

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude <sup>⊙</sup>	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-3000	7,985513E+08	7,985866E+08	3,154094E+09	3,153988E+09	1,597138E+09	6,308082E+09	7,905220E+09
-2999	7,985344E+08	7,985511E+08	3,153996E+09	3,154039E+09	1,597086E+09	6,308034E+09	7,905120E+09
-2998	7,986294E+08	7,986130E+08	3,153949E+09	3,153989E+09	1,597242E+09	6,307938E+09	7,905180E+09
-2997	7,986066E+08	7,986622E+08	3,153980E+09	3,153818E+09	1,597269E+09	6,307798E+09	7,905066E+09
-2996	7,986587E+08	7,986234E+08	3,153853E+09	3,153935E+09	1,597282E+09	6,307789E+09	7,905071E+09
-2995	7,987332E+08	7,987193E+08	3,153858E+09	3,153819E+09	1,597453E+09	6,307677E+09	7,905130E+09
-2994	7,986799E+08	7,987282E+08	3,153818E+09	3,153757E+09	1,597408E+09	6,307575E+09	7,904983E+09
-2993	7,987483E+08	7,987014E+08	3,153720E+09	3,153876E+09	1,597450E+09	6,307596E+09	7,905046E+09
-2992	7,987517E+08	7,987768E+08	3,153812E+09	3,153727E+09	1,597529E+09	6,307540E+09	7,905068E+09
-2991	7,986952E+08	7,987075E+08	3,153801E+09	3,153795E+09	1,597403E+09	6,307597E+09	7,904999E+09
-2990	7,987513E+08	7,986993E+08	3,153802E+09	3,153867E+09	1,597451E+09	6,307670E+09	7,905120E+09
-2989	7,986888E+08	7,987255E+08	3,153920E+09	3,153780E+09	1,597414E+09	6,307701E+09	7,905115E+09
-2988	7,986493E+08	7,986299E+08	3,153879E+09	3,153980E+09	1,597279E+09	6,307859E+09	7,905139E+09
-2987	7,986748E+08	7,986610E+08	3,153958E+09	3,153965E+09	1,597336E+09	6,307923E+09	7,905259E+09
-2986	7,985754E+08	7,986329E+08	3,154033E+09	3,153914E+09	1,597208E+09	6,307947E+09	7,905155E+09
-2985	7,985967E+08	7,985482E+08	3,153960E+09	3,154080E+09	1,597145E+09	6,308040E+09	7,905185E+09
-2984	7,986180E+08	7,986098E+08	3,154035E+09	3,153974E+09	1,597228E+09	6,308009E+09	7,905237E+09
-2983	7,985486E+08	7,985695E+08	3,154007E+09	3,153981E+09	1,597118E+09	6,307989E+09	7,905107E+09
-2982	7,986198E+08	7,985758E+08	3,153907E+09	3,154035E+09	1,597196E+09	6,307942E+09	7,905138E+09
-2981	7,986173E+08	7,986615E+08	3,153977E+09	3,153853E+09	1,597279E+09	6,307830E+09	7,905109E+09
-2980	7,986051E+08	7,986156E+08	3,153885E+09	3,153919E+09	1,597221E+09	6,307804E+09	7,905025E+09
-2979	7,987063E+08	7,986764E+08	3,153866E+09	3,153861E+09	1,597383E+09	6,307728E+09	7,905110E+09
-2978	7,986753E+08	7,987320E+08	3,153886E+09	3,153711E+09	1,597407E+09	6,307597E+09	7,905004E+09
-2977	7,987237E+08	7,986917E+08	3,153715E+09	3,153839E+09	1,597415E+09	6,307555E+09	7,904970E+09
-2976	7,987981E+08	7,987936E+08	3,153728E+09	3,153727E+09	1,597592E+09	6,307455E+09	7,905046E+09
-2975	7,987399E+08	7,987919E+08	3,153716E+09	3,153662E+09	1,597532E+09	6,307378E+09	7,904910E+09
-2974	7,988060E+08	7,987635E+08	3,153613E+09	3,153747E+09	1,597570E+09	6,307360E+09	7,904930E+09
-2973	7,988160E+08	7,988324E+08	3,153735E+09	3,153610E+09	1,597648E+09	6,307345E+09	7,904993E+09
-2972	7,987533E+08	7,987547E+08	3,153715E+09	3,153717E+09	1,597508E+09	6,307433E+09	7,904941E+09
-2971	7,988015E+08	7,987530E+08	3,153734E+09	3,153791E+09	1,597555E+09	6,307525E+09	7,905079E+09
-2970	7,987267E+08	7,987827E+08	3,153849E+09	3,153715E+09	1,597509E+09	6,307563E+09	7,905073E+09
-2969	7,986862E+08	7,986716E+08	3,153779E+09	3,153903E+09	1,597358E+09	6,307683E+09	7,905040E+09
-2968	7,987244E+08	7,986993E+08	3,153869E+09	3,153886E+09	1,597424E+09	6,307754E+09	7,905178E+09
-2967	7,986323E+08	7,986659E+08	3,153949E+09	3,153832E+09	1,597298E+09	6,307781E+09	7,905079E+09
-2966	7,986544E+08	7,985994E+08	3,153836E+09	3,153970E+09	1,597254E+09	6,307806E+09	7,905060E+09
-2965	7,986828E+08	7,986768E+08	3,153921E+09	3,153862E+09	1,597360E+09	6,307783E+09	7,905143E+09
-2964	7,986085E+08	7,986396E+08	3,153892E+09	3,153880E+09	1,597248E+09	6,307772E+09	7,905020E+09
-2963	7,986795E+08	7,986493E+08	3,153832E+09	3,153908E+09	1,597329E+09	6,307739E+09	7,905068E+09
-2962	7,986749E+08	7,987324E+08	3,153907E+09	3,153734E+09	1,597407E+09	6,307641E+09	7,905049E+09
-2961	7,986680E+08	7,986736E+08	3,153777E+09	3,153813E+09	1,597342E+09	6,307591E+09	7,904932E+09
-2960	7,987784E+08	7,987394E+08	3,153743E+09	3,153773E+09	1,597518E+09	6,307517E+09	7,905034E+09
-2959	7,987460E+08	7,987969E+08	3,153753E+09	3,153629E+09	1,597543E+09	6,307382E+09	7,904925E+09
-2958	7,987902E+08	7,987682E+08	3,153556E+09	3,153717E+09	1,597558E+09	6,307273E+09	7,904831E+09
-2957	7,988704E+08	7,988651E+08	3,153604E+09	3,153589E+09	1,597735E+09	6,307192E+09	7,904928E+09
-2956	7,988089E+08	7,988510E+08	3,153614E+09	3,153542E+09	1,597660E+09	6,307157E+09	7,904816E+09
-2955	7,988716E+08	7,988207E+08	3,153554E+09	3,153625E+09	1,597692E+09	6,307179E+09	7,904871E+09
-2954	7,988665E+08	7,988913E+08	3,153675E+09	3,153524E+09	1,597758E+09	6,307199E+09	7,904957E+09
-2953	7,987960E+08	7,988065E+08	3,153626E+09	3,153656E+09	1,597602E+09	6,307283E+09	7,904885E+09
-2952	7,988433E+08	7,988034E+08	3,153649E+09	3,153736E+09	1,597647E+09	6,307385E+09	7,905032E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-2951	7,987689E+08	7,988206E+08	3,153777E+09	3,153656E+09	1,597589E+09	6,307433E+09	7,905022E+09
-2950	7,987330E+08	7,987130E+08	3,153679E+09	3,153803E+09	1,597446E+09	6,307481E+09	7,904927E+09
-2949	7,987852E+08	7,987408E+08	3,153771E+09	3,153781E+09	1,597526E+09	6,307551E+09	7,905077E+09
-2948	7,986923E+08	7,987142E+08	3,153834E+09	3,153745E+09	1,597407E+09	6,307579E+09	7,904986E+09
-2947	7,987114E+08	7,986653E+08	3,153739E+09	3,153856E+09	1,597377E+09	6,307595E+09	7,904972E+09
-2946	7,987308E+08	7,987517E+08	3,153830E+09	3,153752E+09	1,597482E+09	6,307582E+09	7,905065E+09
-2945	7,986593E+08	7,987024E+08	3,153791E+09	3,153768E+09	1,597362E+09	6,307558E+09	7,904920E+09
-2944	7,987405E+08	7,987080E+08	3,153743E+09	3,153804E+09	1,597449E+09	6,307547E+09	7,904995E+09
-2943	7,987437E+08	7,987855E+08	3,153814E+09	3,153647E+09	1,597529E+09	6,307461E+09	7,904990E+09
-2942	7,987394E+08	7,987415E+08	3,153634E+09	3,153700E+09	1,597481E+09	6,307334E+09	7,904815E+09
-2941	7,988581E+08	7,988155E+08	3,153602E+09	3,153660E+09	1,597674E+09	6,307262E+09	7,904935E+09
-2940	7,988205E+08	7,988720E+08	3,153617E+09	3,153518E+09	1,597693E+09	6,307134E+09	7,904827E+09
-2939	7,988602E+08	7,988429E+08	3,153466E+09	3,153571E+09	1,597703E+09	6,307037E+09	7,904740E+09
-2938	7,989323E+08	7,989332E+08	3,153534E+09	3,153461E+09	1,597865E+09	6,306994E+09	7,904860E+09
-2937	7,988669E+08	7,989020E+08	3,153523E+09	3,153440E+09	1,597769E+09	6,306963E+09	7,904732E+09
-2936	7,989258E+08	7,988734E+08	3,153464E+09	3,153557E+09	1,597799E+09	6,307022E+09	7,904821E+09
-2935	7,989162E+08	7,989413E+08	3,153579E+09	3,153478E+09	1,597858E+09	6,307057E+09	7,904915E+09
-2934	7,988410E+08	7,988596E+08	3,153503E+09	3,153574E+09	1,597701E+09	6,307077E+09	7,904777E+09
-2933	7,988994E+08	7,988487E+08	3,153550E+09	3,153640E+09	1,597748E+09	6,307189E+09	7,904937E+09
-2932	7,988271E+08	7,988575E+08	3,153681E+09	3,153564E+09	1,597685E+09	6,307245E+09	7,904929E+09
-2931	7,987914E+08	7,987612E+08	3,153606E+09	3,153684E+09	1,597553E+09	6,307290E+09	7,904843E+09
-2930	7,988338E+08	7,988017E+08	3,153692E+09	3,153681E+09	1,597635E+09	6,307373E+09	7,905009E+09
-2929	7,987358E+08	7,987767E+08	3,153735E+09	3,153656E+09	1,597513E+09	6,307391E+09	7,904903E+09
-2928	7,987554E+08	7,987310E+08	3,153662E+09	3,153769E+09	1,597486E+09	6,307431E+09	7,904918E+09
-2927	7,987796E+08	7,988065E+08	3,153764E+09	3,153669E+09	1,597586E+09	6,307432E+09	7,905019E+09
-2926	7,987173E+08	7,987575E+08	3,153689E+09	3,153656E+09	1,597475E+09	6,307345E+09	7,904820E+09
-2925	7,988162E+08	7,987621E+08	3,153630E+09	3,153697E+09	1,597578E+09	6,307327E+09	7,904905E+09
-2924	7,988208E+08	7,988466E+08	3,153673E+09	3,153557E+09	1,597667E+09	6,307229E+09	7,904897E+09
-2923	7,988162E+08	7,988217E+08	3,153501E+09	3,153571E+09	1,597638E+09	6,307072E+09	7,904710E+09
-2922	7,989250E+08	7,988980E+08	3,153476E+09	3,153525E+09	1,597823E+09	6,307001E+09	7,904824E+09
-2921	7,988867E+08	7,989405E+08	3,153494E+09	3,153383E+09	1,597827E+09	6,306877E+09	7,904704E+09
-2920	7,989280E+08	7,989042E+08	3,153376E+09	3,153448E+09	1,597832E+09	6,306824E+09	7,904656E+09
-2919	7,989949E+08	7,989860E+08	3,153453E+09	3,153374E+09	1,597981E+09	6,306827E+09	7,904808E+09
-2918	7,989242E+08	7,989634E+08	3,153410E+09	3,153352E+09	1,597888E+09	6,306762E+09	7,904650E+09
-2917	7,989842E+08	7,989344E+08	3,153360E+09	3,153480E+09	1,597919E+09	6,306840E+09	7,904758E+09
-2916	7,989687E+08	7,989954E+08	3,153479E+09	3,153410E+09	1,597964E+09	6,306889E+09	7,904853E+09
-2915	7,988938E+08	7,989129E+08	3,153433E+09	3,153461E+09	1,597807E+09	6,306894E+09	7,904701E+09
-2914	7,989473E+08	7,988966E+08	3,153484E+09	3,153534E+09	1,597844E+09	6,307018E+09	7,904862E+09
-2913	7,988750E+08	7,988973E+08	3,153589E+09	3,153473E+09	1,597772E+09	6,307062E+09	7,904834E+09
-2912	7,988374E+08	7,988119E+08	3,153521E+09	3,153604E+09	1,597649E+09	6,307125E+09	7,904775E+09
-2911	7,988764E+08	7,988559E+08	3,153606E+09	3,153615E+09	1,597732E+09	6,307221E+09	7,904953E+09
-2910	7,987807E+08	7,988356E+08	3,153625E+09	3,153555E+09	1,597616E+09	6,307180E+09	7,904796E+09
-2909	7,988159E+08	7,987841E+08	3,153570E+09	3,153663E+09	1,597600E+09	6,307233E+09	7,904833E+09
-2908	7,988482E+08	7,988543E+08	3,153663E+09	3,153574E+09	1,597702E+09	6,307238E+09	7,904940E+09
-2907	7,987919E+08	7,988193E+08	3,153589E+09	3,153532E+09	1,597611E+09	6,307120E+09	7,904731E+09
-2906	7,988871E+08	7,988374E+08	3,153512E+09	3,153585E+09	1,597724E+09	6,307097E+09	7,904821E+09
-2905	7,988888E+08	7,989214E+08	3,153528E+09	3,153442E+09	1,597810E+09	6,306970E+09	7,904780E+09
-2904	7,988820E+08	7,989002E+08	3,153388E+09	3,153446E+09	1,597782E+09	6,306835E+09	7,904617E+09
-2903	7,989894E+08	7,989661E+08	3,153382E+09	3,153409E+09	1,597955E+09	6,306791E+09	7,904746E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-2902	7,989518E+08	7,990041E+08	3,153380E+09	3,153253E+09	1,597956E+09	6,306633E+09	7,904589E+09
-2901	7,989999E+08	7,989637E+08	3,153271E+09	3,153345E+09	1,597964E+09	6,306616E+09	7,904580E+09
-2900	7,990593E+08	7,990453E+08	3,153336E+09	3,153302E+09	1,598105E+09	6,306638E+09	7,904742E+09
-2899	7,989849E+08	7,990326E+08	3,153309E+09	3,153251E+09	1,598017E+09	6,306560E+09	7,904578E+09
-2898	7,990348E+08	7,989977E+08	3,153270E+09	3,153380E+09	1,598032E+09	6,306651E+09	7,904683E+09
-2897	7,990186E+08	7,990395E+08	3,153385E+09	3,153311E+09	1,598058E+09	6,306696E+09	7,904754E+09
-2896	7,989454E+08	7,989543E+08	3,153365E+09	3,153365E+09	1,597900E+09	6,306731E+09	7,904630E+09
-2895	7,989944E+08	7,989368E+08	3,153411E+09	3,153463E+09	1,597931E+09	6,306874E+09	7,904805E+09
-2894	7,989193E+08	7,989497E+08	3,153484E+09	3,153390E+09	1,597869E+09	6,306874E+09	7,904743E+09
-2893	7,988876E+08	7,988690E+08	3,153431E+09	3,153523E+09	1,597757E+09	6,306954E+09	7,904711E+09
-2892	7,989236E+08	7,989096E+08	3,153524E+09	3,153538E+09	1,597833E+09	6,307062E+09	7,904895E+09
-2891	7,988385E+08	7,988944E+08	3,153561E+09	3,153437E+09	1,597733E+09	6,306997E+09	7,904730E+09
-2890	7,988742E+08	7,988395E+08	3,153489E+09	3,153552E+09	1,597714E+09	6,307041E+09	7,904755E+09
-2889	7,989114E+08	7,989067E+08	3,153539E+09	3,153478E+09	1,597818E+09	6,307017E+09	7,904835E+09
-2888	7,988590E+08	7,988876E+08	3,153460E+09	3,153430E+09	1,597747E+09	6,306890E+09	7,904637E+09
-2887	7,989506E+08	7,989102E+08	3,153376E+09	3,153486E+09	1,597861E+09	6,306862E+09	7,904723E+09
-2886	7,989541E+08	7,989961E+08	3,153380E+09	3,153304E+09	1,597950E+09	6,306684E+09	7,904634E+09
-2885	7,989592E+08	7,989679E+08	3,153272E+09	3,153305E+09	1,597927E+09	6,306576E+09	7,904503E+09
-2884	7,990636E+08	7,990276E+08	3,153276E+09	3,153291E+09	1,598091E+09	6,306567E+09	7,904658E+09
-2883	7,990268E+08	7,990769E+08	3,153286E+09	3,153125E+09	1,598104E+09	6,306411E+09	7,904515E+09
-2882	7,990622E+08	7,990403E+08	3,153176E+09	3,153247E+09	1,598103E+09	6,306423E+09	7,904526E+09
-2881	7,991140E+08	7,991111E+08	3,153227E+09	3,153219E+09	1,598225E+09	6,306446E+09	7,904671E+09
-2880	7,990381E+08	7,990913E+08	3,153232E+09	3,153163E+09	1,598129E+09	6,306395E+09	7,904525E+09
-2879	7,990845E+08	7,990419E+08	3,153200E+09	3,153302E+09	1,598126E+09	6,306501E+09	7,904628E+09
-2878	7,990696E+08	7,990771E+08	3,153283E+09	3,153214E+09	1,598147E+09	6,306498E+09	7,904644E+09
-2877	7,990029E+08	7,989963E+08	3,153266E+09	3,153283E+09	1,597999E+09	6,306549E+09	7,904548E+09
-2876	7,990446E+08	7,989872E+08	3,153305E+09	3,153396E+09	1,598032E+09	6,306701E+09	7,904733E+09
-2875	7,989698E+08	7,990144E+08	3,153391E+09	3,153286E+09	1,597984E+09	6,306677E+09	7,904661E+09
-2874	7,989343E+08	7,989309E+08	3,153357E+09	3,153419E+09	1,597865E+09	6,306776E+09	7,904641E+09
-2873	7,989743E+08	7,989556E+08	3,153434E+09	3,153435E+09	1,597930E+09	6,306870E+09	7,904800E+09
-2872	7,988971E+08	7,989425E+08	3,153484E+09	3,153338E+09	1,597840E+09	6,306822E+09	7,904662E+09
-2871	7,989327E+08	7,988944E+08	3,153389E+09	3,153473E+09	1,597827E+09	6,306862E+09	7,904689E+09
-2870	7,989713E+08	7,989720E+08	3,153394E+09	3,153375E+09	1,597943E+09	6,306769E+09	7,904712E+09
-2869	7,989288E+08	7,989623E+08	3,153327E+09	3,153316E+09	1,597891E+09	6,306644E+09	7,904535E+09
-2868	7,990186E+08	7,989821E+08	3,153258E+09	3,153364E+09	1,598001E+09	6,306621E+09	7,904622E+09
-2867	7,990293E+08	7,990726E+08	3,153284E+09	3,153146E+09	1,598102E+09	6,306430E+09	7,904531E+09
-2866	7,990307E+08	7,990395E+08	3,153184E+09	3,153170E+09	1,598070E+09	6,306354E+09	7,904424E+09
-2865	7,991287E+08	7,990915E+08	3,153162E+09	3,153189E+09	1,598220E+09	6,306351E+09	7,904571E+09
-2864	7,990914E+08	7,991474E+08	3,153183E+09	3,153041E+09	1,598239E+09	6,306224E+09	7,904463E+09
-2863	7,991178E+08	7,991058E+08	3,153070E+09	3,153175E+09	1,598224E+09	6,306245E+09	7,904468E+09
-2862	7,991693E+08	7,991650E+08	3,153104E+09	3,153119E+09	1,598334E+09	6,306223E+09	7,904558E+09
-2861	7,991054E+08	7,991367E+08	3,153128E+09	3,153061E+09	1,598242E+09	6,306189E+09	7,904431E+09
-2860	7,991448E+08	7,990834E+08	3,153100E+09	3,153213E+09	1,598228E+09	6,306313E+09	7,904541E+09
-2859	7,991297E+08	7,991352E+08	3,153191E+09	3,153106E+09	1,598265E+09	6,306297E+09	7,904562E+09
-2858	7,990506E+08	7,990612E+08	3,153185E+09	3,153188E+09	1,598112E+09	6,306372E+09	7,904484E+09
-2857	7,990821E+08	7,990454E+08	3,153222E+09	3,153312E+09	1,598127E+09	6,306533E+09	7,904661E+09
-2856	7,990131E+08	7,990687E+08	3,153342E+09	3,153198E+09	1,598082E+09	6,306540E+09	7,904622E+09
-2855	7,989769E+08	7,989747E+08	3,153300E+09	3,153344E+09	1,597952E+09	6,306644E+09	7,904596E+09
-2854	7,990248E+08	7,989943E+08	3,153329E+09	3,153348E+09	1,598019E+09	6,306676E+09	7,904696E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-2853	7,989633E+08	7,989910E+08	3,153356E+09	3,153254E+09	1,597954E+09	6,306611E+09	7,904565E+09
-2852	7,989975E+08	7,989573E+08	3,153245E+09	3,153384E+09	1,597955E+09	6,306629E+09	7,904584E+09
-2851	7,990429E+08	7,990515E+08	3,153257E+09	3,153232E+09	1,598094E+09	6,306490E+09	7,904584E+09
-2850	7,989995E+08	7,990418E+08	3,153218E+09	3,153164E+09	1,598041E+09	6,306382E+09	7,904423E+09
-2849	7,990884E+08	7,990490E+08	3,153149E+09	3,153221E+09	1,598137E+09	6,306370E+09	7,904508E+09
-2848	7,991036E+08	7,991401E+08	3,153200E+09	3,153024E+09	1,598244E+09	6,306225E+09	7,904468E+09
-2847	7,990963E+08	7,991095E+08	3,153088E+09	3,153089E+09	1,598206E+09	6,306177E+09	7,904383E+09
-2846	7,991894E+08	7,991606E+08	3,153031E+09	3,153101E+09	1,598350E+09	6,306132E+09	7,904482E+09
-2845	7,991598E+08	7,992152E+08	3,153063E+09	3,152957E+09	1,598375E+09	6,306020E+09	7,904395E+09
-2844	7,991823E+08	7,991652E+08	3,152962E+09	3,153084E+09	1,598348E+09	6,306046E+09	7,904394E+09
-2843	7,992371E+08	7,992225E+08	3,153003E+09	3,152988E+09	1,598460E+09	6,305991E+09	7,904450E+09
-2842	7,991671E+08	7,991917E+08	3,153038E+09	3,152945E+09	1,598359E+09	6,305984E+09	7,904342E+09
-2841	7,991950E+08	7,991349E+08	3,152994E+09	3,153117E+09	1,598330E+09	6,306111E+09	7,904441E+09
-2840	7,991758E+08	7,991935E+08	3,153113E+09	3,153024E+09	1,598369E+09	6,306137E+09	7,904506E+09
-2839	7,990869E+08	7,991166E+08	3,153119E+09	3,153122E+09	1,598203E+09	6,306241E+09	7,904444E+09
-2838	7,991191E+08	7,990863E+08	3,153137E+09	3,153224E+09	1,598205E+09	6,306361E+09	7,904567E+09
-2837	7,990692E+08	7,991050E+08	3,153259E+09	3,153118E+09	1,598174E+09	6,306377E+09	7,904551E+09
-2836	7,990352E+08	7,990146E+08	3,153200E+09	3,153268E+09	1,598050E+09	6,306469E+09	7,904518E+09
-2835	7,990907E+08	7,990547E+08	3,153208E+09	3,153237E+09	1,598145E+09	6,306446E+09	7,904591E+09
-2834	7,990276E+08	7,990657E+08	3,153239E+09	3,153139E+09	1,598093E+09	6,306378E+09	7,904471E+09
-2833	7,990566E+08	7,990306E+08	3,153126E+09	3,153258E+09	1,598087E+09	6,306384E+09	7,904472E+09
-2832	7,991092E+08	7,991239E+08	3,153178E+09	3,153100E+09	1,598233E+09	6,306278E+09	7,904511E+09
-2831	7,990625E+08	7,991084E+08	3,153140E+09	3,153051E+09	1,598171E+09	6,306190E+09	7,904361E+09
-2830	7,991505E+08	7,991086E+08	3,153034E+09	3,153111E+09	1,598259E+09	6,306145E+09	7,904404E+09
-2829	7,991784E+08	7,992071E+08	3,153068E+09	3,152941E+09	1,598386E+09	6,306008E+09	7,904394E+09
-2828	7,991654E+08	7,991809E+08	3,152948E+09	3,153008E+09	1,598346E+09	6,305956E+09	7,904302E+09
-2827	7,992633E+08	7,992371E+08	3,152895E+09	3,152975E+09	1,598500E+09	6,305870E+09	7,904370E+09
-2826	7,992335E+08	7,992824E+08	3,152949E+09	3,152821E+09	1,598516E+09	6,305770E+09	7,904286E+09
-2825	7,992479E+08	7,992191E+08	3,152851E+09	3,152955E+09	1,598467E+09	6,305807E+09	7,904274E+09
-2824	7,993009E+08	7,992766E+08	3,152924E+09	3,152878E+09	1,598578E+09	6,305802E+09	7,904380E+09
-2823	7,992141E+08	7,992503E+08	3,152962E+09	3,152870E+09	1,598464E+09	6,305831E+09	7,904296E+09
-2822	7,992314E+08	7,991891E+08	3,152904E+09	3,153039E+09	1,598421E+09	6,305943E+09	7,904363E+09
-2821	7,992219E+08	7,992439E+08	3,153035E+09	3,152959E+09	1,598466E+09	6,305994E+09	7,904460E+09
-2820	7,991333E+08	7,991581E+08	3,153052E+09	3,153055E+09	1,598291E+09	6,306107E+09	7,904398E+09
-2819	7,991756E+08	7,991292E+08	3,153055E+09	3,153121E+09	1,598305E+09	6,306175E+09	7,904480E+09
-2818	7,991300E+08	7,991513E+08	3,153163E+09	3,153021E+09	1,598281E+09	6,306185E+09	7,904466E+09
-2817	7,990916E+08	7,990701E+08	3,153071E+09	3,153174E+09	1,598162E+09	6,306245E+09	7,904406E+09
-2816	7,991515E+08	7,991223E+08	3,153097E+09	3,153133E+09	1,598274E+09	6,306229E+09	7,904503E+09
-2815	7,990825E+08	7,991380E+08	3,153139E+09	3,153033E+09	1,598220E+09	6,306171E+09	7,904392E+09
-2814	7,991137E+08	7,990914E+08	3,153018E+09	3,153125E+09	1,598205E+09	6,306143E+09	7,904348E+09
-2813	7,991817E+08	7,991835E+08	3,153074E+09	3,152987E+09	1,598365E+09	6,306061E+09	7,904426E+09
-2812	7,991353E+08	7,991721E+08	3,153032E+09	3,152956E+09	1,598307E+09	6,305988E+09	7,904296E+09
-2811	7,992249E+08	7,991861E+08	3,152902E+09	3,152992E+09	1,598411E+09	6,305894E+09	7,904305E+09
-2810	7,992517E+08	7,992896E+08	3,152944E+09	3,152827E+09	1,598541E+09	6,305771E+09	7,904313E+09
-2809	7,992332E+08	7,992553E+08	3,152823E+09	3,152887E+09	1,598489E+09	6,305710E+09	7,904199E+09
-2808	7,993340E+08	7,993012E+08	3,152808E+09	3,152848E+09	1,598635E+09	6,305656E+09	7,904291E+09
-2807	7,992952E+08	7,993397E+08	3,152866E+09	3,152716E+09	1,598635E+09	6,305582E+09	7,904217E+09
-2806	7,993009E+08	7,992661E+08	3,152742E+09	3,152851E+09	1,598567E+09	6,305593E+09	7,904160E+09
-2805	7,993576E+08	7,993307E+08	3,152812E+09	3,152806E+09	1,598688E+09	6,305618E+09	7,904306E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-2804	7,992630E+08	7,993067E+08	3,152864E+09	3,152805E+09	1,598570E+09	6,305669E+09	7,904239E+09
-2803	7,992812E+08	7,992470E+08	3,152813E+09	3,152936E+09	1,598528E+09	6,305749E+09	7,904277E+09
-2802	7,992770E+08	7,992927E+08	3,152963E+09	3,152858E+09	1,598570E+09	6,305821E+09	7,904391E+09
-2801	7,991866E+08	7,991985E+08	3,152965E+09	3,152960E+09	1,598385E+09	6,305925E+09	7,904310E+09
-2800	7,992338E+08	7,991750E+08	3,152977E+09	3,153033E+09	1,598409E+09	6,306010E+09	7,904419E+09
-2799	7,991788E+08	7,992105E+08	3,153070E+09	3,152946E+09	1,598389E+09	6,306016E+09	7,904406E+09
-2798	7,991353E+08	7,991317E+08	3,152958E+09	3,153074E+09	1,598267E+09	6,306032E+09	7,904299E+09
-2797	7,992095E+08	7,991871E+08	3,152994E+09	3,153033E+09	1,598397E+09	6,306027E+09	7,904423E+09
-2796	7,991437E+08	7,991981E+08	3,153049E+09	3,152924E+09	1,598342E+09	6,305973E+09	7,904315E+09
-2795	7,991834E+08	7,991551E+08	3,152914E+09	3,152989E+09	1,598338E+09	6,305903E+09	7,904242E+09
-2794	7,992564E+08	7,992500E+08	3,152958E+09	3,152867E+09	1,598506E+09	6,305825E+09	7,904332E+09
-2793	7,992051E+08	7,992443E+08	3,152889E+09	3,152849E+09	1,598449E+09	6,305738E+09	7,904188E+09
-2792	7,992990E+08	7,992627E+08	3,152782E+09	3,152881E+09	1,598562E+09	6,305663E+09	7,904225E+09
-2791	7,993183E+08	7,993629E+08	3,152832E+09	3,152716E+09	1,598681E+09	6,305547E+09	7,904229E+09
-2790	7,992990E+08	7,993134E+08	3,152702E+09	3,152755E+09	1,598612E+09	6,305456E+09	7,904069E+09
-2789	7,994087E+08	7,993560E+08	3,152689E+09	3,152738E+09	1,598765E+09	6,305427E+09	7,904192E+09
-2788	7,993620E+08	7,993978E+08	3,152757E+09	3,152625E+09	1,598760E+09	6,305382E+09	7,904142E+09
-2787	7,993614E+08	7,993357E+08	3,152632E+09	3,152742E+09	1,598697E+09	6,305374E+09	7,904071E+09
-2786	7,994118E+08	7,993994E+08	3,152728E+09	3,152710E+09	1,598811E+09	6,305438E+09	7,904249E+09
-2785	7,993107E+08	7,993644E+08	3,152789E+09	3,152716E+09	1,598675E+09	6,305506E+09	7,904181E+09
-2784	7,993327E+08	7,992930E+08	3,152768E+09	3,152846E+09	1,598626E+09	6,305614E+09	7,904240E+09
-2783	7,993218E+08	7,993341E+08	3,152903E+09	3,152790E+09	1,598656E+09	6,305693E+09	7,904349E+09
-2782	7,992293E+08	7,992360E+08	3,152860E+09	3,152880E+09	1,598465E+09	6,305741E+09	7,904206E+09
-2781	7,992855E+08	7,992255E+08	3,152850E+09	3,152967E+09	1,598511E+09	6,305817E+09	7,904328E+09
-2780	7,992316E+08	7,992688E+08	3,152956E+09	3,152865E+09	1,598500E+09	6,305821E+09	7,904321E+09
-2779	7,991946E+08	7,991956E+08	3,152846E+09	3,152935E+09	1,598390E+09	6,305781E+09	7,904171E+09
-2778	7,992764E+08	7,992479E+08	3,152903E+09	3,152893E+09	1,598524E+09	6,305796E+09	7,904321E+09
-2777	7,992119E+08	7,992583E+08	3,152947E+09	3,152800E+09	1,598470E+09	6,305747E+09	7,904217E+09
-2776	7,992542E+08	7,992214E+08	3,152823E+09	3,152879E+09	1,598476E+09	6,305702E+09	7,904177E+09
-2775	7,993174E+08	7,993274E+08	3,152851E+09	3,152780E+09	1,598645E+09	6,305631E+09	7,904276E+09
-2774	7,992649E+08	7,993156E+08	3,152760E+09	3,152740E+09	1,598580E+09	6,305500E+09	7,904081E+09
-2773	7,993716E+08	7,993323E+08	3,152655E+09	3,152776E+09	1,598704E+09	6,305431E+09	7,904135E+09
-2772	7,993930E+08	7,994248E+08	3,152720E+09	3,152603E+09	1,598818E+09	6,305322E+09	7,904140E+09
-2771	7,993746E+08	7,993784E+08	3,152578E+09	3,152612E+09	1,598753E+09	6,305190E+09	7,903943E+09
-2770	7,994801E+08	7,994243E+08	3,152572E+09	3,152617E+09	1,598904E+09	6,305189E+09	7,904093E+09
-2769	7,994216E+08	7,994686E+08	3,152637E+09	3,152526E+09	1,598890E+09	6,305162E+09	7,904053E+09
-2768	7,994171E+08	7,994029E+08	3,152557E+09	3,152647E+09	1,598820E+09	6,305204E+09	7,904024E+09
-2767	7,994558E+08	7,994570E+08	3,152668E+09	3,152628E+09	1,598913E+09	6,305296E+09	7,904209E+09
-2766	7,993547E+08	7,994011E+08	3,152715E+09	3,152628E+09	1,598756E+09	6,305344E+09	7,904099E+09
-2765	7,993873E+08	7,993289E+08	3,152678E+09	3,152782E+09	1,598716E+09	6,305460E+09	7,904176E+09
-2764	7,993739E+08	7,993740E+08	3,152801E+09	3,152728E+09	1,598748E+09	6,305529E+09	7,904277E+09
-2763	7,992822E+08	7,992945E+08	3,152741E+09	3,152777E+09	1,598577E+09	6,305518E+09	7,904094E+09
-2762	7,993413E+08	7,992897E+08	3,152747E+09	3,152852E+09	1,598631E+09	6,305600E+09	7,904231E+09
-2761	7,992866E+08	7,993301E+08	3,152861E+09	3,152747E+09	1,598617E+09	6,305608E+09	7,904225E+09
-2760	7,992578E+08	7,992534E+08	3,152787E+09	3,152812E+09	1,598511E+09	6,305600E+09	7,904111E+09
-2759	7,993313E+08	7,993065E+08	3,152827E+09	3,152795E+09	1,598638E+09	6,305622E+09	7,904260E+09
-2758	7,992684E+08	7,993160E+08	3,152826E+09	3,152705E+09	1,598584E+09	6,305531E+09	7,904115E+09
-2757	7,993213E+08	7,992919E+08	3,152676E+09	3,152799E+09	1,598613E+09	6,305476E+09	7,904089E+09
-2756	7,993873E+08	7,993990E+08	3,152714E+09	3,152684E+09	1,598786E+09	6,305398E+09	7,904184E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-2755	7,993434E+08	7,993905E+08	3,152618E+09	3,152590E+09	1,598734E+09	6,305208E+09	7,903942E+09
-2754	7,994558E+08	7,994026E+08	3,152532E+09	3,152623E+09	1,598858E+09	6,305155E+09	7,904014E+09
-2753	7,994708E+08	7,994935E+08	3,152596E+09	3,152469E+09	1,598964E+09	6,305065E+09	7,904029E+09
-2752	7,994470E+08	7,994518E+08	3,152488E+09	3,152491E+09	1,598899E+09	6,304979E+09	7,903878E+09
-2751	7,995297E+08	7,995021E+08	3,152493E+09	3,152528E+09	1,599032E+09	6,305021E+09	7,904053E+09
-2750	7,994660E+08	7,995305E+08	3,152555E+09	3,152439E+09	1,598997E+09	6,304994E+09	7,903991E+09
-2749	7,994675E+08	7,994540E+08	3,152481E+09	3,152580E+09	1,598921E+09	6,305061E+09	7,903982E+09
-2748	7,995084E+08	7,994938E+08	3,152597E+09	3,152566E+09	1,599002E+09	6,305162E+09	7,904165E+09
-2747	7,994121E+08	7,994385E+08	3,152606E+09	3,152532E+09	1,598851E+09	6,305138E+09	7,903989E+09
-2746	7,994448E+08	7,993758E+08	3,152557E+09	3,152690E+09	1,598821E+09	6,305248E+09	7,904068E+09
-2745	7,994265E+08	7,994305E+08	3,152672E+09	3,152637E+09	1,598857E+09	6,305309E+09	7,904166E+09
-2744	7,993369E+08	7,993562E+08	3,152657E+09	3,152662E+09	1,598693E+09	6,305319E+09	7,904012E+09
-2743	7,993865E+08	7,993515E+08	3,152683E+09	3,152740E+09	1,598738E+09	6,305423E+09	7,904161E+09
-2742	7,993371E+08	7,993785E+08	3,152779E+09	3,152634E+09	1,598716E+09	6,305413E+09	7,904129E+09
-2741	7,993184E+08	7,993077E+08	3,152688E+09	3,152731E+09	1,598626E+09	6,305419E+09	7,904045E+09
-2740	7,993920E+08	7,993671E+08	3,152716E+09	3,152723E+09	1,598759E+09	6,305439E+09	7,904198E+09
-2739	7,993350E+08	7,993908E+08	3,152687E+09	3,152593E+09	1,598726E+09	6,305279E+09	7,904005E+09
-2738	7,993956E+08	7,993711E+08	3,152547E+09	3,152672E+09	1,598767E+09	6,305220E+09	7,903986E+09
-2737	7,994636E+08	7,994720E+08	3,152587E+09	3,152548E+09	1,598936E+09	6,305135E+09	7,904071E+09
-2736	7,994260E+08	7,994609E+08	3,152526E+09	3,152442E+09	1,598887E+09	6,304968E+09	7,903855E+09
-2735	7,995226E+08	7,994746E+08	3,152434E+09	3,152499E+09	1,598997E+09	6,304933E+09	7,903930E+09
-2734	7,995303E+08	7,995595E+08	3,152473E+09	3,152363E+09	1,599090E+09	6,304835E+09	7,903925E+09
-2733	7,995083E+08	7,995229E+08	3,152370E+09	3,152416E+09	1,599031E+09	6,304786E+09	7,903817E+09
-2732	7,995852E+08	7,995611E+08	3,152396E+09	3,152451E+09	1,599146E+09	6,304847E+09	7,903994E+09
-2731	7,995284E+08	7,995824E+08	3,152451E+09	3,152331E+09	1,599111E+09	6,304782E+09	7,903893E+09
-2730	7,995355E+08	7,994995E+08	3,152384E+09	3,152474E+09	1,599035E+09	6,304858E+09	7,903893E+09
-2729	7,995696E+08	7,995374E+08	3,152483E+09	3,152476E+09	1,599107E+09	6,304959E+09	7,904066E+09
-2728	7,994719E+08	7,994939E+08	3,152515E+09	3,152437E+09	1,598966E+09	6,304952E+09	7,903918E+09
-2727	7,994848E+08	7,994416E+08	3,152474E+09	3,152600E+09	1,598926E+09	6,305074E+09	7,904000E+09
-2726	7,994649E+08	7,994864E+08	3,152588E+09	3,152538E+09	1,598951E+09	6,305126E+09	7,904077E+09
-2725	7,993854E+08	7,994107E+08	3,152586E+09	3,152576E+09	1,598796E+09	6,305163E+09	7,903959E+09
-2724	7,994360E+08	7,993973E+08	3,152618E+09	3,152658E+09	1,598833E+09	6,305276E+09	7,904109E+09
-2723	7,993964E+08	7,994300E+08	3,152670E+09	3,152533E+09	1,598826E+09	6,305203E+09	7,904030E+09
-2722	7,993842E+08	7,993713E+08	3,152559E+09	3,152633E+09	1,598755E+09	6,305193E+09	7,903948E+09
-2721	7,994587E+08	7,994372E+08	3,152571E+09	3,152623E+09	1,598896E+09	6,305193E+09	7,904089E+09
-2720	7,994121E+08	7,994651E+08	3,152574E+09	3,152458E+09	1,598877E+09	6,305032E+09	7,903909E+09
-2719	7,994642E+08	7,994466E+08	3,152447E+09	3,152532E+09	1,598911E+09	6,304979E+09	7,903890E+09
-2718	7,995354E+08	7,995344E+08	3,152470E+09	3,152410E+09	1,599070E+09	6,304880E+09	7,903950E+09
-2717	7,995005E+08	7,995302E+08	3,152404E+09	3,152335E+09	1,599031E+09	6,304738E+09	7,903769E+09
-2716	7,995870E+08	7,995458E+08	3,152324E+09	3,152408E+09	1,599133E+09	6,304733E+09	7,903866E+09
-2715	7,995950E+08	7,996334E+08	3,152346E+09	3,152253E+09	1,599228E+09	6,304599E+09	7,903828E+09
-2714	7,995747E+08	7,995917E+08	3,152267E+09	3,152310E+09	1,599166E+09	6,304577E+09	7,903743E+09
-2713	7,996492E+08	7,996172E+08	3,152300E+09	3,152352E+09	1,599266E+09	6,304652E+09	7,903918E+09
-2712	7,995976E+08	7,996316E+08	3,152374E+09	3,152225E+09	1,599229E+09	6,304599E+09	7,903828E+09
-2711	7,995860E+08	7,995536E+08	3,152294E+09	3,152384E+09	1,599140E+09	6,304678E+09	7,903817E+09
-2710	7,996141E+08	7,995868E+08	3,152362E+09	3,152391E+09	1,599201E+09	6,304753E+09	7,903954E+09
-2709	7,995179E+08	7,995532E+08	3,152406E+09	3,152363E+09	1,599071E+09	6,304768E+09	7,903840E+09
-2708	7,995272E+08	7,994938E+08	3,152399E+09	3,152514E+09	1,599021E+09	6,304912E+09	7,903933E+09
-2707	7,995170E+08	7,995340E+08	3,152503E+09	3,152423E+09	1,599051E+09	6,304926E+09	7,903977E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-2706	7,994475E+08	7,994591E+08	3,152506E+09	3,152472E+09	1,598907E+09	6,304978E+09	7,903885E+09
-2705	7,994953E+08	7,994488E+08	3,152514E+09	3,152571E+09	1,598944E+09	6,305085E+09	7,904029E+09
-2704	7,994628E+08	7,994951E+08	3,152574E+09	3,152436E+09	1,598958E+09	6,305009E+09	7,903967E+09
-2703	7,994396E+08	7,994487E+08	3,152458E+09	3,152529E+09	1,598888E+09	6,304987E+09	7,903876E+09
-2702	7,995190E+08	7,995021E+08	3,152452E+09	3,152504E+09	1,599021E+09	6,304957E+09	7,903978E+09
-2701	7,994861E+08	7,995328E+08	3,152461E+09	3,152345E+09	1,599019E+09	6,304806E+09	7,903824E+09
-2700	7,995369E+08	7,995070E+08	3,152338E+09	3,152414E+09	1,599044E+09	6,304751E+09	7,903795E+09
-2699	7,996104E+08	7,996009E+08	3,152324E+09	3,152280E+09	1,599211E+09	6,304604E+09	7,903816E+09
-2698	7,995774E+08	7,996089E+08	3,152262E+09	3,152217E+09	1,599186E+09	6,304479E+09	7,903665E+09
-2697	7,996540E+08	7,996229E+08	3,152190E+09	3,152300E+09	1,599277E+09	6,304491E+09	7,903768E+09
-2696	7,996683E+08	7,997061E+08	3,152255E+09	3,152131E+09	1,599374E+09	6,304386E+09	7,903760E+09
-2695	7,996360E+08	7,996570E+08	3,152189E+09	3,152195E+09	1,599293E+09	6,304383E+09	7,903676E+09
-2694	7,997081E+08	7,996631E+08	3,152199E+09	3,152251E+09	1,599371E+09	6,304451E+09	7,903822E+09
-2693	7,996571E+08	7,996844E+08	3,152268E+09	3,152151E+09	1,599342E+09	6,304419E+09	7,903760E+09
-2692	7,996323E+08	7,996085E+08	3,152201E+09	3,152311E+09	1,599241E+09	6,304512E+09	7,903753E+09
-2691	7,996596E+08	7,996434E+08	3,152258E+09	3,152294E+09	1,599303E+09	6,304551E+09	7,903854E+09
-2690	7,995695E+08	7,996090E+08	3,152331E+09	3,152260E+09	1,599178E+09	6,304591E+09	7,903769E+09
-2689	7,995772E+08	7,995407E+08	3,152332E+09	3,152419E+09	1,599118E+09	6,304751E+09	7,903869E+09
-2688	7,995776E+08	7,995801E+08	3,152444E+09	3,152324E+09	1,599158E+09	6,304768E+09	7,903926E+09
-2687	7,994959E+08	7,995156E+08	3,152424E+09	3,152388E+09	1,599011E+09	6,304813E+09	7,903824E+09
-2686	7,995458E+08	7,995036E+08	3,152389E+09	3,152490E+09	1,599049E+09	6,304879E+09	7,903928E+09
-2685	7,995233E+08	7,995598E+08	3,152443E+09	3,152350E+09	1,599083E+09	6,304793E+09	7,903876E+09
-2684	7,995024E+08	7,995115E+08	3,152347E+09	3,152417E+09	1,599014E+09	6,304765E+09	7,903779E+09
-2683	7,995943E+08	7,995624E+08	3,152316E+09	3,152358E+09	1,599157E+09	6,304674E+09	7,903831E+09
-2682	7,995693E+08	7,996012E+08	3,152330E+09	3,152203E+09	1,599170E+09	6,304533E+09	7,903703E+09
-2681	7,996125E+08	7,995820E+08	3,152206E+09	3,152290E+09	1,599195E+09	6,304496E+09	7,903690E+09
-2680	7,996861E+08	7,996855E+08	3,152215E+09	3,152152E+09	1,599372E+09	6,304367E+09	7,903739E+09
-2679	7,996372E+08	7,996976E+08	3,152172E+09	3,152100E+09	1,599335E+09	6,304272E+09	7,903606E+09
-2678	7,997132E+08	7,996897E+08	3,152093E+09	3,152190E+09	1,599403E+09	6,304283E+09	7,903686E+09
-2677	7,997357E+08	7,997656E+08	3,152164E+09	3,152041E+09	1,599501E+09	6,304205E+09	7,903707E+09
-2676	7,996976E+08	7,997053E+08	3,152098E+09	3,152111E+09	1,599403E+09	6,304209E+09	7,903612E+09
-2675	7,997680E+08	7,997110E+08	3,152063E+09	3,152156E+09	1,599479E+09	6,304219E+09	7,903698E+09
-2674	7,997182E+08	7,997435E+08	3,152137E+09	3,152059E+09	1,599462E+09	6,304196E+09	7,903657E+09
-2673	7,996842E+08	7,996661E+08	3,152094E+09	3,152213E+09	1,599350E+09	6,304307E+09	7,903657E+09
-2672	7,997172E+08	7,996990E+08	3,152194E+09	3,152177E+09	1,599416E+09	6,304371E+09	7,903787E+09
-2671	7,996188E+08	7,996636E+08	3,152283E+09	3,152155E+09	1,599282E+09	6,304437E+09	7,903720E+09
-2670	7,996242E+08	7,995814E+08	3,152252E+09	3,152333E+09	1,599206E+09	6,304586E+09	7,903791E+09
-2669	7,996307E+08	7,996326E+08	3,152349E+09	3,152266E+09	1,599263E+09	6,304615E+09	7,903878E+09
-2668	7,995447E+08	7,995725E+08	3,152323E+09	3,152318E+09	1,599117E+09	6,304642E+09	7,903759E+09
-2667	7,996012E+08	7,995625E+08	3,152255E+09	3,152385E+09	1,599164E+09	6,304640E+09	7,903803E+09
-2666	7,995943E+08	7,996250E+08	3,152324E+09	3,152226E+09	1,599219E+09	6,304550E+09	7,903769E+09
-2665	7,995746E+08	7,995747E+08	3,152235E+09	3,152282E+09	1,599149E+09	6,304517E+09	7,903667E+09
-2664	7,996741E+08	7,996322E+08	3,152211E+09	3,152213E+09	1,599306E+09	6,304424E+09	7,903730E+09
-2663	7,996356E+08	7,996841E+08	3,152218E+09	3,152073E+09	1,599320E+09	6,304292E+09	7,903612E+09
-2662	7,996734E+08	7,996591E+08	3,152075E+09	3,152177E+09	1,599332E+09	6,304251E+09	7,903584E+09
-2661	7,997520E+08	7,997638E+08	3,152101E+09	3,152056E+09	1,599516E+09	6,304156E+09	7,903672E+09
-2660	7,997028E+08	7,997622E+08	3,152082E+09	3,151998E+09	1,599465E+09	6,304080E+09	7,903545E+09
-2659	7,997854E+08	7,997419E+08	3,151972E+09	3,152075E+09	1,599527E+09	6,304047E+09	7,903574E+09
-2658	7,998139E+08	7,998208E+08	3,152039E+09	3,151936E+09	1,599635E+09	6,303975E+09	7,903610E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-2657	7,997643E+08	7,997655E+08	3,151975E+09	3,152014E+09	1,599530E+09	6,303988E+09	7,903518E+09
-2656	7,998311E+08	7,997796E+08	3,151961E+09	3,152044E+09	1,599611E+09	6,304005E+09	7,903616E+09
-2655	7,997635E+08	7,998149E+08	3,152067E+09	3,151950E+09	1,599578E+09	6,304017E+09	7,903596E+09
-2654	7,997276E+08	7,997179E+08	3,152029E+09	3,152116E+09	1,599445E+09	6,304145E+09	7,903590E+09
-2653	7,997658E+08	7,997443E+08	3,152136E+09	3,152102E+09	1,599510E+09	6,304238E+09	7,903748E+09
-2652	7,996642E+08	7,997028E+08	3,152219E+09	3,152092E+09	1,599367E+09	6,304311E+09	7,903678E+09
-2651	7,996723E+08	7,996243E+08	3,152127E+09	3,152258E+09	1,599297E+09	6,304385E+09	7,903682E+09
-2650	7,996879E+08	7,996888E+08	3,152212E+09	3,152182E+09	1,599377E+09	6,304394E+09	7,903771E+09
-2649	7,996038E+08	7,996332E+08	3,152198E+09	3,152211E+09	1,599237E+09	6,304409E+09	7,903646E+09
-2648	7,996739E+08	7,996265E+08	3,152150E+09	3,152239E+09	1,599300E+09	6,304389E+09	7,903690E+09
-2647	7,996625E+08	7,996955E+08	3,152232E+09	3,152079E+09	1,599358E+09	6,304311E+09	7,903669E+09
-2646	7,996419E+08	7,996400E+08	3,152122E+09	3,152152E+09	1,599282E+09	6,304274E+09	7,903556E+09
-2645	7,997411E+08	7,997096E+08	3,152102E+09	3,152110E+09	1,599451E+09	6,304211E+09	7,903662E+09
-2644	7,996965E+08	7,997626E+08	3,152121E+09	3,151979E+09	1,599459E+09	6,304100E+09	7,903559E+09
-2643	7,997373E+08	7,997295E+08	3,151951E+09	3,152067E+09	1,599467E+09	6,304017E+09	7,903484E+09
-2642	7,998297E+08	7,998315E+08	3,151984E+09	3,151946E+09	1,599661E+09	6,303930E+09	7,903591E+09
-2641	7,997823E+08	7,998212E+08	3,151965E+09	3,151888E+09	1,599604E+09	6,303853E+09	7,903457E+09
-2640	7,998665E+08	7,998051E+08	3,151851E+09	3,151953E+09	1,599672E+09	6,303804E+09	7,903475E+09
-2639	7,998787E+08	7,998950E+08	3,151918E+09	3,151821E+09	1,599774E+09	6,303739E+09	7,903513E+09
-2638	7,998178E+08	7,998317E+08	3,151848E+09	3,151905E+09	1,599649E+09	6,303753E+09	7,903403E+09
-2637	7,998820E+08	7,998441E+08	3,151876E+09	3,151948E+09	1,599726E+09	6,303824E+09	7,903550E+09
-2636	7,998109E+08	7,998647E+08	3,152012E+09	3,151860E+09	1,599676E+09	6,303872E+09	7,903548E+09
-2635	7,997758E+08	7,997549E+08	3,151945E+09	3,152026E+09	1,599531E+09	6,303971E+09	7,903502E+09
-2634	7,998215E+08	7,997880E+08	3,152040E+09	3,152031E+09	1,599610E+09	6,304071E+09	7,903681E+09
-2633	7,997165E+08	7,997519E+08	3,152114E+09	3,152023E+09	1,599468E+09	6,304137E+09	7,903605E+09
-2632	7,997288E+08	7,996861E+08	3,152023E+09	3,152157E+09	1,599415E+09	6,304180E+09	7,903595E+09
-2631	7,997399E+08	7,997563E+08	3,152123E+09	3,152063E+09	1,599496E+09	6,304186E+09	7,903682E+09
-2630	7,996607E+08	7,996913E+08	3,152102E+09	3,152085E+09	1,599352E+09	6,304187E+09	7,903539E+09
-2629	7,997386E+08	7,996872E+08	3,152064E+09	3,152124E+09	1,599426E+09	6,304188E+09	7,903614E+09
-2628	7,997240E+08	7,997573E+08	3,152138E+09	3,151978E+09	1,599481E+09	6,304116E+09	7,903597E+09
-2627	7,997038E+08	7,997063E+08	3,151980E+09	3,152048E+09	1,599410E+09	6,304028E+09	7,903439E+09
-2626	7,998106E+08	7,997862E+08	3,151958E+09	3,152006E+09	1,599597E+09	6,303965E+09	7,903561E+09
-2625	7,997704E+08	7,998356E+08	3,151996E+09	3,151867E+09	1,599606E+09	6,303864E+09	7,903469E+09
-2624	7,998228E+08	7,998020E+08	3,151836E+09	3,151926E+09	1,599625E+09	6,303762E+09	7,903387E+09
-2623	7,999080E+08	7,999036E+08	3,151874E+09	3,151809E+09	1,599812E+09	6,303683E+09	7,903495E+09
-2622	7,998564E+08	7,998882E+08	3,151833E+09	3,151770E+09	1,599745E+09	6,303603E+09	7,903347E+09
-2621	7,999327E+08	7,998786E+08	3,151731E+09	3,151850E+09	1,599811E+09	6,303581E+09	7,903392E+09
-2620	7,999299E+08	7,999646E+08	3,151827E+09	3,151727E+09	1,599894E+09	6,303554E+09	7,903448E+09
-2619	7,998661E+08	7,998889E+08	3,151754E+09	3,151801E+09	1,599755E+09	6,303555E+09	7,903310E+09
-2618	7,999360E+08	7,998949E+08	3,151800E+09	3,151855E+09	1,599831E+09	6,303655E+09	7,903486E+09
-2617	7,998669E+08	7,999054E+08	3,151940E+09	3,151785E+09	1,599772E+09	6,303725E+09	7,903498E+09
-2616	7,998344E+08	7,998014E+08	3,151853E+09	3,151939E+09	1,599636E+09	6,303792E+09	7,903428E+09
-2615	7,998704E+08	7,998458E+08	3,151936E+09	3,151945E+09	1,599716E+09	6,303881E+09	7,903597E+09
-2614	7,997658E+08	7,998066E+08	3,151991E+09	3,151931E+09	1,599572E+09	6,303922E+09	7,903494E+09
-2613	7,997838E+08	7,997445E+08	3,151928E+09	3,152053E+09	1,599528E+09	6,303981E+09	7,903509E+09
-2612	7,997968E+08	7,998094E+08	3,152045E+09	3,151955E+09	1,599606E+09	6,304000E+09	7,903606E+09
-2611	7,997226E+08	7,997423E+08	3,151991E+09	3,151966E+09	1,599465E+09	6,303957E+09	7,903422E+09
-2610	7,998066E+08	7,997529E+08	3,151944E+09	3,152020E+09	1,599559E+09	6,303964E+09	7,903523E+09
-2609	7,997918E+08	7,998308E+08	3,152017E+09	3,151882E+09	1,599623E+09	6,303899E+09	7,903522E+09



1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-2608	7,997744E+08	7,997894E+08	3,151864E+09	3,151926E+09	1,599564E+09	6,303791E+09	7,903354E+09
-2607	7,998791E+08	7,998697E+08	3,151858E+09	3,151876E+09	1,599749E+09	6,303735E+09	7,903484E+09
-2606	7,998456E+08	7,999030E+08	3,151879E+09	3,151739E+09	1,599749E+09	6,303619E+09	7,903367E+09
-2605	7,999013E+08	7,998688E+08	3,151727E+09	3,151810E+09	1,599770E+09	6,303537E+09	7,903307E+09
-2604	7,999774E+08	7,999684E+08	3,151755E+09	3,151704E+09	1,599946E+09	6,303460E+09	7,903405E+09
-2603	7,999183E+08	7,999537E+08	3,151679E+09	3,151659E+09	1,599872E+09	6,303338E+09	7,903210E+09
-2602	7,999947E+08	7,999497E+08	3,151600E+09	3,151742E+09	1,599944E+09	6,303342E+09	7,903286E+09
-2601	7,999911E+08	8,000233E+08	3,151733E+09	3,151624E+09	1,600014E+09	6,303356E+09	7,903371E+09
-2600	7,999314E+08	7,999443E+08	3,151679E+09	3,151684E+09	1,599876E+09	6,303363E+09	7,903239E+09
-2599	7,999922E+08	7,999482E+08	3,151731E+09	3,151753E+09	1,599940E+09	6,303484E+09	7,903425E+09
-2598	7,999204E+08	7,999533E+08	3,151843E+09	3,151709E+09	1,599874E+09	6,303552E+09	7,903425E+09
-2597	7,998838E+08	7,998583E+08	3,151764E+09	3,151869E+09	1,599742E+09	6,303633E+09	7,903376E+09
-2596	7,999119E+08	7,998999E+08	3,151854E+09	3,151870E+09	1,599812E+09	6,303724E+09	7,903536E+09
-2595	7,998128E+08	7,998551E+08	3,151887E+09	3,151831E+09	1,599668E+09	6,303718E+09	7,903386E+09
-2594	7,998432E+08	7,997976E+08	3,151829E+09	3,151946E+09	1,599641E+09	6,303776E+09	7,903416E+09
-2593	7,998616E+08	7,998613E+08	3,151949E+09	3,151856E+09	1,599723E+09	6,303805E+09	7,903528E+09
-2592	7,997918E+08	7,998108E+08	3,151876E+09	3,151849E+09	1,599603E+09	6,303725E+09	7,903327E+09
-2591	7,998660E+08	7,998328E+08	3,151825E+09	3,151900E+09	1,599699E+09	6,303725E+09	7,903424E+09
-2590	7,998562E+08	7,999055E+08	3,151887E+09	3,151769E+09	1,599762E+09	6,303655E+09	7,903417E+09
-2589	7,998470E+08	7,998614E+08	3,151759E+09	3,151803E+09	1,599708E+09	6,303562E+09	7,903271E+09
-2588	7,999517E+08	7,999319E+08	3,151758E+09	3,151759E+09	1,599884E+09	6,303516E+09	7,903400E+09
-2587	7,999227E+08	7,999622E+08	3,151737E+09	3,151618E+09	1,599885E+09	6,303355E+09	7,903240E+09
-2586	7,999799E+08	7,999408E+08	3,151577E+09	3,151696E+09	1,599921E+09	6,303273E+09	7,903194E+09
-2585	8,000495E+08	8,000419E+08	3,151623E+09	3,151599E+09	1,600091E+09	6,303222E+09	7,903313E+09
-2584	7,999877E+08	8,000329E+08	3,151566E+09	3,151526E+09	1,600021E+09	6,303093E+09	7,903113E+09
-2583	8,000537E+08	8,000230E+08	3,151525E+09	3,151612E+09	1,600077E+09	6,303136E+09	7,903213E+09
-2582	8,000524E+08	8,000778E+08	3,151652E+09	3,151524E+09	1,600130E+09	6,303176E+09	7,903306E+09
-2581	7,999907E+08	7,999939E+08	3,151612E+09	3,151606E+09	1,599985E+09	6,303218E+09	7,903203E+09
-2580	8,000391E+08	7,999958E+08	3,151647E+09	3,151695E+09	1,600035E+09	6,303342E+09	7,903377E+09
-2579	7,999653E+08	7,999998E+08	3,151713E+09	3,151638E+09	1,599965E+09	6,303351E+09	7,903316E+09
-2578	7,999341E+08	7,999137E+08	3,151643E+09	3,151784E+09	1,599848E+09	6,303426E+09	7,903274E+09
-2577	7,999690E+08	7,999472E+08	3,151758E+09	3,151773E+09	1,599916E+09	6,303530E+09	7,903447E+09
-2576	7,998773E+08	7,999101E+08	3,151795E+09	3,151702E+09	1,599787E+09	6,303497E+09	7,903284E+09
-2575	7,999036E+08	7,998608E+08	3,151747E+09	3,151820E+09	1,599764E+09	6,303567E+09	7,903331E+09
-2574	7,999221E+08	7,999247E+08	3,151837E+09	3,151752E+09	1,599847E+09	6,303589E+09	7,903436E+09
-2573	7,998509E+08	7,998839E+08	3,151785E+09	3,151751E+09	1,599735E+09	6,303536E+09	7,903271E+09
-2572	7,999192E+08	7,999024E+08	3,151739E+09	3,151804E+09	1,599822E+09	6,303543E+09	7,903364E+09
-2571	7,999186E+08	7,999647E+08	3,151768E+09	3,151656E+09	1,599883E+09	6,303424E+09	7,903307E+09
-2570	7,999247E+08	7,999257E+08	3,151632E+09	3,151689E+09	1,599850E+09	6,303321E+09	7,903172E+09
-2569	8,000347E+08	7,999914E+08	3,151622E+09	3,151650E+09	1,600026E+09	6,303272E+09	7,903298E+09
-2568	8,000060E+08	8,000403E+08	3,151579E+09	3,151483E+09	1,600046E+09	6,303063E+09	7,903109E+09
-2567	8,000515E+08	8,000284E+08	3,151439E+09	3,151552E+09	1,600080E+09	6,302991E+09	7,903071E+09
-2566	8,001173E+08	8,001185E+08	3,151498E+09	3,151469E+09	1,600236E+09	6,302967E+09	7,903203E+09
-2565	8,000554E+08	8,001020E+08	3,151495E+09	3,151406E+09	1,600157E+09	6,302901E+09	7,903059E+09
-2564	8,001098E+08	8,000783E+08	3,151466E+09	3,151517E+09	1,600188E+09	6,302984E+09	7,903172E+09
-2563	8,001074E+08	8,001235E+08	3,151551E+09	3,151448E+09	1,600231E+09	6,302999E+09	7,903230E+09
-2562	8,000469E+08	8,000491E+08	3,151498E+09	3,151542E+09	1,600096E+09	6,303040E+09	7,903136E+09
-2561	8,000908E+08	8,000465E+08	3,151542E+09	3,151632E+09	1,600137E+09	6,303174E+09	7,903311E+09
-2560	8,000205E+08	8,000586E+08	3,151610E+09	3,151531E+09	1,600079E+09	6,303141E+09	7,903220E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-2559	7,999865E+08	7,999715E+08	3,151566E+09	3,151653E+09	1,599958E+09	6,303220E+09	7,903178E+09
-2558	8,000268E+08	7,999951E+08	3,151671E+09	3,151662E+09	1,600022E+09	6,303333E+09	7,903355E+09
-2557	7,999374E+08	7,999633E+08	3,151722E+09	3,151600E+09	1,599901E+09	6,303322E+09	7,903223E+09
-2556	7,999502E+08	7,999200E+08	3,151658E+09	3,151736E+09	1,599870E+09	6,303394E+09	7,903264E+09
-2555	7,999719E+08	7,999844E+08	3,151706E+09	3,151665E+09	1,599956E+09	6,303370E+09	7,903327E+09
-2554	7,999138E+08	7,999501E+08	3,151657E+09	3,151652E+09	1,599864E+09	6,303308E+09	7,903172E+09
-2553	7,999940E+08	7,999589E+08	3,151623E+09	3,151696E+09	1,599953E+09	6,303320E+09	7,903273E+09
-2552	8,000051E+08	8,000314E+08	3,151633E+09	3,151513E+09	1,600037E+09	6,303146E+09	7,903183E+09
-2551	8,000081E+08	8,000050E+08	3,151501E+09	3,151538E+09	1,600013E+09	6,303039E+09	7,903052E+09
-2550	8,001140E+08	8,000730E+08	3,151472E+09	3,151522E+09	1,600187E+09	6,302993E+09	7,903180E+09
-2549	8,000783E+08	8,001282E+08	3,151472E+09	3,151354E+09	1,600206E+09	6,302826E+09	7,903033E+09
-2548	8,001081E+08	8,001084E+08	3,151361E+09	3,151435E+09	1,600216E+09	6,302797E+09	7,903013E+09
-2547	8,001747E+08	8,001792E+08	3,151405E+09	3,151360E+09	1,600354E+09	6,302765E+09	7,903119E+09
-2546	8,001208E+08	8,001589E+08	3,151407E+09	3,151321E+09	1,600280E+09	6,302728E+09	7,903007E+09
-2545	8,001737E+08	8,001239E+08	3,151371E+09	3,151453E+09	1,600298E+09	6,302824E+09	7,903122E+09
-2544	8,001687E+08	8,001807E+08	3,151420E+09	3,151360E+09	1,600349E+09	6,302780E+09	7,903129E+09
-2543	8,001018E+08	8,001130E+08	3,151382E+09	3,151435E+09	1,600215E+09	6,302816E+09	7,903031E+09
-2542	8,001458E+08	8,000980E+08	3,151424E+09	3,151524E+09	1,600244E+09	6,302948E+09	7,903192E+09
-2541	8,000783E+08	8,001080E+08	3,151542E+09	3,151414E+09	1,600186E+09	6,302956E+09	7,903142E+09
-2540	8,000349E+08	8,000198E+08	3,151511E+09	3,151551E+09	1,600055E+09	6,303062E+09	7,903116E+09
-2539	8,000736E+08	8,000411E+08	3,151574E+09	3,151573E+09	1,600115E+09	6,303147E+09	7,903262E+09
-2538	7,999905E+08	8,000261E+08	3,151617E+09	3,151526E+09	1,600017E+09	6,303143E+09	7,903160E+09
-2537	8,000038E+08	7,999791E+08	3,151558E+09	3,151663E+09	1,599983E+09	6,303221E+09	7,903204E+09
-2536	8,000346E+08	8,000522E+08	3,151589E+09	3,151549E+09	1,600087E+09	6,303138E+09	7,903225E+09
-2535	7,999854E+08	8,000205E+08	3,151552E+09	3,151511E+09	1,600006E+09	6,303063E+09	7,903069E+09
-2534	8,000737E+08	8,000220E+08	3,151492E+09	3,151570E+09	1,600096E+09	6,303062E+09	7,903158E+09
-2533	8,000871E+08	8,001043E+08	3,151515E+09	3,151384E+09	1,600191E+09	6,302899E+09	7,903090E+09
-2532	8,000739E+08	8,000875E+08	3,151379E+09	3,151414E+09	1,600161E+09	6,302794E+09	7,902955E+09
-2531	8,001752E+08	8,001504E+08	3,151328E+09	3,151398E+09	1,600326E+09	6,302726E+09	7,903052E+09
-2530	8,001474E+08	8,002056E+08	3,151354E+09	3,151236E+09	1,600353E+09	6,302591E+09	7,902944E+09
-2529	8,001787E+08	8,001666E+08	3,151273E+09	3,151335E+09	1,600345E+09	6,302608E+09	7,902953E+09
-2528	8,002495E+08	8,002400E+08	3,151296E+09	3,151249E+09	1,600490E+09	6,302545E+09	7,903035E+09
-2527	8,001924E+08	8,002224E+08	3,151298E+09	3,151212E+09	1,600415E+09	6,302510E+09	7,902925E+09
-2526	8,002377E+08	8,001834E+08	3,151242E+09	3,151368E+09	1,600421E+09	6,302610E+09	7,903031E+09
-2525	8,002279E+08	8,002419E+08	3,151329E+09	3,151260E+09	1,600470E+09	6,302588E+09	7,903058E+09
-2524	8,001450E+08	8,001702E+08	3,151313E+09	3,151330E+09	1,600315E+09	6,302643E+09	7,902958E+09
-2523	8,001903E+08	8,001422E+08	3,151337E+09	3,151422E+09	1,600332E+09	6,302760E+09	7,903092E+09
-2522	8,001321E+08	8,001557E+08	3,151456E+09	3,151331E+09	1,600288E+09	6,302787E+09	7,903075E+09
-2521	8,000874E+08	8,000648E+08	3,151425E+09	3,151486E+09	1,600152E+09	6,302910E+09	7,903062E+09
-2520	8,001267E+08	8,001034E+08	3,151450E+09	3,151481E+09	1,600230E+09	6,302930E+09	7,903161E+09
-2519	8,000474E+08	8,000959E+08	3,151507E+09	3,151412E+09	1,600143E+09	6,302920E+09	7,903063E+09
-2518	8,000673E+08	8,000397E+08	3,151440E+09	3,151551E+09	1,600107E+09	6,302991E+09	7,903098E+09
-2517	8,001084E+08	8,001123E+08	3,151501E+09	3,151419E+09	1,600221E+09	6,302920E+09	7,903140E+09
-2516	8,000532E+08	8,000872E+08	3,151457E+09	3,151388E+09	1,600140E+09	6,302845E+09	7,902985E+09
-2515	8,001416E+08	8,000898E+08	3,151350E+09	3,151452E+09	1,600231E+09	6,302802E+09	7,903034E+09
-2514	8,001582E+08	8,001877E+08	3,151377E+09	3,151276E+09	1,600346E+09	6,302653E+09	7,902999E+09
-2513	8,001427E+08	8,001638E+08	3,151270E+09	3,151308E+09	1,600307E+09	6,302578E+09	7,902884E+09
-2512	8,002443E+08	8,002273E+08	3,151213E+09	3,151260E+09	1,600472E+09	6,302473E+09	7,902945E+09
-2511	8,002242E+08	8,002774E+08	3,151262E+09	3,151102E+09	1,600502E+09	6,302365E+09	7,902866E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-2510	8,002554E+08	8,002241E+08	3,151156E+09	3,151232E+09	1,600480E+09	6,302388E+09	7,902868E+09
-2509	8,003221E+08	8,003010E+08	3,151189E+09	3,151151E+09	1,600623E+09	6,302341E+09	7,902964E+09
-2508	8,002480E+08	8,002902E+08	3,151185E+09	3,151122E+09	1,600538E+09	6,302307E+09	7,902846E+09
-2507	8,002865E+08	8,002402E+08	3,151107E+09	3,151269E+09	1,600527E+09	6,302377E+09	7,902903E+09
-2506	8,002830E+08	8,002978E+08	3,151223E+09	3,151161E+09	1,600581E+09	6,302384E+09	7,902964E+09
-2505	8,002012E+08	8,002126E+08	3,151240E+09	3,151236E+09	1,600414E+09	6,302476E+09	7,902890E+09
-2504	8,002453E+08	8,001936E+08	3,151243E+09	3,151314E+09	1,600439E+09	6,302557E+09	7,902996E+09
-2503	8,001891E+08	8,002174E+08	3,151369E+09	3,151230E+09	1,600407E+09	6,302599E+09	7,903006E+09
-2502	8,001393E+08	8,001252E+08	3,151321E+09	3,151407E+09	1,600264E+09	6,302728E+09	7,902992E+09
-2501	8,001800E+08	8,001662E+08	3,151376E+09	3,151384E+09	1,600346E+09	6,302760E+09	7,903107E+09
-2500	8,000971E+08	8,001573E+08	3,151438E+09	3,151307E+09	1,600254E+09	6,302745E+09	7,902999E+09
-2499	8,001252E+08	8,000910E+08	3,151331E+09	3,151441E+09	1,600216E+09	6,302773E+09	7,902989E+09
-2498	8,001808E+08	8,001713E+08	3,151378E+09	3,151318E+09	1,600352E+09	6,302696E+09	7,903048E+09
-2497	8,001258E+08	8,001503E+08	3,151327E+09	3,151290E+09	1,600276E+09	6,302617E+09	7,902893E+09
-2496	8,002137E+08	8,001719E+08	3,151189E+09	3,151319E+09	1,600386E+09	6,302508E+09	7,902894E+09
-2495	8,002355E+08	8,002730E+08	3,151240E+09	3,151125E+09	1,600508E+09	6,302365E+09	7,902874E+09
-2494	8,002209E+08	8,002362E+08	3,151145E+09	3,151175E+09	1,600457E+09	6,302320E+09	7,902777E+09
-2493	8,003255E+08	8,002957E+08	3,151126E+09	3,151125E+09	1,600621E+09	6,302251E+09	7,902872E+09
-2492	8,002941E+08	8,003469E+08	3,151170E+09	3,150993E+09	1,600641E+09	6,302163E+09	7,902804E+09
-2491	8,003189E+08	8,002895E+08	3,151022E+09	3,151141E+09	1,600608E+09	6,302163E+09	7,902771E+09
-2490	8,003846E+08	8,003713E+08	3,151060E+09	3,151069E+09	1,600756E+09	6,302129E+09	7,902885E+09
-2489	8,003050E+08	8,003497E+08	3,151085E+09	3,151036E+09	1,600655E+09	6,302120E+09	7,902775E+09
-2488	8,003416E+08	8,002998E+08	3,151002E+09	3,151146E+09	1,600641E+09	6,302147E+09	7,902789E+09
-2487	8,003443E+08	8,003526E+08	3,151146E+09	3,151039E+09	1,600697E+09	6,302185E+09	7,902882E+09
-2486	8,002589E+08	8,002594E+08	3,151154E+09	3,151149E+09	1,600518E+09	6,302304E+09	7,902822E+09
-2485	8,002974E+08	8,002483E+08	3,151172E+09	3,151225E+09	1,600546E+09	6,302397E+09	7,902942E+09
-2484	8,002301E+08	8,002800E+08	3,151290E+09	3,151153E+09	1,600510E+09	6,302442E+09	7,902953E+09
-2483	8,001818E+08	8,001773E+08	3,151211E+09	3,151321E+09	1,600359E+09	6,302532E+09	7,902891E+09
-2482	8,002369E+08	8,002172E+08	3,151275E+09	3,151295E+09	1,600454E+09	6,302570E+09	7,903024E+09
-2481	8,001650E+08	8,002026E+08	3,151342E+09	3,151214E+09	1,600368E+09	6,302557E+09	7,902924E+09
-2480	8,001970E+08	8,001519E+08	3,151189E+09	3,151314E+09	1,600349E+09	6,302504E+09	7,902853E+09
-2479	8,002592E+08	8,002483E+08	3,151240E+09	3,151186E+09	1,600507E+09	6,302426E+09	7,902934E+09
-2478	8,001999E+08	8,002311E+08	3,151186E+09	3,151166E+09	1,600431E+09	6,302352E+09	7,902782E+09
-2477	8,002838E+08	8,002555E+08	3,151092E+09	3,151173E+09	1,600539E+09	6,302266E+09	7,902805E+09
-2476	8,003005E+08	8,003545E+08	3,151159E+09	3,150993E+09	1,600655E+09	6,302152E+09	7,902807E+09
-2475	8,002883E+08	8,003005E+08	3,151034E+09	3,151060E+09	1,600589E+09	6,302094E+09	7,902682E+09
-2474	8,003993E+08	8,003614E+08	3,151004E+09	3,151036E+09	1,600761E+09	6,302040E+09	7,902801E+09
-2473	8,003663E+08	8,004098E+08	3,151041E+09	3,150915E+09	1,600776E+09	6,301955E+09	7,902731E+09
-2472	8,003846E+08	8,003626E+08	3,150862E+09	3,151025E+09	1,600747E+09	6,301887E+09	7,902634E+09
-2471	8,004539E+08	8,004404E+08	3,150934E+09	3,150937E+09	1,600894E+09	6,301870E+09	7,902765E+09
-2470	8,003713E+08	8,004051E+08	3,150980E+09	3,150915E+09	1,600776E+09	6,301895E+09	7,902671E+09
-2469	8,004048E+08	8,003532E+08	3,150942E+09	3,151021E+09	1,600758E+09	6,301962E+09	7,902720E+09
-2468	8,003950E+08	8,004100E+08	3,151086E+09	3,150947E+09	1,600805E+09	6,302033E+09	7,902838E+09
-2467	8,003024E+08	8,003127E+08	3,151062E+09	3,151081E+09	1,600615E+09	6,302143E+09	7,902758E+09
-2466	8,003423E+08	8,003058E+08	3,151083E+09	3,151168E+09	1,600648E+09	6,302251E+09	7,902899E+09
-2465	8,002780E+08	8,003260E+08	3,151211E+09	3,151089E+09	1,600604E+09	6,302300E+09	7,902904E+09
-2464	8,002375E+08	8,002289E+08	3,151099E+09	3,151212E+09	1,600466E+09	6,302311E+09	7,902778E+09
-2463	8,003095E+08	8,002688E+08	3,151160E+09	3,151173E+09	1,600578E+09	6,302333E+09	7,902911E+09
-2462	8,002387E+08	8,002596E+08	3,151204E+09	3,151106E+09	1,600498E+09	6,302310E+09	7,902808E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-2461	8,002688E+08	8,002283E+08	3,151069E+09	3,151179E+09	1,600497E+09	6,302248E+09	7,902745E+09
-2460	8,003199E+08	8,003352E+08	3,151124E+09	3,151054E+09	1,600655E+09	6,302178E+09	7,902833E+09
-2459	8,002608E+08	8,003075E+08	3,151064E+09	3,151035E+09	1,600568E+09	6,302098E+09	7,902667E+09
-2458	8,003532E+08	8,003263E+08	3,150990E+09	3,151055E+09	1,600680E+09	6,302045E+09	7,902725E+09
-2457	8,003759E+08	8,004147E+08	3,151061E+09	3,150896E+09	1,600791E+09	6,301957E+09	7,902748E+09
-2456	8,003650E+08	8,003712E+08	3,150889E+09	3,150945E+09	1,600736E+09	6,301834E+09	7,902570E+09
-2455	8,004804E+08	8,004373E+08	3,150862E+09	3,150921E+09	1,600918E+09	6,301783E+09	7,902701E+09
-2454	8,004405E+08	8,004831E+08	3,150902E+09	3,150808E+09	1,600924E+09	6,301710E+09	7,902633E+09
-2453	8,004524E+08	8,004347E+08	3,150772E+09	3,150884E+09	1,600887E+09	6,301656E+09	7,902543E+09
-2452	8,005106E+08	8,005065E+08	3,150866E+09	3,150812E+09	1,601017E+09	6,301678E+09	7,902695E+09
-2451	8,004248E+08	8,004550E+08	3,150896E+09	3,150816E+09	1,600880E+09	6,301712E+09	7,902592E+09
-2450	8,004552E+08	8,004047E+08	3,150861E+09	3,150954E+09	1,600860E+09	6,301815E+09	7,902675E+09
-2449	8,004436E+08	8,004593E+08	3,150997E+09	3,150902E+09	1,600903E+09	6,301899E+09	7,902802E+09
-2448	8,003490E+08	8,003677E+08	3,150935E+09	3,150996E+09	1,600717E+09	6,301932E+09	7,902648E+09
-2447	8,004008E+08	8,003565E+08	3,150975E+09	3,151064E+09	1,600757E+09	6,302038E+09	7,902796E+09
-2446	8,003434E+08	8,003700E+08	3,151101E+09	3,150984E+09	1,600713E+09	6,302085E+09	7,902798E+09
-2445	8,003054E+08	8,002840E+08	3,151008E+09	3,151076E+09	1,600589E+09	6,302084E+09	7,902674E+09
-2444	8,003704E+08	8,003387E+08	3,151059E+09	3,151054E+09	1,600709E+09	6,302114E+09	7,902823E+09
-2443	8,002957E+08	8,003327E+08	3,151078E+09	3,150993E+09	1,600628E+09	6,302071E+09	7,902700E+09
-2442	8,003263E+08	8,003076E+08	3,150965E+09	3,151071E+09	1,600634E+09	6,302036E+09	7,902670E+09
-2441	8,003815E+08	8,004037E+08	3,151037E+09	3,150951E+09	1,600785E+09	6,301988E+09	7,902773E+09
-2440	8,003298E+08	8,003754E+08	3,150948E+09	3,150905E+09	1,600705E+09	6,301853E+09	7,902558E+09
-2439	8,004370E+08	8,003906E+08	3,150871E+09	3,150934E+09	1,600828E+09	6,301805E+09	7,902633E+09
-2438	8,004604E+08	8,004801E+08	3,150915E+09	3,150796E+09	1,600941E+09	6,301710E+09	7,902651E+09
-2437	8,004464E+08	8,004524E+08	3,150751E+09	3,150815E+09	1,600899E+09	6,301566E+09	7,902465E+09
-2436	8,005494E+08	8,005212E+08	3,150732E+09	3,150791E+09	1,601071E+09	6,301523E+09	7,902594E+09
-2435	8,005049E+08	8,005518E+08	3,150776E+09	3,150678E+09	1,601057E+09	6,301454E+09	7,902511E+09
-2434	8,005178E+08	8,004964E+08	3,150686E+09	3,150768E+09	1,601014E+09	6,301454E+09	7,902468E+09
-2433	8,005711E+08	8,005553E+08	3,150792E+09	3,150728E+09	1,601126E+09	6,301520E+09	7,902646E+09
-2432	8,004804E+08	8,005122E+08	3,150789E+09	3,150728E+09	1,600993E+09	6,301517E+09	7,902510E+09
-2431	8,005124E+08	8,004636E+08	3,150758E+09	3,150872E+09	1,600976E+09	6,301630E+09	7,902606E+09
-2430	8,004953E+08	8,005129E+08	3,150893E+09	3,150830E+09	1,601008E+09	6,301724E+09	7,902732E+09
-2429	8,004032E+08	8,004243E+08	3,150862E+09	3,150881E+09	1,600827E+09	6,301743E+09	7,902570E+09
-2428	8,004524E+08	8,004095E+08	3,150900E+09	3,150951E+09	1,600862E+09	6,301851E+09	7,902713E+09
-2427	8,003984E+08	8,004165E+08	3,150997E+09	3,150881E+09	1,600815E+09	6,301877E+09	7,902692E+09
-2426	8,003625E+08	8,003434E+08	3,150904E+09	3,150980E+09	1,600706E+09	6,301884E+09	7,902590E+09
-2425	8,004257E+08	8,004029E+08	3,150950E+09	3,150967E+09	1,600829E+09	6,301917E+09	7,902746E+09
-2424	8,003535E+08	8,004059E+08	3,150943E+09	3,150871E+09	1,600759E+09	6,301814E+09	7,902573E+09
-2423	8,003976E+08	8,003755E+08	3,150852E+09	3,150940E+09	1,600773E+09	6,301792E+09	7,902565E+09
-2422	8,004597E+08	8,004645E+08	3,150922E+09	3,150835E+09	1,600924E+09	6,301758E+09	7,902682E+09
-2421	8,004145E+08	8,004467E+08	3,150840E+09	3,150766E+09	1,600861E+09	6,301606E+09	7,902467E+09
-2420	8,005143E+08	8,004724E+08	3,150748E+09	3,150815E+09	1,600987E+09	6,301562E+09	7,902549E+09
-2419	8,005332E+08	8,005604E+08	3,150766E+09	3,150682E+09	1,601094E+09	6,301448E+09	7,902542E+09
-2418	8,005145E+08	8,005342E+08	3,150634E+09	3,150696E+09	1,601049E+09	6,301330E+09	7,902379E+09
-2417	8,006143E+08	8,005892E+08	3,150638E+09	3,150681E+09	1,601204E+09	6,301319E+09	7,902522E+09
-2416	8,005697E+08	8,006133E+08	3,150661E+09	3,150549E+09	1,601183E+09	6,301211E+09	7,902394E+09
-2415	8,005869E+08	8,005517E+08	3,150586E+09	3,150661E+09	1,601139E+09	6,301247E+09	7,902386E+09
-2414	8,006333E+08	8,006099E+08	3,150680E+09	3,150653E+09	1,601243E+09	6,301333E+09	7,902577E+09
-2413	8,005381E+08	8,005773E+08	3,150691E+09	3,150627E+09	1,601115E+09	6,301318E+09	7,902434E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-2412	8,005598E+08	8,005270E+08	3,150669E+09	3,150775E+09	1,601087E+09	6,301444E+09	7,902531E+09
-2411	8,005443E+08	8,005586E+08	3,150794E+09	3,150730E+09	1,601103E+09	6,301523E+09	7,902626E+09
-2410	8,004581E+08	8,004696E+08	3,150783E+09	3,150780E+09	1,600928E+09	6,301564E+09	7,902491E+09
-2409	8,005085E+08	8,004537E+08	3,150812E+09	3,150869E+09	1,600962E+09	6,301681E+09	7,902643E+09
-2408	8,004546E+08	8,004760E+08	3,150869E+09	3,150778E+09	1,600931E+09	6,301646E+09	7,902577E+09
-2407	8,004257E+08	8,004123E+08	3,150790E+09	3,150874E+09	1,600838E+09	6,301664E+09	7,902502E+09
-2406	8,004866E+08	8,004704E+08	3,150843E+09	3,150863E+09	1,600957E+09	6,301706E+09	7,902663E+09
-2405	8,004228E+08	8,004799E+08	3,150860E+09	3,150730E+09	1,600903E+09	6,301590E+09	7,902493E+09
-2404	8,004667E+08	8,004470E+08	3,150763E+09	3,150813E+09	1,600914E+09	6,301575E+09	7,902489E+09
-2403	8,005318E+08	8,005290E+08	3,150793E+09	3,150727E+09	1,601061E+09	6,301520E+09	7,902581E+09
-2402	8,004910E+08	8,005239E+08	3,150707E+09	3,150663E+09	1,601015E+09	6,301370E+09	7,902385E+09
-2401	8,005863E+08	8,005491E+08	3,150603E+09	3,150714E+09	1,601135E+09	6,301317E+09	7,902452E+09
-2400	8,006041E+08	8,006379E+08	3,150607E+09	3,150542E+09	1,601242E+09	6,301149E+09	7,902391E+09
-2399	8,005946E+08	8,006035E+08	3,150509E+09	3,150548E+09	1,601198E+09	6,301057E+09	7,902255E+09
-2398	8,006883E+08	8,006484E+08	3,150529E+09	3,150557E+09	1,601337E+09	6,301086E+09	7,902423E+09
-2397	8,006428E+08	8,006822E+08	3,150573E+09	3,150421E+09	1,601325E+09	6,300994E+09	7,902319E+09
-2396	8,006449E+08	8,006236E+08	3,150498E+09	3,150565E+09	1,601269E+09	6,301064E+09	7,902332E+09
-2395	8,006822E+08	8,006725E+08	3,150577E+09	3,150575E+09	1,601355E+09	6,301153E+09	7,902507E+09
-2394	8,005872E+08	8,006348E+08	3,150618E+09	3,150547E+09	1,601222E+09	6,301165E+09	7,902387E+09
-2393	8,006070E+08	8,005704E+08	3,150599E+09	3,150699E+09	1,601177E+09	6,301298E+09	7,902475E+09
-2392	8,005967E+08	8,005984E+08	3,150687E+09	3,150630E+09	1,601195E+09	6,301317E+09	7,902512E+09
-2391	8,005208E+08	8,005152E+08	3,150675E+09	3,150682E+09	1,601036E+09	6,301357E+09	7,902393E+09
-2390	8,005671E+08	8,005100E+08	3,150689E+09	3,150784E+09	1,601077E+09	6,301472E+09	7,902550E+09
-2389	8,005161E+08	8,005517E+08	3,150757E+09	3,150653E+09	1,601068E+09	6,301409E+09	7,902477E+09
-2388	8,004819E+08	8,004892E+08	3,150697E+09	3,150749E+09	1,600971E+09	6,301446E+09	7,902418E+09
-2387	8,005467E+08	8,005329E+08	3,150741E+09	3,150743E+09	1,601080E+09	6,301484E+09	7,902563E+09
-2386	8,004923E+08	8,005419E+08	3,150772E+09	3,150617E+09	1,601034E+09	6,301389E+09	7,902423E+09
-2385	8,005377E+08	8,005107E+08	3,150652E+09	3,150722E+09	1,601048E+09	6,301374E+09	7,902422E+09
-2384	8,006049E+08	8,006017E+08	3,150629E+09	3,150612E+09	1,601207E+09	6,301241E+09	7,902447E+09
-2383	8,005713E+08	8,006045E+08	3,150554E+09	3,150537E+09	1,601176E+09	6,301092E+09	7,902268E+09
-2382	8,006629E+08	8,006264E+08	3,150467E+09	3,150584E+09	1,601289E+09	6,301051E+09	7,902340E+09
-2381	8,006837E+08	8,007174E+08	3,150501E+09	3,150377E+09	1,601401E+09	6,300878E+09	7,902279E+09
-2380	8,006670E+08	8,006770E+08	3,150421E+09	3,150409E+09	1,601344E+09	6,300831E+09	7,902175E+09
-2379	8,007522E+08	8,007103E+08	3,150420E+09	3,150453E+09	1,601463E+09	6,300873E+09	7,902336E+09
-2378	8,007045E+08	8,007494E+08	3,150476E+09	3,150342E+09	1,601454E+09	6,300818E+09	7,902272E+09
-2377	8,006972E+08	8,006851E+08	3,150397E+09	3,150502E+09	1,601382E+09	6,300899E+09	7,902281E+09
-2376	8,007337E+08	8,007244E+08	3,150454E+09	3,150480E+09	1,601458E+09	6,300934E+09	7,902392E+09
-2375	8,006518E+08	8,006794E+08	3,150513E+09	3,150444E+09	1,601331E+09	6,300957E+09	7,902288E+09
-2374	8,006694E+08	8,006119E+08	3,150494E+09	3,150604E+09	1,601281E+09	6,301098E+09	7,902379E+09
-2373	8,006611E+08	8,006581E+08	3,150587E+09	3,150510E+09	1,601319E+09	6,301097E+09	7,902416E+09
-2372	8,005756E+08	8,005879E+08	3,150583E+09	3,150575E+09	1,601164E+09	6,301158E+09	7,902321E+09
-2371	8,006125E+08	8,005788E+08	3,150591E+09	3,150684E+09	1,601191E+09	6,301275E+09	7,902466E+09
-2370	8,005685E+08	8,006197E+08	3,150693E+09	3,150553E+09	1,601188E+09	6,301246E+09	7,902434E+09
-2369	8,005355E+08	8,005448E+08	3,150626E+09	3,150658E+09	1,601080E+09	6,301284E+09	7,902364E+09
-2368	8,006084E+08	8,005834E+08	3,150621E+09	3,150636E+09	1,601192E+09	6,301257E+09	7,902449E+09
-2367	8,005716E+08	8,006010E+08	3,150631E+09	3,150514E+09	1,601173E+09	6,301145E+09	7,902318E+09
-2366	8,006148E+08	8,005815E+08	3,150488E+09	3,150618E+09	1,601196E+09	6,301107E+09	7,902303E+09
-2365	8,006867E+08	8,006899E+08	3,150475E+09	3,150459E+09	1,601377E+09	6,300934E+09	7,902310E+09
-2364	8,006489E+08	8,006921E+08	3,150429E+09	3,150375E+09	1,601341E+09	6,300803E+09	7,902144E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-2363	8,007364E+08	8,006991E+08	3,150348E+09	3,150432E+09	1,601435E+09	6,300780E+09	7,902216E+09
-2362	8,007600E+08	8,007875E+08	3,150414E+09	3,150251E+09	1,601548E+09	6,300665E+09	7,902213E+09
-2361	8,007324E+08	8,007445E+08	3,150330E+09	3,150326E+09	1,601477E+09	6,300656E+09	7,902133E+09
-2360	8,008100E+08	8,007773E+08	3,150295E+09	3,150367E+09	1,601587E+09	6,300662E+09	7,902249E+09
-2359	8,007689E+08	8,008140E+08	3,150362E+09	3,150260E+09	1,601583E+09	6,300622E+09	7,902205E+09
-2358	8,007562E+08	8,007409E+08	3,150294E+09	3,150417E+09	1,601497E+09	6,300711E+09	7,902208E+09
-2357	8,007981E+08	8,007804E+08	3,150359E+09	3,150354E+09	1,601578E+09	6,300714E+09	7,902292E+09
-2356	8,007116E+08	8,007342E+08	3,150427E+09	3,150330E+09	1,601446E+09	6,300756E+09	7,902202E+09
-2355	8,007217E+08	8,006653E+08	3,150386E+09	3,150506E+09	1,601387E+09	6,300893E+09	7,902280E+09
-2354	8,007128E+08	8,007205E+08	3,150498E+09	3,150421E+09	1,601433E+09	6,300919E+09	7,902352E+09
-2353	8,006201E+08	8,006501E+08	3,150500E+09	3,150497E+09	1,601270E+09	6,300997E+09	7,902267E+09
-2352	8,006593E+08	8,006308E+08	3,150485E+09	3,150575E+09	1,601290E+09	6,301060E+09	7,902350E+09
-2351	8,006349E+08	8,006676E+08	3,150591E+09	3,150448E+09	1,601303E+09	6,301039E+09	7,902342E+09
-2350	8,006068E+08	8,005960E+08	3,150508E+09	3,150563E+09	1,601203E+09	6,301071E+09	7,902274E+09
-2349	8,006883E+08	8,006539E+08	3,150482E+09	3,150508E+09	1,601342E+09	6,300990E+09	7,902332E+09
-2348	8,006493E+08	8,006870E+08	3,150493E+09	3,150384E+09	1,601336E+09	6,300877E+09	7,902213E+09
-2347	8,006864E+08	8,006656E+08	3,150346E+09	3,150480E+09	1,601352E+09	6,300826E+09	7,902178E+09
-2346	8,007619E+08	8,007722E+08	3,150376E+09	3,150315E+09	1,601534E+09	6,300691E+09	7,902225E+09
-2345	8,007192E+08	8,007659E+08	3,150339E+09	3,150251E+09	1,601485E+09	6,300590E+09	7,902075E+09
-2344	8,008029E+08	8,007630E+08	3,150228E+09	3,150310E+09	1,601566E+09	6,300538E+09	7,902104E+09
-2343	8,008363E+08	8,008552E+08	3,150285E+09	3,150161E+09	1,601691E+09	6,300446E+09	7,902138E+09
-2342	8,008016E+08	8,008145E+08	3,150196E+09	3,150248E+09	1,601616E+09	6,300443E+09	7,902059E+09
-2341	8,008793E+08	8,008521E+08	3,150168E+09	3,150248E+09	1,601731E+09	6,300416E+09	7,902148E+09
-2340	8,008366E+08	8,008800E+08	3,150261E+09	3,150136E+09	1,601717E+09	6,300397E+09	7,902113E+09
-2339	8,008163E+08	8,007913E+08	3,150191E+09	3,150297E+09	1,601608E+09	6,300488E+09	7,902096E+09
-2338	8,008597E+08	8,008306E+08	3,150283E+09	3,150252E+09	1,601690E+09	6,300535E+09	7,902226E+09
-2337	8,007608E+08	8,007890E+08	3,150343E+09	3,150252E+09	1,601550E+09	6,300595E+09	7,902145E+09
-2336	8,007621E+08	8,007213E+08	3,150281E+09	3,150417E+09	1,601483E+09	6,300698E+09	7,902182E+09
-2335	8,007649E+08	8,007780E+08	3,150406E+09	3,150339E+09	1,601543E+09	6,300745E+09	7,902288E+09
-2334	8,006730E+08	8,007012E+08	3,150418E+09	3,150412E+09	1,601374E+09	6,300830E+09	7,902204E+09
-2333	8,007231E+08	8,006861E+08	3,150393E+09	3,150454E+09	1,601409E+09	6,300847E+09	7,902256E+09
-2332	8,007049E+08	8,007257E+08	3,150485E+09	3,150334E+09	1,601431E+09	6,300819E+09	7,902250E+09
-2331	8,006745E+08	8,006621E+08	3,150363E+09	3,150453E+09	1,601337E+09	6,300816E+09	7,902152E+09
-2330	8,007618E+08	8,007325E+08	3,150350E+09	3,150391E+09	1,601494E+09	6,300741E+09	7,902235E+09
-2329	8,007163E+08	8,007696E+08	3,150368E+09	3,150262E+09	1,601486E+09	6,300630E+09	7,902116E+09
-2328	8,007538E+08	8,007379E+08	3,150215E+09	3,150328E+09	1,601492E+09	6,300544E+09	7,902035E+09
-2327	8,008433E+08	8,008403E+08	3,150258E+09	3,150181E+09	1,601684E+09	6,300439E+09	7,902122E+09
-2326	8,007981E+08	8,008345E+08	3,150225E+09	3,150143E+09	1,601633E+09	6,300368E+09	7,902000E+09
-2325	8,008811E+08	8,008445E+08	3,150101E+09	3,150187E+09	1,601726E+09	6,300288E+09	7,902014E+09
-2324	8,009088E+08	8,009396E+08	3,150169E+09	3,150053E+09	1,601848E+09	6,300222E+09	7,902070E+09
-2323	8,008667E+08	8,008881E+08	3,150079E+09	3,150140E+09	1,601755E+09	6,300219E+09	7,901974E+09
-2322	8,009460E+08	8,009120E+08	3,150086E+09	3,150134E+09	1,601858E+09	6,300220E+09	7,902078E+09
-2321	8,008952E+08	8,009308E+08	3,150180E+09	3,150040E+09	1,601826E+09	6,300220E+09	7,902046E+09
-2320	8,008689E+08	8,008337E+08	3,150079E+09	3,150192E+09	1,601703E+09	6,300271E+09	7,901974E+09
-2319	8,009172E+08	8,008812E+08	3,150164E+09	3,150173E+09	1,601798E+09	6,300337E+09	7,902136E+09
-2318	8,008128E+08	8,008474E+08	3,150234E+09	3,150180E+09	1,601660E+09	6,300414E+09	7,902074E+09
-2317	8,008158E+08	8,007855E+08	3,150179E+09	3,150301E+09	1,601601E+09	6,300480E+09	7,902082E+09
-2316	8,008240E+08	8,008365E+08	3,150324E+09	3,150223E+09	1,601660E+09	6,300547E+09	7,902207E+09
-2315	8,007338E+08	8,007515E+08	3,150320E+09	3,150301E+09	1,601485E+09	6,300621E+09	7,902106E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-2314	8,007908E+08	8,007410E+08	3,150302E+09	3,150351E+09	1,601532E+09	6,300654E+09	7,902186E+09
-2313	8,007664E+08	8,007942E+08	3,150374E+09	3,150245E+09	1,601561E+09	6,300619E+09	7,902180E+09
-2312	8,007323E+08	8,007351E+08	3,150225E+09	3,150333E+09	1,601467E+09	6,300558E+09	7,902025E+09
-2311	8,008325E+08	8,008091E+08	3,150221E+09	3,150272E+09	1,601642E+09	6,300493E+09	7,902135E+09
-2310	8,007896E+08	8,008424E+08	3,150258E+09	3,150135E+09	1,601632E+09	6,300394E+09	7,902026E+09
-2309	8,008326E+08	8,008133E+08	3,150104E+09	3,150175E+09	1,601646E+09	6,300278E+09	7,901924E+09
-2308	8,009242E+08	8,009159E+08	3,150145E+09	3,150052E+09	1,601840E+09	6,300197E+09	7,902037E+09
-2307	8,008720E+08	8,009104E+08	3,150086E+09	3,150035E+09	1,601782E+09	6,300121E+09	7,901903E+09
-2306	8,009553E+08	8,009223E+08	3,149985E+09	3,150083E+09	1,601878E+09	6,300069E+09	7,901946E+09
-2305	8,009740E+08	8,010107E+08	3,150056E+09	3,149950E+09	1,601985E+09	6,300006E+09	7,901991E+09
-2304	8,009282E+08	8,009422E+08	3,149955E+09	3,150013E+09	1,601870E+09	6,299969E+09	7,901839E+09
-2303	8,010172E+08	8,009615E+08	3,149968E+09	3,150028E+09	1,601979E+09	6,299997E+09	7,901975E+09
-2302	8,009596E+08	8,009824E+08	3,150070E+09	3,149950E+09	1,601942E+09	6,300020E+09	7,901962E+09
-2301	8,009282E+08	8,009010E+08	3,149968E+09	3,150080E+09	1,601829E+09	6,300048E+09	7,901878E+09
-2300	8,009708E+08	8,009510E+08	3,150077E+09	3,150070E+09	1,601922E+09	6,300147E+09	7,902069E+09
-2299	8,008607E+08	8,009092E+08	3,150154E+09	3,150082E+09	1,601770E+09	6,300236E+09	7,902006E+09
-2298	8,008690E+08	8,008384E+08	3,150129E+09	3,150203E+09	1,601707E+09	6,300331E+09	7,902039E+09
-2297	8,008738E+08	8,008846E+08	3,150255E+09	3,150142E+09	1,601758E+09	6,300397E+09	7,902155E+09
-2296	8,007855E+08	8,007975E+08	3,150202E+09	3,150206E+09	1,601583E+09	6,300408E+09	7,901991E+09
-2295	8,008560E+08	8,008007E+08	3,150157E+09	3,150267E+09	1,601657E+09	6,300424E+09	7,902081E+09
-2294	8,008331E+08	8,008643E+08	3,150234E+09	3,150146E+09	1,601697E+09	6,300380E+09	7,902077E+09
-2293	8,008058E+08	8,008148E+08	3,150092E+09	3,150175E+09	1,601621E+09	6,300267E+09	7,901887E+09
-2292	8,009110E+08	8,008842E+08	3,150113E+09	3,150112E+09	1,601795E+09	6,300225E+09	7,902021E+09
-2291	8,008689E+08	8,009139E+08	3,150143E+09	3,149996E+09	1,601783E+09	6,300139E+09	7,901922E+09
-2290	8,009134E+08	8,008864E+08	3,150002E+09	3,150052E+09	1,601800E+09	6,300054E+09	7,901854E+09
-2289	8,009925E+08	8,009973E+08	3,150030E+09	3,149959E+09	1,601990E+09	6,299989E+09	7,901979E+09
-2288	8,009371E+08	8,009854E+08	3,149950E+09	3,149924E+09	1,601922E+09	6,299874E+09	7,901797E+09
-2287	8,010284E+08	8,009918E+08	3,149855E+09	3,149980E+09	1,602020E+09	6,299835E+09	7,901855E+09
-2286	8,010470E+08	8,010712E+08	3,149944E+09	3,149843E+09	1,602118E+09	6,299787E+09	7,901905E+09
-2285	8,010013E+08	8,010040E+08	3,149835E+09	3,149873E+09	1,602005E+09	6,299709E+09	7,901714E+09
-2284	8,010851E+08	8,010252E+08	3,149856E+09	3,149909E+09	1,602110E+09	6,299765E+09	7,901875E+09
-2283	8,010171E+08	8,010496E+08	3,149951E+09	3,149852E+09	1,602067E+09	6,299802E+09	7,901869E+09
-2282	8,009814E+08	8,009673E+08	3,149894E+09	3,149983E+09	1,601949E+09	6,299877E+09	7,901825E+09
-2281	8,010130E+08	8,010104E+08	3,150015E+09	3,149985E+09	1,602023E+09	6,300000E+09	7,902023E+09
-2280	8,009057E+08	8,009500E+08	3,150075E+09	3,149982E+09	1,601856E+09	6,300058E+09	7,901913E+09
-2279	8,009272E+08	8,008788E+08	3,150032E+09	3,150127E+09	1,601806E+09	6,300159E+09	7,901965E+09
-2278	8,009345E+08	8,009318E+08	3,150144E+09	3,150070E+09	1,601866E+09	6,300214E+09	7,902080E+09
-2277	8,008492E+08	8,008670E+08	3,150068E+09	3,150090E+09	1,601716E+09	6,300158E+09	7,901874E+09
-2276	8,009240E+08	8,008782E+08	3,150038E+09	3,150140E+09	1,601802E+09	6,300177E+09	7,901980E+09
-2275	8,009006E+08	8,009383E+08	3,150118E+09	3,150010E+09	1,601839E+09	6,300127E+09	7,901966E+09
-2274	8,008802E+08	8,008849E+08	3,150014E+09	3,150033E+09	1,601765E+09	6,300047E+09	7,901812E+09
-2273	8,009772E+08	8,009532E+08	3,150021E+09	3,149993E+09	1,601930E+09	6,300014E+09	7,901944E+09
-2272	8,009346E+08	8,009798E+08	3,150009E+09	3,149882E+09	1,601914E+09	6,299891E+09	7,901805E+09
-2271	8,009881E+08	8,009637E+08	3,149848E+09	3,149964E+09	1,601952E+09	6,299812E+09	7,901764E+09
-2270	8,010669E+08	8,010739E+08	3,149884E+09	3,149861E+09	1,602141E+09	6,299745E+09	7,901885E+09
-2269	8,010174E+08	8,010637E+08	3,149805E+09	3,149775E+09	1,602081E+09	6,299580E+09	7,901661E+09
-2268	8,011117E+08	8,010609E+08	3,149732E+09	3,149829E+09	1,602173E+09	6,299561E+09	7,901734E+09
-2267	8,011226E+08	8,011350E+08	3,149821E+09	3,149711E+09	1,602258E+09	6,299532E+09	7,901789E+09
-2266	8,010713E+08	8,010718E+08	3,149748E+09	3,149755E+09	1,602143E+09	6,299503E+09	7,901646E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-2265	8,011326E+08	8,010983E+08	3,149776E+09	3,149820E+09	1,602231E+09	6,299596E+09	7,901827E+09
-2264	8,010588E+08	8,011104E+08	3,149866E+09	3,149762E+09	1,602169E+09	6,299629E+09	7,901798E+09
-2263	8,010308E+08	8,010196E+08	3,149818E+09	3,149912E+09	1,602050E+09	6,299729E+09	7,901780E+09
-2262	8,010653E+08	8,010508E+08	3,149943E+09	3,149917E+09	1,602116E+09	6,299861E+09	7,901977E+09
-2261	8,009670E+08	8,009938E+08	3,149969E+09	3,149881E+09	1,601961E+09	6,299851E+09	7,901812E+09
-2260	8,009917E+08	8,009316E+08	3,149907E+09	3,150028E+09	1,601923E+09	6,299936E+09	7,901859E+09
-2259	8,009980E+08	8,009960E+08	3,149999E+09	3,149970E+09	1,601994E+09	6,299969E+09	7,901963E+09
-2258	8,009169E+08	8,009390E+08	3,149958E+09	3,149958E+09	1,601856E+09	6,299917E+09	7,901773E+09
-2257	8,009821E+08	8,009519E+08	3,149943E+09	3,150006E+09	1,601934E+09	6,299949E+09	7,901883E+09
-2256	8,009642E+08	8,010006E+08	3,150010E+09	3,149870E+09	1,601965E+09	6,299880E+09	7,901845E+09
-2255	8,009532E+08	8,009504E+08	3,149897E+09	3,149927E+09	1,601904E+09	6,299824E+09	7,901727E+09
-2254	8,010488E+08	8,010246E+08	3,149898E+09	3,149903E+09	1,602073E+09	6,299801E+09	7,901875E+09
-2253	8,010110E+08	8,010645E+08	3,149861E+09	3,149759E+09	1,602076E+09	6,299620E+09	7,901695E+09
-2252	8,010680E+08	8,010496E+08	3,149714E+09	3,149833E+09	1,602118E+09	6,299547E+09	7,901665E+09
-2251	8,011460E+08	8,011506E+08	3,149753E+09	3,149726E+09	1,602297E+09	6,299479E+09	7,901775E+09
-2250	8,011001E+08	8,011338E+08	3,149711E+09	3,149628E+09	1,602234E+09	6,299340E+09	7,901573E+09
-2249	8,011772E+08	8,011296E+08	3,149635E+09	3,149708E+09	1,602307E+09	6,299343E+09	7,901650E+09
-2248	8,011804E+08	8,011965E+08	3,149699E+09	3,149603E+09	1,602377E+09	6,299302E+09	7,901679E+09
-2247	8,011289E+08	8,011394E+08	3,149633E+09	3,149681E+09	1,602268E+09	6,299314E+09	7,901582E+09
-2246	8,011838E+08	8,011578E+08	3,149686E+09	3,149747E+09	1,602342E+09	6,299432E+09	7,901774E+09
-2245	8,011163E+08	8,011642E+08	3,149772E+09	3,149655E+09	1,602281E+09	6,299427E+09	7,901708E+09
-2244	8,010956E+08	8,010663E+08	3,149730E+09	3,149809E+09	1,602162E+09	6,299538E+09	7,901700E+09
-2243	8,011279E+08	8,010943E+08	3,149829E+09	3,149825E+09	1,602222E+09	6,299654E+09	7,901876E+09
-2242	8,010319E+08	8,010507E+08	3,149870E+09	3,149780E+09	1,602083E+09	6,299650E+09	7,901732E+09
-2241	8,010413E+08	8,010033E+08	3,149803E+09	3,149926E+09	1,602045E+09	6,299730E+09	7,901775E+09
-2240	8,010466E+08	8,010611E+08	3,149888E+09	3,149851E+09	1,602108E+09	6,299739E+09	7,901847E+09
-2239	8,009768E+08	8,010065E+08	3,149863E+09	3,149851E+09	1,601983E+09	6,299714E+09	7,901697E+09
-2238	8,010436E+08	8,010111E+08	3,149856E+09	3,149899E+09	1,602055E+09	6,299755E+09	7,901810E+09
-2237	8,010357E+08	8,010660E+08	3,149886E+09	3,149745E+09	1,602102E+09	6,299631E+09	7,901733E+09
-2236	8,010311E+08	8,010250E+08	3,149757E+09	3,149812E+09	1,602056E+09	6,299569E+09	7,901625E+09
-2235	8,011254E+08	8,011047E+08	3,149740E+09	3,149791E+09	1,602230E+09	6,299530E+09	7,901760E+09
-2234	8,010959E+08	8,011471E+08	3,149737E+09	3,149618E+09	1,602243E+09	6,299356E+09	7,901598E+09
-2233	8,011425E+08	8,011295E+08	3,149601E+09	3,149689E+09	1,602272E+09	6,299290E+09	7,901562E+09
-2232	8,012204E+08	8,012141E+08	3,149627E+09	3,149582E+09	1,602435E+09	6,299209E+09	7,901643E+09
-2231	8,011772E+08	8,012021E+08	3,149586E+09	3,149519E+09	1,602379E+09	6,299105E+09	7,901484E+09
-2230	8,012421E+08	8,011993E+08	3,149525E+09	3,149618E+09	1,602441E+09	6,299144E+09	7,901585E+09
-2229	8,012441E+08	8,012711E+08	3,149581E+09	3,149498E+09	1,602515E+09	6,299079E+09	7,901594E+09
-2228	8,011917E+08	8,012068E+08	3,149540E+09	3,149580E+09	1,602398E+09	6,299120E+09	7,901519E+09
-2227	8,012430E+08	8,012123E+08	3,149597E+09	3,149653E+09	1,602455E+09	6,299250E+09	7,901705E+09
-2226	8,011828E+08	8,012108E+08	3,149700E+09	3,149550E+09	1,602394E+09	6,299250E+09	7,901644E+09
-2225	8,011459E+08	8,011179E+08	3,149638E+09	3,149717E+09	1,602264E+09	6,299355E+09	7,901619E+09
-2224	8,011763E+08	8,011450E+08	3,149699E+09	3,149734E+09	1,602321E+09	6,299433E+09	7,901754E+09
-2223	8,010854E+08	8,011148E+08	3,149742E+09	3,149696E+09	1,602200E+09	6,299438E+09	7,901638E+09
-2222	8,010932E+08	8,010657E+08	3,149706E+09	3,149825E+09	1,602159E+09	6,299531E+09	7,901689E+09
-2221	8,011096E+08	8,011217E+08	3,149782E+09	3,149713E+09	1,602231E+09	6,299495E+09	7,901726E+09
-2220	8,010495E+08	8,010672E+08	3,149766E+09	3,149721E+09	1,602117E+09	6,299487E+09	7,901603E+09
-2219	8,011142E+08	8,010748E+08	3,149737E+09	3,149790E+09	1,602189E+09	6,299527E+09	7,901716E+09
-2218	8,011130E+08	8,011423E+08	3,149775E+09	3,149629E+09	1,602255E+09	6,299405E+09	7,901660E+09
-2217	8,010967E+08	8,011132E+08	3,149641E+09	3,149697E+09	1,602210E+09	6,299338E+09	7,901548E+09



1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude <sup>⊙</sup>	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-2216	8,011944E+08	8,011794E+08	3,149608E+09	3,149662E+09	1,602374E+09	6,299269E+09	7,901643E+09
-2215	8,011758E+08	8,012220E+08	3,149614E+09	3,149499E+09	1,602398E+09	6,299113E+09	7,901511E+09
-2214	8,012198E+08	8,011958E+08	3,149488E+09	3,149569E+09	1,602416E+09	6,299057E+09	7,901473E+09
-2213	8,012976E+08	8,012825E+08	3,149484E+09	3,149450E+09	1,602580E+09	6,298934E+09	7,901514E+09
-2212	8,012541E+08	8,012795E+08	3,149449E+09	3,149404E+09	1,602534E+09	6,298854E+09	7,901387E+09
-2211	8,013074E+08	8,012741E+08	3,149394E+09	3,149512E+09	1,602582E+09	6,298905E+09	7,901487E+09
-2210	8,013128E+08	8,013403E+08	3,149493E+09	3,149380E+09	1,602653E+09	6,298873E+09	7,901526E+09
-2209	8,012483E+08	8,012686E+08	3,149466E+09	3,149469E+09	1,602517E+09	6,298935E+09	7,901452E+09
-2208	8,012970E+08	8,012537E+08	3,149499E+09	3,149552E+09	1,602551E+09	6,299050E+09	7,901601E+09
-2207	8,012412E+08	8,012605E+08	3,149592E+09	3,149479E+09	1,602502E+09	6,299071E+09	7,901573E+09
-2206	8,011955E+08	8,011732E+08	3,149534E+09	3,149642E+09	1,602369E+09	6,299176E+09	7,901545E+09
-2205	8,012283E+08	8,012070E+08	3,149579E+09	3,149627E+09	1,602435E+09	6,299206E+09	7,901641E+09
-2204	8,011455E+08	8,011794E+08	3,149648E+09	3,149578E+09	1,602325E+09	6,299226E+09	7,901551E+09
-2203	8,011528E+08	8,011238E+08	3,149619E+09	3,149707E+09	1,602277E+09	6,299326E+09	7,901603E+09
-2202	8,011807E+08	8,011797E+08	3,149708E+09	3,149590E+09	1,602360E+09	6,299297E+09	7,901658E+09
-2201	8,011103E+08	8,011351E+08	3,149668E+09	3,149614E+09	1,602245E+09	6,299283E+09	7,901528E+09
-2200	8,011758E+08	8,011420E+08	3,149595E+09	3,149689E+09	1,602318E+09	6,299284E+09	7,901602E+09
-2199	8,011855E+08	8,012212E+08	3,149629E+09	3,149534E+09	1,602407E+09	6,299163E+09	7,901569E+09
-2198	8,011701E+08	8,011891E+08	3,149514E+09	3,149578E+09	1,602359E+09	6,299092E+09	7,901451E+09
-2197	8,012791E+08	8,012503E+08	3,149462E+09	3,149509E+09	1,602529E+09	6,298971E+09	7,901500E+09
-2196	8,012666E+08	8,012944E+08	3,149475E+09	3,149349E+09	1,602561E+09	6,298824E+09	7,901385E+09
-2195	8,013007E+08	8,012719E+08	3,149350E+09	3,149438E+09	1,602573E+09	6,298788E+09	7,901361E+09
-2194	8,013763E+08	8,013660E+08	3,149371E+09	3,149318E+09	1,602742E+09	6,298689E+09	7,901432E+09
-2193	8,013125E+08	8,013661E+08	3,149359E+09	3,149289E+09	1,602679E+09	6,298648E+09	7,901326E+09
-2192	8,013611E+08	8,013394E+08	3,149303E+09	3,149405E+09	1,602700E+09	6,298708E+09	7,901409E+09
-2191	8,013737E+08	8,013965E+08	3,149410E+09	3,149298E+09	1,602770E+09	6,298707E+09	7,901478E+09
-2190	8,013049E+08	8,013128E+08	3,149384E+09	3,149393E+09	1,602618E+09	6,298776E+09	7,901394E+09
-2189	8,013552E+08	8,012977E+08	3,149367E+09	3,149459E+09	1,602653E+09	6,298827E+09	7,901480E+09
-2188	8,013025E+08	8,013175E+08	3,149460E+09	3,149384E+09	1,602620E+09	6,298844E+09	7,901464E+09
-2187	8,012505E+08	8,012349E+08	3,149415E+09	3,149537E+09	1,602485E+09	6,298952E+09	7,901437E+09
-2186	8,012906E+08	8,012689E+08	3,149500E+09	3,149494E+09	1,602560E+09	6,298994E+09	7,901554E+09
-2185	8,012007E+08	8,012431E+08	3,149583E+09	3,149453E+09	1,602444E+09	6,299036E+09	7,901480E+09
-2184	8,012084E+08	8,011755E+08	3,149526E+09	3,149597E+09	1,602384E+09	6,299123E+09	7,901507E+09
-2183	8,012433E+08	8,012440E+08	3,149599E+09	3,149513E+09	1,602487E+09	6,299112E+09	7,901599E+09
-2182	8,011715E+08	8,012062E+08	3,149555E+09	3,149533E+09	1,602378E+09	6,299089E+09	7,901466E+09
-2181	8,012437E+08	8,012142E+08	3,149449E+09	3,149573E+09	1,602458E+09	6,299022E+09	7,901480E+09
-2180	8,012678E+08	8,012975E+08	3,149496E+09	3,149399E+09	1,602565E+09	6,298895E+09	7,901460E+09
-2179	8,012534E+08	8,012610E+08	3,149382E+09	3,149429E+09	1,602514E+09	6,298812E+09	7,901326E+09
-2178	8,013675E+08	8,013245E+08	3,149342E+09	3,149350E+09	1,602692E+09	6,298692E+09	7,901384E+09
-2177	8,013399E+08	8,013806E+08	3,149352E+09	3,149210E+09	1,602720E+09	6,298562E+09	7,901283E+09
-2176	8,013648E+08	8,013505E+08	3,149212E+09	3,149317E+09	1,602715E+09	6,298529E+09	7,901244E+09
-2175	8,014420E+08	8,014460E+08	3,149256E+09	3,149222E+09	1,602888E+09	6,298478E+09	7,901367E+09
-2174	8,013760E+08	8,014301E+08	3,149272E+09	3,149192E+09	1,602806E+09	6,298464E+09	7,901270E+09
-2173	8,014288E+08	8,013886E+08	3,149190E+09	3,149294E+09	1,602817E+09	6,298484E+09	7,901302E+09
-2172	8,014478E+08	8,014462E+08	3,149292E+09	3,149198E+09	1,602894E+09	6,298490E+09	7,901384E+09
-2171	8,013693E+08	8,013681E+08	3,149259E+09	3,149298E+09	1,602737E+09	6,298557E+09	7,901294E+09
-2170	8,014186E+08	8,013638E+08	3,149261E+09	3,149348E+09	1,602782E+09	6,298608E+09	7,901391E+09
-2169	8,013510E+08	8,013907E+08	3,149378E+09	3,149270E+09	1,602742E+09	6,298648E+09	7,901390E+09
-2168	8,012968E+08	8,012930E+08	3,149339E+09	3,149425E+09	1,602590E+09	6,298763E+09	7,901353E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-2167	8,013446E+08	8,013247E+08	3,149434E+09	3,149406E+09	1,602669E+09	6,298839E+09	7,901508E+09
-2166	8,012536E+08	8,012935E+08	3,149512E+09	3,149376E+09	1,602547E+09	6,298888E+09	7,901435E+09
-2165	8,012666E+08	8,012300E+08	3,149394E+09	3,149509E+09	1,602497E+09	6,298903E+09	7,901400E+09
-2164	8,013124E+08	8,013111E+08	3,149448E+09	3,149415E+09	1,602624E+09	6,298863E+09	7,901487E+09
-2163	8,012432E+08	8,012788E+08	3,149409E+09	3,149412E+09	1,602522E+09	6,298822E+09	7,901344E+09
-2162	8,013294E+08	8,012886E+08	3,149324E+09	3,149411E+09	1,602618E+09	6,298734E+09	7,901352E+09
-2161	8,013466E+08	8,013761E+08	3,149382E+09	3,149235E+09	1,602723E+09	6,298617E+09	7,901340E+09
-2160	8,013295E+08	8,013336E+08	3,149253E+09	3,149282E+09	1,602663E+09	6,298535E+09	7,901198E+09
-2159	8,014414E+08	8,014073E+08	3,149219E+09	3,149236E+09	1,602849E+09	6,298455E+09	7,901304E+09
-2158	8,014053E+08	8,014640E+08	3,149248E+09	3,149111E+09	1,602869E+09	6,298358E+09	7,901228E+09
-2157	8,014302E+08	8,014242E+08	3,149090E+09	3,149206E+09	1,602854E+09	6,298295E+09	7,901150E+09
-2156	8,015162E+08	8,015135E+08	3,149148E+09	3,149114E+09	1,603030E+09	6,298262E+09	7,901291E+09
-2155	8,014505E+08	8,014867E+08	3,149165E+09	3,149088E+09	1,602937E+09	6,298253E+09	7,901190E+09
-2154	8,015049E+08	8,014446E+08	3,149079E+09	3,149177E+09	1,602949E+09	6,298256E+09	7,901206E+09
-2153	8,015077E+08	8,015136E+08	3,149175E+09	3,149090E+09	1,603021E+09	6,298265E+09	7,901286E+09
-2152	8,014205E+08	8,014323E+08	3,149133E+09	3,149190E+09	1,602853E+09	6,298323E+09	7,901176E+09
-2151	8,014687E+08	8,014308E+08	3,149169E+09	3,149252E+09	1,602900E+09	6,298421E+09	7,901320E+09
-2150	8,014004E+08	8,014466E+08	3,149318E+09	3,149175E+09	1,602847E+09	6,298493E+09	7,901340E+09
-2149	8,013500E+08	8,013363E+08	3,149249E+09	3,149322E+09	1,602686E+09	6,298570E+09	7,901257E+09
-2148	8,014071E+08	8,013746E+08	3,149330E+09	3,149319E+09	1,602782E+09	6,298649E+09	7,901430E+09
-2147	8,013168E+08	8,013511E+08	3,149391E+09	3,149288E+09	1,602668E+09	6,298679E+09	7,901347E+09
-2146	8,013350E+08	8,013008E+08	3,149271E+09	3,149391E+09	1,602636E+09	6,298662E+09	7,901298E+09
-2145	8,013772E+08	8,013909E+08	3,149338E+09	3,149282E+09	1,602768E+09	6,298619E+09	7,901387E+09
-2144	8,013126E+08	8,013489E+08	3,149290E+09	3,149267E+09	1,602661E+09	6,298557E+09	7,901218E+09
-2143	8,014065E+08	8,013608E+08	3,149214E+09	3,149281E+09	1,602767E+09	6,298495E+09	7,901263E+09
-2142	8,014204E+08	8,014469E+08	3,149270E+09	3,149117E+09	1,602867E+09	6,298387E+09	7,901254E+09
-2141	8,014018E+08	8,014076E+08	3,149099E+09	3,149161E+09	1,602809E+09	6,298261E+09	7,901070E+09
-2140	8,015175E+08	8,014909E+08	3,149068E+09	3,149122E+09	1,603008E+09	6,298191E+09	7,901199E+09
-2139	8,014823E+08	8,015424E+08	3,149119E+09	3,148993E+09	1,603025E+09	6,298112E+09	7,901136E+09
-2138	8,015146E+08	8,014974E+08	3,148980E+09	3,149065E+09	1,603012E+09	6,298045E+09	7,901057E+09
-2137	8,015917E+08	8,015833E+08	3,149044E+09	3,148982E+09	1,603175E+09	6,298026E+09	7,901201E+09
-2136	8,015197E+08	8,015481E+08	3,149041E+09	3,148975E+09	1,603068E+09	6,298015E+09	7,901083E+09
-2135	8,015674E+08	8,015141E+08	3,148966E+09	3,149086E+09	1,603081E+09	6,298053E+09	7,901134E+09
-2134	8,015566E+08	8,015800E+08	3,149086E+09	3,149005E+09	1,603137E+09	6,298091E+09	7,901228E+09
-2133	8,014680E+08	8,014895E+08	3,149040E+09	3,149089E+09	1,602957E+09	6,298129E+09	7,901086E+09
-2132	8,015233E+08	8,014830E+08	3,149089E+09	3,149151E+09	1,603006E+09	6,298240E+09	7,901246E+09
-2131	8,014587E+08	8,014912E+08	3,149240E+09	3,149086E+09	1,602950E+09	6,298326E+09	7,901276E+09
-2130	8,014140E+08	8,013873E+08	3,149152E+09	3,149220E+09	1,602801E+09	6,298371E+09	7,901173E+09
-2129	8,014623E+08	8,014391E+08	3,149214E+09	3,149218E+09	1,602901E+09	6,298433E+09	7,901334E+09
-2128	8,013747E+08	8,014167E+08	3,149253E+09	3,149182E+09	1,602791E+09	6,298435E+09	7,901227E+09
-2127	8,014006E+08	8,013715E+08	3,149154E+09	3,149275E+09	1,602772E+09	6,298430E+09	7,901202E+09
-2126	8,014457E+08	8,014559E+08	3,149237E+09	3,149157E+09	1,602902E+09	6,298394E+09	7,901296E+09
-2125	8,013872E+08	8,014114E+08	3,149157E+09	3,149127E+09	1,602799E+09	6,298284E+09	7,901083E+09
-2124	8,014863E+08	8,014358E+08	3,149075E+09	3,149153E+09	1,602922E+09	6,298227E+09	7,901150E+09
-2123	8,014984E+08	8,015301E+08	3,149133E+09	3,149002E+09	1,603029E+09	6,298135E+09	7,901163E+09
-2122	8,014809E+08	8,014980E+08	3,148975E+09	3,149025E+09	1,602979E+09	6,298000E+09	7,900979E+09
-2121	8,015884E+08	8,015807E+08	3,148966E+09	3,148987E+09	1,603169E+09	6,297953E+09	7,901122E+09
-2120	8,015575E+08	8,016143E+08	3,149008E+09	3,148866E+09	1,603172E+09	6,297874E+09	7,901046E+09
-2119	8,015903E+08	8,015641E+08	3,148879E+09	3,148959E+09	1,603154E+09	6,297838E+09	7,900992E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-2118	8,016585E+08	8,016440E+08	3,148935E+09	3,148890E+09	1,603302E+09	6,297826E+09	7,901128E+09
-2117	8,015803E+08	8,016073E+08	3,148890E+09	3,148872E+09	1,603188E+09	6,297762E+09	7,900949E+09
-2116	8,016280E+08	8,015804E+08	3,148832E+09	3,148983E+09	1,603208E+09	6,297815E+09	7,901024E+09
-2115	8,016177E+08	8,016376E+08	3,148984E+09	3,148898E+09	1,603255E+09	6,297882E+09	7,901137E+09
-2114	8,015330E+08	8,015438E+08	3,148960E+09	3,148962E+09	1,603077E+09	6,297922E+09	7,900999E+09
-2113	8,015798E+08	8,015389E+08	3,149016E+09	3,149039E+09	1,603119E+09	6,298055E+09	7,901174E+09
-2112	8,015151E+08	8,015428E+08	3,149135E+09	3,148998E+09	1,603058E+09	6,298133E+09	7,901190E+09
-2111	8,014697E+08	8,014513E+08	3,149051E+09	3,149142E+09	1,602921E+09	6,298193E+09	7,901114E+09
-2110	8,015140E+08	8,015026E+08	3,149116E+09	3,149134E+09	1,603017E+09	6,298251E+09	7,901267E+09
-2109	8,014333E+08	8,014767E+08	3,149130E+09	3,149067E+09	1,602910E+09	6,298196E+09	7,901107E+09
-2108	8,014726E+08	8,014373E+08	3,149034E+09	3,149149E+09	1,602910E+09	6,298183E+09	7,901093E+09
-2107	8,015236E+08	8,015197E+08	3,149118E+09	3,149032E+09	1,603043E+09	6,298151E+09	7,901194E+09
-2106	8,014687E+08	8,014898E+08	3,149025E+09	3,148985E+09	1,602959E+09	6,298010E+09	7,900968E+09
-2105	8,015567E+08	8,015274E+08	3,148943E+09	3,149014E+09	1,603084E+09	6,297957E+09	7,901041E+09
-2104	8,015699E+08	8,016162E+08	3,148994E+09	3,148876E+09	1,603186E+09	6,297870E+09	7,901056E+09
-2103	8,015581E+08	8,015796E+08	3,148870E+09	3,148904E+09	1,603138E+09	6,297774E+09	7,900912E+09
-2102	8,016626E+08	8,016467E+08	3,148870E+09	3,148872E+09	1,603309E+09	6,297742E+09	7,901052E+09
-2101	8,016350E+08	8,016717E+08	3,148871E+09	3,148751E+09	1,603307E+09	6,297622E+09	7,900929E+09
-2100	8,016684E+08	8,016304E+08	3,148728E+09	3,148851E+09	1,603299E+09	6,297579E+09	7,900878E+09
-2099	8,017285E+08	8,017117E+08	3,148799E+09	3,148789E+09	1,603440E+09	6,297587E+09	7,901028E+09
-2098	8,016475E+08	8,016824E+08	3,148777E+09	3,148742E+09	1,603330E+09	6,297519E+09	7,900849E+09
-2097	8,016826E+08	8,016516E+08	3,148757E+09	3,148852E+09	1,603334E+09	6,297609E+09	7,900943E+09
-2096	8,016744E+08	8,016921E+08	3,148908E+09	3,148793E+09	1,603367E+09	6,297701E+09	7,901068E+09
-2095	8,015902E+08	8,015939E+08	3,148895E+09	3,148881E+09	1,603184E+09	6,297777E+09	7,900961E+09
-2094	8,016269E+08	8,015878E+08	3,148932E+09	3,148976E+09	1,603215E+09	6,297908E+09	7,901123E+09
-2093	8,015643E+08	8,015939E+08	3,148998E+09	3,148920E+09	1,603158E+09	6,297918E+09	7,901076E+09
-2092	8,015275E+08	8,015147E+08	3,148913E+09	3,149045E+09	1,603042E+09	6,297958E+09	7,901000E+09
-2091	8,015815E+08	8,015607E+08	3,148998E+09	3,149020E+09	1,603142E+09	6,298018E+09	7,901161E+09
-2090	8,015113E+08	8,015425E+08	3,149015E+09	3,148914E+09	1,603054E+09	6,297929E+09	7,900983E+09
-2089	8,015454E+08	8,015123E+08	3,148929E+09	3,148998E+09	1,603058E+09	6,297927E+09	7,900984E+09
-2088	8,015966E+08	8,015965E+08	3,148989E+09	3,148906E+09	1,603193E+09	6,297895E+09	7,901089E+09
-2087	8,015393E+08	8,015761E+08	3,148920E+09	3,148874E+09	1,603115E+09	6,297793E+09	7,900909E+09
-2086	8,016198E+08	8,016091E+08	3,148848E+09	3,148910E+09	1,603229E+09	6,297759E+09	7,900988E+09
-2085	8,016405E+08	8,016841E+08	3,148867E+09	3,148757E+09	1,603325E+09	6,297624E+09	7,900948E+09
-2084	8,016414E+08	8,016480E+08	3,148737E+09	3,148787E+09	1,603289E+09	6,297524E+09	7,900813E+09
-2083	8,017498E+08	8,017067E+08	3,148730E+09	3,148761E+09	1,603456E+09	6,297491E+09	7,900948E+09
-2082	8,017201E+08	8,017454E+08	3,148710E+09	3,148616E+09	1,603465E+09	6,297327E+09	7,900792E+09
-2081	8,017389E+08	8,017157E+08	3,148588E+09	3,148710E+09	1,603455E+09	6,297298E+09	7,900753E+09
-2080	8,017932E+08	8,017863E+08	3,148671E+09	3,148661E+09	1,603580E+09	6,297332E+09	7,900911E+09
-2079	8,017106E+08	8,017501E+08	3,148707E+09	3,148625E+09	1,603461E+09	6,297332E+09	7,900793E+09
-2078	8,017349E+08	8,017052E+08	3,148704E+09	3,148757E+09	1,603440E+09	6,297461E+09	7,900902E+09
-2077	8,017264E+08	8,017356E+08	3,148811E+09	3,148712E+09	1,603462E+09	6,297523E+09	7,900985E+09
-2076	8,016463E+08	8,016488E+08	3,148781E+09	3,148814E+09	1,603295E+09	6,297595E+09	7,900890E+09
-2075	8,016823E+08	8,016413E+08	3,148819E+09	3,148905E+09	1,603324E+09	6,297725E+09	7,901048E+09
-2074	8,016256E+08	8,016580E+08	3,148884E+09	3,148803E+09	1,603284E+09	6,297688E+09	7,900971E+09
-2073	8,015880E+08	8,015837E+08	3,148822E+09	3,148903E+09	1,603172E+09	6,297725E+09	7,900897E+09
-2072	8,016483E+08	8,016210E+08	3,148895E+09	3,148892E+09	1,603269E+09	6,297788E+09	7,901057E+09
-2071	8,015823E+08	8,016087E+08	3,148928E+09	3,148797E+09	1,603191E+09	6,297725E+09	7,900916E+09
-2070	8,016044E+08	8,015825E+08	3,148826E+09	3,148895E+09	1,603187E+09	6,297721E+09	7,900908E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-2069	8,016580E+08	8,016679E+08	3,148842E+09	3,148801E+09	1,603326E+09	6,297643E+09	7,900969E+09
-2068	8,016133E+08	8,016538E+08	3,148774E+09	3,148759E+09	1,603267E+09	6,297534E+09	7,900801E+09
-2067	8,017021E+08	8,016750E+08	3,148719E+09	3,148790E+09	1,603377E+09	6,297509E+09	7,900886E+09
-2066	8,017333E+08	8,017566E+08	3,148726E+09	3,148607E+09	1,603490E+09	6,297332E+09	7,900822E+09
-2065	8,017282E+08	8,017288E+08	3,148599E+09	3,148633E+09	1,603457E+09	6,297232E+09	7,900689E+09
-2064	8,018302E+08	8,017871E+08	3,148575E+09	3,148633E+09	1,603617E+09	6,297208E+09	7,900825E+09
-2063	8,017924E+08	8,018311E+08	3,148599E+09	3,148492E+09	1,603624E+09	6,297091E+09	7,900714E+09
-2062	8,017931E+08	8,017930E+08	3,148511E+09	3,148596E+09	1,603586E+09	6,297107E+09	7,900693E+09
-2061	8,018464E+08	8,018449E+08	3,148583E+09	3,148553E+09	1,603691E+09	6,297136E+09	7,900827E+09
-2060	8,017715E+08	8,018042E+08	3,148624E+09	3,148539E+09	1,603576E+09	6,297162E+09	7,900738E+09
-2059	8,017949E+08	8,017481E+08	3,148614E+09	3,148691E+09	1,603543E+09	6,297305E+09	7,900848E+09
-2058	8,017877E+08	8,017911E+08	3,148684E+09	3,148622E+09	1,603579E+09	6,297306E+09	7,900885E+09
-2057	8,017022E+08	8,017154E+08	3,148662E+09	3,148704E+09	1,603418E+09	6,297366E+09	7,900783E+09
-2056	8,017420E+08	8,016998E+08	3,148695E+09	3,148794E+09	1,603442E+09	6,297489E+09	7,900931E+09
-2055	8,016909E+08	8,017157E+08	3,148804E+09	3,148679E+09	1,603407E+09	6,297483E+09	7,900889E+09
-2054	8,016472E+08	8,016413E+08	3,148750E+09	3,148786E+09	1,603288E+09	6,297536E+09	7,900825E+09
-2053	8,017085E+08	8,016761E+08	3,148774E+09	3,148780E+09	1,603385E+09	6,297554E+09	7,900938E+09
-2052	8,016490E+08	8,016825E+08	3,148796E+09	3,148699E+09	1,603332E+09	6,297496E+09	7,900827E+09
-2051	8,016721E+08	8,016554E+08	3,148704E+09	3,148799E+09	1,603328E+09	6,297503E+09	7,900830E+09
-2050	8,017325E+08	8,017483E+08	3,148709E+09	3,148667E+09	1,603481E+09	6,297376E+09	7,900856E+09
-2049	8,016940E+08	8,017366E+08	3,148659E+09	3,148608E+09	1,603431E+09	6,297267E+09	7,900698E+09
-2048	8,017890E+08	8,017458E+08	3,148580E+09	3,148656E+09	1,603535E+09	6,297236E+09	7,900771E+09
-2047	8,018201E+08	8,018326E+08	3,148603E+09	3,148475E+09	1,603653E+09	6,297078E+09	7,900730E+09
-2046	8,017978E+08	8,018119E+08	3,148472E+09	3,148509E+09	1,603610E+09	6,296981E+09	7,900591E+09
-2045	8,018926E+08	8,018638E+08	3,148426E+09	3,148507E+09	1,603756E+09	6,296933E+09	7,900690E+09
-2044	8,018599E+08	8,019079E+08	3,148479E+09	3,148376E+09	1,603768E+09	6,296855E+09	7,900623E+09
-2043	8,018607E+08	8,018495E+08	3,148427E+09	3,148493E+09	1,603710E+09	6,296920E+09	7,900630E+09
-2042	8,019158E+08	8,019019E+08	3,148484E+09	3,148441E+09	1,603818E+09	6,296925E+09	7,900743E+09
-2041	8,018377E+08	8,018655E+08	3,148528E+09	3,148434E+09	1,603703E+09	6,296962E+09	7,900665E+09
-2040	8,018541E+08	8,018060E+08	3,148495E+09	3,148611E+09	1,603660E+09	6,297106E+09	7,900766E+09
-2039	8,018452E+08	8,018530E+08	3,148596E+09	3,148531E+09	1,603698E+09	6,297128E+09	7,900826E+09
-2038	8,017480E+08	8,017748E+08	3,148587E+09	3,148600E+09	1,603523E+09	6,297187E+09	7,900710E+09
-2037	8,017922E+08	8,017486E+08	3,148593E+09	3,148683E+09	1,603541E+09	6,297277E+09	7,900817E+09
-2036	8,017541E+08	8,017707E+08	3,148698E+09	3,148577E+09	1,603525E+09	6,297275E+09	7,900800E+09
-2035	8,017104E+08	8,016948E+08	3,148642E+09	3,148695E+09	1,603405E+09	6,297338E+09	7,900743E+09
-2034	8,017734E+08	8,017499E+08	3,148632E+09	3,148663E+09	1,603523E+09	6,297295E+09	7,900818E+09
-2033	8,017171E+08	8,017666E+08	3,148667E+09	3,148565E+09	1,603484E+09	6,297232E+09	7,900716E+09
-2032	8,017458E+08	8,017302E+08	3,148570E+09	3,148670E+09	1,603476E+09	6,297240E+09	7,900716E+09
-2031	8,018161E+08	8,018202E+08	3,148608E+09	3,148525E+09	1,603636E+09	6,297133E+09	7,900769E+09
-2030	8,017711E+08	8,018107E+08	3,148552E+09	3,148473E+09	1,603582E+09	6,297025E+09	7,900607E+09
-2029	8,018651E+08	8,018175E+08	3,148426E+09	3,148529E+09	1,603683E+09	6,296954E+09	7,900637E+09
-2028	8,018980E+08	8,019179E+08	3,148450E+09	3,148358E+09	1,603816E+09	6,296809E+09	7,900625E+09
-2027	8,018706E+08	8,018902E+08	3,148353E+09	3,148396E+09	1,603761E+09	6,296749E+09	7,900510E+09
-2026	8,019634E+08	8,019426E+08	3,148311E+09	3,148367E+09	1,603906E+09	6,296677E+09	7,900583E+09
-2025	8,019334E+08	8,019811E+08	3,148395E+09	3,148242E+09	1,603914E+09	6,296637E+09	7,900552E+09
-2024	8,019327E+08	8,019060E+08	3,148326E+09	3,148397E+09	1,603839E+09	6,296723E+09	7,900562E+09
-2023	8,019832E+08	8,019582E+08	3,148392E+09	3,148354E+09	1,603941E+09	6,296745E+09	7,900687E+09
-2022	8,018901E+08	8,019282E+08	3,148423E+09	3,148355E+09	1,603818E+09	6,296778E+09	7,900596E+09
-2021	8,019025E+08	8,018600E+08	3,148355E+09	3,148515E+09	1,603762E+09	6,296870E+09	7,900633E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-2020	8,019021E+08	8,019092E+08	3,148478E+09	3,148429E+09	1,603811E+09	6,296907E+09	7,900718E+09
-2019	8,018097E+08	8,018222E+08	3,148500E+09	3,148494E+09	1,603632E+09	6,296993E+09	7,900625E+09
-2018	8,018553E+08	8,018060E+08	3,148483E+09	3,148555E+09	1,603661E+09	6,297038E+09	7,900699E+09
-2017	8,018198E+08	8,018421E+08	3,148594E+09	3,148456E+09	1,603662E+09	6,297049E+09	7,900711E+09
-2016	8,017729E+08	8,017664E+08	3,148522E+09	3,148596E+09	1,603539E+09	6,297118E+09	7,900657E+09
-2015	8,018363E+08	8,018252E+08	3,148545E+09	3,148549E+09	1,603662E+09	6,297094E+09	7,900756E+09
-2014	8,017770E+08	8,018415E+08	3,148585E+09	3,148446E+09	1,603619E+09	6,297031E+09	7,900650E+09
-2013	8,018136E+08	8,017927E+08	3,148447E+09	3,148546E+09	1,603606E+09	6,296993E+09	7,900600E+09
-2012	8,018980E+08	8,018882E+08	3,148470E+09	3,148412E+09	1,603786E+09	6,296882E+09	7,900669E+09
-2011	8,018540E+08	8,018800E+08	3,148408E+09	3,148362E+09	1,603734E+09	6,296770E+09	7,900504E+09
-2010	8,019447E+08	8,019047E+08	3,148252E+09	3,148387E+09	1,603849E+09	6,296639E+09	7,900488E+09
-2009	8,019788E+08	8,020098E+08	3,148309E+09	3,148204E+09	1,603989E+09	6,296514E+09	7,900502E+09
-2008	8,019485E+08	8,019663E+08	3,148233E+09	3,148262E+09	1,603915E+09	6,296495E+09	7,900410E+09
-2007	8,020411E+08	8,020109E+08	3,148236E+09	3,148237E+09	1,604052E+09	6,296473E+09	7,900525E+09
-2006	8,019995E+08	8,020456E+08	3,148313E+09	3,148139E+09	1,604045E+09	6,296451E+09	7,900496E+09
-2005	8,019910E+08	8,019636E+08	3,148199E+09	3,148312E+09	1,603955E+09	6,296511E+09	7,900465E+09
-2004	8,020425E+08	8,020230E+08	3,148262E+09	3,148279E+09	1,604065E+09	6,296541E+09	7,900606E+09
-2003	8,019454E+08	8,019837E+08	3,148319E+09	3,148270E+09	1,603929E+09	6,296589E+09	7,900518E+09
-2002	8,019582E+08	8,019201E+08	3,148244E+09	3,148391E+09	1,603878E+09	6,296635E+09	7,900513E+09
-2001	8,019657E+08	8,019678E+08	3,148391E+09	3,148298E+09	1,603933E+09	6,296689E+09	7,900622E+09
-2000	8,018726E+08	8,018749E+08	3,148402E+09	3,148391E+09	1,603747E+09	6,296793E+09	7,900541E+09
-1999	8,019150E+08	8,018680E+08	3,148399E+09	3,148449E+09	1,603783E+09	6,296848E+09	7,900631E+09
-1998	8,018701E+08	8,019148E+08	3,148499E+09	3,148359E+09	1,603785E+09	6,296857E+09	7,900642E+09
-1997	8,018258E+08	8,018309E+08	3,148394E+09	3,148491E+09	1,603657E+09	6,296886E+09	7,900542E+09
-1996	8,019051E+08	8,018894E+08	3,148423E+09	3,148442E+09	1,603794E+09	6,296865E+09	7,900660E+09
-1995	8,018572E+08	8,018987E+08	3,148471E+09	3,148335E+09	1,603756E+09	6,296806E+09	7,900562E+09
-1994	8,018990E+08	8,018648E+08	3,148289E+09	3,148404E+09	1,603764E+09	6,296693E+09	7,900457E+09
-1993	8,019869E+08	8,019751E+08	3,148317E+09	3,148267E+09	1,603962E+09	6,296584E+09	7,900546E+09
-1992	8,019376E+08	8,019699E+08	3,148256E+09	3,148230E+09	1,603907E+09	6,296486E+09	7,900394E+09
-1991	8,020213E+08	8,019940E+08	3,148149E+09	3,148236E+09	1,604015E+09	6,296384E+09	7,900400E+09
-1990	8,020466E+08	8,020946E+08	3,148227E+09	3,148071E+09	1,604141E+09	6,296298E+09	7,900439E+09
-1989	8,020160E+08	8,020303E+08	3,148124E+09	3,148146E+09	1,604046E+09	6,296270E+09	7,900316E+09
-1988	8,021110E+08	8,020728E+08	3,148120E+09	3,148151E+09	1,604184E+09	6,296271E+09	7,900455E+09
-1987	8,020677E+08	8,021031E+08	3,148192E+09	3,148067E+09	1,604171E+09	6,296259E+09	7,900430E+09
-1986	8,020528E+08	8,020311E+08	3,148044E+09	3,148204E+09	1,604084E+09	6,296247E+09	7,900331E+09
-1985	8,021075E+08	8,020894E+08	3,148138E+09	3,148153E+09	1,604197E+09	6,296290E+09	7,900487E+09
-1984	8,020100E+08	8,020380E+08	3,148211E+09	3,148150E+09	1,604048E+09	6,296362E+09	7,900410E+09
-1983	8,020215E+08	8,019738E+08	3,148179E+09	3,148260E+09	1,603995E+09	6,296439E+09	7,900434E+09
-1982	8,020190E+08	8,020280E+08	3,148323E+09	3,148195E+09	1,604047E+09	6,296517E+09	7,900564E+09
-1981	8,019209E+08	8,019332E+08	3,148298E+09	3,148304E+09	1,603854E+09	6,296602E+09	7,900456E+09
-1980	8,019662E+08	8,019349E+08	3,148295E+09	3,148375E+09	1,603901E+09	6,296670E+09	7,900571E+09
-1979	8,019276E+08	8,019732E+08	3,148407E+09	3,148277E+09	1,603901E+09	6,296684E+09	7,900585E+09
-1978	8,018916E+08	8,018960E+08	3,148270E+09	3,148367E+09	1,603788E+09	6,296637E+09	7,900425E+09
-1977	8,019884E+08	8,019554E+08	3,148299E+09	3,148307E+09	1,603944E+09	6,296606E+09	7,900550E+09
-1976	8,019429E+08	8,019664E+08	3,148321E+09	3,148213E+09	1,603909E+09	6,296534E+09	7,900444E+09
-1975	8,019826E+08	8,019493E+08	3,148153E+09	3,148259E+09	1,603932E+09	6,296413E+09	7,900345E+09
-1974	8,020584E+08	8,020692E+08	3,148182E+09	3,148122E+09	1,604128E+09	6,296303E+09	7,900431E+09
-1973	8,020057E+08	8,020526E+08	3,148117E+09	3,148086E+09	1,604058E+09	6,296202E+09	7,900260E+09
-1972	8,020954E+08	8,020710E+08	3,148038E+09	3,148108E+09	1,604166E+09	6,296146E+09	7,900312E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-1971	8,021240E+08	8,021560E+08	3,148129E+09	3,147967E+09	1,604280E+09	6,296096E+09	7,900376E+09
-1970	8,020923E+08	8,020989E+08	3,147985E+09	3,148034E+09	1,604191E+09	6,296018E+09	7,900210E+09
-1969	8,021889E+08	8,021447E+08	3,147984E+09	3,148042E+09	1,604334E+09	6,296025E+09	7,900359E+09
-1968	8,021383E+08	8,021712E+08	3,148057E+09	3,147969E+09	1,604310E+09	6,296026E+09	7,900335E+09
-1967	8,021171E+08	8,020990E+08	3,147955E+09	3,148072E+09	1,604216E+09	6,296027E+09	7,900243E+09
-1966	8,021616E+08	8,021530E+08	3,148067E+09	3,148030E+09	1,604315E+09	6,296097E+09	7,900412E+09
-1965	8,020627E+08	8,020876E+08	3,148123E+09	3,148045E+09	1,604150E+09	6,296168E+09	7,900318E+09
-1964	8,020748E+08	8,020274E+08	3,148090E+09	3,148181E+09	1,604102E+09	6,296271E+09	7,900373E+09
-1963	8,020722E+08	8,020819E+08	3,148226E+09	3,148134E+09	1,604154E+09	6,296360E+09	7,900514E+09
-1962	8,019751E+08	8,019987E+08	3,148163E+09	3,148208E+09	1,603974E+09	6,296370E+09	7,900344E+09
-1961	8,020316E+08	8,019990E+08	3,148178E+09	3,148259E+09	1,604031E+09	6,296437E+09	7,900467E+09
-1960	8,020027E+08	8,020305E+08	3,148287E+09	3,148162E+09	1,604033E+09	6,296449E+09	7,900483E+09
-1959	8,019719E+08	8,019611E+08	3,148163E+09	3,148219E+09	1,603933E+09	6,296382E+09	7,900315E+09
-1958	8,020624E+08	8,020336E+08	3,148178E+09	3,148173E+09	1,604096E+09	6,296351E+09	7,900447E+09
-1957	8,020134E+08	8,020480E+08	3,148169E+09	3,148082E+09	1,604061E+09	6,296250E+09	7,900312E+09
-1956	8,020514E+08	8,020378E+08	3,148025E+09	3,148134E+09	1,604089E+09	6,296158E+09	7,900247E+09
-1955	8,021287E+08	8,021471E+08	3,148081E+09	3,148004E+09	1,604276E+09	6,296085E+09	7,900361E+09
-1954	8,020804E+08	8,021282E+08	3,147995E+09	3,147947E+09	1,604209E+09	6,295942E+09	7,900150E+09
-1953	8,021798E+08	8,021403E+08	3,147923E+09	3,147982E+09	1,604320E+09	6,295905E+09	7,900225E+09
-1952	8,022075E+08	8,022212E+08	3,147989E+09	3,147870E+09	1,604429E+09	6,295859E+09	7,900288E+09
-1951	8,021703E+08	8,021753E+08	3,147854E+09	3,147912E+09	1,604346E+09	6,295766E+09	7,900112E+09
-1950	8,022530E+08	8,022236E+08	3,147858E+09	3,147922E+09	1,604477E+09	6,295780E+09	7,900257E+09
-1949	8,021976E+08	8,022346E+08	3,147931E+09	3,147844E+09	1,604432E+09	6,295775E+09	7,900207E+09
-1948	8,021778E+08	8,021577E+08	3,147866E+09	3,147958E+09	1,604336E+09	6,295824E+09	7,900160E+09
-1947	8,022209E+08	8,022004E+08	3,147993E+09	3,147941E+09	1,604421E+09	6,295935E+09	7,900356E+09
-1946	8,021183E+08	8,021459E+08	3,148014E+09	3,147950E+09	1,604264E+09	6,295965E+09	7,900229E+09
-1945	8,021336E+08	8,020921E+08	3,147988E+09	3,148092E+09	1,604226E+09	6,296080E+09	7,900306E+09
-1944	8,021283E+08	8,021422E+08	3,148118E+09	3,148054E+09	1,604270E+09	6,296172E+09	7,900442E+09
-1943	8,020362E+08	8,020631E+08	3,148081E+09	3,148086E+09	1,604099E+09	6,296167E+09	7,900266E+09
-1942	8,020931E+08	8,020611E+08	3,148088E+09	3,148134E+09	1,604154E+09	6,296222E+09	7,900376E+09
-1941	8,020689E+08	8,020857E+08	3,148161E+09	3,148041E+09	1,604155E+09	6,296202E+09	7,900356E+09
-1940	8,020427E+08	8,020313E+08	3,148034E+09	3,148105E+09	1,604074E+09	6,296139E+09	7,900213E+09
-1939	8,021321E+08	8,021075E+08	3,148042E+09	3,148065E+09	1,604240E+09	6,296107E+09	7,900347E+09
-1938	8,020842E+08	8,021335E+08	3,148010E+09	3,147940E+09	1,604218E+09	6,295950E+09	7,900167E+09
-1937	8,021331E+08	8,021179E+08	3,147897E+09	3,147983E+09	1,604251E+09	6,295880E+09	7,900131E+09
-1936	8,022140E+08	8,022169E+08	3,147958E+09	3,147875E+09	1,604431E+09	6,295833E+09	7,900264E+09
-1935	8,021701E+08	8,022038E+08	3,147887E+09	3,147803E+09	1,604374E+09	6,295690E+09	7,900064E+09
-1934	8,022584E+08	8,022221E+08	3,147801E+09	3,147863E+09	1,604481E+09	6,295663E+09	7,900144E+09
-1933	8,022788E+08	8,022991E+08	3,147841E+09	3,147760E+09	1,604578E+09	6,295601E+09	7,900179E+09
-1932	8,022368E+08	8,022545E+08	3,147735E+09	3,147801E+09	1,604491E+09	6,295536E+09	7,900028E+09
-1931	8,023145E+08	8,022877E+08	3,147765E+09	3,147819E+09	1,604602E+09	6,295584E+09	7,900186E+09
-1930	8,022593E+08	8,022948E+08	3,147823E+09	3,147722E+09	1,604554E+09	6,295544E+09	7,900098E+09
-1929	8,022433E+08	8,022120E+08	3,147776E+09	3,147851E+09	1,604455E+09	6,295627E+09	7,900083E+09
-1928	8,022814E+08	8,022540E+08	3,147889E+09	3,147866E+09	1,604535E+09	6,295755E+09	7,900290E+09
-1927	8,021771E+08	8,022107E+08	3,147917E+09	3,147846E+09	1,604388E+09	6,295763E+09	7,900151E+09
-1926	8,021827E+08	8,021587E+08	3,147892E+09	3,147989E+09	1,604341E+09	6,295882E+09	7,900223E+09
-1925	8,021819E+08	8,021944E+08	3,148006E+09	3,147944E+09	1,604376E+09	6,295950E+09	7,900326E+09
-1924	8,020985E+08	8,021168E+08	3,147985E+09	3,147973E+09	1,604215E+09	6,295958E+09	7,900173E+09
-1923	8,021602E+08	8,021136E+08	3,147982E+09	3,148036E+09	1,604274E+09	6,296018E+09	7,900292E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-1922	8,021382E+08	8,021549E+08	3,148010E+09	3,147919E+09	1,604293E+09	6,295929E+09	7,900222E+09
-1921	8,021182E+08	8,021125E+08	3,147899E+09	3,147975E+09	1,604231E+09	6,295873E+09	7,900104E+09
-1920	8,022050E+08	8,021878E+08	3,147915E+09	3,147940E+09	1,604393E+09	6,295855E+09	7,900247E+09
-1919	8,021629E+08	8,022189E+08	3,147913E+09	3,147781E+09	1,604382E+09	6,295694E+09	7,900076E+09
-1918	8,022088E+08	8,021995E+08	3,147801E+09	3,147844E+09	1,604408E+09	6,295644E+09	7,900053E+09
-1917	8,022906E+08	8,022870E+08	3,147825E+09	3,147757E+09	1,604578E+09	6,295582E+09	7,900159E+09
-1916	8,022490E+08	8,022830E+08	3,147751E+09	3,147701E+09	1,604532E+09	6,295452E+09	7,899984E+09
-1915	8,023319E+08	8,022986E+08	3,147658E+09	3,147767E+09	1,604630E+09	6,295425E+09	7,900055E+09
-1914	8,023484E+08	8,023759E+08	3,147683E+09	3,147629E+09	1,604724E+09	6,295311E+09	7,900035E+09
-1913	8,023137E+08	8,023232E+08	3,147617E+09	3,147660E+09	1,604637E+09	6,295277E+09	7,899914E+09
-1912	8,023860E+08	8,023430E+08	3,147660E+09	3,147698E+09	1,604729E+09	6,295358E+09	7,900087E+09
-1911	8,023301E+08	8,023582E+08	3,147738E+09	3,147595E+09	1,604688E+09	6,295333E+09	7,900021E+09
-1910	8,023001E+08	8,022801E+08	3,147689E+09	3,147752E+09	1,604580E+09	6,295440E+09	7,900021E+09
-1909	8,023287E+08	8,023148E+08	3,147781E+09	3,147782E+09	1,604644E+09	6,295563E+09	7,900207E+09
-1908	8,022274E+08	8,022719E+08	3,147837E+09	3,147762E+09	1,604499E+09	6,295599E+09	7,900098E+09
-1907	8,022342E+08	8,022068E+08	3,147813E+09	3,147907E+09	1,604441E+09	6,295720E+09	7,900161E+09
-1906	8,022418E+08	8,022423E+08	3,147887E+09	3,147833E+09	1,604484E+09	6,295720E+09	7,900204E+09
-1905	8,021720E+08	8,021718E+08	3,147860E+09	3,147858E+09	1,604344E+09	6,295718E+09	7,900062E+09
-1904	8,022320E+08	8,021794E+08	3,147837E+09	3,147931E+09	1,604411E+09	6,295768E+09	7,900179E+09
-1903	8,022131E+08	8,022420E+08	3,147875E+09	3,147773E+09	1,604455E+09	6,295648E+09	7,900103E+09
-1902	8,021865E+08	8,022026E+08	3,147783E+09	3,147826E+09	1,604389E+09	6,295609E+09	7,899999E+09
-1901	8,022743E+08	8,022633E+08	3,147796E+09	3,147797E+09	1,604538E+09	6,295593E+09	7,900130E+09
-1900	8,022418E+08	8,022931E+08	3,147815E+09	3,147653E+09	1,604535E+09	6,295468E+09	7,900003E+09
-1899	8,022868E+08	8,022700E+08	3,147686E+09	3,147746E+09	1,604557E+09	6,295432E+09	7,899989E+09
-1898	8,023688E+08	8,023654E+08	3,147663E+09	3,147643E+09	1,604734E+09	6,295305E+09	7,900039E+09
-1897	8,023320E+08	8,023655E+08	3,147601E+09	3,147579E+09	1,604698E+09	6,295180E+09	7,899877E+09
-1896	8,024091E+08	8,023744E+08	3,147522E+09	3,147646E+09	1,604784E+09	6,295168E+09	7,899952E+09
-1895	8,024269E+08	8,024512E+08	3,147576E+09	3,147469E+09	1,604878E+09	6,295045E+09	7,899923E+09
-1894	8,023820E+08	8,023923E+08	3,147532E+09	3,147523E+09	1,604774E+09	6,295055E+09	7,899829E+09
-1893	8,024452E+08	8,024006E+08	3,147556E+09	3,147593E+09	1,604846E+09	6,295150E+09	7,899995E+09
-1892	8,023872E+08	8,024215E+08	3,147645E+09	3,147516E+09	1,604809E+09	6,295160E+09	7,899969E+09
-1891	8,023490E+08	8,023395E+08	3,147591E+09	3,147690E+09	1,604688E+09	6,295281E+09	7,899970E+09
-1890	8,023787E+08	8,023683E+08	3,147656E+09	3,147686E+09	1,604747E+09	6,295343E+09	7,900090E+09
-1889	8,022929E+08	8,023204E+08	3,147729E+09	3,147653E+09	1,604613E+09	6,295382E+09	7,899996E+09
-1888	8,023023E+08	8,022534E+08	3,147698E+09	3,147803E+09	1,604556E+09	6,295501E+09	7,900056E+09
-1887	8,023151E+08	8,023072E+08	3,147771E+09	3,147698E+09	1,604622E+09	6,295469E+09	7,900091E+09
-1886	8,022374E+08	8,022537E+08	3,147747E+09	3,147730E+09	1,604491E+09	6,295477E+09	7,899968E+09
-1885	8,022899E+08	8,022597E+08	3,147714E+09	3,147805E+09	1,604550E+09	6,295519E+09	7,900069E+09
-1884	8,022768E+08	8,023243E+08	3,147788E+09	3,147651E+09	1,604601E+09	6,295439E+09	7,900040E+09
-1883	8,022518E+08	8,022729E+08	3,147700E+09	3,147719E+09	1,604525E+09	6,295418E+09	7,899943E+09
-1882	8,023454E+08	8,023277E+08	3,147669E+09	3,147678E+09	1,604673E+09	6,295347E+09	7,900020E+09
-1881	8,023300E+08	8,023621E+08	3,147673E+09	3,147543E+09	1,604692E+09	6,295216E+09	7,899908E+09
-1880	8,023726E+08	8,023447E+08	3,147516E+09	3,147638E+09	1,604717E+09	6,295155E+09	7,899872E+09
-1879	8,024566E+08	8,024545E+08	3,147500E+09	3,147489E+09	1,604911E+09	6,294989E+09	7,899900E+09
-1878	8,024132E+08	8,024538E+08	3,147465E+09	3,147415E+09	1,604867E+09	6,294880E+09	7,899747E+09
-1877	8,024823E+08	8,024453E+08	3,147395E+09	3,147492E+09	1,604928E+09	6,294887E+09	7,899814E+09
-1876	8,025014E+08	8,025195E+08	3,147488E+09	3,147344E+09	1,605021E+09	6,294833E+09	7,899854E+09
-1875	8,024450E+08	8,024550E+08	3,147444E+09	3,147440E+09	1,604900E+09	6,294884E+09	7,899784E+09
-1874	8,024990E+08	8,024648E+08	3,147436E+09	3,147508E+09	1,604964E+09	6,294945E+09	7,899908E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-1873	8,024482E+08	8,024847E+08	3,147537E+09	3,147435E+09	1,604933E+09	6,294972E+09	7,899905E+09
-1872	8,024059E+08	8,023944E+08	3,147490E+09	3,147606E+09	1,604800E+09	6,295096E+09	7,899896E+09
-1871	8,024435E+08	8,024254E+08	3,147561E+09	3,147560E+09	1,604869E+09	6,295121E+09	7,899990E+09
-1870	8,023564E+08	8,023785E+08	3,147635E+09	3,147530E+09	1,604735E+09	6,295166E+09	7,899901E+09
-1869	8,023609E+08	8,023119E+08	3,147576E+09	3,147691E+09	1,604673E+09	6,295267E+09	7,899940E+09
-1868	8,023767E+08	8,023793E+08	3,147664E+09	3,147593E+09	1,604756E+09	6,295257E+09	7,900013E+09
-1867	8,022924E+08	8,023280E+08	3,147646E+09	3,147633E+09	1,604620E+09	6,295279E+09	7,899899E+09
-1866	8,023473E+08	8,023278E+08	3,147594E+09	3,147679E+09	1,604675E+09	6,295273E+09	7,899948E+09
-1865	8,023537E+08	8,023868E+08	3,147675E+09	3,147528E+09	1,604740E+09	6,295203E+09	7,899944E+09
-1864	8,023342E+08	8,023346E+08	3,147572E+09	3,147610E+09	1,604669E+09	6,295183E+09	7,899851E+09
-1863	8,024361E+08	8,024052E+08	3,147519E+09	3,147538E+09	1,604841E+09	6,295056E+09	7,899898E+09
-1862	8,024156E+08	8,024535E+08	3,147522E+09	3,147404E+09	1,604869E+09	6,294926E+09	7,899795E+09
-1861	8,024502E+08	8,024335E+08	3,147361E+09	3,147496E+09	1,604884E+09	6,294857E+09	7,899740E+09
-1860	8,025343E+08	8,025392E+08	3,147390E+09	3,147344E+09	1,605074E+09	6,294734E+09	7,899807E+09
-1859	8,024837E+08	8,025279E+08	3,147373E+09	3,147292E+09	1,605012E+09	6,294664E+09	7,899676E+09
-1858	8,025475E+08	8,025082E+08	3,147278E+09	3,147369E+09	1,605056E+09	6,294647E+09	7,899702E+09
-1857	8,025740E+08	8,025835E+08	3,147369E+09	3,147253E+09	1,605157E+09	6,294623E+09	7,899780E+09
-1856	8,025102E+08	8,025203E+08	3,147318E+09	3,147366E+09	1,605030E+09	6,294685E+09	7,899715E+09
-1855	8,025634E+08	8,025356E+08	3,147316E+09	3,147393E+09	1,605099E+09	6,294709E+09	7,899808E+09
-1854	8,025110E+08	8,025489E+08	3,147438E+09	3,147314E+09	1,605060E+09	6,294752E+09	7,899812E+09
-1853	8,024651E+08	8,024449E+08	3,147384E+09	3,147484E+09	1,604910E+09	6,294868E+09	7,899778E+09
-1852	8,025072E+08	8,024775E+08	3,147477E+09	3,147453E+09	1,604985E+09	6,294930E+09	7,899915E+09
-1851	8,024126E+08	8,024380E+08	3,147542E+09	3,147445E+09	1,604851E+09	6,294987E+09	7,899838E+09
-1850	8,024108E+08	8,023768E+08	3,147454E+09	3,147588E+09	1,604788E+09	6,295043E+09	7,899830E+09
-1849	8,024398E+08	8,024485E+08	3,147556E+09	3,147493E+09	1,604888E+09	6,295049E+09	7,899937E+09
-1848	8,023581E+08	8,023911E+08	3,147544E+09	3,147528E+09	1,604749E+09	6,295071E+09	7,899821E+09
-1847	8,024227E+08	8,023955E+08	3,147484E+09	3,147538E+09	1,604818E+09	6,295022E+09	7,899841E+09
-1846	8,024353E+08	8,024578E+08	3,147555E+09	3,147396E+09	1,604893E+09	6,294950E+09	7,899843E+09
-1845	8,024129E+08	8,024096E+08	3,147411E+09	3,147486E+09	1,604822E+09	6,294897E+09	7,899719E+09
-1844	8,025194E+08	8,024924E+08	3,147370E+09	3,147413E+09	1,605012E+09	6,294784E+09	7,899795E+09
-1843	8,024913E+08	8,025421E+08	3,147380E+09	3,147276E+09	1,605033E+09	6,294657E+09	7,899690E+09
-1842	8,025229E+08	8,025117E+08	3,147217E+09	3,147337E+09	1,605035E+09	6,294555E+09	7,899589E+09
-1841	8,026184E+08	8,026102E+08	3,147268E+09	3,147203E+09	1,605229E+09	6,294471E+09	7,899700E+09
-1840	8,025630E+08	8,025950E+08	3,147259E+09	3,147179E+09	1,605158E+09	6,294439E+09	7,899597E+09
-1839	8,026230E+08	8,025863E+08	3,147159E+09	3,147246E+09	1,605209E+09	6,294405E+09	7,899614E+09
-1838	8,026420E+08	8,026640E+08	3,147261E+09	3,147147E+09	1,605306E+09	6,294408E+09	7,899714E+09
-1837	8,025688E+08	8,025895E+08	3,147209E+09	3,147266E+09	1,605158E+09	6,294475E+09	7,899633E+09
-1836	8,026243E+08	8,025940E+08	3,147242E+09	3,147290E+09	1,605218E+09	6,294532E+09	7,899750E+09
-1835	8,025659E+08	8,025983E+08	3,147364E+09	3,147226E+09	1,605164E+09	6,294590E+09	7,899754E+09
-1834	8,025176E+08	8,024893E+08	3,147274E+09	3,147382E+09	1,605007E+09	6,294656E+09	7,899663E+09
-1833	8,025690E+08	8,025300E+08	3,147351E+09	3,147367E+09	1,605099E+09	6,294718E+09	7,899817E+09
-1832	8,024721E+08	8,025012E+08	3,147417E+09	3,147361E+09	1,604973E+09	6,294778E+09	7,899751E+09
-1831	8,024740E+08	8,024501E+08	3,147333E+09	3,147452E+09	1,604924E+09	6,294785E+09	7,899709E+09
-1830	8,025071E+08	8,025184E+08	3,147454E+09	3,147354E+09	1,605025E+09	6,294808E+09	7,899833E+09
-1829	8,024286E+08	8,024542E+08	3,147429E+09	3,147398E+09	1,604883E+09	6,294827E+09	7,899710E+09
-1828	8,025008E+08	8,024616E+08	3,147379E+09	3,147419E+09	1,604962E+09	6,294798E+09	7,899760E+09
-1827	8,025080E+08	8,025357E+08	3,147428E+09	3,147294E+09	1,605044E+09	6,294722E+09	7,899766E+09
-1826	8,024826E+08	8,024924E+08	3,147253E+09	3,147355E+09	1,604975E+09	6,294608E+09	7,899583E+09
-1825	8,025998E+08	8,025766E+08	3,147225E+09	3,147282E+09	1,605176E+09	6,294507E+09	7,899683E+09



1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-1824	8,025724E+08	8,026211E+08	3,147256E+09	3,147141E+09	1,605193E+09	6,294397E+09	7,899590E+09
-1823	8,026068E+08	8,025910E+08	3,147099E+09	3,147173E+09	1,605198E+09	6,294271E+09	7,899469E+09
-1822	8,027001E+08	8,026869E+08	3,147157E+09	3,147067E+09	1,605387E+09	6,294224E+09	7,899611E+09
-1821	8,026364E+08	8,026697E+08	3,147127E+09	3,147071E+09	1,605306E+09	6,294198E+09	7,899504E+09
-1820	8,026926E+08	8,026622E+08	3,147053E+09	3,147148E+09	1,605355E+09	6,294201E+09	7,899556E+09
-1819	8,027020E+08	8,027329E+08	3,147159E+09	3,147059E+09	1,605435E+09	6,294218E+09	7,899653E+09
-1818	8,026255E+08	8,026408E+08	3,147092E+09	3,147150E+09	1,605266E+09	6,294243E+09	7,899509E+09
-1817	8,026934E+08	8,026397E+08	3,147128E+09	3,147191E+09	1,605333E+09	6,294319E+09	7,899652E+09
-1816	8,026328E+08	8,026460E+08	3,147247E+09	3,147134E+09	1,605279E+09	6,294381E+09	7,899660E+09
-1815	8,025814E+08	8,025565E+08	3,147151E+09	3,147259E+09	1,605138E+09	6,294410E+09	7,899548E+09
-1814	8,026287E+08	8,026057E+08	3,147249E+09	3,147249E+09	1,605234E+09	6,294497E+09	7,899732E+09
-1813	8,025267E+08	8,025715E+08	3,147319E+09	3,147245E+09	1,605098E+09	6,294564E+09	7,899662E+09
-1812	8,025342E+08	8,025149E+08	3,147270E+09	3,147337E+09	1,605049E+09	6,294607E+09	7,899656E+09
-1811	8,025659E+08	8,025780E+08	3,147374E+09	3,147258E+09	1,605144E+09	6,294632E+09	7,899775E+09
-1810	8,024910E+08	8,025116E+08	3,147299E+09	3,147288E+09	1,605003E+09	6,294586E+09	7,899589E+09
-1809	8,025783E+08	8,025310E+08	3,147220E+09	3,147321E+09	1,605109E+09	6,294541E+09	7,899650E+09
-1808	8,025871E+08	8,026147E+08	3,147268E+09	3,147181E+09	1,605202E+09	6,294449E+09	7,899651E+09
-1807	8,025665E+08	8,025820E+08	3,147101E+09	3,147182E+09	1,605148E+09	6,294283E+09	7,899431E+09
-1806	8,026864E+08	8,026604E+08	3,147101E+09	3,147107E+09	1,605347E+09	6,294207E+09	7,899554E+09
-1805	8,026561E+08	8,026980E+08	3,147132E+09	3,146989E+09	1,605354E+09	6,294121E+09	7,899475E+09
-1804	8,026896E+08	8,026681E+08	3,147001E+09	3,147048E+09	1,605358E+09	6,294049E+09	7,899407E+09
-1803	8,027670E+08	8,027685E+08	3,147051E+09	3,146979E+09	1,605535E+09	6,294030E+09	7,899565E+09
-1802	8,026983E+08	8,027436E+08	3,147002E+09	3,146972E+09	1,605442E+09	6,293974E+09	7,899416E+09
-1801	8,027611E+08	8,027267E+08	3,146932E+09	3,147056E+09	1,605488E+09	6,293988E+09	7,899476E+09
-1800	8,027700E+08	8,027871E+08	3,147051E+09	3,146963E+09	1,605557E+09	6,294014E+09	7,899571E+09
-1799	8,026959E+08	8,026980E+08	3,146974E+09	3,147014E+09	1,605394E+09	6,293988E+09	7,899382E+09
-1798	8,027595E+08	8,026991E+08	3,147012E+09	3,147069E+09	1,605459E+09	6,294081E+09	7,899540E+09
-1797	8,026912E+08	8,027126E+08	3,147120E+09	3,147030E+09	1,605404E+09	6,294150E+09	7,899554E+09
-1796	8,026375E+08	8,026267E+08	3,147066E+09	3,147151E+09	1,605264E+09	6,294217E+09	7,899481E+09
-1795	8,026749E+08	8,026724E+08	3,147175E+09	3,147150E+09	1,605347E+09	6,294324E+09	7,899672E+09
-1794	8,025784E+08	8,026230E+08	3,147227E+09	3,147128E+09	1,605201E+09	6,294356E+09	7,899557E+09
-1793	8,026014E+08	8,025650E+08	3,147161E+09	3,147243E+09	1,605166E+09	6,294404E+09	7,899571E+09
-1792	8,026385E+08	8,026348E+08	3,147246E+09	3,147170E+09	1,605273E+09	6,294416E+09	7,899690E+09
-1791	8,025691E+08	8,025915E+08	3,147144E+09	3,147152E+09	1,605161E+09	6,294296E+09	7,899457E+09
-1790	8,026595E+08	8,026195E+08	3,147076E+09	3,147176E+09	1,605279E+09	6,294252E+09	7,899531E+09
-1789	8,026671E+08	8,027007E+08	3,147131E+09	3,147028E+09	1,605368E+09	6,294159E+09	7,899527E+09
-1788	8,026500E+08	8,026638E+08	3,147011E+09	3,147025E+09	1,605314E+09	6,294036E+09	7,899350E+09
-1787	8,027597E+08	8,027388E+08	3,147006E+09	3,146980E+09	1,605498E+09	6,293986E+09	7,899484E+09
-1786	8,027268E+08	8,027689E+08	3,146998E+09	3,146871E+09	1,605496E+09	6,293869E+09	7,899365E+09
-1785	8,027666E+08	8,027458E+08	3,146851E+09	3,146962E+09	1,605512E+09	6,293814E+09	7,899326E+09
-1784	8,028416E+08	8,028434E+08	3,146905E+09	3,146886E+09	1,605685E+09	6,293791E+09	7,899476E+09
-1783	8,027756E+08	8,028183E+08	3,146859E+09	3,146828E+09	1,605594E+09	6,293687E+09	7,899281E+09
-1782	8,028395E+08	8,027915E+08	3,146814E+09	3,146911E+09	1,605631E+09	6,293725E+09	7,899356E+09
-1781	8,028415E+08	8,028443E+08	3,146930E+09	3,146835E+09	1,605686E+09	6,293765E+09	7,899451E+09
-1780	8,027627E+08	8,027612E+08	3,146889E+09	3,146897E+09	1,605524E+09	6,293786E+09	7,899310E+09
-1779	8,028066E+08	8,027702E+08	3,146929E+09	3,146979E+09	1,605577E+09	6,293907E+09	7,899484E+09
-1778	8,027336E+08	8,027759E+08	3,147029E+09	3,146933E+09	1,605509E+09	6,293961E+09	7,899471E+09
-1777	8,026895E+08	8,026844E+08	3,146983E+09	3,147071E+09	1,605374E+09	6,294054E+09	7,899428E+09
-1776	8,027315E+08	8,027201E+08	3,147095E+09	3,147068E+09	1,605452E+09	6,294163E+09	7,899615E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-1775	8,026466E+08	8,026765E+08	3,147114E+09	3,147011E+09	1,605323E+09	6,294125E+09	7,899448E+09
-1774	8,026758E+08	8,026272E+08	3,147026E+09	3,147128E+09	1,605303E+09	6,294154E+09	7,899457E+09
-1773	8,027128E+08	8,027093E+08	3,147085E+09	3,147054E+09	1,605422E+09	6,294139E+09	7,899561E+09
-1772	8,026484E+08	8,026769E+08	3,147017E+09	3,147009E+09	1,605325E+09	6,294026E+09	7,899352E+09
-1771	8,027286E+08	8,027053E+08	3,146963E+09	3,147030E+09	1,605434E+09	6,293993E+09	7,899427E+09
-1770	8,027406E+08	8,027741E+08	3,147007E+09	3,146874E+09	1,605515E+09	6,293882E+09	7,899396E+09
-1769	8,027328E+08	8,027357E+08	3,146881E+09	3,146904E+09	1,605469E+09	6,293785E+09	7,899254E+09
-1768	8,028380E+08	8,028137E+08	3,146874E+09	3,146879E+09	1,605652E+09	6,293753E+09	7,899405E+09
-1767	8,028083E+08	8,028571E+08	3,146848E+09	3,146742E+09	1,605665E+09	6,293589E+09	7,899255E+09
-1766	8,028466E+08	8,028314E+08	3,146717E+09	3,146832E+09	1,605678E+09	6,293549E+09	7,899227E+09
-1765	8,029178E+08	8,029183E+08	3,146777E+09	3,146758E+09	1,605836E+09	6,293535E+09	7,899371E+09
-1764	8,028541E+08	8,028842E+08	3,146770E+09	3,146691E+09	1,605738E+09	6,293460E+09	7,899198E+09
-1763	8,029010E+08	8,028544E+08	3,146721E+09	3,146798E+09	1,605755E+09	6,293519E+09	7,899274E+09
-1762	8,028967E+08	8,029008E+08	3,146809E+09	3,146730E+09	1,605797E+09	6,293539E+09	7,899337E+09
-1761	8,028194E+08	8,028255E+08	3,146771E+09	3,146820E+09	1,605645E+09	6,293591E+09	7,899236E+09
-1760	8,028582E+08	8,028310E+08	3,146831E+09	3,146899E+09	1,605689E+09	6,293731E+09	7,899420E+09
-1759	8,027937E+08	8,028350E+08	3,146926E+09	3,146812E+09	1,605629E+09	6,293739E+09	7,899367E+09
-1758	8,027574E+08	8,027377E+08	3,146888E+09	3,146954E+09	1,605495E+09	6,293842E+09	7,899337E+09
-1757	8,028010E+08	8,027723E+08	3,146974E+09	3,146965E+09	1,605573E+09	6,293938E+09	7,899512E+09
-1756	8,027207E+08	8,027428E+08	3,147006E+09	3,146899E+09	1,605463E+09	6,293905E+09	7,899368E+09
-1755	8,027375E+08	8,027102E+08	3,146907E+09	3,147019E+09	1,605448E+09	6,293926E+09	7,899374E+09
-1754	8,027747E+08	8,027856E+08	3,146951E+09	3,146921E+09	1,605560E+09	6,293872E+09	7,899432E+09
-1753	8,027212E+08	8,027554E+08	3,146899E+09	3,146884E+09	1,605477E+09	6,293782E+09	7,899259E+09
-1752	8,028031E+08	8,027757E+08	3,146854E+09	3,146902E+09	1,605579E+09	6,293757E+09	7,899335E+09
-1751	8,028223E+08	8,028490E+08	3,146870E+09	3,146728E+09	1,605671E+09	6,293598E+09	7,899269E+09
-1750	8,028182E+08	8,028174E+08	3,146737E+09	3,146777E+09	1,605636E+09	6,293514E+09	7,899149E+09
-1749	8,029186E+08	8,028983E+08	3,146713E+09	3,146762E+09	1,605817E+09	6,293475E+09	7,899292E+09
-1748	8,028934E+08	8,029420E+08	3,146725E+09	3,146605E+09	1,605835E+09	6,293331E+09	7,899166E+09
-1747	8,029190E+08	8,029103E+08	3,146606E+09	3,146696E+09	1,605829E+09	6,293302E+09	7,899131E+09
-1746	8,029880E+08	8,029775E+08	3,146653E+09	3,146620E+09	1,605965E+09	6,293273E+09	7,899239E+09
-1745	8,029275E+08	8,029460E+08	3,146647E+09	3,146588E+09	1,605873E+09	6,293234E+09	7,899108E+09
-1744	8,029632E+08	8,029179E+08	3,146610E+09	3,146709E+09	1,605881E+09	6,293319E+09	7,899200E+09
-1743	8,029577E+08	8,029730E+08	3,146691E+09	3,146621E+09	1,605931E+09	6,293312E+09	7,899242E+09
-1742	8,028802E+08	8,028938E+08	3,146681E+09	3,146714E+09	1,605774E+09	6,293395E+09	7,899169E+09
-1741	8,029146E+08	8,028891E+08	3,146745E+09	3,146801E+09	1,605804E+09	6,293546E+09	7,899350E+09
-1740	8,028600E+08	8,028876E+08	3,146861E+09	3,146705E+09	1,605748E+09	6,293566E+09	7,899314E+09
-1739	8,028117E+08	8,027944E+08	3,146795E+09	3,146860E+09	1,605606E+09	6,293655E+09	7,899261E+09
-1738	8,028577E+08	8,028286E+08	3,146834E+09	3,146866E+09	1,605686E+09	6,293700E+09	7,899386E+09
-1737	8,027870E+08	8,028146E+08	3,146854E+09	3,146802E+09	1,605602E+09	6,293656E+09	7,899258E+09
-1736	8,028030E+08	8,027830E+08	3,146779E+09	3,146898E+09	1,605586E+09	6,293676E+09	7,899262E+09
-1735	8,028514E+08	8,028599E+08	3,146818E+09	3,146757E+09	1,605711E+09	6,293576E+09	7,899287E+09
-1734	8,028060E+08	8,028279E+08	3,146781E+09	3,146727E+09	1,605634E+09	6,293507E+09	7,899141E+09
-1733	8,028844E+08	8,028502E+08	3,146721E+09	3,146772E+09	1,605735E+09	6,293493E+09	7,899228E+09
-1732	8,029087E+08	8,029338E+08	3,146750E+09	3,146600E+09	1,605843E+09	6,293350E+09	7,899193E+09
-1731	8,028906E+08	8,029117E+08	3,146614E+09	3,146659E+09	1,605802E+09	6,293273E+09	7,899075E+09
-1730	8,029909E+08	8,029771E+08	3,146576E+09	3,146634E+09	1,605968E+09	6,293210E+09	7,899178E+09
-1729	8,029745E+08	8,030171E+08	3,146599E+09	3,146489E+09	1,605992E+09	6,293088E+09	7,899079E+09
-1728	8,029956E+08	8,029746E+08	3,146492E+09	3,146580E+09	1,605970E+09	6,293072E+09	7,899042E+09
-1727	8,030643E+08	8,030423E+08	3,146512E+09	3,146488E+09	1,606107E+09	6,292999E+09	7,899106E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-1726	8,030011E+08	8,030189E+08	3,146515E+09	3,146472E+09	1,606020E+09	6,292988E+09	7,899008E+09
-1725	8,030252E+08	8,029919E+08	3,146485E+09	3,146606E+09	1,606017E+09	6,293091E+09	7,899108E+09
-1724	8,030219E+08	8,030426E+08	3,146612E+09	3,146506E+09	1,606064E+09	6,293118E+09	7,899182E+09
-1723	8,029338E+08	8,029566E+08	3,146615E+09	3,146608E+09	1,605890E+09	6,293223E+09	7,899113E+09
-1722	8,029684E+08	8,029309E+08	3,146648E+09	3,146696E+09	1,605899E+09	6,293344E+09	7,899243E+09
-1721	8,029223E+08	8,029377E+08	3,146747E+09	3,146629E+09	1,605860E+09	6,293376E+09	7,899236E+09
-1720	8,028704E+08	8,028542E+08	3,146675E+09	3,146775E+09	1,605725E+09	6,293450E+09	7,899175E+09
-1719	8,029208E+08	8,028987E+08	3,146690E+09	3,146743E+09	1,605820E+09	6,293433E+09	7,899252E+09
-1718	8,028585E+08	8,028908E+08	3,146737E+09	3,146665E+09	1,605749E+09	6,293402E+09	7,899151E+09
-1717	8,028742E+08	8,028543E+08	3,146669E+09	3,146757E+09	1,605728E+09	6,293427E+09	7,899155E+09
-1716	8,029327E+08	8,029309E+08	3,146730E+09	3,146612E+09	1,605864E+09	6,293341E+09	7,899205E+09
-1715	8,028770E+08	8,029068E+08	3,146673E+09	3,146604E+09	1,605784E+09	6,293277E+09	7,899060E+09
-1714	8,029538E+08	8,029262E+08	3,146571E+09	3,146657E+09	1,605880E+09	6,293228E+09	7,899108E+09
-1713	8,029877E+08	8,030206E+08	3,146594E+09	3,146500E+09	1,606008E+09	6,293094E+09	7,899102E+09
-1712	8,029695E+08	8,029926E+08	3,146476E+09	3,146538E+09	1,605962E+09	6,293014E+09	7,898976E+09
-1711	8,030777E+08	8,030505E+08	3,146425E+09	3,146478E+09	1,606128E+09	6,292903E+09	7,899031E+09
-1710	8,030660E+08	8,030890E+08	3,146461E+09	3,146338E+09	1,606155E+09	6,292799E+09	7,898955E+09
-1709	8,030748E+08	8,030481E+08	3,146357E+09	3,146451E+09	1,606123E+09	6,292808E+09	7,898931E+09
-1708	8,031401E+08	8,031230E+08	3,146409E+09	3,146362E+09	1,606263E+09	6,292771E+09	7,899034E+09
-1707	8,030560E+08	8,031019E+08	3,146431E+09	3,146364E+09	1,606158E+09	6,292795E+09	7,898953E+09
-1706	8,030740E+08	8,030541E+08	3,146400E+09	3,146503E+09	1,606128E+09	6,292903E+09	7,899031E+09
-1705	8,030799E+08	8,030965E+08	3,146529E+09	3,146426E+09	1,606176E+09	6,292955E+09	7,899131E+09
-1704	8,029898E+08	8,029993E+08	3,146529E+09	3,146530E+09	1,605989E+09	6,293059E+09	7,899048E+09
-1703	8,030303E+08	8,029764E+08	3,146512E+09	3,146598E+09	1,606007E+09	6,293110E+09	7,899117E+09
-1702	8,029903E+08	8,029978E+08	3,146602E+09	3,146524E+09	1,605988E+09	6,293127E+09	7,899115E+09
-1701	8,029346E+08	8,029248E+08	3,146535E+09	3,146657E+09	1,605859E+09	6,293191E+09	7,899051E+09
-1700	8,029941E+08	8,029720E+08	3,146588E+09	3,146592E+09	1,605966E+09	6,293180E+09	7,899146E+09
-1699	8,029246E+08	8,029671E+08	3,146649E+09	3,146518E+09	1,605892E+09	6,293167E+09	7,899059E+09
-1698	8,029411E+08	8,029185E+08	3,146557E+09	3,146623E+09	1,605860E+09	6,293180E+09	7,899040E+09
-1697	8,030070E+08	8,030062E+08	3,146603E+09	3,146514E+09	1,606013E+09	6,293117E+09	7,899130E+09
-1696	8,029497E+08	8,029886E+08	3,146544E+09	3,146508E+09	1,605938E+09	6,293053E+09	7,898991E+09
-1695	8,030322E+08	8,030094E+08	3,146414E+09	3,146529E+09	1,606042E+09	6,292943E+09	7,898985E+09
-1694	8,030759E+08	8,031047E+08	3,146455E+09	3,146359E+09	1,606181E+09	6,292814E+09	7,898995E+09
-1693	8,030567E+08	8,030710E+08	3,146343E+09	3,146391E+09	1,606128E+09	6,292734E+09	7,898861E+09
-1692	8,031673E+08	8,031252E+08	3,146309E+09	3,146322E+09	1,606292E+09	6,292632E+09	7,898924E+09
-1691	8,031392E+08	8,031718E+08	3,146344E+09	3,146207E+09	1,606311E+09	6,292550E+09	7,898861E+09
-1690	8,031374E+08	8,031216E+08	3,146222E+09	3,146332E+09	1,606259E+09	6,292554E+09	7,898813E+09
-1689	8,032017E+08	8,031983E+08	3,146295E+09	3,146272E+09	1,606400E+09	6,292567E+09	7,898967E+09
-1688	8,031150E+08	8,031633E+08	3,146347E+09	3,146271E+09	1,606278E+09	6,292619E+09	7,898897E+09
-1687	8,031364E+08	8,031007E+08	3,146292E+09	3,146392E+09	1,606237E+09	6,292684E+09	7,898921E+09
-1686	8,031501E+08	8,031437E+08	3,146417E+09	3,146326E+09	1,606294E+09	6,292743E+09	7,899037E+09
-1685	8,030546E+08	8,030538E+08	3,146401E+09	3,146434E+09	1,606108E+09	6,292835E+09	7,898944E+09
-1684	8,030974E+08	8,030443E+08	3,146397E+09	3,146481E+09	1,606142E+09	6,292879E+09	7,899020E+09
-1683	8,030457E+08	8,030770E+08	3,146505E+09	3,146401E+09	1,606123E+09	6,292906E+09	7,899029E+09
-1682	8,029886E+08	8,029921E+08	3,146439E+09	3,146525E+09	1,605981E+09	6,292964E+09	7,898945E+09
-1681	8,030571E+08	8,030392E+08	3,146502E+09	3,146482E+09	1,606096E+09	6,292984E+09	7,899081E+09
-1680	8,029892E+08	8,030295E+08	3,146559E+09	3,146417E+09	1,606019E+09	6,292976E+09	7,898995E+09
-1679	8,030107E+08	8,029848E+08	3,146412E+09	3,146512E+09	1,605996E+09	6,292925E+09	7,898920E+09
-1678	8,030873E+08	8,030863E+08	3,146444E+09	3,146402E+09	1,606174E+09	6,292845E+09	7,899019E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-1677	8,030314E+08	8,030737E+08	3,146387E+09	3,146380E+09	1,606105E+09	6,292767E+09	7,898872E+09
-1676	8,031260E+08	8,030929E+08	3,146283E+09	3,146365E+09	1,606219E+09	6,292648E+09	7,898867E+09
-1675	8,031615E+08	8,031870E+08	3,146333E+09	3,146192E+09	1,606348E+09	6,292524E+09	7,898873E+09
-1674	8,031374E+08	8,031433E+08	3,146206E+09	3,146237E+09	1,606281E+09	6,292443E+09	7,898724E+09
-1673	8,032451E+08	8,032060E+08	3,146176E+09	3,146206E+09	1,606451E+09	6,292382E+09	7,898833E+09
-1672	8,032056E+08	8,032526E+08	3,146231E+09	3,146107E+09	1,606458E+09	6,292338E+09	7,898796E+09
-1671	8,032012E+08	8,031944E+08	3,146102E+09	3,146222E+09	1,606396E+09	6,292324E+09	7,898719E+09
-1670	8,032710E+08	8,032635E+08	3,146193E+09	3,146166E+09	1,606535E+09	6,292359E+09	7,898894E+09
-1669	8,031841E+08	8,032179E+08	3,146249E+09	3,146172E+09	1,606402E+09	6,292421E+09	7,898823E+09
-1668	8,032088E+08	8,031530E+08	3,146191E+09	3,146279E+09	1,606362E+09	6,292470E+09	7,898832E+09
-1667	8,032088E+08	8,032075E+08	3,146301E+09	3,146221E+09	1,606416E+09	6,292522E+09	7,898939E+09
-1666	8,031078E+08	8,031190E+08	3,146267E+09	3,146323E+09	1,606227E+09	6,292589E+09	7,898816E+09
-1665	8,031533E+08	8,031164E+08	3,146286E+09	3,146376E+09	1,606270E+09	6,292662E+09	7,898932E+09
-1664	8,031025E+08	8,031416E+08	3,146424E+09	3,146289E+09	1,606244E+09	6,292713E+09	7,898957E+09
-1663	8,030520E+08	8,030473E+08	3,146335E+09	3,146397E+09	1,606099E+09	6,292732E+09	7,898832E+09
-1662	8,031288E+08	8,031006E+08	3,146389E+09	3,146372E+09	1,606229E+09	6,292761E+09	7,898990E+09
-1661	8,030633E+08	8,031009E+08	3,146430E+09	3,146315E+09	1,606164E+09	6,292745E+09	7,898909E+09
-1660	8,030904E+08	8,030670E+08	3,146281E+09	3,146385E+09	1,606157E+09	6,292666E+09	7,898823E+09
-1659	8,031623E+08	8,031765E+08	3,146320E+09	3,146263E+09	1,606339E+09	6,292584E+09	7,898923E+09
-1658	8,031104E+08	8,031519E+08	3,146251E+09	3,146225E+09	1,606262E+09	6,292476E+09	7,898738E+09
-1657	8,032105E+08	8,031703E+08	3,146156E+09	3,146228E+09	1,606381E+09	6,292384E+09	7,898764E+09
-1656	8,032413E+08	8,032609E+08	3,146210E+09	3,146066E+09	1,606502E+09	6,292276E+09	7,898778E+09
-1655	8,032132E+08	8,032178E+08	3,146047E+09	3,146108E+09	1,606431E+09	6,292156E+09	7,898587E+09
-1654	8,033208E+08	8,032897E+08	3,146028E+09	3,146090E+09	1,606610E+09	6,292118E+09	7,898728E+09
-1653	8,032797E+08	8,033311E+08	3,146106E+09	3,145992E+09	1,606611E+09	6,292098E+09	7,898709E+09
-1652	8,032794E+08	8,032645E+08	3,146003E+09	3,146087E+09	1,606544E+09	6,292090E+09	7,898633E+09
-1651	8,033397E+08	8,033285E+08	3,146100E+09	3,146042E+09	1,606668E+09	6,292142E+09	7,898810E+09
-1650	8,032482E+08	8,032723E+08	3,146131E+09	3,146061E+09	1,606520E+09	6,292193E+09	7,898713E+09
-1649	8,032692E+08	8,032177E+08	3,146075E+09	3,146193E+09	1,606487E+09	6,292268E+09	7,898755E+09
-1648	8,032603E+08	8,032733E+08	3,146202E+09	3,146133E+09	1,606534E+09	6,292336E+09	7,898869E+09
-1647	8,031594E+08	8,031809E+08	3,146161E+09	3,146210E+09	1,606340E+09	6,292371E+09	7,898711E+09
-1646	8,032138E+08	8,031781E+08	3,146196E+09	3,146262E+09	1,606392E+09	6,292458E+09	7,898850E+09
-1645	8,031684E+08	8,031979E+08	3,146335E+09	3,146184E+09	1,606366E+09	6,292519E+09	7,898885E+09
-1644	8,031261E+08	8,031084E+08	3,146232E+09	3,146280E+09	1,606235E+09	6,292513E+09	7,898747E+09
-1643	8,031956E+08	8,031745E+08	3,146260E+09	3,146257E+09	1,606370E+09	6,292517E+09	7,898887E+09
-1642	8,031331E+08	8,031769E+08	3,146274E+09	3,146194E+09	1,606310E+09	6,292468E+09	7,898778E+09
-1641	8,031689E+08	8,031497E+08	3,146140E+09	3,146257E+09	1,606319E+09	6,292397E+09	7,898716E+09
-1640	8,032423E+08	8,032512E+08	3,146196E+09	3,146124E+09	1,606494E+09	6,292320E+09	7,898814E+09
-1639	8,031956E+08	8,032231E+08	3,146101E+09	3,146069E+09	1,606419E+09	6,292170E+09	7,898588E+09
-1638	8,032990E+08	8,032502E+08	3,146003E+09	3,146086E+09	1,606549E+09	6,292088E+09	7,898638E+09
-1637	8,033252E+08	8,033482E+08	3,146064E+09	3,145942E+09	1,606673E+09	6,292006E+09	7,898679E+09
-1636	8,032952E+08	8,033101E+08	3,145924E+09	3,145970E+09	1,606605E+09	6,291894E+09	7,898499E+09
-1635	8,033889E+08	8,033793E+08	3,145932E+09	3,145956E+09	1,606768E+09	6,291888E+09	7,898656E+09
-1634	8,033490E+08	8,034007E+08	3,146005E+09	3,145871E+09	1,606750E+09	6,291876E+09	7,898626E+09
-1633	8,033492E+08	8,033259E+08	3,145910E+09	3,145989E+09	1,606675E+09	6,291899E+09	7,898574E+09
-1632	8,034012E+08	8,033821E+08	3,145999E+09	3,145958E+09	1,606783E+09	6,291957E+09	7,898740E+09
-1631	8,033068E+08	8,033275E+08	3,145986E+09	3,145964E+09	1,606634E+09	6,291950E+09	7,898585E+09
-1630	8,033287E+08	8,032839E+08	3,145940E+09	3,146093E+09	1,606613E+09	6,292032E+09	7,898645E+09
-1629	8,033226E+08	8,033361E+08	3,146096E+09	3,146025E+09	1,606659E+09	6,292121E+09	7,898780E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-1628	8,032282E+08	8,032406E+08	3,146075E+09	3,146073E+09	1,606469E+09	6,292148E+09	7,898617E+09
-1627	8,032753E+08	8,032403E+08	3,146115E+09	3,146135E+09	1,606516E+09	6,292250E+09	7,898766E+09
-1626	8,032328E+08	8,032569E+08	3,146217E+09	3,146075E+09	1,606490E+09	6,292292E+09	7,898781E+09
-1625	8,031914E+08	8,031812E+08	3,146112E+09	3,146188E+09	1,606373E+09	6,292300E+09	7,898672E+09
-1624	8,032590E+08	8,032498E+08	3,146143E+09	3,146159E+09	1,606509E+09	6,292303E+09	7,898811E+09
-1623	8,032039E+08	8,032489E+08	3,146131E+09	3,146062E+09	1,606453E+09	6,292193E+09	7,898646E+09
-1622	8,032519E+08	8,032269E+08	3,146002E+09	3,146117E+09	1,606479E+09	6,292118E+09	7,898597E+09
-1621	8,033306E+08	8,033249E+08	3,146060E+09	3,145984E+09	1,606655E+09	6,292044E+09	7,898699E+09
-1620	8,032861E+08	8,033070E+08	3,145959E+09	3,145912E+09	1,606593E+09	6,291870E+09	7,898463E+09
-1619	8,033756E+08	8,033465E+08	3,145863E+09	3,145938E+09	1,606722E+09	6,291801E+09	7,898523E+09
-1618	8,033997E+08	8,034377E+08	3,145920E+09	3,145808E+09	1,606837E+09	6,291728E+09	7,898566E+09
-1617	8,033716E+08	8,033934E+08	3,145819E+09	3,145850E+09	1,606765E+09	6,291669E+09	7,898434E+09
-1616	8,034603E+08	8,034444E+08	3,145842E+09	3,145845E+09	1,606905E+09	6,291688E+09	7,898592E+09
-1615	8,034219E+08	8,034537E+08	3,145878E+09	3,145761E+09	1,606876E+09	6,291639E+09	7,898515E+09
-1614	8,034233E+08	8,033872E+08	3,145771E+09	3,145892E+09	1,606810E+09	6,291662E+09	7,898473E+09
-1613	8,034691E+08	8,034457E+08	3,145864E+09	3,145867E+09	1,606915E+09	6,291731E+09	7,898646E+09
-1612	8,033742E+08	8,034000E+08	3,145873E+09	3,145840E+09	1,606774E+09	6,291713E+09	7,898487E+09
-1611	8,033853E+08	8,033558E+08	3,145856E+09	3,145957E+09	1,606741E+09	6,291814E+09	7,898555E+09
-1610	8,033814E+08	8,033941E+08	3,146009E+09	3,145906E+09	1,606776E+09	6,291916E+09	7,898691E+09
-1609	8,032904E+08	8,032974E+08	3,146001E+09	3,145978E+09	1,606588E+09	6,291979E+09	7,898567E+09
-1608	8,033290E+08	8,032958E+08	3,146020E+09	3,146056E+09	1,606625E+09	6,292076E+09	7,898701E+09
-1607	8,032910E+08	8,033179E+08	3,146068E+09	3,145982E+09	1,606609E+09	6,292051E+09	7,898660E+09
-1606	8,032603E+08	8,032563E+08	3,145956E+09	3,146079E+09	1,606517E+09	6,292035E+09	7,898551E+09
-1605	8,033382E+08	8,033208E+08	3,146005E+09	3,146030E+09	1,606659E+09	6,292035E+09	7,898694E+09
-1604	8,032945E+08	8,033255E+08	3,145998E+09	3,145892E+09	1,606620E+09	6,291891E+09	7,898511E+09
-1603	8,033360E+08	8,033105E+08	3,145878E+09	3,145945E+09	1,606646E+09	6,291824E+09	7,898470E+09
-1602	8,034128E+08	8,034087E+08	3,145915E+09	3,145839E+09	1,606821E+09	6,291754E+09	7,898576E+09
-1601	8,033647E+08	8,034001E+08	3,145840E+09	3,145788E+09	1,606765E+09	6,291628E+09	7,898393E+09
-1600	8,034423E+08	8,034341E+08	3,145763E+09	3,145828E+09	1,606876E+09	6,291591E+09	7,898468E+09
-1599	8,034709E+08	8,035109E+08	3,145799E+09	3,145690E+09	1,606982E+09	6,291490E+09	7,898471E+09
-1598	8,034517E+08	8,034627E+08	3,145697E+09	3,145742E+09	1,606914E+09	6,291440E+09	7,898354E+09
-1597	8,035430E+08	8,035016E+08	3,145718E+09	3,145747E+09	1,607045E+09	6,291465E+09	7,898509E+09
-1596	8,035037E+08	8,035186E+08	3,145730E+09	3,145637E+09	1,607022E+09	6,291367E+09	7,898389E+09
-1595	8,034897E+08	8,034650E+08	3,145633E+09	3,145761E+09	1,606955E+09	6,291393E+09	7,898348E+09
-1594	8,035311E+08	8,035167E+08	3,145730E+09	3,145741E+09	1,607048E+09	6,291471E+09	7,898519E+09
-1593	8,034349E+08	8,034671E+08	3,145793E+09	3,145720E+09	1,606902E+09	6,291513E+09	7,898415E+09
-1592	8,034373E+08	8,034118E+08	3,145798E+09	3,145853E+09	1,606849E+09	6,291651E+09	7,898500E+09
-1591	8,034362E+08	8,034406E+08	3,145907E+09	3,145811E+09	1,606877E+09	6,291717E+09	7,898594E+09
-1590	8,033519E+08	8,033574E+08	3,145879E+09	3,145898E+09	1,606709E+09	6,291777E+09	7,898487E+09
-1589	8,033931E+08	8,033581E+08	3,145894E+09	3,145973E+09	1,606751E+09	6,291867E+09	7,898618E+09
-1588	8,033632E+08	8,033917E+08	3,145939E+09	3,145852E+09	1,606755E+09	6,291792E+09	7,898547E+09
-1587	8,033322E+08	8,033374E+08	3,145845E+09	3,145922E+09	1,606670E+09	6,291767E+09	7,898437E+09
-1586	8,034174E+08	8,033923E+08	3,145878E+09	3,145881E+09	1,606810E+09	6,291759E+09	7,898569E+09
-1585	8,033775E+08	8,034021E+08	3,145889E+09	3,145755E+09	1,606780E+09	6,291644E+09	7,898423E+09
-1584	8,034076E+08	8,033905E+08	3,145760E+09	3,145824E+09	1,606798E+09	6,291583E+09	7,898381E+09
-1583	8,034835E+08	8,034900E+08	3,145758E+09	3,145718E+09	1,606974E+09	6,291476E+09	7,898450E+09
-1582	8,034453E+08	8,034881E+08	3,145692E+09	3,145671E+09	1,606933E+09	6,291363E+09	7,898296E+09
-1581	8,035276E+08	8,035066E+08	3,145635E+09	3,145708E+09	1,607034E+09	6,291344E+09	7,898378E+09
-1580	8,035643E+08	8,035836E+08	3,145664E+09	3,145545E+09	1,607148E+09	6,291209E+09	7,898357E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-1579	8,035378E+08	8,035389E+08	3,145561E+09	3,145594E+09	1,607077E+09	6,291155E+09	7,898232E+09
-1578	8,036206E+08	8,035743E+08	3,145562E+09	3,145623E+09	1,607195E+09	6,291185E+09	7,898379E+09
-1577	8,035735E+08	8,035990E+08	3,145616E+09	3,145520E+09	1,607173E+09	6,291136E+09	7,898309E+09
-1576	8,035408E+08	8,035384E+08	3,145554E+09	3,145649E+09	1,607079E+09	6,291203E+09	7,898282E+09
-1575	8,035809E+08	8,035746E+08	3,145643E+09	3,145631E+09	1,607155E+09	6,291274E+09	7,898429E+09
-1574	8,034939E+08	8,035223E+08	3,145710E+09	3,145629E+09	1,607016E+09	6,291339E+09	7,898356E+09
-1573	8,034973E+08	8,034569E+08	3,145709E+09	3,145779E+09	1,606954E+09	6,291488E+09	7,898442E+09
-1572	8,035009E+08	8,034988E+08	3,145779E+09	3,145712E+09	1,607000E+09	6,291492E+09	7,898492E+09
-1571	8,034137E+08	8,034302E+08	3,145749E+09	3,145779E+09	1,606844E+09	6,291528E+09	7,898372E+09
-1570	8,034605E+08	8,034259E+08	3,145753E+09	3,145850E+09	1,606886E+09	6,291603E+09	7,898489E+09
-1569	8,034389E+08	8,034608E+08	3,145838E+09	3,145713E+09	1,606900E+09	6,291551E+09	7,898450E+09
-1568	8,034021E+08	8,034065E+08	3,145752E+09	3,145785E+09	1,606809E+09	6,291537E+09	7,898345E+09
-1567	8,034896E+08	8,034594E+08	3,145741E+09	3,145749E+09	1,606949E+09	6,291490E+09	7,898439E+09
-1566	8,034552E+08	8,034870E+08	3,145742E+09	3,145642E+09	1,606942E+09	6,291384E+09	7,898326E+09
-1565	8,034857E+08	8,034747E+08	3,145627E+09	3,145716E+09	1,606960E+09	6,291343E+09	7,898304E+09
-1564	8,035664E+08	8,035781E+08	3,145618E+09	3,145576E+09	1,607145E+09	6,291194E+09	7,898338E+09
-1563	8,035300E+08	8,035758E+08	3,145573E+09	3,145517E+09	1,607106E+09	6,291090E+09	7,898196E+09
-1562	8,036157E+08	8,035791E+08	3,145497E+09	3,145573E+09	1,607195E+09	6,291069E+09	7,898264E+09
-1561	8,036498E+08	8,036558E+08	3,145541E+09	3,145418E+09	1,607306E+09	6,290959E+09	7,898264E+09
-1560	8,036054E+08	8,036165E+08	3,145436E+09	3,145477E+09	1,607222E+09	6,290913E+09	7,898135E+09
-1559	8,036806E+08	8,036460E+08	3,145411E+09	3,145503E+09	1,607327E+09	6,290913E+09	7,898240E+09
-1558	8,036376E+08	8,036729E+08	3,145494E+09	3,145408E+09	1,607310E+09	6,290902E+09	7,898213E+09
-1557	8,036058E+08	8,035938E+08	3,145471E+09	3,145544E+09	1,607200E+09	6,291015E+09	7,898214E+09
-1556	8,036483E+08	8,036293E+08	3,145549E+09	3,145511E+09	1,607278E+09	6,291060E+09	7,898338E+09
-1555	8,035594E+08	8,035830E+08	3,145616E+09	3,145518E+09	1,607142E+09	6,291134E+09	7,898276E+09
-1554	8,035593E+08	8,035164E+08	3,145583E+09	3,145690E+09	1,607076E+09	6,291273E+09	7,898348E+09
-1553	8,035633E+08	8,035663E+08	3,145679E+09	3,145615E+09	1,607130E+09	6,291295E+09	7,898424E+09
-1552	8,034683E+08	8,035000E+08	3,145661E+09	3,145667E+09	1,606968E+09	6,291328E+09	7,898296E+09
-1551	8,035208E+08	8,034866E+08	3,145635E+09	3,145726E+09	1,607007E+09	6,291361E+09	7,898369E+09
-1550	8,035140E+08	8,035289E+08	3,145716E+09	3,145597E+09	1,607043E+09	6,291313E+09	7,898356E+09
-1549	8,034791E+08	8,034711E+08	3,145628E+09	3,145673E+09	1,606950E+09	6,291300E+09	7,898251E+09
-1548	8,035678E+08	8,035426E+08	3,145584E+09	3,145612E+09	1,607110E+09	6,291195E+09	7,898306E+09
-1547	8,035350E+08	8,035825E+08	3,145595E+09	3,145490E+09	1,607118E+09	6,291085E+09	7,898202E+09
-1546	8,035673E+08	8,035595E+08	3,145479E+09	3,145574E+09	1,607127E+09	6,291053E+09	7,898180E+09
-1545	8,036549E+08	8,036582E+08	3,145510E+09	3,145429E+09	1,607313E+09	6,290939E+09	7,898252E+09
-1544	8,036106E+08	8,036517E+08	3,145463E+09	3,145381E+09	1,607262E+09	6,290844E+09	7,898106E+09
-1543	8,036927E+08	8,036483E+08	3,145342E+09	3,145448E+09	1,607341E+09	6,290790E+09	7,898131E+09
-1542	8,037275E+08	8,037371E+08	3,145386E+09	3,145308E+09	1,607465E+09	6,290694E+09	7,898159E+09
-1541	8,036762E+08	8,036914E+08	3,145316E+09	3,145368E+09	1,607368E+09	6,290684E+09	7,898052E+09
-1540	8,037482E+08	8,037217E+08	3,145299E+09	3,145366E+09	1,607470E+09	6,290665E+09	7,898134E+09
-1539	8,037058E+08	8,037440E+08	3,145414E+09	3,145274E+09	1,607450E+09	6,290688E+09	7,898138E+09
-1538	8,036720E+08	8,036482E+08	3,145378E+09	3,145445E+09	1,607320E+09	6,290823E+09	7,898143E+09
-1537	8,037121E+08	8,036839E+08	3,145465E+09	3,145423E+09	1,607396E+09	6,290888E+09	7,898284E+09
-1536	8,036103E+08	8,036458E+08	3,145516E+09	3,145438E+09	1,607256E+09	6,290953E+09	7,898209E+09
-1535	8,036097E+08	8,035756E+08	3,145442E+09	3,145595E+09	1,607185E+09	6,291037E+09	7,898222E+09
-1534	8,036257E+08	8,036301E+08	3,145550E+09	3,145510E+09	1,607256E+09	6,291060E+09	7,898316E+09
-1533	8,035394E+08	8,035568E+08	3,145557E+09	3,145548E+09	1,607096E+09	6,291106E+09	7,898202E+09
-1532	8,035975E+08	8,035521E+08	3,145503E+09	3,145575E+09	1,607150E+09	6,291079E+09	7,898228E+09
-1531	8,035925E+08	8,036092E+08	3,145588E+09	3,145449E+09	1,607202E+09	6,291037E+09	7,898239E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-1530	8,035549E+08	8,035544E+08	3,145485E+09	3,145548E+09	1,607109E+09	6,291034E+09	7,898143E+09
-1529	8,036415E+08	8,036299E+08	3,145477E+09	3,145480E+09	1,607271E+09	6,290957E+09	7,898228E+09
-1528	8,036039E+08	8,036694E+08	3,145501E+09	3,145360E+09	1,607273E+09	6,290861E+09	7,898134E+09
-1527	8,036424E+08	8,036307E+08	3,145348E+09	3,145443E+09	1,607273E+09	6,290790E+09	7,898063E+09
-1526	8,037421E+08	8,037310E+08	3,145367E+09	3,145313E+09	1,607473E+09	6,290680E+09	7,898153E+09
-1525	8,036985E+08	8,037214E+08	3,145316E+09	3,145268E+09	1,607420E+09	6,290584E+09	7,898004E+09
-1524	8,037755E+08	8,037325E+08	3,145165E+09	3,145305E+09	1,607508E+09	6,290470E+09	7,897978E+09
-1523	8,038075E+08	8,038277E+08	3,145241E+09	3,145155E+09	1,607635E+09	6,290397E+09	7,898032E+09
-1522	8,037517E+08	8,037666E+08	3,145195E+09	3,145233E+09	1,607518E+09	6,290427E+09	7,897946E+09
-1521	8,038200E+08	8,037883E+08	3,145230E+09	3,145236E+09	1,607608E+09	6,290466E+09	7,898074E+09
-1520	8,037668E+08	8,038068E+08	3,145345E+09	3,145174E+09	1,607574E+09	6,290518E+09	7,898092E+09
-1519	8,037261E+08	8,037028E+08	3,145262E+09	3,145364E+09	1,607429E+09	6,290625E+09	7,898054E+09
-1518	8,037702E+08	8,037482E+08	3,145340E+09	3,145356E+09	1,607518E+09	6,290696E+09	7,898214E+09
-1517	8,036691E+08	8,037026E+08	3,145407E+09	3,145354E+09	1,607372E+09	6,290761E+09	7,898132E+09
-1516	8,036717E+08	8,036394E+08	3,145319E+09	3,145465E+09	1,607311E+09	6,290784E+09	7,898095E+09
-1515	8,036976E+08	8,036962E+08	3,145445E+09	3,145364E+09	1,607394E+09	6,290809E+09	7,898203E+09
-1514	8,036119E+08	8,036181E+08	3,145440E+09	3,145422E+09	1,607230E+09	6,290862E+09	7,898092E+09
-1513	8,036680E+08	8,036241E+08	3,145402E+09	3,145447E+09	1,607292E+09	6,290849E+09	7,898142E+09
-1512	8,036541E+08	8,036933E+08	3,145474E+09	3,145332E+09	1,607347E+09	6,290806E+09	7,898154E+09
-1511	8,036178E+08	8,036318E+08	3,145342E+09	3,145428E+09	1,607250E+09	6,290769E+09	7,898019E+09
-1510	8,037190E+08	8,037074E+08	3,145342E+09	3,145361E+09	1,607426E+09	6,290703E+09	7,898129E+09
-1509	8,036923E+08	8,037359E+08	3,145378E+09	3,145237E+09	1,607428E+09	6,290615E+09	7,898043E+09
-1508	8,037351E+08	8,037074E+08	3,145183E+09	3,145294E+09	1,607442E+09	6,290477E+09	7,897919E+09
-1507	8,038359E+08	8,038190E+08	3,145206E+09	3,145160E+09	1,607655E+09	6,290366E+09	7,898021E+09
-1506	8,037845E+08	8,038116E+08	3,145156E+09	3,145132E+09	1,607596E+09	6,290288E+09	7,897884E+09
-1505	8,038524E+08	8,038226E+08	3,145060E+09	3,145156E+09	1,607675E+09	6,290216E+09	7,897891E+09
-1504	8,038714E+08	8,039122E+08	3,145166E+09	3,145025E+09	1,607784E+09	6,290191E+09	7,897975E+09
-1503	8,038134E+08	8,038295E+08	3,145101E+09	3,145124E+09	1,607643E+09	6,290225E+09	7,897868E+09
-1502	8,038838E+08	8,038460E+08	3,145128E+09	3,145158E+09	1,607730E+09	6,290286E+09	7,898016E+09
-1501	8,038313E+08	8,038580E+08	3,145235E+09	3,145109E+09	1,607689E+09	6,290344E+09	7,898034E+09
-1500	8,037878E+08	8,037658E+08	3,145106E+09	3,145259E+09	1,607554E+09	6,290365E+09	7,897919E+09
-1499	8,038360E+08	8,038144E+08	3,145205E+09	3,145228E+09	1,607650E+09	6,290433E+09	7,898084E+09
-1498	8,037380E+08	8,037615E+08	3,145285E+09	3,145226E+09	1,607500E+09	6,290511E+09	7,898011E+09
-1497	8,037418E+08	8,036989E+08	3,145237E+09	3,145319E+09	1,607441E+09	6,290556E+09	7,897997E+09
-1496	8,037599E+08	8,037640E+08	3,145360E+09	3,145241E+09	1,607524E+09	6,290601E+09	7,898125E+09
-1495	8,036714E+08	8,036859E+08	3,145314E+09	3,145314E+09	1,607357E+09	6,290628E+09	7,897985E+09
-1494	8,037306E+08	8,037037E+08	3,145277E+09	3,145354E+09	1,607434E+09	6,290631E+09	7,898065E+09
-1493	8,037239E+08	8,037663E+08	3,145364E+09	3,145233E+09	1,607490E+09	6,290598E+09	7,898088E+09
-1492	8,036958E+08	8,037097E+08	3,145202E+09	3,145288E+09	1,607406E+09	6,290490E+09	7,897896E+09
-1491	8,038116E+08	8,037849E+08	3,145206E+09	3,145212E+09	1,607597E+09	6,290418E+09	7,898015E+09
-1490	8,037875E+08	8,038113E+08	3,145219E+09	3,145103E+09	1,607599E+09	6,290321E+09	7,897920E+09
-1489	8,038250E+08	8,037955E+08	3,145040E+09	3,145143E+09	1,607621E+09	6,290182E+09	7,897803E+09
-1488	8,039111E+08	8,039172E+08	3,145067E+09	3,145016E+09	1,607828E+09	6,290083E+09	7,897911E+09
-1487	8,038530E+08	8,038967E+08	3,145015E+09	3,144990E+09	1,607750E+09	6,290005E+09	7,897755E+09
-1486	8,039245E+08	8,039005E+08	3,144954E+09	3,145034E+09	1,607825E+09	6,289988E+09	7,897813E+09
-1485	8,039465E+08	8,039697E+08	3,145076E+09	3,144924E+09	1,607916E+09	6,289999E+09	7,897916E+09
-1484	8,038859E+08	8,038905E+08	3,144972E+09	3,145015E+09	1,607776E+09	6,289987E+09	7,897763E+09
-1483	8,039570E+08	8,039120E+08	3,144999E+09	3,145053E+09	1,607869E+09	6,290052E+09	7,897921E+09
-1482	8,038979E+08	8,039215E+08	3,145100E+09	3,145015E+09	1,607819E+09	6,290115E+09	7,897935E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-1481	8,038498E+08	8,038330E+08	3,145015E+09	3,145133E+09	1,607683E+09	6,290148E+09	7,897831E+09
-1480	8,038907E+08	8,038800E+08	3,145127E+09	3,145104E+09	1,607771E+09	6,290232E+09	7,898002E+09
-1479	8,037938E+08	8,038158E+08	3,145186E+09	3,145110E+09	1,607610E+09	6,290296E+09	7,897905E+09
-1478	8,038018E+08	8,037593E+08	3,145135E+09	3,145225E+09	1,607561E+09	6,290360E+09	7,897921E+09
-1477	8,038222E+08	8,038254E+08	3,145249E+09	3,145159E+09	1,607648E+09	6,290408E+09	7,898055E+09
-1476	8,037360E+08	8,037626E+08	3,145163E+09	3,145198E+09	1,607499E+09	6,290361E+09	7,897860E+09
-1475	8,038059E+08	8,037818E+08	3,145142E+09	3,145217E+09	1,607588E+09	6,290359E+09	7,897947E+09
-1474	8,038082E+08	8,038375E+08	3,145229E+09	3,145100E+09	1,607646E+09	6,290329E+09	7,897974E+09
-1473	8,037867E+08	8,037864E+08	3,145086E+09	3,145128E+09	1,607573E+09	6,290213E+09	7,897786E+09
-1472	8,038950E+08	8,038706E+08	3,145076E+09	3,145069E+09	1,607766E+09	6,290145E+09	7,897911E+09
-1471	8,038667E+08	8,038986E+08	3,145056E+09	3,144967E+09	1,607765E+09	6,290023E+09	7,897788E+09
-1470	8,039015E+08	8,038884E+08	3,144897E+09	3,145014E+09	1,607790E+09	6,289911E+09	7,897701E+09
-1469	8,039863E+08	8,039971E+08	3,144958E+09	3,144895E+09	1,607983E+09	6,289853E+09	7,897837E+09
-1468	8,039301E+08	8,039733E+08	3,144891E+09	3,144848E+09	1,607903E+09	6,289739E+09	7,897643E+09
-1467	8,040060E+08	8,039684E+08	3,144844E+09	3,144905E+09	1,607974E+09	6,289749E+09	7,897724E+09
-1466	8,040261E+08	8,040309E+08	3,144946E+09	3,144829E+09	1,608057E+09	6,289776E+09	7,897833E+09
-1465	8,039596E+08	8,039598E+08	3,144849E+09	3,144902E+09	1,607919E+09	6,289752E+09	7,897671E+09
-1464	8,040165E+08	8,039864E+08	3,144877E+09	3,144944E+09	1,608003E+09	6,289821E+09	7,897823E+09
-1463	8,039547E+08	8,039830E+08	3,144971E+09	3,144896E+09	1,607938E+09	6,289866E+09	7,897804E+09
-1462	8,039102E+08	8,038933E+08	3,144917E+09	3,145017E+09	1,607804E+09	6,289934E+09	7,897738E+09
-1461	8,039538E+08	8,039304E+08	3,145043E+09	3,145004E+09	1,607884E+09	6,290048E+09	7,897932E+09
-1460	8,038567E+08	8,038785E+08	3,145064E+09	3,144995E+09	1,607735E+09	6,290059E+09	7,897795E+09
-1459	8,038680E+08	8,038324E+08	3,145018E+09	3,145114E+09	1,607700E+09	6,290133E+09	7,897833E+09
-1458	8,038880E+08	8,038980E+08	3,145127E+09	3,145059E+09	1,607786E+09	6,290186E+09	7,897972E+09
-1457	8,038062E+08	8,038401E+08	3,145071E+09	3,145063E+09	1,607646E+09	6,290134E+09	7,897780E+09
-1456	8,038765E+08	8,038584E+08	3,145046E+09	3,145084E+09	1,607735E+09	6,290130E+09	7,897865E+09
-1455	8,038842E+08	8,039036E+08	3,145094E+09	3,144970E+09	1,607788E+09	6,290063E+09	7,897851E+09
-1454	8,038686E+08	8,038646E+08	3,144943E+09	3,145007E+09	1,607733E+09	6,289949E+09	7,897683E+09
-1453	8,039768E+08	8,039494E+08	3,144921E+09	3,144950E+09	1,607926E+09	6,289871E+09	7,897797E+09
-1452	8,039463E+08	8,039891E+08	3,144879E+09	3,144814E+09	1,607935E+09	6,289692E+09	7,897628E+09
-1451	8,039877E+08	8,039754E+08	3,144760E+09	3,144853E+09	1,607963E+09	6,289613E+09	7,897576E+09
-1450	8,040719E+08	8,040699E+08	3,144834E+09	3,144758E+09	1,608142E+09	6,289593E+09	7,897734E+09
-1449	8,040170E+08	8,040476E+08	3,144792E+09	3,144707E+09	1,608065E+09	6,289499E+09	7,897563E+09
-1448	8,040794E+08	8,040453E+08	3,144733E+09	3,144792E+09	1,608125E+09	6,289525E+09	7,897650E+09
-1447	8,040909E+08	8,041025E+08	3,144805E+09	3,144730E+09	1,608193E+09	6,289535E+09	7,897728E+09
-1446	8,040210E+08	8,040345E+08	3,144732E+09	3,144804E+09	1,608056E+09	6,289536E+09	7,897592E+09
-1445	8,040750E+08	8,040459E+08	3,144783E+09	3,144845E+09	1,608121E+09	6,289628E+09	7,897749E+09
-1444	8,040153E+08	8,040420E+08	3,144859E+09	3,144771E+09	1,608057E+09	6,289630E+09	7,897688E+09
-1443	8,039773E+08	8,039498E+08	3,144823E+09	3,144897E+09	1,607927E+09	6,289720E+09	7,897647E+09
-1442	8,040174E+08	8,039873E+08	3,144933E+09	3,144912E+09	1,608005E+09	6,289845E+09	7,897850E+09
-1441	8,039213E+08	8,039510E+08	3,144961E+09	3,144879E+09	1,607872E+09	6,289840E+09	7,897713E+09
-1440	8,039237E+08	8,039102E+08	3,144914E+09	3,145001E+09	1,607834E+09	6,289915E+09	7,897749E+09
-1439	8,039498E+08	8,039630E+08	3,145004E+09	3,144939E+09	1,607913E+09	6,289943E+09	7,897856E+09
-1438	8,038804E+08	8,039053E+08	3,144956E+09	3,144939E+09	1,607786E+09	6,289895E+09	7,897681E+09
-1437	8,039577E+08	8,039186E+08	3,144921E+09	3,144971E+09	1,607876E+09	6,289892E+09	7,897769E+09
-1436	8,039687E+08	8,039807E+08	3,144918E+09	3,144829E+09	1,607949E+09	6,289748E+09	7,897697E+09
-1435	8,039565E+08	8,039547E+08	3,144782E+09	3,144856E+09	1,607911E+09	6,289638E+09	7,897549E+09
-1434	8,040600E+08	8,040395E+08	3,144774E+09	3,144809E+09	1,608100E+09	6,289584E+09	7,897683E+09
-1433	8,040316E+08	8,040820E+08	3,144771E+09	3,144645E+09	1,608114E+09	6,289417E+09	7,897530E+09



1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-1432	8,040653E+08	8,040624E+08	3,144665E+09	3,144709E+09	1,608128E+09	6,289374E+09	7,897502E+09
-1431	8,041474E+08	8,041409E+08	3,144708E+09	3,144641E+09	1,608288E+09	6,289349E+09	7,897637E+09
-1430	8,040931E+08	8,041227E+08	3,144665E+09	3,144611E+09	1,608216E+09	6,289277E+09	7,897493E+09
-1429	8,041488E+08	8,041150E+08	3,144598E+09	3,144707E+09	1,608264E+09	6,289306E+09	7,897569E+09
-1428	8,041567E+08	8,041738E+08	3,144647E+09	3,144607E+09	1,608330E+09	6,289254E+09	7,897585E+09
-1427	8,040928E+08	8,041003E+08	3,144615E+09	3,144665E+09	1,608193E+09	6,289280E+09	7,897473E+09
-1426	8,041445E+08	8,041005E+08	3,144679E+09	3,144724E+09	1,608245E+09	6,289403E+09	7,897648E+09
-1425	8,040850E+08	8,041045E+08	3,144777E+09	3,144640E+09	1,608189E+09	6,289417E+09	7,897607E+09
-1424	8,040351E+08	8,040205E+08	3,144738E+09	3,144793E+09	1,608056E+09	6,289531E+09	7,897587E+09
-1423	8,040677E+08	8,040528E+08	3,144819E+09	3,144821E+09	1,608120E+09	6,289640E+09	7,897761E+09
-1422	8,039774E+08	8,040205E+08	3,144869E+09	3,144790E+09	1,607998E+09	6,289659E+09	7,897657E+09
-1421	8,039845E+08	8,039673E+08	3,144820E+09	3,144907E+09	1,607952E+09	6,289727E+09	7,897679E+09
-1420	8,040200E+08	8,040211E+08	3,144867E+09	3,144813E+09	1,608041E+09	6,289680E+09	7,897721E+09
-1419	8,039656E+08	8,039718E+08	3,144816E+09	3,144804E+09	1,607937E+09	6,289620E+09	7,897558E+09
-1418	8,040424E+08	8,039928E+08	3,144755E+09	3,144847E+09	1,608035E+09	6,289602E+09	7,897637E+09
-1417	8,040549E+08	8,040765E+08	3,144764E+09	3,144667E+09	1,608131E+09	6,289432E+09	7,897563E+09
-1416	8,040340E+08	8,040552E+08	3,144649E+09	3,144693E+09	1,608089E+09	6,289342E+09	7,897431E+09
-1415	8,041345E+08	8,041240E+08	3,144644E+09	3,144653E+09	1,608259E+09	6,289297E+09	7,897556E+09
-1414	8,041143E+08	8,041629E+08	3,144669E+09	3,144511E+09	1,608277E+09	6,289180E+09	7,897457E+09
-1413	8,041456E+08	8,041325E+08	3,144553E+09	3,144607E+09	1,608278E+09	6,289160E+09	7,897438E+09
-1412	8,042249E+08	8,042164E+08	3,144549E+09	3,144529E+09	1,608441E+09	6,289078E+09	7,897520E+09
-1411	8,041745E+08	8,042019E+08	3,144519E+09	3,144494E+09	1,608376E+09	6,289013E+09	7,897389E+09
-1410	8,042221E+08	8,041868E+08	3,144465E+09	3,144594E+09	1,608409E+09	6,289059E+09	7,897468E+09
-1409	8,042310E+08	8,042462E+08	3,144549E+09	3,144458E+09	1,608477E+09	6,289007E+09	7,897484E+09
-1408	8,041572E+08	8,041677E+08	3,144536E+09	3,144533E+09	1,608325E+09	6,289069E+09	7,897394E+09
-1407	8,042021E+08	8,041565E+08	3,144579E+09	3,144619E+09	1,608359E+09	6,289198E+09	7,897556E+09
-1406	8,041442E+08	8,041673E+08	3,144679E+09	3,144556E+09	1,608312E+09	6,289235E+09	7,897547E+09
-1405	8,040880E+08	8,040815E+08	3,144631E+09	3,144723E+09	1,608169E+09	6,289354E+09	7,897524E+09
-1404	8,041237E+08	8,041142E+08	3,144681E+09	3,144714E+09	1,608238E+09	6,289395E+09	7,897633E+09
-1403	8,040497E+08	8,040792E+08	3,144748E+09	3,144664E+09	1,608129E+09	6,289412E+09	7,897541E+09
-1402	8,040623E+08	8,040245E+08	3,144690E+09	3,144787E+09	1,608087E+09	6,289477E+09	7,897564E+09
-1401	8,041056E+08	8,040945E+08	3,144735E+09	3,144661E+09	1,608200E+09	6,289395E+09	7,897595E+09
-1400	8,040434E+08	8,040635E+08	3,144683E+09	3,144657E+09	1,608107E+09	6,289340E+09	7,897447E+09
-1399	8,041128E+08	8,040841E+08	3,144609E+09	3,144703E+09	1,608197E+09	6,289312E+09	7,897508E+09
-1398	8,041291E+08	8,041702E+08	3,144657E+09	3,144529E+09	1,608299E+09	6,289186E+09	7,897485E+09
-1397	8,041076E+08	8,041349E+08	3,144556E+09	3,144572E+09	1,608243E+09	6,289127E+09	7,897370E+09
-1396	8,042113E+08	8,041961E+08	3,144513E+09	3,144522E+09	1,608407E+09	6,289035E+09	7,897443E+09
-1395	8,042044E+08	8,042354E+08	3,144532E+09	3,144395E+09	1,608440E+09	6,288927E+09	7,897366E+09
-1394	8,042321E+08	8,042072E+08	3,144392E+09	3,144505E+09	1,608439E+09	6,288897E+09	7,897336E+09
-1393	8,043099E+08	8,043028E+08	3,144395E+09	3,144387E+09	1,608613E+09	6,288782E+09	7,897395E+09
-1392	8,042509E+08	8,042878E+08	3,144390E+09	3,144346E+09	1,608539E+09	6,288736E+09	7,897275E+09
-1391	8,042904E+08	8,042529E+08	3,144341E+09	3,144449E+09	1,608543E+09	6,288790E+09	7,897333E+09
-1390	8,043012E+08	8,043093E+08	3,144462E+09	3,144339E+09	1,608610E+09	6,288800E+09	7,897411E+09
-1389	8,042186E+08	8,042250E+08	3,144449E+09	3,144447E+09	1,608444E+09	6,288896E+09	7,897339E+09
-1388	8,042544E+08	8,042184E+08	3,144454E+09	3,144526E+09	1,608473E+09	6,288980E+09	7,897453E+09
-1387	8,042054E+08	8,042338E+08	3,144568E+09	3,144467E+09	1,608439E+09	6,289035E+09	7,897474E+09
-1386	8,041479E+08	8,041412E+08	3,144523E+09	3,144631E+09	1,608289E+09	6,289154E+09	7,897443E+09
-1385	8,041933E+08	8,041782E+08	3,144579E+09	3,144579E+09	1,608371E+09	6,289158E+09	7,897530E+09
-1384	8,041213E+08	8,041463E+08	3,144643E+09	3,144530E+09	1,608268E+09	6,289173E+09	7,897440E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-1383	8,041314E+08	8,040910E+08	3,144551E+09	3,144659E+09	1,608222E+09	6,289210E+09	7,897432E+09
-1382	8,041796E+08	8,041762E+08	3,144604E+09	3,144539E+09	1,608356E+09	6,289142E+09	7,897498E+09
-1381	8,041121E+08	8,041483E+08	3,144555E+09	3,144538E+09	1,608260E+09	6,289093E+09	7,897353E+09
-1380	8,041818E+08	8,041655E+08	3,144465E+09	3,144554E+09	1,608347E+09	6,289019E+09	7,897366E+09
-1379	8,042161E+08	8,042464E+08	3,144532E+09	3,144385E+09	1,608463E+09	6,288916E+09	7,897379E+09
-1378	8,041977E+08	8,042056E+08	3,144424E+09	3,144451E+09	1,608403E+09	6,288875E+09	7,897279E+09
-1377	8,043069E+08	8,042790E+08	3,144368E+09	3,144381E+09	1,608586E+09	6,288749E+09	7,897335E+09
-1376	8,042927E+08	8,043283E+08	3,144383E+09	3,144262E+09	1,608621E+09	6,288644E+09	7,897265E+09
-1375	8,043101E+08	8,042947E+08	3,144234E+09	3,144372E+09	1,608605E+09	6,288607E+09	7,897212E+09
-1374	8,043871E+08	8,043845E+08	3,144280E+09	3,144250E+09	1,608772E+09	6,288530E+09	7,897302E+09
-1373	8,043190E+08	8,043569E+08	3,144296E+09	3,144226E+09	1,608676E+09	6,288522E+09	7,897198E+09
-1372	8,043528E+08	8,043131E+08	3,144226E+09	3,144326E+09	1,608666E+09	6,288552E+09	7,897218E+09
-1371	8,043703E+08	8,043692E+08	3,144349E+09	3,144243E+09	1,608740E+09	6,288591E+09	7,897331E+09
-1370	8,042812E+08	8,042875E+08	3,144328E+09	3,144372E+09	1,608569E+09	6,288700E+09	7,897269E+09
-1369	8,043170E+08	8,042896E+08	3,144335E+09	3,144410E+09	1,608607E+09	6,288746E+09	7,897352E+09
-1368	8,042674E+08	8,043020E+08	3,144468E+09	3,144342E+09	1,608569E+09	6,288810E+09	7,897380E+09
-1367	8,042100E+08	8,041974E+08	3,144410E+09	3,144504E+09	1,608407E+09	6,288913E+09	7,897321E+09
-1366	8,042641E+08	8,042358E+08	3,144482E+09	3,144461E+09	1,608500E+09	6,288943E+09	7,897443E+09
-1365	8,041881E+08	8,042120E+08	3,144531E+09	3,144429E+09	1,608400E+09	6,288960E+09	7,897360E+09
-1364	8,041944E+08	8,041664E+08	3,144404E+09	3,144535E+09	1,608361E+09	6,288938E+09	7,897299E+09
-1363	8,042539E+08	8,042587E+08	3,144473E+09	3,144415E+09	1,608513E+09	6,288888E+09	7,897401E+09
-1362	8,041887E+08	8,042267E+08	3,144438E+09	3,144415E+09	1,608415E+09	6,288853E+09	7,897269E+09
-1361	8,042655E+08	8,042469E+08	3,144351E+09	3,144399E+09	1,608512E+09	6,288751E+09	7,897263E+09
-1360	8,043043E+08	8,043283E+08	3,144412E+09	3,144246E+09	1,608633E+09	6,288658E+09	7,897291E+09
-1359	8,042830E+08	8,042843E+08	3,144261E+09	3,144324E+09	1,608567E+09	6,288584E+09	7,897152E+09
-1358	8,043941E+08	8,043665E+08	3,144215E+09	3,144258E+09	1,608761E+09	6,288474E+09	7,897234E+09
-1357	8,043712E+08	8,044159E+08	3,144234E+09	3,144138E+09	1,608787E+09	6,288371E+09	7,897158E+09
-1356	8,043819E+08	8,043716E+08	3,144082E+09	3,144216E+09	1,608753E+09	6,288298E+09	7,897051E+09
-1355	8,044681E+08	8,044536E+08	3,144158E+09	3,144110E+09	1,608922E+09	6,288268E+09	7,897189E+09
-1354	8,043953E+08	8,044191E+08	3,144186E+09	3,144113E+09	1,608814E+09	6,288299E+09	7,897114E+09
-1353	8,044244E+08	8,043857E+08	3,144116E+09	3,144202E+09	1,608810E+09	6,288317E+09	7,897128E+09
-1352	8,044345E+08	8,044467E+08	3,144246E+09	3,144138E+09	1,608881E+09	6,288384E+09	7,897265E+09
-1351	8,043368E+08	8,043549E+08	3,144220E+09	3,144272E+09	1,608692E+09	6,288492E+09	7,897184E+09
-1350	8,043767E+08	8,043496E+08	3,144259E+09	3,144309E+09	1,608726E+09	6,288568E+09	7,897294E+09
-1349	8,043256E+08	8,043539E+08	3,144386E+09	3,144248E+09	1,608679E+09	6,288635E+09	7,897314E+09
-1348	8,042689E+08	8,042480E+08	3,144286E+09	3,144389E+09	1,608517E+09	6,288676E+09	7,897193E+09
-1347	8,043365E+08	8,042970E+08	3,144342E+09	3,144359E+09	1,608634E+09	6,288701E+09	7,897334E+09
-1346	8,042595E+08	8,042859E+08	3,144387E+09	3,144327E+09	1,608545E+09	6,288713E+09	7,897259E+09
-1345	8,042699E+08	8,042542E+08	3,144266E+09	3,144382E+09	1,608524E+09	6,288648E+09	7,897172E+09
-1344	8,043322E+08	8,043433E+08	3,144356E+09	3,144257E+09	1,608676E+09	6,288613E+09	7,897288E+09
-1343	8,042697E+08	8,043020E+08	3,144311E+09	3,144269E+09	1,608572E+09	6,288580E+09	7,897151E+09
-1342	8,043537E+08	8,043223E+08	3,144234E+09	3,144267E+09	1,608676E+09	6,288500E+09	7,897176E+09
-1341	8,043855E+08	8,044109E+08	3,144274E+09	3,144135E+09	1,608796E+09	6,288409E+09	7,897206E+09
-1340	8,043597E+08	8,043722E+08	3,144091E+09	3,144189E+09	1,608732E+09	6,288281E+09	7,897012E+09
-1339	8,044784E+08	8,044526E+08	3,144061E+09	3,144126E+09	1,608931E+09	6,288187E+09	7,897118E+09
-1338	8,044532E+08	8,044947E+08	3,144106E+09	3,144004E+09	1,608948E+09	6,288110E+09	7,897058E+09
-1337	8,044644E+08	8,044495E+08	3,143967E+09	3,144053E+09	1,608914E+09	6,288019E+09	7,896933E+09
-1336	8,045452E+08	8,045269E+08	3,144056E+09	3,143974E+09	1,609072E+09	6,288030E+09	7,897102E+09
-1335	8,044633E+08	8,044886E+08	3,144064E+09	3,144008E+09	1,608952E+09	6,288073E+09	7,897024E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-1334	8,044881E+08	8,044569E+08	3,144017E+09	3,144109E+09	1,608945E+09	6,288125E+09	7,897070E+09
-1333	8,044887E+08	8,045127E+08	3,144148E+09	3,144055E+09	1,609001E+09	6,288203E+09	7,897204E+09
-1332	8,043910E+08	8,044074E+08	3,144103E+09	3,144158E+09	1,608798E+09	6,288261E+09	7,897059E+09
-1331	8,044452E+08	8,043972E+08	3,144144E+09	3,144206E+09	1,608842E+09	6,288350E+09	7,897193E+09
-1330	8,043969E+08	8,044056E+08	3,144265E+09	3,144153E+09	1,608802E+09	6,288418E+09	7,897220E+09
-1329	8,043404E+08	8,043214E+08	3,144153E+09	3,144255E+09	1,608662E+09	6,288409E+09	7,897071E+09
-1328	8,044059E+08	8,043821E+08	3,144223E+09	3,144226E+09	1,608788E+09	6,288449E+09	7,897237E+09
-1327	8,043257E+08	8,043671E+08	3,144265E+09	3,144191E+09	1,608693E+09	6,288456E+09	7,897149E+09
-1326	8,043405E+08	8,043309E+08	3,144183E+09	3,144246E+09	1,608671E+09	6,288429E+09	7,897101E+09
-1325	8,044018E+08	8,044154E+08	3,144260E+09	3,144142E+09	1,608817E+09	6,288403E+09	7,897220E+09
-1324	8,043424E+08	8,043697E+08	3,144167E+09	3,144143E+09	1,608712E+09	6,288310E+09	7,897022E+09
-1323	8,044404E+08	8,043994E+08	3,144066E+09	3,144158E+09	1,608840E+09	6,288224E+09	7,897064E+09
-1322	8,044732E+08	8,044954E+08	3,144101E+09	3,144017E+09	1,608969E+09	6,288118E+09	7,897086E+09
-1321	8,044496E+08	8,044664E+08	3,143928E+09	3,144012E+09	1,608916E+09	6,287940E+09	7,896856E+09
-1320	8,045677E+08	8,045395E+08	3,143930E+09	3,143947E+09	1,609107E+09	6,287877E+09	7,896984E+09
-1319	8,045373E+08	8,045706E+08	3,143978E+09	3,143848E+09	1,609108E+09	6,287827E+09	7,896935E+09
-1318	8,045451E+08	8,045234E+08	3,143873E+09	3,143927E+09	1,609068E+09	6,287801E+09	7,896869E+09
-1317	8,046091E+08	8,046034E+08	3,143955E+09	3,143887E+09	1,609213E+09	6,287842E+09	7,897055E+09
-1316	8,045201E+08	8,045595E+08	3,143944E+09	3,143913E+09	1,609080E+09	6,287857E+09	7,896936E+09
-1315	8,045516E+08	8,045208E+08	3,143905E+09	3,144024E+09	1,609072E+09	6,287929E+09	7,897001E+09
-1314	8,045530E+08	8,045664E+08	3,144047E+09	3,143966E+09	1,609119E+09	6,288014E+09	7,897133E+09
-1313	8,044609E+08	8,044662E+08	3,143992E+09	3,144026E+09	1,608927E+09	6,288017E+09	7,896944E+09
-1312	8,045152E+08	8,044576E+08	3,144025E+09	3,144080E+09	1,608973E+09	6,288106E+09	7,897078E+09
-1311	8,044623E+08	8,044743E+08	3,144126E+09	3,144038E+09	1,608937E+09	6,288164E+09	7,897100E+09
-1310	8,044059E+08	8,043991E+08	3,144047E+09	3,144131E+09	1,608805E+09	6,288178E+09	7,896983E+09
-1309	8,044612E+08	8,044588E+08	3,144126E+09	3,144106E+09	1,608920E+09	6,288232E+09	7,897152E+09
-1308	8,043869E+08	8,044328E+08	3,144155E+09	3,144053E+09	1,608820E+09	6,288208E+09	7,897028E+09
-1307	8,044179E+08	8,043931E+08	3,144061E+09	3,144133E+09	1,608811E+09	6,288194E+09	7,897005E+09
-1306	8,044849E+08	8,044822E+08	3,144121E+09	3,144041E+09	1,608967E+09	6,288162E+09	7,897129E+09
-1305	8,044317E+08	8,044583E+08	3,144000E+09	3,143998E+09	1,608890E+09	6,287997E+09	7,896887E+09
-1304	8,045302E+08	8,044948E+08	3,143908E+09	3,144006E+09	1,609025E+09	6,287914E+09	7,896939E+09
-1303	8,045592E+08	8,045867E+08	3,143951E+09	3,143858E+09	1,609146E+09	6,287809E+09	7,896955E+09
-1302	8,045364E+08	8,045518E+08	3,143829E+09	3,143849E+09	1,609088E+09	6,287678E+09	7,896766E+09
-1301	8,046412E+08	8,046187E+08	3,143833E+09	3,143816E+09	1,609260E+09	6,287649E+09	7,896909E+09
-1300	8,046067E+08	8,046411E+08	3,143851E+09	3,143729E+09	1,609248E+09	6,287580E+09	7,896828E+09
-1299	8,046174E+08	8,045976E+08	3,143737E+09	3,143845E+09	1,609215E+09	6,287582E+09	7,896797E+09
-1298	8,046780E+08	8,046755E+08	3,143823E+09	3,143808E+09	1,609353E+09	6,287631E+09	7,896984E+09
-1297	8,045917E+08	8,046308E+08	3,143812E+09	3,143782E+09	1,609223E+09	6,287594E+09	7,896816E+09
-1296	8,046251E+08	8,045820E+08	3,143794E+09	3,143888E+09	1,609207E+09	6,287682E+09	7,896889E+09
-1295	8,046239E+08	8,046194E+08	3,143923E+09	3,143839E+09	1,609243E+09	6,287762E+09	7,897005E+09
-1294	8,045298E+08	8,045272E+08	3,143896E+09	3,143902E+09	1,609057E+09	6,287798E+09	7,896855E+09
-1293	8,045684E+08	8,045314E+08	3,143925E+09	3,143979E+09	1,609100E+09	6,287904E+09	7,897004E+09
-1292	8,045122E+08	8,045449E+08	3,144012E+09	3,143923E+09	1,609057E+09	6,287935E+09	7,896992E+09
-1291	8,044664E+08	8,044677E+08	3,143947E+09	3,144032E+09	1,608934E+09	6,287979E+09	7,896913E+09
-1290	8,045274E+08	8,045190E+08	3,144030E+09	3,144006E+09	1,609046E+09	6,288036E+09	7,897082E+09
-1289	8,044659E+08	8,044996E+08	3,144031E+09	3,143917E+09	1,608965E+09	6,287947E+09	7,896913E+09
-1288	8,045039E+08	8,044665E+08	3,143916E+09	3,144002E+09	1,608970E+09	6,287918E+09	7,896888E+09
-1287	8,045711E+08	8,045654E+08	3,143944E+09	3,143911E+09	1,609137E+09	6,287854E+09	7,896991E+09
-1286	8,045214E+08	8,045529E+08	3,143855E+09	3,143843E+09	1,609074E+09	6,287698E+09	7,896772E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-1285	8,046087E+08	8,045889E+08	3,143776E+09	3,143849E+09	1,609198E+09	6,287626E+09	7,896823E+09
-1284	8,046374E+08	8,046669E+08	3,143815E+09	3,143693E+09	1,609304E+09	6,287508E+09	7,896812E+09
-1283	8,046223E+08	8,046285E+08	3,143701E+09	3,143723E+09	1,609251E+09	6,287424E+09	7,896674E+09
-1282	8,047197E+08	8,046938E+08	3,143710E+09	3,143716E+09	1,609413E+09	6,287426E+09	7,896839E+09
-1281	8,046865E+08	8,047278E+08	3,143713E+09	3,143607E+09	1,609414E+09	6,287321E+09	7,896735E+09
-1280	8,046937E+08	8,046785E+08	3,143613E+09	3,143724E+09	1,609372E+09	6,287337E+09	7,896709E+09
-1279	8,047483E+08	8,047442E+08	3,143702E+09	3,143690E+09	1,609493E+09	6,287392E+09	7,896884E+09
-1278	8,046653E+08	8,046918E+08	3,143728E+09	3,143652E+09	1,609357E+09	6,287380E+09	7,896737E+09
-1277	8,046829E+08	8,046399E+08	3,143701E+09	3,143778E+09	1,609323E+09	6,287479E+09	7,896802E+09
-1276	8,046783E+08	8,046740E+08	3,143799E+09	3,143731E+09	1,609352E+09	6,287530E+09	7,896883E+09
-1275	8,045892E+08	8,045929E+08	3,143769E+09	3,143817E+09	1,609182E+09	6,287586E+09	7,896768E+09
-1274	8,046244E+08	8,045984E+08	3,143815E+09	3,143887E+09	1,609223E+09	6,287702E+09	7,896924E+09
-1273	8,045787E+08	8,046148E+08	3,143898E+09	3,143786E+09	1,609194E+09	6,287683E+09	7,896877E+09
-1272	8,045412E+08	8,045315E+08	3,143842E+09	3,143895E+09	1,609073E+09	6,287738E+09	7,896810E+09
-1271	8,046052E+08	8,045814E+08	3,143898E+09	3,143885E+09	1,609187E+09	6,287783E+09	7,896970E+09
-1270	8,045507E+08	8,045752E+08	3,143908E+09	3,143788E+09	1,609126E+09	6,287696E+09	7,896822E+09
-1269	8,045767E+08	8,045587E+08	3,143778E+09	3,143879E+09	1,609135E+09	6,287657E+09	7,896793E+09
-1268	8,046439E+08	8,046529E+08	3,143791E+09	3,143764E+09	1,609297E+09	6,287556E+09	7,896853E+09
-1267	8,046030E+08	8,046412E+08	3,143722E+09	3,143706E+09	1,609244E+09	6,287428E+09	7,896672E+09
-1266	8,046907E+08	8,046681E+08	3,143661E+09	3,143715E+09	1,609359E+09	6,287376E+09	7,896734E+09
-1265	8,047250E+08	8,047466E+08	3,143676E+09	3,143540E+09	1,609472E+09	6,287217E+09	7,896688E+09
-1264	8,047103E+08	8,047101E+08	3,143562E+09	3,143593E+09	1,609420E+09	6,287155E+09	7,896576E+09
-1263	8,048001E+08	8,047761E+08	3,143551E+09	3,143600E+09	1,609576E+09	6,287151E+09	7,896728E+09
-1262	8,047679E+08	8,048089E+08	3,143594E+09	3,143477E+09	1,609577E+09	6,287070E+09	7,896647E+09
-1261	8,047608E+08	8,047535E+08	3,143505E+09	3,143598E+09	1,609514E+09	6,287104E+09	7,896618E+09
-1260	8,048133E+08	8,047981E+08	3,143580E+09	3,143558E+09	1,609611E+09	6,287137E+09	7,896749E+09
-1259	8,047357E+08	8,047482E+08	3,143606E+09	3,143553E+09	1,609484E+09	6,287159E+09	7,896643E+09
-1258	8,047459E+08	8,047003E+08	3,143584E+09	3,143690E+09	1,609446E+09	6,287274E+09	7,896720E+09
-1257	8,047419E+08	8,047479E+08	3,143672E+09	3,143614E+09	1,609490E+09	6,287286E+09	7,896775E+09
-1256	8,046537E+08	8,046670E+08	3,143670E+09	3,143698E+09	1,609321E+09	6,287368E+09	7,896689E+09
-1255	8,046856E+08	8,046645E+08	3,143718E+09	3,143771E+09	1,609350E+09	6,287489E+09	7,896839E+09
-1254	8,046505E+08	8,046776E+08	3,143824E+09	3,143662E+09	1,609328E+09	6,287486E+09	7,896814E+09
-1253	8,046047E+08	8,045986E+08	3,143741E+09	3,143787E+09	1,609203E+09	6,287528E+09	7,896731E+09
-1252	8,046716E+08	8,046477E+08	3,143748E+09	3,143772E+09	1,609319E+09	6,287519E+09	7,896839E+09
-1251	8,046288E+08	8,046586E+08	3,143743E+09	3,143683E+09	1,609287E+09	6,287426E+09	7,896714E+09
-1250	8,046544E+08	8,046429E+08	3,143630E+09	3,143750E+09	1,609297E+09	6,287380E+09	7,896677E+09
-1249	8,047318E+08	8,047383E+08	3,143642E+09	3,143589E+09	1,609470E+09	6,287231E+09	7,896701E+09
-1248	8,046973E+08	8,047213E+08	3,143590E+09	3,143533E+09	1,609419E+09	6,287123E+09	7,896542E+09
-1247	8,047783E+08	8,047466E+08	3,143518E+09	3,143571E+09	1,609525E+09	6,287089E+09	7,896614E+09
-1246	8,048150E+08	8,048340E+08	3,143555E+09	3,143406E+09	1,609649E+09	6,286961E+09	7,896610E+09
-1245	8,047823E+08	8,048037E+08	3,143439E+09	3,143479E+09	1,609586E+09	6,286918E+09	7,896504E+09
-1244	8,048677E+08	8,048535E+08	3,143420E+09	3,143479E+09	1,609721E+09	6,286899E+09	7,896621E+09
-1243	8,048434E+08	8,048797E+08	3,143474E+09	3,143372E+09	1,609723E+09	6,286846E+09	7,896569E+09
-1242	8,048317E+08	8,048123E+08	3,143397E+09	3,143492E+09	1,609644E+09	6,286890E+09	7,896534E+09
-1241	8,048859E+08	8,048578E+08	3,143444E+09	3,143431E+09	1,609744E+09	6,286875E+09	7,896618E+09
-1240	8,048068E+08	8,048159E+08	3,143477E+09	3,143436E+09	1,609623E+09	6,286913E+09	7,896535E+09
-1239	8,048070E+08	8,047734E+08	3,143455E+09	3,143581E+09	1,609580E+09	6,287036E+09	7,896616E+09
-1238	8,048069E+08	8,048207E+08	3,143586E+09	3,143488E+09	1,609628E+09	6,287074E+09	7,896702E+09
-1237	8,047087E+08	8,047359E+08	3,143597E+09	3,143581E+09	1,609445E+09	6,287177E+09	7,896622E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-1236	8,047433E+08	8,047157E+08	3,143616E+09	3,143655E+09	1,609459E+09	6,287271E+09	7,896730E+09
-1235	8,047199E+08	8,047363E+08	3,143703E+09	3,143576E+09	1,609456E+09	6,287279E+09	7,896736E+09
-1234	8,046748E+08	8,046681E+08	3,143607E+09	3,143696E+09	1,609343E+09	6,287303E+09	7,896646E+09
-1233	8,047495E+08	8,047278E+08	3,143583E+09	3,143635E+09	1,609477E+09	6,287218E+09	7,896695E+09
-1232	8,047142E+08	8,047449E+08	3,143602E+09	3,143529E+09	1,609459E+09	6,287131E+09	7,896590E+09
-1231	8,047389E+08	8,047255E+08	3,143496E+09	3,143589E+09	1,609464E+09	6,287084E+09	7,896549E+09
-1230	8,048227E+08	8,048189E+08	3,143536E+09	3,143422E+09	1,609642E+09	6,286958E+09	7,896599E+09
-1229	8,047762E+08	8,048082E+08	3,143474E+09	3,143397E+09	1,609584E+09	6,286871E+09	7,896455E+09
-1228	8,048522E+08	8,048274E+08	3,143365E+09	3,143448E+09	1,609680E+09	6,286812E+09	7,896492E+09
-1227	8,048955E+08	8,049236E+08	3,143399E+09	3,143307E+09	1,609819E+09	6,286707E+09	7,896526E+09
-1226	8,048611E+08	8,048848E+08	3,143302E+09	3,143366E+09	1,609746E+09	6,286668E+09	7,896414E+09
-1225	8,049514E+08	8,049244E+08	3,143274E+09	3,143329E+09	1,609876E+09	6,286602E+09	7,896478E+09
-1224	8,049307E+08	8,049462E+08	3,143342E+09	3,143227E+09	1,609877E+09	6,286569E+09	7,896446E+09
-1223	8,049075E+08	8,048792E+08	3,143264E+09	3,143365E+09	1,609787E+09	6,286629E+09	7,896416E+09
-1222	8,049579E+08	8,049333E+08	3,143342E+09	3,143306E+09	1,609891E+09	6,286648E+09	7,896539E+09
-1221	8,048597E+08	8,048982E+08	3,143393E+09	3,143327E+09	1,609758E+09	6,286720E+09	7,896478E+09
-1220	8,048530E+08	8,048381E+08	3,143371E+09	3,143474E+09	1,609691E+09	6,286845E+09	7,896536E+09
-1219	8,048643E+08	8,048802E+08	3,143507E+09	3,143407E+09	1,609745E+09	6,286914E+09	7,896659E+09
-1218	8,047684E+08	8,047844E+08	3,143510E+09	3,143500E+09	1,609553E+09	6,287010E+09	7,896563E+09
-1217	8,048125E+08	8,047675E+08	3,143476E+09	3,143549E+09	1,609580E+09	6,287025E+09	7,896605E+09
-1216	8,047990E+08	8,048030E+08	3,143545E+09	3,143458E+09	1,609602E+09	6,287002E+09	7,896604E+09
-1215	8,047508E+08	8,047481E+08	3,143442E+09	3,143560E+09	1,609499E+09	6,287002E+09	7,896501E+09
-1214	8,048347E+08	8,048131E+08	3,143456E+09	3,143466E+09	1,609648E+09	6,286922E+09	7,896570E+09
-1213	8,047908E+08	8,048325E+08	3,143491E+09	3,143361E+09	1,609623E+09	6,286852E+09	7,896475E+09
-1212	8,048147E+08	8,048002E+08	3,143369E+09	3,143434E+09	1,609615E+09	6,286802E+09	7,896417E+09
-1211	8,049051E+08	8,049020E+08	3,143399E+09	3,143311E+09	1,609807E+09	6,286710E+09	7,896517E+09
-1210	8,048554E+08	8,048956E+08	3,143339E+09	3,143295E+09	1,609751E+09	6,286634E+09	7,896385E+09
-1209	8,049344E+08	8,049153E+08	3,143207E+09	3,143318E+09	1,609850E+09	6,286525E+09	7,896374E+09
-1208	8,049839E+08	8,050081E+08	3,143261E+09	3,143168E+09	1,609992E+09	6,286429E+09	7,896421E+09
-1207	8,049458E+08	8,049614E+08	3,143170E+09	3,143224E+09	1,609907E+09	6,286394E+09	7,896301E+09
-1206	8,050380E+08	8,049944E+08	3,143163E+09	3,143178E+09	1,610032E+09	6,286341E+09	7,896373E+09
-1205	8,049991E+08	8,050226E+08	3,143230E+09	3,143101E+09	1,610022E+09	6,286331E+09	7,896353E+09
-1204	8,049658E+08	8,049495E+08	3,143137E+09	3,143251E+09	1,609915E+09	6,286387E+09	7,896303E+09
-1203	8,050160E+08	8,050072E+08	3,143232E+09	3,143220E+09	1,610023E+09	6,286452E+09	7,896475E+09
-1202	8,049171E+08	8,049605E+08	3,143312E+09	3,143237E+09	1,609878E+09	6,286549E+09	7,896427E+09
-1201	8,049166E+08	8,048869E+08	3,143262E+09	3,143357E+09	1,609804E+09	6,286618E+09	7,896422E+09
-1200	8,049376E+08	8,049293E+08	3,143390E+09	3,143298E+09	1,609867E+09	6,286688E+09	7,896555E+09
-1199	8,048409E+08	8,048440E+08	3,143369E+09	3,143393E+09	1,609685E+09	6,286762E+09	7,896447E+09
-1198	8,048893E+08	8,048416E+08	3,143342E+09	3,143419E+09	1,609731E+09	6,286761E+09	7,896492E+09
-1197	8,048654E+08	8,048927E+08	3,143424E+09	3,143321E+09	1,609758E+09	6,286745E+09	7,896504E+09
-1196	8,048163E+08	8,048276E+08	3,143323E+09	3,143407E+09	1,609644E+09	6,286730E+09	7,896374E+09
-1195	8,049088E+08	8,048932E+08	3,143349E+09	3,143336E+09	1,609802E+09	6,286685E+09	7,896487E+09
-1194	8,048668E+08	8,049071E+08	3,143385E+09	3,143241E+09	1,609774E+09	6,286627E+09	7,896401E+09
-1193	8,048944E+08	8,048760E+08	3,143216E+09	3,143305E+09	1,609770E+09	6,286521E+09	7,896291E+09
-1192	8,049924E+08	8,049896E+08	3,143235E+09	3,143188E+09	1,609982E+09	6,286423E+09	7,896405E+09
-1191	8,049428E+08	8,049865E+08	3,143176E+09	3,143162E+09	1,609929E+09	6,286338E+09	7,896267E+09
-1190	8,050289E+08	8,050011E+08	3,143075E+09	3,143154E+09	1,610030E+09	6,286229E+09	7,896259E+09
-1189	8,050679E+08	8,050907E+08	3,143143E+09	3,143007E+09	1,610159E+09	6,286150E+09	7,896309E+09
-1188	8,050224E+08	8,050303E+08	3,143040E+09	3,143076E+09	1,610053E+09	6,286116E+09	7,896169E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-1187	8,051119E+08	8,050705E+08	3,143037E+09	3,143074E+09	1,610182E+09	6,286111E+09	7,896294E+09
-1186	8,050627E+08	8,050978E+08	3,143121E+09	3,143010E+09	1,610160E+09	6,286131E+09	7,896291E+09
-1185	8,050262E+08	8,050186E+08	3,143022E+09	3,143143E+09	1,610045E+09	6,286165E+09	7,896210E+09
-1184	8,050817E+08	8,050702E+08	3,143134E+09	3,143112E+09	1,610152E+09	6,286245E+09	7,896397E+09
-1183	8,049832E+08	8,050147E+08	3,143214E+09	3,143133E+09	1,609998E+09	6,286347E+09	7,896345E+09
-1182	8,049886E+08	8,049405E+08	3,143163E+09	3,143240E+09	1,609929E+09	6,286403E+09	7,896332E+09
-1181	8,049993E+08	8,049949E+08	3,143270E+09	3,143188E+09	1,609994E+09	6,286457E+09	7,896451E+09
-1180	8,049002E+08	8,049147E+08	3,143221E+09	3,143272E+09	1,609815E+09	6,286493E+09	7,896308E+09
-1179	8,049552E+08	8,049227E+08	3,143208E+09	3,143303E+09	1,609878E+09	6,286511E+09	7,896389E+09
-1178	8,049335E+08	8,049681E+08	3,143319E+09	3,143190E+09	1,609902E+09	6,286509E+09	7,896410E+09
-1177	8,048919E+08	8,048957E+08	3,143199E+09	3,143254E+09	1,609788E+09	6,286453E+09	7,896240E+09
-1176	8,049921E+08	8,049653E+08	3,143220E+09	3,143198E+09	1,609957E+09	6,286418E+09	7,896375E+09
-1175	8,049513E+08	8,049891E+08	3,143241E+09	3,143119E+09	1,609940E+09	6,286361E+09	7,896301E+09
-1174	8,049840E+08	8,049678E+08	3,143076E+09	3,143165E+09	1,609952E+09	6,286241E+09	7,896193E+09
-1173	8,050729E+08	8,050878E+08	3,143105E+09	3,143047E+09	1,610161E+09	6,286152E+09	7,896313E+09
-1172	8,050251E+08	8,050706E+08	3,143039E+09	3,143011E+09	1,610096E+09	6,286050E+09	7,896146E+09
-1171	8,051149E+08	8,050798E+08	3,142947E+09	3,143025E+09	1,610195E+09	6,285973E+09	7,896167E+09
-1170	8,051489E+08	8,051615E+08	3,143022E+09	3,142889E+09	1,610310E+09	6,285911E+09	7,896221E+09
-1169	8,050991E+08	8,050999E+08	3,142882E+09	3,142947E+09	1,610199E+09	6,285830E+09	7,896029E+09
-1168	8,051854E+08	8,051490E+08	3,142890E+09	3,142957E+09	1,610334E+09	6,285847E+09	7,896181E+09
-1167	8,051335E+08	8,051749E+08	3,142996E+09	3,142896E+09	1,610308E+09	6,285892E+09	7,896201E+09
-1166	8,050994E+08	8,050861E+08	3,142928E+09	3,143008E+09	1,610186E+09	6,285936E+09	7,896122E+09
-1165	8,051452E+08	8,051340E+08	3,143047E+09	3,142989E+09	1,610279E+09	6,286036E+09	7,896316E+09
-1164	8,050454E+08	8,050680E+08	3,143098E+09	3,143021E+09	1,610113E+09	6,286120E+09	7,896233E+09
-1163	8,050511E+08	8,050059E+08	3,143042E+09	3,143153E+09	1,610057E+09	6,286194E+09	7,896251E+09
-1162	8,050578E+08	8,050647E+08	3,143157E+09	3,143094E+09	1,610122E+09	6,286251E+09	7,896374E+09
-1161	8,049613E+08	8,049847E+08	3,143097E+09	3,143143E+09	1,609946E+09	6,286239E+09	7,896186E+09
-1160	8,050256E+08	8,049951E+08	3,143098E+09	3,143168E+09	1,610021E+09	6,286266E+09	7,896287E+09
-1159	8,050105E+08	8,050375E+08	3,143210E+09	3,143060E+09	1,610048E+09	6,286270E+09	7,896318E+09
-1158	8,049757E+08	8,049684E+08	3,143085E+09	3,143115E+09	1,609944E+09	6,286200E+09	7,896144E+09
-1157	8,050676E+08	8,050516E+08	3,143086E+09	3,143070E+09	1,610119E+09	6,286156E+09	7,896276E+09
-1156	8,050285E+08	8,050762E+08	3,143081E+09	3,142990E+09	1,610105E+09	6,286071E+09	7,896176E+09
-1155	8,050691E+08	8,050596E+08	3,142930E+09	3,143041E+09	1,610129E+09	6,285970E+09	7,896099E+09
-1154	8,051589E+08	8,051667E+08	3,142973E+09	3,142907E+09	1,610326E+09	6,285880E+09	7,896206E+09
-1153	8,051147E+08	8,051424E+08	3,142882E+09	3,142852E+09	1,610257E+09	6,285734E+09	7,895991E+09
-1152	8,052061E+08	8,051572E+08	3,142788E+09	3,142880E+09	1,610363E+09	6,285668E+09	7,896032E+09
-1151	8,052321E+08	8,052450E+08	3,142870E+09	3,142762E+09	1,610477E+09	6,285633E+09	7,896110E+09
-1150	8,051783E+08	8,051891E+08	3,142763E+09	3,142810E+09	1,610367E+09	6,285573E+09	7,895941E+09
-1149	8,052477E+08	8,052353E+08	3,142800E+09	3,142827E+09	1,610483E+09	6,285628E+09	7,896111E+09
-1148	8,051953E+08	8,052413E+08	3,142906E+09	3,142778E+09	1,610437E+09	6,285684E+09	7,896121E+09
-1147	8,051638E+08	8,051445E+08	3,142843E+09	3,142918E+09	1,610308E+09	6,285761E+09	7,896069E+09
-1146	8,052045E+08	8,051838E+08	3,142949E+09	3,142909E+09	1,610388E+09	6,285858E+09	7,896247E+09
-1145	8,051062E+08	8,051224E+08	3,142950E+09	3,142922E+09	1,610229E+09	6,285872E+09	7,896100E+09
-1144	8,051166E+08	8,050749E+08	3,142892E+09	3,143042E+09	1,610192E+09	6,285934E+09	7,896126E+09
-1143	8,051276E+08	8,051355E+08	3,143030E+09	3,142970E+09	1,610263E+09	6,285999E+09	7,896262E+09
-1142	8,050399E+08	8,050559E+08	3,142995E+09	3,142984E+09	1,610096E+09	6,285979E+09	7,896075E+09
-1141	8,050962E+08	8,050697E+08	3,143003E+09	3,143019E+09	1,610166E+09	6,286022E+09	7,896188E+09
-1140	8,050849E+08	8,051099E+08	3,143082E+09	3,142934E+09	1,610195E+09	6,286015E+09	7,896210E+09
-1139	8,050526E+08	8,050526E+08	3,142951E+09	3,143013E+09	1,610105E+09	6,285964E+09	7,896069E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude <sup>⊙</sup>	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-1138	8,051426E+08	8,051374E+08	3,142955E+09	3,142965E+09	1,610280E+09	6,285920E+09	7,896200E+09
-1137	8,051111E+08	8,051574E+08	3,142922E+09	3,142848E+09	1,610268E+09	6,285770E+09	7,896039E+09
-1136	8,051602E+08	8,051427E+08	3,142777E+09	3,142890E+09	1,610303E+09	6,285667E+09	7,895970E+09
-1135	8,052531E+08	8,052451E+08	3,142827E+09	3,142760E+09	1,610498E+09	6,285587E+09	7,896085E+09
-1134	8,052085E+08	8,052258E+08	3,142737E+09	3,142689E+09	1,610434E+09	6,285426E+09	7,895860E+09
-1133	8,052824E+08	8,052521E+08	3,142651E+09	3,142732E+09	1,610534E+09	6,285383E+09	7,895917E+09
-1132	8,053037E+08	8,053327E+08	3,142731E+09	3,142631E+09	1,610636E+09	6,285362E+09	7,895998E+09
-1131	8,052491E+08	8,052697E+08	3,142665E+09	3,142698E+09	1,610519E+09	6,285363E+09	7,895882E+09
-1130	8,053122E+08	8,052967E+08	3,142721E+09	3,142724E+09	1,610609E+09	6,285445E+09	7,896054E+09
-1129	8,052626E+08	8,052888E+08	3,142789E+09	3,142671E+09	1,610551E+09	6,285460E+09	7,896011E+09
-1128	8,052337E+08	8,052005E+08	3,142708E+09	3,142823E+09	1,610434E+09	6,285532E+09	7,895966E+09
-1127	8,052726E+08	8,052460E+08	3,142810E+09	3,142817E+09	1,610519E+09	6,285627E+09	7,896146E+09
-1126	8,051757E+08	8,051969E+08	3,142829E+09	3,142793E+09	1,610373E+09	6,285622E+09	7,895995E+09
-1125	8,051773E+08	8,051549E+08	3,142800E+09	3,142900E+09	1,610332E+09	6,285701E+09	7,896033E+09
-1124	8,051917E+08	8,052031E+08	3,142933E+09	3,142837E+09	1,610395E+09	6,285770E+09	7,896165E+09
-1123	8,051100E+08	8,051234E+08	3,142910E+09	3,142877E+09	1,610233E+09	6,285787E+09	7,896020E+09
-1122	8,051604E+08	8,051343E+08	3,142895E+09	3,142922E+09	1,610295E+09	6,285818E+09	7,896113E+09
-1121	8,051545E+08	8,051806E+08	3,142918E+09	3,142823E+09	1,610335E+09	6,285741E+09	7,896076E+09
-1120	8,051336E+08	8,051389E+08	3,142777E+09	3,142889E+09	1,610273E+09	6,285667E+09	7,895939E+09
-1119	8,052321E+08	8,052189E+08	3,142797E+09	3,142822E+09	1,610451E+09	6,285619E+09	7,896070E+09
-1118	8,052107E+08	8,052422E+08	3,142777E+09	3,142666E+09	1,610453E+09	6,285443E+09	7,895896E+09
-1117	8,052513E+08	8,052314E+08	3,142641E+09	3,142710E+09	1,610483E+09	6,285351E+09	7,895834E+09
-1116	8,053392E+08	8,053309E+08	3,142674E+09	3,142607E+09	1,610670E+09	6,285281E+09	7,895951E+09
-1115	8,052896E+08	8,053199E+08	3,142613E+09	3,142564E+09	1,610610E+09	6,285177E+09	7,895786E+09
-1114	8,053487E+08	8,053386E+08	3,142551E+09	3,142622E+09	1,610687E+09	6,285173E+09	7,895861E+09
-1113	8,053716E+08	8,054043E+08	3,142616E+09	3,142516E+09	1,610776E+09	6,285132E+09	7,895908E+09
-1112	8,053244E+08	8,053351E+08	3,142552E+09	3,142595E+09	1,610660E+09	6,285147E+09	7,895806E+09
-1111	8,053887E+08	8,053496E+08	3,142605E+09	3,142631E+09	1,610738E+09	6,285236E+09	7,895974E+09
-1110	8,053408E+08	8,053493E+08	3,142652E+09	3,142554E+09	1,610690E+09	6,285207E+09	7,895897E+09
-1109	8,052975E+08	8,052767E+08	3,142574E+09	3,142699E+09	1,610574E+09	6,285273E+09	7,895847E+09
-1108	8,053352E+08	8,053196E+08	3,142673E+09	3,142694E+09	1,610655E+09	6,285367E+09	7,896022E+09
-1107	8,052405E+08	8,052687E+08	3,142738E+09	3,142668E+09	1,610509E+09	6,285405E+09	7,895915E+09
-1106	8,052358E+08	8,052171E+08	3,142728E+09	3,142782E+09	1,610453E+09	6,285510E+09	7,895963E+09
-1105	8,052558E+08	8,052578E+08	3,142816E+09	3,142719E+09	1,610514E+09	6,285534E+09	7,896048E+09
-1104	8,051811E+08	8,051919E+08	3,142772E+09	3,142776E+09	1,610373E+09	6,285548E+09	7,895921E+09
-1103	8,052352E+08	8,052086E+08	3,142754E+09	3,142823E+09	1,610444E+09	6,285577E+09	7,896021E+09
-1102	8,052377E+08	8,052654E+08	3,142774E+09	3,142680E+09	1,610503E+09	6,285454E+09	7,895957E+09
-1101	8,052153E+08	8,052311E+08	3,142651E+09	3,142723E+09	1,610446E+09	6,285374E+09	7,895821E+09
-1100	8,053203E+08	8,052995E+08	3,142655E+09	3,142663E+09	1,610620E+09	6,285318E+09	7,895938E+09
-1099	8,053011E+08	8,053249E+08	3,142654E+09	3,142521E+09	1,610626E+09	6,285174E+09	7,895800E+09
-1098	8,053290E+08	8,053149E+08	3,142514E+09	3,142580E+09	1,610644E+09	6,285094E+09	7,895738E+09
-1097	8,054136E+08	8,054139E+08	3,142512E+09	3,142477E+09	1,610827E+09	6,284990E+09	7,895817E+09
-1096	8,053694E+08	8,054089E+08	3,142465E+09	3,142446E+09	1,610778E+09	6,284911E+09	7,895689E+09
-1095	8,054304E+08	8,054120E+08	3,142431E+09	3,142505E+09	1,610842E+09	6,284936E+09	7,895778E+09
-1094	8,054582E+08	8,054736E+08	3,142495E+09	3,142378E+09	1,610932E+09	6,284873E+09	7,895805E+09
-1093	8,054032E+08	8,054065E+08	3,142432E+09	3,142461E+09	1,610810E+09	6,284894E+09	7,895703E+09
-1092	8,054606E+08	8,054153E+08	3,142459E+09	3,142519E+09	1,610876E+09	6,284979E+09	7,895854E+09
-1091	8,054081E+08	8,054244E+08	3,142539E+09	3,142449E+09	1,610832E+09	6,284989E+09	7,895821E+09
-1090	8,053500E+08	8,053480E+08	3,142486E+09	3,142587E+09	1,610698E+09	6,285073E+09	7,895771E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-1089	8,053877E+08	8,053788E+08	3,142573E+09	3,142573E+09	1,610766E+09	6,285146E+09	7,895912E+09
-1088	8,053043E+08	8,053301E+08	3,142642E+09	3,142562E+09	1,610634E+09	6,285204E+09	7,895838E+09
-1087	8,053021E+08	8,052698E+08	3,142627E+09	3,142689E+09	1,610572E+09	6,285315E+09	7,895887E+09
-1086	8,053286E+08	8,053245E+08	3,142680E+09	3,142604E+09	1,610653E+09	6,285284E+09	7,895937E+09
-1085	8,052531E+08	8,052755E+08	3,142628E+09	3,142644E+09	1,610529E+09	6,285272E+09	7,895801E+09
-1084	8,053132E+08	8,052881E+08	3,142596E+09	3,142686E+09	1,610601E+09	6,285282E+09	7,895884E+09
-1083	8,053249E+08	8,053464E+08	3,142653E+09	3,142529E+09	1,610671E+09	6,285181E+09	7,895853E+09
-1082	8,052969E+08	8,053095E+08	3,142538E+09	3,142569E+09	1,610606E+09	6,285107E+09	7,895713E+09
-1081	8,054032E+08	8,053742E+08	3,142499E+09	3,142513E+09	1,610777E+09	6,285012E+09	7,895789E+09
-1080	8,053882E+08	8,054161E+08	3,142491E+09	3,142392E+09	1,610804E+09	6,284882E+09	7,895687E+09
-1079	8,054127E+08	8,054054E+08	3,142373E+09	3,142462E+09	1,610818E+09	6,284835E+09	7,895653E+09
-1078	8,054987E+08	8,055072E+08	3,142379E+09	3,142333E+09	1,611006E+09	6,284712E+09	7,895718E+09
-1077	8,054516E+08	8,054985E+08	3,142359E+09	3,142299E+09	1,610950E+09	6,284658E+09	7,895608E+09
-1076	8,055129E+08	8,054824E+08	3,142310E+09	3,142381E+09	1,610995E+09	6,284691E+09	7,895686E+09
-1075	8,055387E+08	8,055387E+08	3,142384E+09	3,142265E+09	1,611077E+09	6,284649E+09	7,895726E+09
-1074	8,054664E+08	8,054749E+08	3,142313E+09	3,142356E+09	1,610941E+09	6,284669E+09	7,895610E+09
-1073	8,055185E+08	8,054811E+08	3,142305E+09	3,142404E+09	1,611000E+09	6,284710E+09	7,895709E+09
-1072	8,054705E+08	8,054956E+08	3,142409E+09	3,142336E+09	1,610966E+09	6,284745E+09	7,895711E+09
-1071	8,054149E+08	8,054061E+08	3,142397E+09	3,142473E+09	1,610821E+09	6,284870E+09	7,895691E+09
-1070	8,054569E+08	8,054367E+08	3,142476E+09	3,142439E+09	1,610894E+09	6,284915E+09	7,895809E+09
-1069	8,053726E+08	8,053965E+08	3,142543E+09	3,142437E+09	1,610769E+09	6,284980E+09	7,895750E+09
-1068	8,053695E+08	8,053367E+08	3,142492E+09	3,142587E+09	1,610706E+09	6,285079E+09	7,895785E+09
-1067	8,053986E+08	8,054010E+08	3,142566E+09	3,142496E+09	1,610800E+09	6,285063E+09	7,895862E+09
-1066	8,053177E+08	8,053558E+08	3,142523E+09	3,142522E+09	1,610673E+09	6,285044E+09	7,895718E+09
-1065	8,053853E+08	8,053588E+08	3,142458E+09	3,142545E+09	1,610744E+09	6,285004E+09	7,895748E+09
-1064	8,054105E+08	8,054243E+08	3,142512E+09	3,142395E+09	1,610835E+09	6,284906E+09	7,895741E+09
-1063	8,053850E+08	8,053845E+08	3,142399E+09	3,142438E+09	1,610769E+09	6,284838E+09	7,895607E+09
-1062	8,054900E+08	8,054651E+08	3,142335E+09	3,142361E+09	1,610955E+09	6,284696E+09	7,895651E+09
-1061	8,054734E+08	8,055201E+08	3,142342E+09	3,142236E+09	1,610993E+09	6,284578E+09	7,895571E+09
-1060	8,054970E+08	8,054952E+08	3,142226E+09	3,142319E+09	1,610992E+09	6,284545E+09	7,895537E+09
-1059	8,055866E+08	8,055882E+08	3,142275E+09	3,142192E+09	1,611175E+09	6,284467E+09	7,895642E+09
-1058	8,055310E+08	8,055703E+08	3,142254E+09	3,142168E+09	1,611101E+09	6,284422E+09	7,895523E+09
-1057	8,055863E+08	8,055435E+08	3,142158E+09	3,142261E+09	1,611130E+09	6,284419E+09	7,895548E+09
-1056	8,056130E+08	8,056130E+08	3,142229E+09	3,142163E+09	1,611226E+09	6,284392E+09	7,895618E+09
-1055	8,055346E+08	8,055448E+08	3,142189E+09	3,142250E+09	1,611079E+09	6,284439E+09	7,895519E+09
-1054	8,055844E+08	8,055544E+08	3,142192E+09	3,142268E+09	1,611139E+09	6,284460E+09	7,895599E+09
-1053	8,055374E+08	8,055677E+08	3,142326E+09	3,142198E+09	1,611105E+09	6,284524E+09	7,895629E+09
-1052	8,054812E+08	8,054632E+08	3,142303E+09	3,142365E+09	1,610944E+09	6,284667E+09	7,895612E+09
-1051	8,055228E+08	8,054953E+08	3,142389E+09	3,142342E+09	1,611018E+09	6,284731E+09	7,895749E+09
-1050	8,054292E+08	8,054644E+08	3,142436E+09	3,142345E+09	1,610894E+09	6,284781E+09	7,895674E+09
-1049	8,054278E+08	8,054043E+08	3,142338E+09	3,142479E+09	1,610832E+09	6,284818E+09	7,895650E+09
-1048	8,054717E+08	8,054762E+08	3,142419E+09	3,142378E+09	1,610948E+09	6,284796E+09	7,895744E+09
-1047	8,054000E+08	8,054252E+08	3,142400E+09	3,142385E+09	1,610825E+09	6,284785E+09	7,895610E+09
-1046	8,054746E+08	8,054365E+08	3,142312E+09	3,142379E+09	1,610911E+09	6,284691E+09	7,895602E+09
-1045	8,054999E+08	8,055147E+08	3,142369E+09	3,142232E+09	1,611015E+09	6,284601E+09	7,895615E+09
-1044	8,054709E+08	8,054768E+08	3,142246E+09	3,142301E+09	1,610948E+09	6,284547E+09	7,895495E+09
-1043	8,055719E+08	8,055595E+08	3,142218E+09	3,142220E+09	1,611131E+09	6,284437E+09	7,895569E+09
-1042	8,055471E+08	8,056115E+08	3,142243E+09	3,142102E+09	1,611159E+09	6,284344E+09	7,895503E+09
-1041	8,055736E+08	8,055689E+08	3,142095E+09	3,142188E+09	1,611143E+09	6,284283E+09	7,895425E+09



1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-1040	8,056713E+08	8,056594E+08	3,142134E+09	3,142081E+09	1,611331E+09	6,284215E+09	7,895546E+09
-1039	8,056157E+08	8,056354E+08	3,142113E+09	3,142064E+09	1,611251E+09	6,284177E+09	7,895428E+09
-1038	8,056657E+08	8,056207E+08	3,141986E+09	3,142127E+09	1,611286E+09	6,284113E+09	7,895400E+09
-1037	8,056877E+08	8,056983E+08	3,142087E+09	3,142018E+09	1,611386E+09	6,284105E+09	7,895491E+09
-1036	8,056054E+08	8,056174E+08	3,142070E+09	3,142116E+09	1,611223E+09	6,284187E+09	7,895409E+09
-1035	8,056519E+08	8,056190E+08	3,142125E+09	3,142135E+09	1,611271E+09	6,284260E+09	7,895531E+09
-1034	8,055959E+08	8,056299E+08	3,142258E+09	3,142092E+09	1,611226E+09	6,284350E+09	7,895575E+09
-1033	8,055361E+08	8,055184E+08	3,142183E+09	3,142274E+09	1,611055E+09	6,284457E+09	7,895511E+09
-1032	8,055835E+08	8,055638E+08	3,142256E+09	3,142267E+09	1,611147E+09	6,284523E+09	7,895670E+09
-1031	8,054951E+08	8,055303E+08	3,142318E+09	3,142253E+09	1,611025E+09	6,284571E+09	7,895597E+09
-1030	8,054992E+08	8,054782E+08	3,142205E+09	3,142340E+09	1,610977E+09	6,284545E+09	7,895522E+09
-1029	8,055540E+08	8,055541E+08	3,142301E+09	3,142221E+09	1,611108E+09	6,284522E+09	7,895630E+09
-1028	8,054850E+08	8,054970E+08	3,142264E+09	3,142240E+09	1,610982E+09	6,284504E+09	7,895486E+09
-1027	8,055577E+08	8,055171E+08	3,142191E+09	3,142233E+09	1,611075E+09	6,284424E+09	7,895499E+09
-1026	8,055741E+08	8,056083E+08	3,142235E+09	3,142095E+09	1,611182E+09	6,284331E+09	7,895513E+09
-1025	8,055433E+08	8,055629E+08	3,142086E+09	3,142164E+09	1,611106E+09	6,284250E+09	7,895356E+09
-1024	8,056552E+08	8,056462E+08	3,142073E+09	3,142093E+09	1,611301E+09	6,284167E+09	7,895468E+09
-1023	8,056394E+08	8,056829E+08	3,142116E+09	3,141974E+09	1,611322E+09	6,284091E+09	7,895413E+09
-1022	8,056679E+08	8,056452E+08	3,141933E+09	3,142040E+09	1,611313E+09	6,283974E+09	7,895287E+09
-1021	8,057642E+08	8,057439E+08	3,141975E+09	3,141934E+09	1,611508E+09	6,283909E+09	7,895417E+09
-1020	8,056994E+08	8,057207E+08	3,141952E+09	3,141933E+09	1,611420E+09	6,283885E+09	7,895305E+09
-1019	8,057393E+08	8,057064E+08	3,141881E+09	3,141985E+09	1,611446E+09	6,283867E+09	7,895312E+09
-1018	8,057477E+08	8,057788E+08	3,142013E+09	3,141889E+09	1,611527E+09	6,283902E+09	7,895429E+09
-1017	8,056620E+08	8,056778E+08	3,141981E+09	3,142005E+09	1,611340E+09	6,283986E+09	7,895326E+09
-1016	8,057120E+08	8,056767E+08	3,142029E+09	3,142056E+09	1,611389E+09	6,284085E+09	7,895474E+09
-1015	8,056584E+08	8,056816E+08	3,142155E+09	3,142024E+09	1,611340E+09	6,284179E+09	7,895519E+09
-1014	8,055998E+08	8,055851E+08	3,142032E+09	3,142171E+09	1,611185E+09	6,284203E+09	7,895388E+09
-1013	8,056539E+08	8,056361E+08	3,142117E+09	3,142138E+09	1,611290E+09	6,284254E+09	7,895544E+09
-1012	8,055723E+08	8,055974E+08	3,142185E+09	3,142118E+09	1,611170E+09	6,284302E+09	7,895472E+09
-1011	8,055804E+08	8,055460E+08	3,142102E+09	3,142180E+09	1,611126E+09	6,284282E+09	7,895408E+09
-1010	8,056275E+08	8,056298E+08	3,142192E+09	3,142077E+09	1,611257E+09	6,284269E+09	7,895527E+09
-1009	8,055561E+08	8,055749E+08	3,142116E+09	3,142109E+09	1,611131E+09	6,284225E+09	7,895356E+09
-1008	8,056306E+08	8,056076E+08	3,142045E+09	3,142120E+09	1,611238E+09	6,284164E+09	7,895403E+09
-1007	8,056528E+08	8,056928E+08	3,142113E+09	3,141982E+09	1,611346E+09	6,284095E+09	7,895440E+09
-1006	8,056290E+08	8,056495E+08	3,141941E+09	3,142016E+09	1,611279E+09	6,283957E+09	7,895236E+09
-1005	8,057509E+08	8,057296E+08	3,141938E+09	3,141940E+09	1,611481E+09	6,283878E+09	7,895359E+09
-1004	8,057367E+08	8,057596E+08	3,141959E+09	3,141840E+09	1,611496E+09	6,283800E+09	7,895296E+09
-1003	8,057578E+08	8,057295E+08	3,141790E+09	3,141894E+09	1,611487E+09	6,283684E+09	7,895172E+09
-1002	8,058372E+08	8,058373E+08	3,141834E+09	3,141796E+09	1,611674E+09	6,283631E+09	7,895305E+09
-1001	8,057649E+08	8,058021E+08	3,141810E+09	3,141794E+09	1,611567E+09	6,283603E+09	7,895170E+09
-1000	8,058060E+08	8,057819E+08	3,141777E+09	3,141865E+09	1,611588E+09	6,283642E+09	7,895230E+09
-999	8,058182E+08	8,058351E+08	3,141933E+09	3,141789E+09	1,611653E+09	6,283723E+09	7,895376E+09
-998	8,057309E+08	8,057359E+08	3,141864E+09	3,141899E+09	1,611467E+09	6,283763E+09	7,895230E+09
-997	8,057825E+08	8,057415E+08	3,141909E+09	3,141955E+09	1,611524E+09	6,283863E+09	7,895387E+09
-996	8,057271E+08	8,057451E+08	3,142018E+09	3,141929E+09	1,611472E+09	6,283947E+09	7,895419E+09
-995	8,056667E+08	8,056549E+08	3,141929E+09	3,142042E+09	1,611322E+09	6,283971E+09	7,895293E+09
-994	8,057170E+08	8,057082E+08	3,142020E+09	3,142004E+09	1,611425E+09	6,284025E+09	7,895450E+09
-993	8,056376E+08	8,056601E+08	3,142062E+09	3,141983E+09	1,611298E+09	6,284045E+09	7,895343E+09
-992	8,056517E+08	8,056175E+08	3,141977E+09	3,142065E+09	1,611269E+09	6,284043E+09	7,895312E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-991	8,057024E+08	8,057021E+08	3,142061E+09	3,141971E+09	1,611404E+09	6,284032E+09	7,895437E+09
-990	8,056328E+08	8,056638E+08	3,141949E+09	3,141973E+09	1,611297E+09	6,283922E+09	7,895218E+09
-989	8,057156E+08	8,056994E+08	3,141897E+09	3,141968E+09	1,611415E+09	6,283865E+09	7,895280E+09
-988	8,057450E+08	8,057750E+08	3,141969E+09	3,141836E+09	1,611520E+09	6,283804E+09	7,895324E+09
-987	8,057260E+08	8,057326E+08	3,141819E+09	3,141852E+09	1,611459E+09	6,283671E+09	7,895129E+09
-986	8,058388E+08	8,058165E+08	3,141803E+09	3,141793E+09	1,611655E+09	6,283596E+09	7,895252E+09
-985	8,058172E+08	8,058452E+08	3,141792E+09	3,141704E+09	1,611662E+09	6,283496E+09	7,895158E+09
-984	8,058343E+08	8,058221E+08	3,141645E+09	3,141771E+09	1,611656E+09	6,283416E+09	7,895072E+09
-983	8,059095E+08	8,059155E+08	3,141731E+09	3,141680E+09	1,611825E+09	6,283411E+09	7,895236E+09
-982	8,058376E+08	8,058770E+08	3,141698E+09	3,141661E+09	1,611715E+09	6,283359E+09	7,895074E+09
-981	8,058812E+08	8,058467E+08	3,141682E+09	3,141742E+09	1,611728E+09	6,283424E+09	7,895152E+09
-980	8,058923E+08	8,058912E+08	3,141817E+09	3,141700E+09	1,611784E+09	6,283517E+09	7,895300E+09
-979	8,058015E+08	8,057997E+08	3,141748E+09	3,141791E+09	1,611601E+09	6,283539E+09	7,895140E+09
-978	8,058400E+08	8,058129E+08	3,141784E+09	3,141847E+09	1,611653E+09	6,283631E+09	7,895284E+09
-977	8,057849E+08	8,058087E+08	3,141880E+09	3,141807E+09	1,611594E+09	6,283687E+09	7,895281E+09
-976	8,057313E+08	8,057206E+08	3,141816E+09	3,141918E+09	1,611452E+09	6,283734E+09	7,895186E+09
-975	8,057879E+08	8,057655E+08	3,141920E+09	3,141889E+09	1,611553E+09	6,283808E+09	7,895362E+09
-974	8,057113E+08	8,057313E+08	3,141920E+09	3,141849E+09	1,611443E+09	6,283769E+09	7,895212E+09
-973	8,057287E+08	8,057011E+08	3,141843E+09	3,141931E+09	1,611430E+09	6,283773E+09	7,895203E+09
-972	8,057795E+08	8,057873E+08	3,141922E+09	3,141850E+09	1,611567E+09	6,283772E+09	7,895339E+09
-971	8,057138E+08	8,057526E+08	3,141843E+09	3,141821E+09	1,611466E+09	6,283664E+09	7,895130E+09
-970	8,057943E+08	8,057866E+08	3,141791E+09	3,141823E+09	1,611581E+09	6,283614E+09	7,895195E+09
-969	8,058283E+08	8,058497E+08	3,141825E+09	3,141696E+09	1,611678E+09	6,283521E+09	7,895199E+09
-968	8,058133E+08	8,058157E+08	3,141668E+09	3,141728E+09	1,611629E+09	6,283396E+09	7,895025E+09
-967	8,059255E+08	8,058976E+08	3,141646E+09	3,141676E+09	1,611823E+09	6,283322E+09	7,895145E+09
-966	8,059000E+08	8,059361E+08	3,141612E+09	3,141555E+09	1,611836E+09	6,283166E+09	7,895003E+09
-965	8,059204E+08	8,059091E+08	3,141510E+09	3,141612E+09	1,611829E+09	6,283123E+09	7,894952E+09
-964	8,059938E+08	8,059857E+08	3,141610E+09	3,141543E+09	1,611979E+09	6,283153E+09	7,895132E+09
-963	8,059202E+08	8,059456E+08	3,141607E+09	3,141522E+09	1,611866E+09	6,283128E+09	7,894994E+09
-962	8,059493E+08	8,059184E+08	3,141578E+09	3,141633E+09	1,611868E+09	6,283211E+09	7,895079E+09
-961	8,059517E+08	8,059576E+08	3,141677E+09	3,141605E+09	1,611909E+09	6,283281E+09	7,895191E+09
-960	8,058604E+08	8,058732E+08	3,141628E+09	3,141699E+09	1,611734E+09	6,283328E+09	7,895061E+09
-959	8,059001E+08	8,058727E+08	3,141685E+09	3,141749E+09	1,611773E+09	6,283434E+09	7,895207E+09
-958	8,058497E+08	8,058711E+08	3,141760E+09	3,141676E+09	1,611721E+09	6,283436E+09	7,895157E+09
-957	8,058048E+08	8,057844E+08	3,141711E+09	3,141782E+09	1,611589E+09	6,283493E+09	7,895082E+09
-956	8,058603E+08	8,058297E+08	3,141795E+09	3,141775E+09	1,611690E+09	6,283570E+09	7,895260E+09
-955	8,057854E+08	8,058130E+08	3,141802E+09	3,141714E+09	1,611598E+09	6,283516E+09	7,895114E+09
-954	8,057944E+08	8,057909E+08	3,141721E+09	3,141799E+09	1,611585E+09	6,283520E+09	7,895106E+09
-953	8,058492E+08	8,058655E+08	3,141784E+09	3,141714E+09	1,611715E+09	6,283498E+09	7,895213E+09
-952	8,057969E+08	8,058315E+08	3,141719E+09	3,141689E+09	1,611628E+09	6,283408E+09	7,895036E+09
-951	8,058839E+08	8,058552E+08	3,141661E+09	3,141703E+09	1,611739E+09	6,283364E+09	7,895104E+09
-950	8,059206E+08	8,059320E+08	3,141645E+09	3,141554E+09	1,611853E+09	6,283200E+09	7,895052E+09
-949	8,059077E+08	8,059086E+08	3,141498E+09	3,141573E+09	1,611816E+09	6,283072E+09	7,894888E+09
-948	8,060129E+08	8,059886E+08	3,141490E+09	3,141534E+09	1,612001E+09	6,283023E+09	7,895025E+09
-947	8,059867E+08	8,060284E+08	3,141501E+09	3,141385E+09	1,612015E+09	6,282886E+09	7,894901E+09
-946	8,059944E+08	8,059938E+08	3,141419E+09	3,141468E+09	1,611988E+09	6,282887E+09	7,894875E+09
-945	8,060625E+08	8,060531E+08	3,141495E+09	3,141429E+09	1,612116E+09	6,282924E+09	7,895039E+09
-944	8,059896E+08	8,060145E+08	3,141490E+09	3,141435E+09	1,612004E+09	6,282925E+09	7,894929E+09
-943	8,060130E+08	8,059813E+08	3,141453E+09	3,141557E+09	1,611994E+09	6,283010E+09	7,895005E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-942	8,060145E+08	8,060250E+08	3,141521E+09	3,141490E+09	1,612040E+09	6,283011E+09	7,895050E+09
-941	8,059309E+08	8,059388E+08	3,141508E+09	3,141559E+09	1,611870E+09	6,283066E+09	7,894936E+09
-940	8,059724E+08	8,059297E+08	3,141571E+09	3,141620E+09	1,611902E+09	6,283192E+09	7,895094E+09
-939	8,059254E+08	8,059364E+08	3,141665E+09	3,141529E+09	1,611862E+09	6,283194E+09	7,895056E+09
-938	8,058695E+08	8,058613E+08	3,141611E+09	3,141659E+09	1,611731E+09	6,283269E+09	7,895000E+09
-937	8,059191E+08	8,059055E+08	3,141666E+09	3,141663E+09	1,611825E+09	6,283329E+09	7,895154E+09
-936	8,058505E+08	8,058959E+08	3,141694E+09	3,141609E+09	1,611746E+09	6,283304E+09	7,895050E+09
-935	8,058657E+08	8,058621E+08	3,141619E+09	3,141695E+09	1,611728E+09	6,283314E+09	7,895041E+09
-934	8,059307E+08	8,059362E+08	3,141637E+09	3,141579E+09	1,611867E+09	6,283216E+09	7,895083E+09
-933	8,058935E+08	8,059078E+08	3,141568E+09	3,141545E+09	1,611801E+09	6,283113E+09	7,894914E+09
-932	8,059807E+08	8,059348E+08	3,141480E+09	3,141567E+09	1,611915E+09	6,283047E+09	7,894962E+09
-931	8,060154E+08	8,060304E+08	3,141476E+09	3,141382E+09	1,612046E+09	6,282858E+09	7,894904E+09
-930	8,059905E+08	8,060140E+08	3,141354E+09	3,141403E+09	1,612005E+09	6,282757E+09	7,894762E+09
-929	8,060882E+08	8,060756E+08	3,141354E+09	3,141371E+09	1,612164E+09	6,282725E+09	7,894889E+09
-928	8,060671E+08	8,061102E+08	3,141401E+09	3,141253E+09	1,612177E+09	6,282654E+09	7,894832E+09
-927	8,060711E+08	8,060596E+08	3,141318E+09	3,141371E+09	1,612131E+09	6,282689E+09	7,894820E+09
-926	8,061347E+08	8,061223E+08	3,141347E+09	3,141325E+09	1,612257E+09	6,282672E+09	7,894929E+09
-925	8,060655E+08	8,060880E+08	3,141353E+09	3,141327E+09	1,612153E+09	6,282680E+09	7,894833E+09
-924	8,060822E+08	8,060474E+08	3,141323E+09	3,141451E+09	1,612130E+09	6,282774E+09	7,894904E+09
-923	8,060858E+08	8,060936E+08	3,141423E+09	3,141345E+09	1,612179E+09	6,282769E+09	7,894948E+09
-922	8,059948E+08	8,060073E+08	3,141425E+09	3,141422E+09	1,612002E+09	6,282848E+09	7,894850E+09
-921	8,060308E+08	8,059890E+08	3,141464E+09	3,141504E+09	1,612020E+09	6,282968E+09	7,894988E+09
-920	8,059888E+08	8,060066E+08	3,141560E+09	3,141436E+09	1,611995E+09	6,282996E+09	7,894992E+09
-919	8,059292E+08	8,059303E+08	3,141497E+09	3,141577E+09	1,611859E+09	6,283075E+09	7,894934E+09
-918	8,059833E+08	8,059782E+08	3,141518E+09	3,141546E+09	1,611961E+09	6,283065E+09	7,895026E+09
-917	8,059329E+08	8,059665E+08	3,141561E+09	3,141469E+09	1,611899E+09	6,283029E+09	7,894929E+09
-916	8,059549E+08	8,059288E+08	3,141474E+09	3,141560E+09	1,611884E+09	6,283034E+09	7,894917E+09
-915	8,060284E+08	8,060172E+08	3,141487E+09	3,141412E+09	1,612046E+09	6,282899E+09	7,894945E+09
-914	8,059817E+08	8,060060E+08	3,141414E+09	3,141382E+09	1,611988E+09	6,282796E+09	7,894784E+09
-913	8,060599E+08	8,060331E+08	3,141314E+09	3,141412E+09	1,612093E+09	6,282725E+09	7,894818E+09
-912	8,060961E+08	8,061303E+08	3,141353E+09	3,141236E+09	1,612226E+09	6,282589E+09	7,894815E+09
-911	8,060676E+08	8,060972E+08	3,141258E+09	3,141276E+09	1,612165E+09	6,282533E+09	7,894698E+09
-910	8,061651E+08	8,061497E+08	3,141227E+09	3,141239E+09	1,612315E+09	6,282466E+09	7,894781E+09
-909	8,061543E+08	8,061805E+08	3,141275E+09	3,141137E+09	1,612335E+09	6,282412E+09	7,894747E+09
-908	8,061535E+08	8,061284E+08	3,141167E+09	3,141276E+09	1,612282E+09	6,282444E+09	7,894726E+09
-907	8,062153E+08	8,062015E+08	3,141199E+09	3,141193E+09	1,612417E+09	6,282391E+09	7,894808E+09
-906	8,061365E+08	8,061692E+08	3,141227E+09	3,141186E+09	1,612306E+09	6,282413E+09	7,894719E+09
-905	8,061470E+08	8,061123E+08	3,141199E+09	3,141311E+09	1,612259E+09	6,282510E+09	7,894769E+09
-904	8,061541E+08	8,061572E+08	3,141334E+09	3,141226E+09	1,612311E+09	6,282561E+09	7,894872E+09
-903	8,060583E+08	8,060664E+08	3,141338E+09	3,141332E+09	1,612125E+09	6,282670E+09	7,894794E+09
-902	8,060883E+08	8,060550E+08	3,141331E+09	3,141401E+09	1,612143E+09	6,282732E+09	7,894876E+09
-901	8,060569E+08	8,060808E+08	3,141438E+09	3,141333E+09	1,612138E+09	6,282771E+09	7,894908E+09
-900	8,059990E+08	8,059995E+08	3,141374E+09	3,141470E+09	1,611999E+09	6,282844E+09	7,894842E+09
-899	8,060622E+08	8,060516E+08	3,141403E+09	3,141396E+09	1,612114E+09	6,282799E+09	7,894913E+09
-898	8,060145E+08	8,060454E+08	3,141443E+09	3,141320E+09	1,612060E+09	6,282763E+09	7,894823E+09
-897	8,060346E+08	8,060041E+08	3,141317E+09	3,141418E+09	1,612039E+09	6,282735E+09	7,894773E+09
-896	8,061128E+08	8,061069E+08	3,141338E+09	3,141278E+09	1,612220E+09	6,282617E+09	7,894836E+09
-895	8,060608E+08	8,060983E+08	3,141268E+09	3,141251E+09	1,612159E+09	6,282519E+09	7,894678E+09
-894	8,061367E+08	8,061227E+08	3,141156E+09	3,141250E+09	1,612259E+09	6,282406E+09	7,894666E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-893	8,061874E+08	8,062136E+08	3,141223E+09	3,141081E+09	1,612401E+09	6,282305E+09	7,894706E+09
-892	8,061597E+08	8,061695E+08	3,141129E+09	3,141149E+09	1,612329E+09	6,282278E+09	7,894608E+09
-891	8,062579E+08	8,062298E+08	3,141092E+09	3,141099E+09	1,612488E+09	6,282191E+09	7,894679E+09
-890	8,062380E+08	8,062694E+08	3,141136E+09	3,141012E+09	1,612507E+09	6,282148E+09	7,894655E+09
-889	8,062243E+08	8,062104E+08	3,141017E+09	3,141156E+09	1,612435E+09	6,282173E+09	7,894608E+09
-888	8,062860E+08	8,062794E+08	3,141092E+09	3,141073E+09	1,612565E+09	6,282165E+09	7,894730E+09
-887	8,062002E+08	8,062333E+08	3,141140E+09	3,141077E+09	1,612434E+09	6,282217E+09	7,894651E+09
-886	8,062076E+08	8,061701E+08	3,141087E+09	3,141191E+09	1,612378E+09	6,282278E+09	7,894656E+09
-885	8,062243E+08	8,062157E+08	3,141219E+09	3,141122E+09	1,612440E+09	6,282341E+09	7,894781E+09
-884	8,061239E+08	8,061291E+08	3,141210E+09	3,141246E+09	1,612253E+09	6,282455E+09	7,894708E+09
-883	8,061553E+08	8,061315E+08	3,141203E+09	3,141273E+09	1,612287E+09	6,282476E+09	7,894763E+09
-882	8,061239E+08	8,061578E+08	3,141325E+09	3,141194E+09	1,612282E+09	6,282520E+09	7,894801E+09
-881	8,060684E+08	8,060662E+08	3,141247E+09	3,141330E+09	1,612135E+09	6,282577E+09	7,894711E+09
-880	8,061436E+08	8,061192E+08	3,141289E+09	3,141265E+09	1,612263E+09	6,282554E+09	7,894817E+09
-879	8,060941E+08	8,061190E+08	3,141312E+09	3,141204E+09	1,612213E+09	6,282516E+09	7,894730E+09
-878	8,061113E+08	8,060892E+08	3,141146E+09	3,141277E+09	1,612201E+09	6,282423E+09	7,894623E+09
-877	8,061991E+08	8,061994E+08	3,141185E+09	3,141135E+09	1,612398E+09	6,282320E+09	7,894719E+09
-876	8,061474E+08	8,061864E+08	3,141135E+09	3,141112E+09	1,612334E+09	6,282247E+09	7,894580E+09
-875	8,062274E+08	8,062122E+08	3,141035E+09	3,141082E+09	1,612440E+09	6,282117E+09	7,894556E+09
-874	8,062775E+08	8,063014E+08	3,141106E+09	3,140936E+09	1,612579E+09	6,282041E+09	7,894620E+09
-873	8,062447E+08	8,062498E+08	3,140976E+09	3,141026E+09	1,612495E+09	6,282002E+09	7,894497E+09
-872	8,063415E+08	8,063150E+08	3,140950E+09	3,140989E+09	1,612657E+09	6,281939E+09	7,894596E+09
-871	8,063128E+08	8,063521E+08	3,140997E+09	3,140906E+09	1,612665E+09	6,281903E+09	7,894568E+09
-870	8,062925E+08	8,062823E+08	3,140867E+09	3,141011E+09	1,612575E+09	6,281878E+09	7,894453E+09
-869	8,063633E+08	8,063434E+08	3,140971E+09	3,140937E+09	1,612707E+09	6,281908E+09	7,894615E+09
-868	8,062751E+08	8,062912E+08	3,141028E+09	3,140962E+09	1,612566E+09	6,281990E+09	7,894556E+09
-867	8,062779E+08	8,062390E+08	3,140975E+09	3,141060E+09	1,612517E+09	6,282035E+09	7,894552E+09
-866	8,062877E+08	8,062945E+08	3,141114E+09	3,141010E+09	1,612582E+09	6,282124E+09	7,894706E+09
-865	8,061808E+08	8,062003E+08	3,141095E+09	3,141139E+09	1,612381E+09	6,282233E+09	7,894615E+09
-864	8,062177E+08	8,061984E+08	3,141121E+09	3,141166E+09	1,612416E+09	6,282287E+09	7,894703E+09
-863	8,061884E+08	8,062177E+08	3,141235E+09	3,141093E+09	1,612406E+09	6,282328E+09	7,894734E+09
-862	8,061365E+08	8,061263E+08	3,141109E+09	3,141203E+09	1,612263E+09	6,282312E+09	7,894575E+09
-861	8,062274E+08	8,061892E+08	3,141132E+09	3,141146E+09	1,612417E+09	6,282278E+09	7,894695E+09
-860	8,061785E+08	8,062014E+08	3,141145E+09	3,141081E+09	1,612380E+09	6,282226E+09	7,894606E+09
-859	8,061977E+08	8,061872E+08	3,140989E+09	3,141103E+09	1,612385E+09	6,282092E+09	7,894477E+09
-858	8,062858E+08	8,062967E+08	3,141055E+09	3,140959E+09	1,612582E+09	6,282014E+09	7,894597E+09
-857	8,062333E+08	8,062714E+08	3,141003E+09	3,140954E+09	1,612505E+09	6,281957E+09	7,894461E+09
-856	8,063183E+08	8,062946E+08	3,140922E+09	3,140950E+09	1,612613E+09	6,281872E+09	7,894485E+09
-855	8,063605E+08	8,063841E+08	3,140972E+09	3,140831E+09	1,612745E+09	6,281803E+09	7,894548E+09
-854	8,063222E+08	8,063352E+08	3,140807E+09	3,140902E+09	1,612657E+09	6,281709E+09	7,894367E+09
-853	8,064253E+08	8,063962E+08	3,140795E+09	3,140863E+09	1,612822E+09	6,281658E+09	7,894479E+09
-852	8,063924E+08	8,064243E+08	3,140867E+09	3,140778E+09	1,612817E+09	6,281645E+09	7,894461E+09
-851	8,063715E+08	8,063559E+08	3,140755E+09	3,140851E+09	1,612727E+09	6,281606E+09	7,894333E+09
-850	8,064357E+08	8,064125E+08	3,140872E+09	3,140801E+09	1,612848E+09	6,281673E+09	7,894521E+09
-849	8,063393E+08	8,063571E+08	3,140910E+09	3,140856E+09	1,612696E+09	6,281766E+09	7,894462E+09
-848	8,063397E+08	8,063097E+08	3,140876E+09	3,140966E+09	1,612649E+09	6,281841E+09	7,894491E+09
-847	8,063424E+08	8,063624E+08	3,141013E+09	3,140923E+09	1,612705E+09	6,281936E+09	7,894641E+09
-846	8,062387E+08	8,062591E+08	3,140970E+09	3,141019E+09	1,612498E+09	6,281988E+09	7,894486E+09
-845	8,062930E+08	8,062528E+08	3,140995E+09	3,141050E+09	1,612546E+09	6,282046E+09	7,894591E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-844	8,062697E+08	8,062766E+08	3,141098E+09	3,140983E+09	1,612546E+09	6,282081E+09	7,894627E+09
-843	8,062206E+08	8,062089E+08	3,140955E+09	3,141050E+09	1,612430E+09	6,282005E+09	7,894435E+09
-842	8,063082E+08	8,062861E+08	3,140990E+09	3,140993E+09	1,612594E+09	6,281983E+09	7,894577E+09
-841	8,062557E+08	8,062966E+08	3,141007E+09	3,140929E+09	1,612552E+09	6,281936E+09	7,894488E+09
-840	8,062778E+08	8,062769E+08	3,140895E+09	3,140955E+09	1,612555E+09	6,281851E+09	7,894405E+09
-839	8,063633E+08	8,063787E+08	3,140957E+09	3,140837E+09	1,612742E+09	6,281794E+09	7,894536E+09
-838	8,063136E+08	8,063449E+08	3,140856E+09	3,140823E+09	1,612658E+09	6,281679E+09	7,894337E+09
-837	8,064090E+08	8,063725E+08	3,140754E+09	3,140840E+09	1,612781E+09	6,281594E+09	7,894375E+09
-836	8,064507E+08	8,064675E+08	3,140796E+09	3,140716E+09	1,612918E+09	6,281512E+09	7,894431E+09
-835	8,064110E+08	8,064268E+08	3,140640E+09	3,140731E+09	1,612838E+09	6,281371E+09	7,894208E+09
-834	8,065105E+08	8,064806E+08	3,140665E+09	3,140691E+09	1,612991E+09	6,281355E+09	7,894346E+09
-833	8,064715E+08	8,064952E+08	3,140742E+09	3,140627E+09	1,612967E+09	6,281369E+09	7,894336E+09
-832	8,064464E+08	8,064242E+08	3,140669E+09	3,140729E+09	1,612871E+09	6,281397E+09	7,894268E+09
-831	8,064950E+08	8,064835E+08	3,140777E+09	3,140716E+09	1,612978E+09	6,281494E+09	7,894472E+09
-830	8,063925E+08	8,064257E+08	3,140791E+09	3,140760E+09	1,612818E+09	6,281551E+09	7,894369E+09
-829	8,064010E+08	8,063742E+08	3,140765E+09	3,140879E+09	1,612775E+09	6,281644E+09	7,894419E+09
-828	8,064081E+08	8,064184E+08	3,140908E+09	3,140830E+09	1,612827E+09	6,281738E+09	7,894565E+09
-827	8,063125E+08	8,063232E+08	3,140852E+09	3,140878E+09	1,612636E+09	6,281730E+09	7,894366E+09
-826	8,063703E+08	8,063211E+08	3,140868E+09	3,140914E+09	1,612691E+09	6,281783E+09	7,894474E+09
-825	8,063441E+08	8,063530E+08	3,140945E+09	3,140854E+09	1,612697E+09	6,281800E+09	7,894497E+09
-824	8,062969E+08	8,062979E+08	3,140833E+09	3,140912E+09	1,612595E+09	6,281746E+09	7,894340E+09
-823	8,063756E+08	8,063741E+08	3,140873E+09	3,140857E+09	1,612750E+09	6,281730E+09	7,894480E+09
-822	8,063282E+08	8,063748E+08	3,140877E+09	3,140773E+09	1,612703E+09	6,281650E+09	7,894353E+09
-821	8,063662E+08	8,063495E+08	3,140760E+09	3,140823E+09	1,612716E+09	6,281583E+09	7,894298E+09
-820	8,064550E+08	8,064515E+08	3,140807E+09	3,140722E+09	1,612907E+09	6,281529E+09	7,894435E+09
-819	8,064100E+08	8,064380E+08	3,140682E+09	3,140673E+09	1,612848E+09	6,281355E+09	7,894203E+09
-818	8,065023E+08	8,064696E+08	3,140590E+09	3,140687E+09	1,612972E+09	6,281277E+09	7,894249E+09
-817	8,065371E+08	8,065583E+08	3,140642E+09	3,140562E+09	1,613095E+09	6,281204E+09	7,894299E+09
-816	8,064963E+08	8,065108E+08	3,140540E+09	3,140573E+09	1,613007E+09	6,281112E+09	7,894119E+09
-815	8,065809E+08	8,065561E+08	3,140572E+09	3,140563E+09	1,613137E+09	6,281135E+09	7,894272E+09
-814	8,065370E+08	8,065617E+08	3,140622E+09	3,140509E+09	1,613099E+09	6,281131E+09	7,894229E+09
-813	8,065148E+08	8,064927E+08	3,140540E+09	3,140646E+09	1,613008E+09	6,281186E+09	7,894194E+09
-812	8,065592E+08	8,065520E+08	3,140650E+09	3,140638E+09	1,613111E+09	6,281288E+09	7,894400E+09
-811	8,064615E+08	8,064977E+08	3,140664E+09	3,140629E+09	1,612959E+09	6,281293E+09	7,894252E+09
-810	8,064721E+08	8,064381E+08	3,140658E+09	3,140742E+09	1,612910E+09	6,281399E+09	7,894309E+09
-809	8,064809E+08	8,064757E+08	3,140785E+09	3,140701E+09	1,612957E+09	6,281487E+09	7,894443E+09
-808	8,063875E+08	8,063889E+08	3,140749E+09	3,140750E+09	1,612776E+09	6,281499E+09	7,894276E+09
-807	8,064338E+08	8,064006E+08	3,140752E+09	3,140804E+09	1,612834E+09	6,281556E+09	7,894391E+09
-806	8,064066E+08	8,064328E+08	3,140806E+09	3,140721E+09	1,612839E+09	6,281527E+09	7,894367E+09
-805	8,063690E+08	8,063772E+08	3,140711E+09	3,140791E+09	1,612746E+09	6,281502E+09	7,894248E+09
-804	8,064525E+08	8,064470E+08	3,140760E+09	3,140736E+09	1,612899E+09	6,281496E+09	7,894396E+09
-803	8,064163E+08	8,064534E+08	3,140741E+09	3,140620E+09	1,612870E+09	6,281361E+09	7,894231E+09
-802	8,064594E+08	8,064318E+08	3,140611E+09	3,140682E+09	1,612891E+09	6,281293E+09	7,894184E+09
-801	8,065472E+08	8,065395E+08	3,140624E+09	3,140588E+09	1,613087E+09	6,281212E+09	7,894299E+09
-800	8,065035E+08	8,065353E+08	3,140531E+09	3,140519E+09	1,613039E+09	6,281051E+09	7,894089E+09
-799	8,065829E+08	8,065643E+08	3,140452E+09	3,140535E+09	1,613147E+09	6,280987E+09	7,894134E+09
-798	8,066147E+08	8,066369E+08	3,140502E+09	3,140396E+09	1,613252E+09	6,280898E+09	7,894150E+09
-797	8,065794E+08	8,065840E+08	3,140415E+09	3,140445E+09	1,613163E+09	6,280860E+09	7,894024E+09
-796	8,066564E+08	8,066258E+08	3,140453E+09	3,140462E+09	1,613282E+09	6,280914E+09	7,894197E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-795	8,066117E+08	8,066440E+08	3,140491E+09	3,140389E+09	1,613256E+09	6,280880E+09	7,894135E+09
-794	8,065854E+08	8,065719E+08	3,140428E+09	3,140532E+09	1,613157E+09	6,280960E+09	7,894117E+09
-793	8,066242E+08	8,066190E+08	3,140539E+09	3,140529E+09	1,613243E+09	6,281067E+09	7,894311E+09
-792	8,065326E+08	8,065586E+08	3,140588E+09	3,140508E+09	1,613091E+09	6,281096E+09	7,894187E+09
-791	8,065327E+08	8,064959E+08	3,140560E+09	3,140634E+09	1,613029E+09	6,281194E+09	7,894223E+09
-790	8,065417E+08	8,065318E+08	3,140649E+09	3,140586E+09	1,613074E+09	6,281234E+09	7,894308E+09
-789	8,064572E+08	8,064604E+08	3,140602E+09	3,140647E+09	1,612918E+09	6,281249E+09	7,894166E+09
-788	8,065012E+08	8,064766E+08	3,140614E+09	3,140690E+09	1,612978E+09	6,281305E+09	7,894282E+09
-787	8,064845E+08	8,065170E+08	3,140669E+09	3,140561E+09	1,613002E+09	6,281230E+09	7,894232E+09
-786	8,064543E+08	8,064548E+08	3,140590E+09	3,140632E+09	1,612909E+09	6,281223E+09	7,894132E+09
-785	8,065396E+08	8,065213E+08	3,140618E+09	3,140598E+09	1,613061E+09	6,281215E+09	7,894276E+09
-784	8,065107E+08	8,065385E+08	3,140610E+09	3,140480E+09	1,613049E+09	6,281090E+09	7,894139E+09
-783	8,065411E+08	8,065301E+08	3,140461E+09	3,140554E+09	1,613071E+09	6,281015E+09	7,894086E+09
-782	8,066267E+08	8,066324E+08	3,140459E+09	3,140437E+09	1,613259E+09	6,280897E+09	7,894156E+09
-781	8,065903E+08	8,066262E+08	3,140389E+09	3,140377E+09	1,613216E+09	6,280766E+09	7,893982E+09
-780	8,066665E+08	8,066441E+08	3,140331E+09	3,140398E+09	1,613311E+09	6,280728E+09	7,894039E+09
-779	8,067017E+08	8,067170E+08	3,140370E+09	3,140243E+09	1,613419E+09	6,280612E+09	7,894031E+09
-778	8,066626E+08	8,066623E+08	3,140291E+09	3,140319E+09	1,613325E+09	6,280610E+09	7,893935E+09
-777	8,067301E+08	8,067043E+08	3,140312E+09	3,140357E+09	1,613434E+09	6,280670E+09	7,894104E+09
-776	8,066861E+08	8,067205E+08	3,140385E+09	3,140272E+09	1,613407E+09	6,280657E+09	7,894063E+09
-775	8,066469E+08	8,066421E+08	3,140329E+09	3,140419E+09	1,613289E+09	6,280748E+09	7,894037E+09
-774	8,066866E+08	8,066695E+08	3,140416E+09	3,140400E+09	1,613356E+09	6,280817E+09	7,894173E+09
-773	8,066033E+08	8,066120E+08	3,140461E+09	3,140405E+09	1,613215E+09	6,280866E+09	7,894081E+09
-772	8,066001E+08	8,065574E+08	3,140431E+09	3,140538E+09	1,613158E+09	6,280969E+09	7,894126E+09
-771	8,066119E+08	8,066107E+08	3,140503E+09	3,140454E+09	1,613223E+09	6,280957E+09	7,894179E+09
-770	8,065290E+08	8,065439E+08	3,140487E+09	3,140510E+09	1,613073E+09	6,280996E+09	7,894069E+09
-769	8,065707E+08	8,065542E+08	3,140501E+09	3,140555E+09	1,613125E+09	6,281057E+09	7,894182E+09
-768	8,065646E+08	8,065922E+08	3,140585E+09	3,140419E+09	1,613157E+09	6,281004E+09	7,894160E+09
-767	8,065275E+08	8,065327E+08	3,140479E+09	3,140511E+09	1,613060E+09	6,280991E+09	7,894051E+09
-766	8,066159E+08	8,065956E+08	3,140456E+09	3,140471E+09	1,613212E+09	6,280927E+09	7,894138E+09
-765	8,065984E+08	8,066286E+08	3,140432E+09	3,140365E+09	1,613227E+09	6,280797E+09	7,894024E+09
-764	8,066282E+08	8,066214E+08	3,140296E+09	3,140417E+09	1,613250E+09	6,280713E+09	7,893962E+09
-763	8,067200E+08	8,067242E+08	3,140298E+09	3,140253E+09	1,613444E+09	6,280551E+09	7,893996E+09
-762	8,066875E+08	8,067113E+08	3,140257E+09	3,140199E+09	1,613399E+09	6,280456E+09	7,893855E+09
-761	8,067547E+08	8,067228E+08	3,140194E+09	3,140253E+09	1,613477E+09	6,280447E+09	7,893924E+09
-760	8,067901E+08	8,068012E+08	3,140259E+09	3,140114E+09	1,613591E+09	6,280373E+09	7,893964E+09
-759	8,067323E+08	8,067502E+08	3,140174E+09	3,140214E+09	1,613482E+09	6,280388E+09	7,893870E+09
-758	8,067922E+08	8,067761E+08	3,140185E+09	3,140244E+09	1,613568E+09	6,280429E+09	7,893998E+09
-757	8,067569E+08	8,067869E+08	3,140269E+09	3,140175E+09	1,613544E+09	6,280444E+09	7,893987E+09
-756	8,067142E+08	8,066974E+08	3,140220E+09	3,140318E+09	1,613412E+09	6,280537E+09	7,893949E+09
-755	8,067588E+08	8,067283E+08	3,140280E+09	3,140273E+09	1,613487E+09	6,280553E+09	7,894040E+09
-754	8,066770E+08	8,066797E+08	3,140326E+09	3,140282E+09	1,613357E+09	6,280608E+09	7,893965E+09
-753	8,066660E+08	8,066344E+08	3,140290E+09	3,140418E+09	1,613300E+09	6,280708E+09	7,894009E+09
-752	8,066832E+08	8,066919E+08	3,140404E+09	3,140313E+09	1,613375E+09	6,280717E+09	7,894092E+09
-751	8,065912E+08	8,066231E+08	3,140398E+09	3,140376E+09	1,613214E+09	6,280774E+09	7,893988E+09
-750	8,066358E+08	8,066170E+08	3,140387E+09	3,140420E+09	1,613253E+09	6,280807E+09	7,894060E+09
-749	8,066442E+08	8,066611E+08	3,140452E+09	3,140315E+09	1,613305E+09	6,280767E+09	7,894072E+09
-748	8,066087E+08	8,066110E+08	3,140330E+09	3,140407E+09	1,613220E+09	6,280737E+09	7,893957E+09
-747	8,067053E+08	8,066867E+08	3,140278E+09	3,140325E+09	1,613392E+09	6,280602E+09	7,893994E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-746	8,066924E+08	8,067239E+08	3,140279E+09	3,140203E+09	1,613416E+09	6,280483E+09	7,893899E+09
-745	8,067193E+08	8,067118E+08	3,140154E+09	3,140253E+09	1,613431E+09	6,280407E+09	7,893838E+09
-744	8,068152E+08	8,068088E+08	3,140188E+09	3,140083E+09	1,613624E+09	6,280271E+09	7,893895E+09
-743	8,067681E+08	8,067981E+08	3,140142E+09	3,140063E+09	1,613566E+09	6,280205E+09	7,893771E+09
-742	8,068276E+08	8,068009E+08	3,140045E+09	3,140128E+09	1,613629E+09	6,280173E+09	7,893802E+09
-741	8,068664E+08	8,068859E+08	3,140107E+09	3,140021E+09	1,613752E+09	6,280128E+09	7,893880E+09
-740	8,068054E+08	8,068270E+08	3,140043E+09	3,140111E+09	1,613632E+09	6,280154E+09	7,893787E+09
-739	8,068694E+08	8,068422E+08	3,140045E+09	3,140102E+09	1,613712E+09	6,280148E+09	7,893859E+09
-738	8,068382E+08	8,068478E+08	3,140146E+09	3,140036E+09	1,613686E+09	6,280181E+09	7,893867E+09
-737	8,067876E+08	8,067600E+08	3,140087E+09	3,140192E+09	1,613548E+09	6,280279E+09	7,893827E+09
-736	8,068311E+08	8,068014E+08	3,140173E+09	3,140144E+09	1,613633E+09	6,280317E+09	7,893949E+09
-735	8,067330E+08	8,067646E+08	3,140230E+09	3,140165E+09	1,613498E+09	6,280396E+09	7,893893E+09
-734	8,067171E+08	8,067052E+08	3,140192E+09	3,140294E+09	1,613422E+09	6,280485E+09	7,893908E+09
-733	8,067464E+08	8,067603E+08	3,140312E+09	3,140215E+09	1,613507E+09	6,280526E+09	7,894033E+09
-732	8,066600E+08	8,066831E+08	3,140300E+09	3,140279E+09	1,613343E+09	6,280579E+09	7,893922E+09
-731	8,067145E+08	8,066804E+08	3,140239E+09	3,140299E+09	1,613395E+09	6,280538E+09	7,893933E+09
-730	8,067340E+08	8,067391E+08	3,140286E+09	3,140187E+09	1,613473E+09	6,280473E+09	7,893946E+09
-729	8,066970E+08	8,067016E+08	3,140149E+09	3,140264E+09	1,613399E+09	6,280412E+09	7,893811E+09
-728	8,068021E+08	8,067815E+08	3,140133E+09	3,140148E+09	1,613584E+09	6,280281E+09	7,893864E+09
-727	8,067794E+08	8,068193E+08	3,140148E+09	3,140024E+09	1,613599E+09	6,280172E+09	7,893771E+09
-726	8,068019E+08	8,067916E+08	3,140013E+09	3,140083E+09	1,613594E+09	6,280095E+09	7,893689E+09
-725	8,069020E+08	8,068949E+08	3,140046E+09	3,139963E+09	1,613797E+09	6,280009E+09	7,893806E+09
-724	8,068488E+08	8,068852E+08	3,140006E+09	3,139959E+09	1,613734E+09	6,279965E+09	7,893699E+09
-723	8,069076E+08	8,068885E+08	3,139893E+09	3,140002E+09	1,613796E+09	6,279896E+09	7,893692E+09
-722	8,069497E+08	8,069670E+08	3,139979E+09	3,139890E+09	1,613917E+09	6,279869E+09	7,893786E+09
-721	8,068840E+08	8,068984E+08	3,139920E+09	3,139981E+09	1,613782E+09	6,279901E+09	7,893684E+09
-720	8,069504E+08	8,069061E+08	3,139944E+09	3,139962E+09	1,613856E+09	6,279906E+09	7,893762E+09
-719	8,069030E+08	8,069172E+08	3,140038E+09	3,139915E+09	1,613820E+09	6,279953E+09	7,893773E+09
-718	8,068436E+08	8,068265E+08	3,139958E+09	3,140076E+09	1,613670E+09	6,280034E+09	7,893704E+09
-717	8,068901E+08	8,068765E+08	3,140054E+09	3,140051E+09	1,613767E+09	6,280105E+09	7,893872E+09
-716	8,067923E+08	8,068327E+08	3,140138E+09	3,140065E+09	1,613625E+09	6,280203E+09	7,893828E+09
-715	8,067846E+08	8,067647E+08	3,140079E+09	3,140164E+09	1,613549E+09	6,280243E+09	7,893793E+09
-714	8,068248E+08	8,068188E+08	3,140194E+09	3,140094E+09	1,613644E+09	6,280287E+09	7,893931E+09
-713	8,067414E+08	8,067517E+08	3,140154E+09	3,140165E+09	1,613493E+09	6,280318E+09	7,893811E+09
-712	8,068031E+08	8,067619E+08	3,140091E+09	3,140159E+09	1,613565E+09	6,280251E+09	7,893816E+09
-711	8,068124E+08	8,068369E+08	3,140143E+09	3,140040E+09	1,613649E+09	6,280184E+09	7,893833E+09
-710	8,067740E+08	8,067911E+08	3,140005E+09	3,140093E+09	1,613565E+09	6,280099E+09	7,893664E+09
-709	8,068855E+08	8,068702E+08	3,140004E+09	3,140001E+09	1,613756E+09	6,280005E+09	7,893761E+09
-708	8,068632E+08	8,069017E+08	3,140030E+09	3,139891E+09	1,613765E+09	6,279921E+09	7,893686E+09
-707	8,068874E+08	8,068720E+08	3,139858E+09	3,139943E+09	1,613759E+09	6,279801E+09	7,893560E+09
-706	8,069907E+08	8,069835E+08	3,139887E+09	3,139837E+09	1,613974E+09	6,279724E+09	7,893698E+09
-705	8,069355E+08	8,069759E+08	3,139845E+09	3,139833E+09	1,613911E+09	6,279678E+09	7,893590E+09
-704	8,069977E+08	8,069711E+08	3,139769E+09	3,139847E+09	1,613969E+09	6,279616E+09	7,893585E+09
-703	8,070281E+08	8,070446E+08	3,139866E+09	3,139740E+09	1,614073E+09	6,279607E+09	7,893679E+09
-702	8,069557E+08	8,069603E+08	3,139793E+09	3,139837E+09	1,613916E+09	6,279630E+09	7,893546E+09
-701	8,070207E+08	8,069753E+08	3,139817E+09	3,139862E+09	1,613996E+09	6,279678E+09	7,893675E+09
-700	8,069660E+08	8,069899E+08	3,139925E+09	3,139825E+09	1,613956E+09	6,279750E+09	7,893706E+09
-699	8,069041E+08	8,068980E+08	3,139840E+09	3,139963E+09	1,613802E+09	6,279804E+09	7,893606E+09
-698	8,069564E+08	8,069451E+08	3,139958E+09	3,139938E+09	1,613901E+09	6,279896E+09	7,893797E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude <sup>⊙</sup>	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-697	8,068620E+08	8,068942E+08	3,140037E+09	3,139954E+09	1,613756E+09	6,279991E+09	7,893747E+09
-696	8,068628E+08	8,068252E+08	3,139977E+09	3,140039E+09	1,613688E+09	6,280016E+09	7,893704E+09
-695	8,068962E+08	8,068911E+08	3,140062E+09	3,139972E+09	1,613787E+09	6,280034E+09	7,893821E+09
-694	8,068112E+08	8,068298E+08	3,139986E+09	3,140029E+09	1,613641E+09	6,280015E+09	7,893656E+09
-693	8,068813E+08	8,068535E+08	3,139932E+09	3,140031E+09	1,613735E+09	6,279963E+09	7,893698E+09
-692	8,068923E+08	8,069230E+08	3,140012E+09	3,139893E+09	1,613815E+09	6,279905E+09	7,893720E+09
-691	8,068600E+08	8,068706E+08	3,139865E+09	3,139920E+09	1,613731E+09	6,279784E+09	7,893515E+09
-690	8,069776E+08	8,069506E+08	3,139866E+09	3,139844E+09	1,613928E+09	6,279710E+09	7,893639E+09
-689	8,069544E+08	8,069894E+08	3,139881E+09	3,139758E+09	1,613944E+09	6,279638E+09	7,893582E+09
-688	8,069805E+08	8,069670E+08	3,139719E+09	3,139802E+09	1,613948E+09	6,279521E+09	7,893468E+09
-687	8,070709E+08	8,070822E+08	3,139759E+09	3,139700E+09	1,614153E+09	6,279459E+09	7,893612E+09
-686	8,070137E+08	8,070576E+08	3,139714E+09	3,139689E+09	1,614071E+09	6,279403E+09	7,893474E+09
-685	8,070787E+08	8,070456E+08	3,139647E+09	3,139729E+09	1,614124E+09	6,279376E+09	7,893500E+09
-684	8,071029E+08	8,071091E+08	3,139752E+09	3,139632E+09	1,614212E+09	6,279384E+09	7,893596E+09
-683	8,070276E+08	8,070252E+08	3,139648E+09	3,139715E+09	1,614053E+09	6,279363E+09	7,893416E+09
-682	8,070903E+08	8,070494E+08	3,139678E+09	3,139749E+09	1,614140E+09	6,279428E+09	7,893567E+09
-681	8,070345E+08	8,070662E+08	3,139802E+09	3,139714E+09	1,614101E+09	6,279516E+09	7,893617E+09
-680	8,069771E+08	8,069661E+08	3,139746E+09	3,139824E+09	1,613943E+09	6,279570E+09	7,893513E+09
-679	8,070201E+08	8,070110E+08	3,139867E+09	3,139808E+09	1,614031E+09	6,279675E+09	7,893706E+09
-678	8,069279E+08	8,069519E+08	3,139915E+09	3,139830E+09	1,613880E+09	6,279745E+09	7,893625E+09
-677	8,069325E+08	8,068954E+08	3,139841E+09	3,139941E+09	1,613828E+09	6,279782E+09	7,893610E+09
-676	8,069653E+08	8,069689E+08	3,139929E+09	3,139867E+09	1,613934E+09	6,279797E+09	7,893731E+09
-675	8,068853E+08	8,069109E+08	3,139838E+09	3,139882E+09	1,613796E+09	6,279720E+09	7,893516E+09
-674	8,069641E+08	8,069370E+08	3,139802E+09	3,139875E+09	1,613901E+09	6,279677E+09	7,893578E+09
-673	8,069810E+08	8,070046E+08	3,139883E+09	3,139743E+09	1,613986E+09	6,279626E+09	7,893611E+09
-672	8,069542E+08	8,069524E+08	3,139740E+09	3,139761E+09	1,613907E+09	6,279501E+09	7,893408E+09
-671	8,070601E+08	8,070440E+08	3,139726E+09	3,139705E+09	1,614104E+09	6,279431E+09	7,893535E+09
-670	8,070368E+08	8,070819E+08	3,139715E+09	3,139621E+09	1,614119E+09	6,279335E+09	7,893454E+09
-669	8,070673E+08	8,070624E+08	3,139568E+09	3,139679E+09	1,614130E+09	6,279247E+09	7,893377E+09
-668	8,071564E+08	8,071633E+08	3,139629E+09	3,139568E+09	1,614320E+09	6,279197E+09	7,893517E+09
-667	8,071008E+08	8,071278E+08	3,139565E+09	3,139537E+09	1,614229E+09	6,279102E+09	7,893330E+09
-666	8,071665E+08	8,071179E+08	3,139499E+09	3,139594E+09	1,614284E+09	6,279093E+09	7,893377E+09
-665	8,071838E+08	8,071858E+08	3,139604E+09	3,139513E+09	1,614370E+09	6,279117E+09	7,893486E+09
-664	8,071042E+08	8,071087E+08	3,139532E+09	3,139581E+09	1,614213E+09	6,279113E+09	7,893326E+09
-663	8,071498E+08	8,071336E+08	3,139588E+09	3,139619E+09	1,614283E+09	6,279207E+09	7,893490E+09
-662	8,070927E+08	8,071320E+08	3,139711E+09	3,139591E+09	1,614225E+09	6,279302E+09	7,893527E+09
-661	8,070402E+08	8,070269E+08	3,139661E+09	3,139732E+09	1,614067E+09	6,279393E+09	7,893460E+09
-660	8,070817E+08	8,070629E+08	3,139766E+09	3,139724E+09	1,614145E+09	6,279490E+09	7,893635E+09
-659	8,069947E+08	8,070105E+08	3,139762E+09	3,139722E+09	1,614005E+09	6,279484E+09	7,893489E+09
-658	8,070071E+08	8,069715E+08	3,139676E+09	3,139821E+09	1,613979E+09	6,279497E+09	7,893476E+09
-657	8,070457E+08	8,070500E+08	3,139779E+09	3,139728E+09	1,614096E+09	6,279507E+09	7,893603E+09
-656	8,069748E+08	8,069940E+08	3,139717E+09	3,139703E+09	1,613969E+09	6,279420E+09	7,893388E+09
-655	8,070451E+08	8,070228E+08	3,139688E+09	3,139703E+09	1,614068E+09	6,279391E+09	7,893459E+09
-654	8,070637E+08	8,070865E+08	3,139742E+09	3,139594E+09	1,614150E+09	6,279336E+09	7,893486E+09
-653	8,070394E+08	8,070456E+08	3,139598E+09	3,139648E+09	1,614085E+09	6,279245E+09	7,893330E+09
-652	8,071399E+08	8,071373E+08	3,139590E+09	3,139596E+09	1,614277E+09	6,279186E+09	7,893463E+09
-651	8,071225E+08	8,071695E+08	3,139560E+09	3,139482E+09	1,614292E+09	6,279042E+09	7,893334E+09
-650	8,071592E+08	8,071464E+08	3,139420E+09	3,139536E+09	1,614306E+09	6,278957E+09	7,893262E+09
-649	8,072499E+08	8,072392E+08	3,139487E+09	3,139429E+09	1,614489E+09	6,278916E+09	7,893405E+09



1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-648	8,071940E+08	8,072044E+08	3,139423E+09	3,139378E+09	1,614398E+09	6,278802E+09	7,893200E+09
-647	8,072395E+08	8,072047E+08	3,139362E+09	3,139450E+09	1,614444E+09	6,278812E+09	7,893256E+09
-646	8,072509E+08	8,072688E+08	3,139465E+09	3,139383E+09	1,614520E+09	6,278849E+09	7,893368E+09
-645	8,071698E+08	8,071865E+08	3,139433E+09	3,139472E+09	1,614356E+09	6,278905E+09	7,893261E+09
-644	8,072094E+08	8,071943E+08	3,139512E+09	3,139517E+09	1,614404E+09	6,279029E+09	7,893432E+09
-643	8,071584E+08	8,071797E+08	3,139598E+09	3,139479E+09	1,614338E+09	6,279077E+09	7,893415E+09
-642	8,071118E+08	8,070830E+08	3,139526E+09	3,139632E+09	1,614195E+09	6,279158E+09	7,893353E+09
-641	8,071563E+08	8,071285E+08	3,139616E+09	3,139625E+09	1,614285E+09	6,279242E+09	7,893527E+09
-640	8,070740E+08	8,070911E+08	3,139623E+09	3,139581E+09	1,614165E+09	6,279204E+09	7,893369E+09
-639	8,070778E+08	8,070617E+08	3,139561E+09	3,139664E+09	1,614140E+09	6,279225E+09	7,893365E+09
-638	8,071205E+08	8,071302E+08	3,139660E+09	3,139572E+09	1,614251E+09	6,279232E+09	7,893483E+09
-637	8,070546E+08	8,070750E+08	3,139614E+09	3,139574E+09	1,614130E+09	6,279187E+09	7,893317E+09
-636	8,071195E+08	8,071002E+08	3,139574E+09	3,139590E+09	1,614220E+09	6,279163E+09	7,893383E+09
-635	8,071426E+08	8,071679E+08	3,139576E+09	3,139472E+09	1,614311E+09	6,279048E+09	7,893358E+09
-634	8,071287E+08	8,071400E+08	3,139422E+09	3,139523E+09	1,614269E+09	6,278945E+09	7,893214E+09
-633	8,072360E+08	8,072246E+08	3,139425E+09	3,139453E+09	1,614461E+09	6,278878E+09	7,893338E+09
-632	8,072259E+08	8,072554E+08	3,139411E+09	3,139301E+09	1,614481E+09	6,278712E+09	7,893193E+09
-631	8,072515E+08	8,072338E+08	3,139281E+09	3,139357E+09	1,614485E+09	6,278638E+09	7,893123E+09
-630	8,073341E+08	8,073193E+08	3,139332E+09	3,139275E+09	1,614653E+09	6,278607E+09	7,893260E+09
-629	8,072717E+08	8,072939E+08	3,139299E+09	3,139259E+09	1,614566E+09	6,278558E+09	7,893124E+09
-628	8,073015E+08	8,072869E+08	3,139265E+09	3,139344E+09	1,614588E+09	6,278610E+09	7,893198E+09
-627	8,073129E+08	8,073372E+08	3,139359E+09	3,139271E+09	1,614650E+09	6,278630E+09	7,893280E+09
-626	8,072392E+08	8,072492E+08	3,139330E+09	3,139373E+09	1,614488E+09	6,278704E+09	7,893192E+09
-625	8,072812E+08	8,072453E+08	3,139403E+09	3,139425E+09	1,614527E+09	6,278828E+09	7,893355E+09
-624	8,072354E+08	8,072379E+08	3,139468E+09	3,139362E+09	1,614473E+09	6,278830E+09	7,893303E+09
-623	8,071783E+08	8,071598E+08	3,139385E+09	3,139504E+09	1,614338E+09	6,278889E+09	7,893227E+09
-622	8,072236E+08	8,072070E+08	3,139464E+09	3,139492E+09	1,614431E+09	6,278956E+09	7,893387E+09
-621	8,071466E+08	8,071736E+08	3,139512E+09	3,139444E+09	1,614320E+09	6,278956E+09	7,893277E+09
-620	8,071449E+08	8,071355E+08	3,139473E+09	3,139527E+09	1,614280E+09	6,279000E+09	7,893280E+09
-619	8,071945E+08	8,071972E+08	3,139533E+09	3,139434E+09	1,614392E+09	6,278967E+09	7,893359E+09
-618	8,071372E+08	8,071531E+08	3,139465E+09	3,139456E+09	1,614290E+09	6,278921E+09	7,893211E+09
-617	8,072056E+08	8,071845E+08	3,139418E+09	3,139478E+09	1,614390E+09	6,278896E+09	7,893287E+09
-616	8,072369E+08	8,072616E+08	3,139418E+09	3,139318E+09	1,614498E+09	6,278736E+09	7,893234E+09
-615	8,072178E+08	8,072387E+08	3,139281E+09	3,139351E+09	1,614457E+09	6,278632E+09	7,893089E+09
-614	8,073288E+08	8,073099E+08	3,139274E+09	3,139289E+09	1,614639E+09	6,278563E+09	7,893202E+09
-613	8,073190E+08	8,073388E+08	3,139280E+09	3,139155E+09	1,614658E+09	6,278435E+09	7,893093E+09
-612	8,073300E+08	8,073148E+08	3,139153E+09	3,139228E+09	1,614645E+09	6,278381E+09	7,893026E+09
-611	8,074078E+08	8,073992E+08	3,139172E+09	3,139147E+09	1,614807E+09	6,278318E+09	7,893125E+09
-610	8,073481E+08	8,073798E+08	3,139155E+09	3,139144E+09	1,614728E+09	6,278300E+09	7,893028E+09
-609	8,073777E+08	8,073588E+08	3,139152E+09	3,139231E+09	1,614737E+09	6,278383E+09	7,893119E+09
-608	8,073939E+08	8,074027E+08	3,139249E+09	3,139134E+09	1,614797E+09	6,278383E+09	7,893180E+09
-607	8,073126E+08	8,073165E+08	3,139219E+09	3,139243E+09	1,614629E+09	6,278462E+09	7,893091E+09
-606	8,073511E+08	8,073082E+08	3,139260E+09	3,139314E+09	1,614659E+09	6,278574E+09	7,893233E+09
-605	8,073033E+08	8,073136E+08	3,139349E+09	3,139258E+09	1,614617E+09	6,278606E+09	7,893223E+09
-604	8,072353E+08	8,072373E+08	3,139289E+09	3,139390E+09	1,614473E+09	6,278678E+09	7,893151E+09
-603	8,072833E+08	8,072744E+08	3,139352E+09	3,139361E+09	1,614558E+09	6,278713E+09	7,893270E+09
-602	8,072193E+08	8,072449E+08	3,139404E+09	3,139324E+09	1,614464E+09	6,278728E+09	7,893193E+09
-601	8,072226E+08	8,071984E+08	3,139356E+09	3,139413E+09	1,614421E+09	6,278769E+09	7,893190E+09
-600	8,072783E+08	8,072723E+08	3,139386E+09	3,139299E+09	1,614551E+09	6,278685E+09	7,893235E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-599	8,072196E+08	8,072472E+08	3,139307E+09	3,139312E+09	1,614467E+09	6,278619E+09	7,893086E+09
-598	8,072917E+08	8,072740E+08	3,139245E+09	3,139331E+09	1,614566E+09	6,278575E+09	7,893141E+09
-597	8,073306E+08	8,073521E+08	3,139284E+09	3,139162E+09	1,614683E+09	6,278446E+09	7,893129E+09
-596	8,073053E+08	8,073225E+08	3,139158E+09	3,139192E+09	1,614628E+09	6,278350E+09	7,892978E+09
-595	8,074158E+08	8,073856E+08	3,139113E+09	3,139133E+09	1,614801E+09	6,278246E+09	7,893047E+09
-594	8,074084E+08	8,074283E+08	3,139114E+09	3,139024E+09	1,614837E+09	6,278138E+09	7,892975E+09
-593	8,074136E+08	8,074034E+08	3,139010E+09	3,139109E+09	1,614817E+09	6,278119E+09	7,892936E+09
-592	8,074894E+08	8,074896E+08	3,139045E+09	3,139004E+09	1,614979E+09	6,278049E+09	7,893028E+09
-591	8,074241E+08	8,074661E+08	3,139059E+09	3,139002E+09	1,614890E+09	6,278060E+09	7,892951E+09
-590	8,074513E+08	8,074251E+08	3,139043E+09	3,139112E+09	1,614876E+09	6,278155E+09	7,893032E+09
-589	8,074674E+08	8,074641E+08	3,139152E+09	3,139033E+09	1,614932E+09	6,278184E+09	7,893116E+09
-588	8,073718E+08	8,073800E+08	3,139109E+09	3,139148E+09	1,614752E+09	6,278257E+09	7,893008E+09
-587	8,074096E+08	8,073723E+08	3,139107E+09	3,139206E+09	1,614782E+09	6,278313E+09	7,893095E+09
-586	8,073703E+08	8,073866E+08	3,139206E+09	3,139143E+09	1,614757E+09	6,278348E+09	7,893105E+09
-585	8,073073E+08	8,073021E+08	3,139182E+09	3,139262E+09	1,614609E+09	6,278444E+09	7,893053E+09
-584	8,073623E+08	8,073406E+08	3,139238E+09	3,139204E+09	1,614703E+09	6,278441E+09	7,893144E+09
-583	8,072969E+08	8,073202E+08	3,139287E+09	3,139176E+09	1,614617E+09	6,278463E+09	7,893080E+09
-582	8,073000E+08	8,072762E+08	3,139206E+09	3,139292E+09	1,614576E+09	6,278498E+09	7,893074E+09
-581	8,073588E+08	8,073607E+08	3,139253E+09	3,139179E+09	1,614720E+09	6,278432E+09	7,893152E+09
-580	8,072949E+08	8,073390E+08	3,139186E+09	3,139180E+09	1,614634E+09	6,278365E+09	7,892999E+09
-579	8,073741E+08	8,073548E+08	3,139093E+09	3,139180E+09	1,614729E+09	6,278273E+09	7,893002E+09
-578	8,074244E+08	8,074370E+08	3,139130E+09	3,139018E+09	1,614861E+09	6,278149E+09	7,893010E+09
-577	8,074003E+08	8,074025E+08	3,139011E+09	3,139051E+09	1,614803E+09	6,278062E+09	7,892865E+09
-576	8,075079E+08	8,074768E+08	3,138945E+09	3,138972E+09	1,614985E+09	6,277917E+09	7,892902E+09
-575	8,074937E+08	8,075324E+08	3,138964E+09	3,138866E+09	1,615026E+09	6,277830E+09	7,892856E+09
-574	8,074948E+08	8,074939E+08	3,138870E+09	3,138969E+09	1,614989E+09	6,277838E+09	7,892827E+09
-573	8,075695E+08	8,075693E+08	3,138953E+09	3,138873E+09	1,615139E+09	6,277826E+09	7,892965E+09
-572	8,074957E+08	8,075339E+08	3,138973E+09	3,138886E+09	1,615030E+09	6,277859E+09	7,892888E+09
-571	8,075187E+08	8,074784E+08	3,138907E+09	3,139004E+09	1,614997E+09	6,277911E+09	7,892908E+09
-570	8,075383E+08	8,075307E+08	3,139002E+09	3,138943E+09	1,615069E+09	6,277945E+09	7,893015E+09
-569	8,074410E+08	8,074469E+08	3,138977E+09	3,139044E+09	1,614888E+09	6,278021E+09	7,892909E+09
-568	8,074781E+08	8,074457E+08	3,138982E+09	3,139064E+09	1,614924E+09	6,278045E+09	7,892969E+09
-567	8,074404E+08	8,074643E+08	3,139110E+09	3,138993E+09	1,614905E+09	6,278104E+09	7,893008E+09
-566	8,073778E+08	8,073666E+08	3,139076E+09	3,139135E+09	1,614744E+09	6,278211E+09	7,892955E+09
-565	8,074334E+08	8,074078E+08	3,139144E+09	3,139090E+09	1,614841E+09	6,278234E+09	7,893075E+09
-564	8,073616E+08	8,073969E+08	3,139170E+09	3,139070E+09	1,614759E+09	6,278240E+09	7,892998E+09
-563	8,073678E+08	8,073536E+08	3,139040E+09	3,139171E+09	1,614721E+09	6,278211E+09	7,892933E+09
-562	8,074420E+08	8,074473E+08	3,139089E+09	3,139051E+09	1,614889E+09	6,278140E+09	7,893029E+09
-561	8,073880E+08	8,074187E+08	3,139045E+09	3,139029E+09	1,614807E+09	6,278073E+09	7,892880E+09
-560	8,074733E+08	8,074392E+08	3,138933E+09	3,138999E+09	1,614913E+09	6,277932E+09	7,892844E+09
-559	8,075217E+08	8,075322E+08	3,138976E+09	3,138841E+09	1,615054E+09	6,277816E+09	7,892870E+09
-558	8,074908E+08	8,074983E+08	3,138850E+09	3,138902E+09	1,614989E+09	6,277752E+09	7,892741E+09
-557	8,075915E+08	8,075756E+08	3,138828E+09	3,138831E+09	1,615167E+09	6,277660E+09	7,892827E+09
-556	8,075660E+08	8,076250E+08	3,138872E+09	3,138739E+09	1,615191E+09	6,277611E+09	7,892802E+09
-555	8,075675E+08	8,075655E+08	3,138753E+09	3,138848E+09	1,615133E+09	6,277601E+09	7,892734E+09
-554	8,076498E+08	8,076348E+08	3,138822E+09	3,138773E+09	1,615285E+09	6,277596E+09	7,892880E+09
-553	8,075764E+08	8,075909E+08	3,138839E+09	3,138790E+09	1,615167E+09	6,277630E+09	7,892797E+09
-552	8,075960E+08	8,075482E+08	3,138738E+09	3,138877E+09	1,615144E+09	6,277614E+09	7,892759E+09
-551	8,076109E+08	8,076121E+08	3,138854E+09	3,138800E+09	1,615223E+09	6,277653E+09	7,892876E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-550	8,075112E+08	8,075217E+08	3,138850E+09	3,138905E+09	1,615033E+09	6,277755E+09	7,892788E+09
-549	8,075472E+08	8,075150E+08	3,138904E+09	3,138921E+09	1,615062E+09	6,277825E+09	7,892887E+09
-548	8,075025E+08	8,075323E+08	3,139035E+09	3,138872E+09	1,615035E+09	6,277907E+09	7,892942E+09
-547	8,074392E+08	8,074284E+08	3,138948E+09	3,139028E+09	1,614868E+09	6,277976E+09	7,892844E+09
-546	8,075021E+08	8,074843E+08	3,138998E+09	3,139001E+09	1,614986E+09	6,277999E+09	7,892985E+09
-545	8,074378E+08	8,074741E+08	3,139038E+09	3,138964E+09	1,614912E+09	6,278002E+09	7,892914E+09
-544	8,074513E+08	8,074381E+08	3,138891E+09	3,139017E+09	1,614889E+09	6,277908E+09	7,892797E+09
-543	8,075339E+08	8,075357E+08	3,138956E+09	3,138879E+09	1,615070E+09	6,277835E+09	7,892905E+09
-542	8,074828E+08	8,075012E+08	3,138897E+09	3,138870E+09	1,614984E+09	6,277767E+09	7,892751E+09
-541	8,075641E+08	8,075269E+08	3,138803E+09	3,138844E+09	1,615091E+09	6,277648E+09	7,892739E+09
-540	8,076016E+08	8,076310E+08	3,138839E+09	3,138702E+09	1,615233E+09	6,277542E+09	7,892774E+09
-539	8,075670E+08	8,075879E+08	3,138687E+09	3,138765E+09	1,615155E+09	6,277452E+09	7,892607E+09
-538	8,076744E+08	8,076640E+08	3,138686E+09	3,138709E+09	1,615338E+09	6,277395E+09	7,892733E+09
-537	8,076563E+08	8,076953E+08	3,138751E+09	3,138614E+09	1,615352E+09	6,277365E+09	7,892717E+09
-536	8,076571E+08	8,076350E+08	3,138600E+09	3,138705E+09	1,615292E+09	6,277305E+09	7,892597E+09
-535	8,077365E+08	8,077118E+08	3,138671E+09	3,138635E+09	1,615448E+09	6,277307E+09	7,892755E+09
-534	8,076549E+08	8,076685E+08	3,138681E+09	3,138667E+09	1,615323E+09	6,277348E+09	7,892671E+09
-533	8,076653E+08	8,076297E+08	3,138632E+09	3,138743E+09	1,615295E+09	6,277374E+09	7,892669E+09
-532	8,076686E+08	8,076911E+08	3,138776E+09	3,138672E+09	1,615360E+09	6,277448E+09	7,892808E+09
-531	8,075671E+08	8,075833E+08	3,138759E+09	3,138785E+09	1,615150E+09	6,277543E+09	7,892694E+09
-530	8,076088E+08	8,075767E+08	3,138805E+09	3,138830E+09	1,615185E+09	6,277635E+09	7,892821E+09
-529	8,075701E+08	8,075886E+08	3,138927E+09	3,138788E+09	1,615159E+09	6,277715E+09	7,892873E+09
-528	8,075104E+08	8,075013E+08	3,138789E+09	3,138912E+09	1,615012E+09	6,277701E+09	7,892712E+09
-527	8,075815E+08	8,075675E+08	3,138844E+09	3,138860E+09	1,615149E+09	6,277704E+09	7,892853E+09
-526	8,075245E+08	8,075539E+08	3,138887E+09	3,138815E+09	1,615078E+09	6,277702E+09	7,892781E+09
-525	8,075432E+08	8,075189E+08	3,138774E+09	3,138846E+09	1,615062E+09	6,277620E+09	7,892682E+09
-524	8,076187E+08	8,076204E+08	3,138832E+09	3,138722E+09	1,615239E+09	6,277555E+09	7,892794E+09
-523	8,075651E+08	8,075861E+08	3,138735E+09	3,138724E+09	1,615151E+09	6,277458E+09	7,892610E+09
-522	8,076477E+08	8,076242E+08	3,138639E+09	3,138718E+09	1,615272E+09	6,277357E+09	7,892629E+09
-521	8,076876E+08	8,077218E+08	3,138704E+09	3,138579E+09	1,615409E+09	6,277283E+09	7,892692E+09
-520	8,076567E+08	8,076790E+08	3,138541E+09	3,138614E+09	1,615336E+09	6,277155E+09	7,892491E+09
-519	8,077676E+08	8,077485E+08	3,138556E+09	3,138556E+09	1,615516E+09	6,277112E+09	7,892628E+09
-518	8,077493E+08	8,077693E+08	3,138606E+09	3,138486E+09	1,615519E+09	6,277092E+09	7,892611E+09
-517	8,077420E+08	8,077119E+08	3,138468E+09	3,138570E+09	1,615454E+09	6,277038E+09	7,892492E+09
-516	8,078042E+08	8,077968E+08	3,138537E+09	3,138510E+09	1,615601E+09	6,277047E+09	7,892648E+09
-515	8,077161E+08	8,077449E+08	3,138538E+09	3,138536E+09	1,615461E+09	6,277074E+09	7,892535E+09
-514	8,077286E+08	8,077032E+08	3,138524E+09	3,138623E+09	1,615432E+09	6,277148E+09	7,892579E+09
-513	8,077372E+08	8,077477E+08	3,138696E+09	3,138564E+09	1,615485E+09	6,277261E+09	7,892746E+09
-512	8,076375E+08	8,076424E+08	3,138642E+09	3,138666E+09	1,615280E+09	6,277308E+09	7,892588E+09
-511	8,076802E+08	8,076450E+08	3,138682E+09	3,138718E+09	1,615325E+09	6,277400E+09	7,892725E+09
-510	8,076433E+08	8,076604E+08	3,138785E+09	3,138686E+09	1,615304E+09	6,277471E+09	7,892775E+09
-509	8,075840E+08	8,075807E+08	3,138677E+09	3,138780E+09	1,615165E+09	6,277457E+09	7,892622E+09
-508	8,076537E+08	8,076497E+08	3,138738E+09	3,138722E+09	1,615303E+09	6,277460E+09	7,892764E+09
-507	8,076013E+08	8,076260E+08	3,138747E+09	3,138668E+09	1,615227E+09	6,277415E+09	7,892642E+09
-506	8,076264E+08	8,075991E+08	3,138629E+09	3,138716E+09	1,615226E+09	6,277345E+09	7,892571E+09
-505	8,077059E+08	8,077007E+08	3,138683E+09	3,138595E+09	1,615407E+09	6,277278E+09	7,892685E+09
-504	8,076514E+08	8,076820E+08	3,138552E+09	3,138570E+09	1,615333E+09	6,277122E+09	7,892455E+09
-503	8,077378E+08	8,077251E+08	3,138483E+09	3,138556E+09	1,615463E+09	6,277039E+09	7,892502E+09
-502	8,077820E+08	8,078101E+08	3,138558E+09	3,138358E+09	1,615592E+09	6,276916E+09	7,892508E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-501	8,077529E+08	8,077627E+08	3,138425E+09	3,138453E+09	1,615516E+09	6,276878E+09	7,892394E+09
-500	8,078529E+08	8,078310E+08	3,138428E+09	3,138417E+09	1,615684E+09	6,276845E+09	7,892529E+09
-499	8,078263E+08	8,078470E+08	3,138442E+09	3,138357E+09	1,615673E+09	6,276800E+09	7,892473E+09
-498	8,078146E+08	8,077984E+08	3,138321E+09	3,138457E+09	1,615613E+09	6,276778E+09	7,892391E+09
-497	8,078738E+08	8,078700E+08	3,138430E+09	3,138397E+09	1,615744E+09	6,276827E+09	7,892571E+09
-496	8,077852E+08	8,078169E+08	3,138428E+09	3,138401E+09	1,615602E+09	6,276829E+09	7,892431E+09
-495	8,078005E+08	8,077691E+08	3,138434E+09	3,138495E+09	1,615570E+09	6,276929E+09	7,892499E+09
-494	8,078090E+08	8,078054E+08	3,138586E+09	3,138469E+09	1,615614E+09	6,277055E+09	7,892669E+09
-493	8,077087E+08	8,077089E+08	3,138533E+09	3,138559E+09	1,615418E+09	6,277092E+09	7,892509E+09
-492	8,077418E+08	8,077208E+08	3,138554E+09	3,138610E+09	1,615463E+09	6,277164E+09	7,892627E+09
-491	8,077084E+08	8,077314E+08	3,138634E+09	3,138560E+09	1,615440E+09	6,277194E+09	7,892634E+09
-490	8,076595E+08	8,076568E+08	3,138541E+09	3,138644E+09	1,615316E+09	6,277184E+09	7,892501E+09
-489	8,077371E+08	8,077163E+08	3,138613E+09	3,138586E+09	1,615453E+09	6,277199E+09	7,892652E+09
-488	8,076882E+08	8,077072E+08	3,138584E+09	3,138511E+09	1,615395E+09	6,277095E+09	7,892490E+09
-487	8,077148E+08	8,076925E+08	3,138474E+09	3,138558E+09	1,615407E+09	6,277032E+09	7,892439E+09
-486	8,077926E+08	8,077968E+08	3,138529E+09	3,138457E+09	1,615589E+09	6,276986E+09	7,892575E+09
-485	8,077399E+08	8,077800E+08	3,138438E+09	3,138410E+09	1,615520E+09	6,276848E+09	7,892368E+09
-484	8,078198E+08	8,078186E+08	3,138378E+09	3,138408E+09	1,615638E+09	6,276786E+09	7,892424E+09
-483	8,078659E+08	8,078876E+08	3,138417E+09	3,138290E+09	1,615753E+09	6,276707E+09	7,892461E+09
-482	8,078397E+08	8,078432E+08	3,138276E+09	3,138336E+09	1,615683E+09	6,276612E+09	7,892295E+09
-481	8,079374E+08	8,079057E+08	3,138275E+09	3,138307E+09	1,615843E+09	6,276582E+09	7,892425E+09
-480	8,079066E+08	8,079323E+08	3,138263E+09	3,138216E+09	1,615839E+09	6,276479E+09	7,892318E+09
-479	8,078944E+08	8,078826E+08	3,138189E+09	3,138303E+09	1,615777E+09	6,276492E+09	7,892269E+09
-478	8,079516E+08	8,079395E+08	3,138320E+09	3,138263E+09	1,615891E+09	6,276583E+09	7,892475E+09
-477	8,078618E+08	8,078825E+08	3,138350E+09	3,138266E+09	1,615744E+09	6,276616E+09	7,892360E+09
-476	8,078644E+08	8,078377E+08	3,138342E+09	3,138391E+09	1,615702E+09	6,276733E+09	7,892435E+09
-475	8,078678E+08	8,078694E+08	3,138446E+09	3,138374E+09	1,615737E+09	6,276819E+09	7,892556E+09
-474	8,077704E+08	8,077843E+08	3,138401E+09	3,138467E+09	1,615555E+09	6,276869E+09	7,892423E+09
-473	8,078090E+08	8,077861E+08	3,138441E+09	3,138504E+09	1,615595E+09	6,276945E+09	7,892540E+09
-472	8,077822E+08	8,078011E+08	3,138496E+09	3,138414E+09	1,615583E+09	6,276911E+09	7,892494E+09
-471	8,077425E+08	8,077314E+08	3,138418E+09	3,138488E+09	1,615474E+09	6,276906E+09	7,892380E+09
-470	8,078213E+08	8,077903E+08	3,138470E+09	3,138450E+09	1,615612E+09	6,276920E+09	7,892531E+09
-469	8,077733E+08	8,077979E+08	3,138450E+09	3,138356E+09	1,615571E+09	6,276806E+09	7,892377E+09
-468	8,077907E+08	8,077932E+08	3,138337E+09	3,138412E+09	1,615584E+09	6,276749E+09	7,892333E+09
-467	8,078698E+08	8,078856E+08	3,138378E+09	3,138308E+09	1,615755E+09	6,276886E+09	7,892441E+09
-466	8,078291E+08	8,078678E+08	3,138306E+09	3,138272E+09	1,615697E+09	6,276578E+09	7,892275E+09
-465	8,079146E+08	8,078905E+08	3,138244E+09	3,138282E+09	1,615805E+09	6,276526E+09	7,892331E+09
-464	8,079606E+08	8,079688E+08	3,138236E+09	3,138146E+09	1,615929E+09	6,276382E+09	7,892312E+09
-463	8,079344E+08	8,079355E+08	3,138107E+09	3,138185E+09	1,615870E+09	6,276292E+09	7,892162E+09
-462	8,080230E+08	8,079949E+08	3,138119E+09	3,138171E+09	1,616018E+09	6,276291E+09	7,892309E+09
-461	8,079893E+08	8,080220E+08	3,138161E+09	3,138058E+09	1,616011E+09	6,276218E+09	7,892230E+09
-460	8,079637E+08	8,079638E+08	3,138108E+09	3,138165E+09	1,615927E+09	6,276273E+09	7,892200E+09
-459	8,080149E+08	8,080025E+08	3,138215E+09	3,138152E+09	1,616017E+09	6,276367E+09	7,892384E+09
-458	8,079279E+08	8,079475E+08	3,138239E+09	3,138181E+09	1,615875E+09	6,276419E+09	7,892295E+09
-457	8,079263E+08	8,078966E+08	3,138218E+09	3,138314E+09	1,615823E+09	6,276532E+09	7,892355E+09
-456	8,079318E+08	8,079383E+08	3,138286E+09	3,138258E+09	1,615870E+09	6,276544E+09	7,892414E+09
-455	8,078443E+08	8,078554E+08	3,138269E+09	3,138321E+09	1,615700E+09	6,276590E+09	7,892290E+09
-454	8,078881E+08	8,078505E+08	3,138314E+09	3,138364E+09	1,615739E+09	6,276678E+09	7,892416E+09
-453	8,078672E+08	8,078736E+08	3,138386E+09	3,138251E+09	1,615741E+09	6,276637E+09	7,892378E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-452	8,078173E+08	8,078164E+08	3,138302E+09	3,138344E+09	1,615634E+09	6,276645E+09	7,892279E+09
-451	8,078901E+08	8,078763E+08	3,138322E+09	3,138317E+09	1,615766E+09	6,276639E+09	7,892406E+09
-450	8,078486E+08	8,078930E+08	3,138322E+09	3,138235E+09	1,615742E+09	6,276557E+09	7,892299E+09
-449	8,078704E+08	8,078752E+08	3,138224E+09	3,138294E+09	1,615746E+09	6,276518E+09	7,892264E+09
-448	8,079583E+08	8,079667E+08	3,138226E+09	3,138164E+09	1,615925E+09	6,276390E+09	7,892314E+09
-447	8,079294E+08	8,079506E+08	3,138156E+09	3,138123E+09	1,615880E+09	6,276279E+09	7,892159E+09
-446	8,080142E+08	8,079720E+08	3,138068E+09	3,138150E+09	1,615986E+09	6,276218E+09	7,892205E+09
-445	8,080562E+08	8,080640E+08	3,138071E+09	3,137983E+09	1,616120E+09	6,276054E+09	7,892174E+09
-444	8,080157E+08	8,080378E+08	3,137965E+09	3,138024E+09	1,616054E+09	6,275988E+09	7,892042E+09
-443	8,080954E+08	8,080783E+08	3,137983E+09	3,138012E+09	1,616174E+09	6,275995E+09	7,892168E+09
-442	8,080647E+08	8,080995E+08	3,138061E+09	3,137929E+09	1,616164E+09	6,275991E+09	7,892155E+09
-441	8,080355E+08	8,080241E+08	3,138015E+09	3,138069E+09	1,616060E+09	6,276084E+09	7,892144E+09
-440	8,080819E+08	8,080655E+08	3,138073E+09	3,138049E+09	1,616147E+09	6,276123E+09	7,892270E+09
-439	8,079999E+08	8,080182E+08	3,138107E+09	3,138074E+09	1,616018E+09	6,276180E+09	7,892199E+09
-438	8,079957E+08	8,079628E+08	3,138085E+09	3,138209E+09	1,615958E+09	6,276294E+09	7,892253E+09
-437	8,080057E+08	8,080085E+08	3,138182E+09	3,138111E+09	1,616014E+09	6,276294E+09	7,892308E+09
-436	8,079139E+08	8,079302E+08	3,138175E+09	3,138175E+09	1,615844E+09	6,276350E+09	7,892194E+09
-435	8,079549E+08	8,079169E+08	3,138189E+09	3,138230E+09	1,615872E+09	6,276419E+09	7,892290E+09
-434	8,079404E+08	8,079529E+08	3,138261E+09	3,138139E+09	1,615893E+09	6,276400E+09	7,892294E+09
-433	8,078892E+08	8,078958E+08	3,138169E+09	3,138240E+09	1,615785E+09	6,276409E+09	7,892194E+09
-432	8,079640E+08	8,079626E+08	3,138158E+09	3,138181E+09	1,615927E+09	6,276339E+09	7,892265E+09
-431	8,079397E+08	8,079795E+08	3,138181E+09	3,138081E+09	1,615919E+09	6,276262E+09	7,892181E+09
-430	8,079678E+08	8,079533E+08	3,138076E+09	3,138151E+09	1,615921E+09	6,276227E+09	7,892148E+09
-429	8,080630E+08	8,080532E+08	3,138077E+09	3,137996E+09	1,616116E+09	6,276073E+09	7,892189E+09
-428	8,080241E+08	8,080499E+08	3,137995E+09	3,137961E+09	1,616074E+09	6,275956E+09	7,892030E+09
-427	8,080973E+08	8,080692E+08	3,137892E+09	3,137995E+09	1,616167E+09	6,275887E+09	7,892053E+09
-426	8,081387E+08	8,081634E+08	3,137938E+09	3,137839E+09	1,616302E+09	6,275777E+09	7,892079E+09
-425	8,080911E+08	8,081181E+08	3,137867E+09	3,137896E+09	1,616209E+09	6,275763E+09	7,891972E+09
-424	8,081674E+08	8,081501E+08	3,137865E+09	3,137882E+09	1,616317E+09	6,275747E+09	7,892064E+09
-423	8,081453E+08	8,081655E+08	3,137949E+09	3,137816E+09	1,616311E+09	6,275766E+09	7,892076E+09
-422	8,081113E+08	8,080861E+08	3,137879E+09	3,137982E+09	1,616197E+09	6,275861E+09	7,892058E+09
-421	8,081572E+08	8,081388E+08	3,137934E+09	3,137927E+09	1,616296E+09	6,275861E+09	7,892157E+09
-420	8,080675E+08	8,080971E+08	3,137982E+09	3,137940E+09	1,616165E+09	6,275921E+09	7,892086E+09
-419	8,080596E+08	8,080290E+08	3,137955E+09	3,138068E+09	1,616089E+09	6,276023E+09	7,892112E+09
-418	8,080774E+08	8,080754E+08	3,138081E+09	3,137983E+09	1,616153E+09	6,276064E+09	7,892216E+09
-417	8,079834E+08	8,079937E+08	3,138075E+09	3,138066E+09	1,615977E+09	6,276141E+09	7,892118E+09
-416	8,080212E+08	8,079916E+08	3,138041E+09	3,138107E+09	1,616013E+09	6,276149E+09	7,892162E+09
-415	8,080169E+08	8,080392E+08	3,138125E+09	3,138016E+09	1,616056E+09	6,276141E+09	7,892198E+09
-414	8,079687E+08	8,079787E+08	3,138037E+09	3,138121E+09	1,615947E+09	6,276158E+09	7,892105E+09
-413	8,080524E+08	8,080471E+08	3,138036E+09	3,138022E+09	1,616100E+09	6,276057E+09	7,892157E+09
-412	8,080305E+08	8,080680E+08	3,138057E+09	3,137924E+09	1,616098E+09	6,275981E+09	7,892080E+09
-411	8,080570E+08	8,080342E+08	3,137907E+09	3,138000E+09	1,616091E+09	6,275907E+09	7,891998E+09
-410	8,081547E+08	8,081450E+08	3,137913E+09	3,137856E+09	1,616300E+09	6,275769E+09	7,892069E+09
-409	8,081095E+08	8,081441E+08	3,137837E+09	3,137825E+09	1,616254E+09	6,275662E+09	7,891915E+09
-408	8,081773E+08	8,081610E+08	3,137722E+09	3,137830E+09	1,616338E+09	6,275552E+09	7,891891E+09
-407	8,082288E+08	8,082485E+08	3,137809E+09	3,137681E+09	1,616477E+09	6,275490E+09	7,891967E+09
-406	8,081804E+08	8,081886E+08	3,137747E+09	3,137770E+09	1,616369E+09	6,275516E+09	7,891885E+09
-405	8,082544E+08	8,082240E+08	3,137745E+09	3,137746E+09	1,616478E+09	6,275491E+09	7,891969E+09
-404	8,082225E+08	8,082482E+08	3,137822E+09	3,137699E+09	1,616471E+09	6,275521E+09	7,891992E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-403	8,081769E+08	8,081625E+08	3,137732E+09	3,137868E+09	1,616339E+09	6,275601E+09	7,891940E+09
-402	8,082242E+08	8,082142E+08	3,137824E+09	3,137816E+09	1,616438E+09	6,275640E+09	7,892078E+09
-401	8,081316E+08	8,081614E+08	3,137890E+09	3,137830E+09	1,616293E+09	6,275720E+09	7,892013E+09
-400	8,081223E+08	8,080908E+08	3,137836E+09	3,137940E+09	1,616213E+09	6,275776E+09	7,891989E+09
-399	8,081520E+08	8,081410E+08	3,137963E+09	3,137867E+09	1,616293E+09	6,275829E+09	7,892122E+09
-398	8,080563E+08	8,080635E+08	3,137941E+09	3,137967E+09	1,616120E+09	6,275907E+09	7,892027E+09
-397	8,080965E+08	8,080770E+08	3,137906E+09	3,137968E+09	1,616174E+09	6,275874E+09	7,892048E+09
-396	8,080933E+08	8,081280E+08	3,137998E+09	3,137865E+09	1,616221E+09	6,275863E+09	7,892084E+09
-395	8,080475E+08	8,080562E+08	3,137895E+09	3,137967E+09	1,616104E+09	6,275862E+09	7,891966E+09
-394	8,081440E+08	8,081252E+08	3,137906E+09	3,137879E+09	1,616269E+09	6,275785E+09	7,892054E+09
-393	8,081200E+08	8,081470E+08	3,137911E+09	3,137796E+09	1,616267E+09	6,275707E+09	7,891974E+09
-392	8,081425E+08	8,081251E+08	3,137720E+09	3,137850E+09	1,616268E+09	6,275570E+09	7,891838E+09
-391	8,082472E+08	8,082426E+08	3,137746E+09	3,137704E+09	1,616490E+09	6,275450E+09	7,891940E+09
-390	8,081994E+08	8,082357E+08	3,137697E+09	3,137680E+09	1,616435E+09	6,275377E+09	7,891812E+09
-389	8,082677E+08	8,082517E+08	3,137606E+09	3,137660E+09	1,616519E+09	6,275266E+09	7,891785E+09
-388	8,083149E+08	8,083349E+08	3,137702E+09	3,137536E+09	1,616650E+09	6,275239E+09	7,891888E+09
-387	8,082590E+08	8,082631E+08	3,137608E+09	3,137654E+09	1,616522E+09	6,275262E+09	7,891784E+09
-386	8,083309E+08	8,083016E+08	3,137613E+09	3,137647E+09	1,616633E+09	6,275260E+09	7,891892E+09
-385	8,082902E+08	8,083232E+08	3,137691E+09	3,137604E+09	1,616613E+09	6,275294E+09	7,891908E+09
-384	8,082400E+08	8,082322E+08	3,137585E+09	3,137735E+09	1,616472E+09	6,275320E+09	7,891792E+09
-383	8,082981E+08	8,082776E+08	3,137706E+09	3,137683E+09	1,616576E+09	6,275389E+09	7,891964E+09
-382	8,082075E+08	8,082201E+08	3,137779E+09	3,137713E+09	1,616428E+09	6,275492E+09	7,891920E+09
-381	8,081974E+08	8,081606E+08	3,137718E+09	3,137799E+09	1,616358E+09	6,275517E+09	7,891875E+09
-380	8,082218E+08	8,082244E+08	3,137846E+09	3,137740E+09	1,616446E+09	6,275586E+09	7,892032E+09
-379	8,081219E+08	8,081433E+08	3,137807E+09	3,137843E+09	1,616265E+09	6,275650E+09	7,891915E+09
-378	8,081671E+08	8,081548E+08	3,137804E+09	3,137846E+09	1,616322E+09	6,275650E+09	7,891972E+09
-377	8,081677E+08	8,081999E+08	3,137894E+09	3,137750E+09	1,616368E+09	6,275643E+09	7,892011E+09
-376	8,081269E+08	8,081275E+08	3,137739E+09	3,137827E+09	1,616254E+09	6,275567E+09	7,891821E+09
-375	8,082389E+08	8,082038E+08	3,137737E+09	3,137746E+09	1,616443E+09	6,275482E+09	7,891925E+09
-374	8,082160E+08	8,082364E+08	3,137727E+09	3,137661E+09	1,616452E+09	6,275388E+09	7,891840E+09
-373	8,082379E+08	8,082296E+08	3,137547E+09	3,137666E+09	1,616467E+09	6,275213E+09	7,891681E+09
-372	8,083386E+08	8,083471E+08	3,137607E+09	3,137519E+09	1,616686E+09	6,275126E+09	7,891812E+09
-371	8,082870E+08	8,083242E+08	3,137563E+09	3,137514E+09	1,616611E+09	6,275078E+09	7,891689E+09
-370	8,083558E+08	8,083343E+08	3,137499E+09	3,137527E+09	1,616690E+09	6,275027E+09	7,891717E+09
-369	8,083941E+08	8,084136E+08	3,137581E+09	3,137438E+09	1,616808E+09	6,275018E+09	7,891826E+09
-368	8,083304E+08	8,083431E+08	3,137450E+09	3,137542E+09	1,616673E+09	6,274991E+09	7,891665E+09
-367	8,084082E+08	8,083785E+08	3,137472E+09	3,137536E+09	1,616787E+09	6,275008E+09	7,891794E+09
-366	8,083652E+08	8,083898E+08	3,137569E+09	3,137490E+09	1,616755E+09	6,275059E+09	7,891814E+09
-365	8,083161E+08	8,083017E+08	3,137479E+09	3,137582E+09	1,616618E+09	6,275061E+09	7,891679E+09
-364	8,083704E+08	8,083452E+08	3,137605E+09	3,137544E+09	1,616716E+09	6,275148E+09	7,891864E+09
-363	8,082727E+08	8,082854E+08	3,137653E+09	3,137597E+09	1,616558E+09	6,275250E+09	7,891809E+09
-362	8,082623E+08	8,082358E+08	3,137609E+09	3,137695E+09	1,616498E+09	6,275303E+09	7,891801E+09
-361	8,082810E+08	8,082990E+08	3,137732E+09	3,137641E+09	1,616580E+09	6,275372E+09	7,891952E+09
-360	8,081860E+08	8,082131E+08	3,137670E+09	3,137711E+09	1,616399E+09	6,275381E+09	7,891781E+09
-359	8,082506E+08	8,082200E+08	3,137669E+09	3,137716E+09	1,616471E+09	6,275385E+09	7,891855E+09
-358	8,082591E+08	8,082672E+08	3,137745E+09	3,137624E+09	1,616526E+09	6,275370E+09	7,891896E+09
-357	8,082224E+08	8,082177E+08	3,137571E+09	3,137660E+09	1,616440E+09	6,275231E+09	7,891671E+09
-356	8,083304E+08	8,083083E+08	3,137573E+09	3,137578E+09	1,616639E+09	6,275152E+09	7,891790E+09
-355	8,083014E+08	8,083395E+08	3,137569E+09	3,137495E+09	1,616641E+09	6,275064E+09	7,891705E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-354	8,083243E+08	8,083270E+08	3,137442E+09	3,137506E+09	1,616651E+09	6,274948E+09	7,891600E+09
-353	8,084181E+08	8,084336E+08	3,137509E+09	3,137389E+09	1,616852E+09	6,274898E+09	7,891750E+09
-352	8,083671E+08	8,084008E+08	3,137427E+09	3,137386E+09	1,616768E+09	6,274812E+09	7,891580E+09
-351	8,084431E+08	8,084095E+08	3,137348E+09	3,137426E+09	1,616853E+09	6,274774E+09	7,891626E+09
-350	8,084803E+08	8,084912E+08	3,137417E+09	3,137340E+09	1,616972E+09	6,274757E+09	7,891728E+09
-349	8,084156E+08	8,084278E+08	3,137287E+09	3,137385E+09	1,616843E+09	6,274672E+09	7,891515E+09
-348	8,084890E+08	8,084571E+08	3,137341E+09	3,137373E+09	1,616946E+09	6,274715E+09	7,891661E+09
-347	8,084414E+08	8,084563E+08	3,137442E+09	3,137339E+09	1,616898E+09	6,274781E+09	7,891679E+09
-346	8,083889E+08	8,083669E+08	3,137388E+09	3,137454E+09	1,616756E+09	6,274842E+09	7,891598E+09
-345	8,084298E+08	8,084154E+08	3,137506E+09	3,137450E+09	1,616845E+09	6,274956E+09	7,891801E+09
-344	8,083284E+08	8,083579E+08	3,137524E+09	3,137491E+09	1,616686E+09	6,275015E+09	7,891702E+09
-343	8,083274E+08	8,083076E+08	3,137490E+09	3,137597E+09	1,616635E+09	6,275087E+09	7,891722E+09
-342	8,083533E+08	8,083643E+08	3,137617E+09	3,137537E+09	1,616718E+09	6,275154E+09	7,891872E+09
-341	8,082687E+08	8,082870E+08	3,137543E+09	3,137558E+09	1,616556E+09	6,275101E+09	7,891657E+09
-340	8,083381E+08	8,082979E+08	3,137531E+09	3,137566E+09	1,616636E+09	6,275097E+09	7,891733E+09
-339	8,083451E+08	8,083510E+08	3,137575E+09	3,137479E+09	1,616696E+09	6,275054E+09	7,891750E+09
-338	8,083088E+08	8,083155E+08	3,137428E+09	3,137507E+09	1,616624E+09	6,274935E+09	7,891559E+09
-337	8,084075E+08	8,084068E+08	3,137440E+09	3,137429E+09	1,616814E+09	6,274869E+09	7,891683E+09
-336	8,083801E+08	8,084283E+08	3,137429E+09	3,137329E+09	1,616808E+09	6,274758E+09	7,891566E+09
-335	8,084165E+08	8,084075E+08	3,137311E+09	3,137370E+09	1,616824E+09	6,274681E+09	7,891505E+09
-334	8,085120E+08	8,085077E+08	3,137365E+09	3,137276E+09	1,617020E+09	6,274642E+09	7,891661E+09
-333	8,084637E+08	8,084905E+08	3,137261E+09	3,137244E+09	1,616954E+09	6,274505E+09	7,891459E+09
-332	8,085339E+08	8,085018E+08	3,137188E+09	3,137282E+09	1,617036E+09	6,274469E+09	7,891505E+09
-331	8,085613E+08	8,085751E+08	3,137263E+09	3,137195E+09	1,617136E+09	6,274459E+09	7,891595E+09
-330	8,084947E+08	8,085069E+08	3,137190E+09	3,137236E+09	1,617002E+09	6,274426E+09	7,891428E+09
-329	8,085540E+08	8,085268E+08	3,137250E+09	3,137251E+09	1,617081E+09	6,274501E+09	7,891582E+09
-328	8,085026E+08	8,085190E+08	3,137325E+09	3,137222E+09	1,617022E+09	6,274547E+09	7,891568E+09
-327	8,084552E+08	8,084328E+08	3,137264E+09	3,137367E+09	1,616888E+09	6,274631E+09	7,891519E+09
-326	8,084935E+08	8,084839E+08	3,137378E+09	3,137367E+09	1,616977E+09	6,274745E+09	7,891722E+09
-325	8,083993E+08	8,084347E+08	3,137394E+09	3,137354E+09	1,616834E+09	6,274748E+09	7,891582E+09
-324	8,084026E+08	8,083786E+08	3,137375E+09	3,137449E+09	1,616781E+09	6,274824E+09	7,891605E+09
-323	8,084324E+08	8,084290E+08	3,137484E+09	3,137396E+09	1,616861E+09	6,274880E+09	7,891741E+09
-322	8,083537E+08	8,083615E+08	3,137424E+09	3,137415E+09	1,616715E+09	6,274839E+09	7,891555E+09
-321	8,084129E+08	8,083854E+08	3,137394E+09	3,137440E+09	1,616798E+09	6,274834E+09	7,891632E+09
-320	8,084193E+08	8,084428E+08	3,137416E+09	3,137332E+09	1,616862E+09	6,274748E+09	7,891610E+09
-319	8,083920E+08	8,084064E+08	3,137291E+09	3,137370E+09	1,616798E+09	6,274661E+09	7,891459E+09
-318	8,084940E+08	8,084899E+08	3,137318E+09	3,137297E+09	1,616984E+09	6,274614E+09	7,891598E+09
-317	8,084767E+08	8,085147E+08	3,137288E+09	3,137165E+09	1,616991E+09	6,274453E+09	7,891444E+09
-316	8,085141E+08	8,084932E+08	3,137162E+09	3,137224E+09	1,617007E+09	6,274386E+09	7,891393E+09
-315	8,086056E+08	8,085960E+08	3,137184E+09	3,137143E+09	1,617202E+09	6,274327E+09	7,891528E+09
-314	8,085556E+08	8,085851E+08	3,137109E+09	3,137098E+09	1,617141E+09	6,274207E+09	7,891347E+09
-313	8,086106E+08	8,085926E+08	3,137051E+09	3,137140E+09	1,617203E+09	6,274191E+09	7,891394E+09
-312	8,086341E+08	8,086493E+08	3,137125E+09	3,137036E+09	1,617283E+09	6,274162E+09	7,891445E+09
-311	8,085727E+08	8,085748E+08	3,137073E+09	3,137110E+09	1,617148E+09	6,274183E+09	7,891330E+09
-310	8,086259E+08	8,085914E+08	3,137136E+09	3,137150E+09	1,617217E+09	6,274287E+09	7,891504E+09
-309	8,085748E+08	8,085978E+08	3,137197E+09	3,137099E+09	1,617173E+09	6,274296E+09	7,891469E+09
-308	8,085236E+08	8,085122E+08	3,137153E+09	3,137249E+09	1,617036E+09	6,274403E+09	7,891439E+09
-307	8,085582E+08	8,085533E+08	3,137264E+09	3,137252E+09	1,617111E+09	6,274516E+09	7,891628E+09
-306	8,084714E+08	8,085008E+08	3,137315E+09	3,137227E+09	1,616972E+09	6,274542E+09	7,891514E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-305	8,084683E+08	8,084440E+08	3,137274E+09	3,137337E+09	1,616912E+09	6,274611E+09	7,891523E+09
-304	8,085009E+08	8,084927E+08	3,137338E+09	3,137272E+09	1,616994E+09	6,274610E+09	7,891604E+09
-303	8,084338E+08	8,084416E+08	3,137265E+09	3,137302E+09	1,616875E+09	6,274567E+09	7,891443E+09
-302	8,084932E+08	8,084709E+08	3,137234E+09	3,137312E+09	1,616964E+09	6,274547E+09	7,891511E+09
-301	8,085088E+08	8,085382E+08	3,137259E+09	3,137154E+09	1,617047E+09	6,274413E+09	7,891460E+09
-300	8,084870E+08	8,084953E+08	3,137157E+09	3,137192E+09	1,616982E+09	6,274349E+09	7,891331E+09
-299	8,085868E+08	8,085715E+08	3,137167E+09	3,137142E+09	1,617158E+09	6,274310E+09	7,891468E+09
-298	8,085747E+08	8,086044E+08	3,137156E+09	3,137020E+09	1,617179E+09	6,274176E+09	7,891355E+09
-297	8,085979E+08	8,085913E+08	3,137010E+09	3,137099E+09	1,617189E+09	6,274109E+09	7,891298E+09
-296	8,086845E+08	8,086875E+08	3,137017E+09	3,136999E+09	1,617372E+09	6,274016E+09	7,891388E+09
-295	8,086407E+08	8,086727E+08	3,136967E+09	3,136963E+09	1,617313E+09	6,273930E+09	7,891243E+09
-294	8,086913E+08	8,086673E+08	3,136931E+09	3,137009E+09	1,617359E+09	6,273940E+09	7,891299E+09
-293	8,087170E+08	8,087245E+08	3,136999E+09	3,136886E+09	1,617442E+09	6,273885E+09	7,891327E+09
-292	8,086513E+08	8,086473E+08	3,136957E+09	3,136983E+09	1,617299E+09	6,273940E+09	7,891238E+09
-291	8,086938E+08	8,086650E+08	3,137002E+09	3,137045E+09	1,617359E+09	6,274047E+09	7,891406E+09
-290	8,086451E+08	8,086740E+08	3,137095E+09	3,136983E+09	1,617319E+09	6,274078E+09	7,891397E+09
-289	8,085824E+08	8,085843E+08	3,137056E+09	3,137138E+09	1,617167E+09	6,274194E+09	7,891361E+09
-288	8,086214E+08	8,086090E+08	3,137143E+09	3,137124E+09	1,617230E+09	6,274267E+09	7,891498E+09
-287	8,085481E+08	8,085588E+08	3,137183E+09	3,137120E+09	1,617107E+09	6,274303E+09	7,891410E+09
-286	8,085462E+08	8,085107E+08	3,137130E+09	3,137232E+09	1,617057E+09	6,274362E+09	7,891419E+09
-285	8,085847E+08	8,085797E+08	3,137168E+09	3,137122E+09	1,617164E+09	6,274290E+09	7,891454E+09
-284	8,085178E+08	8,085362E+08	3,137123E+09	3,137142E+09	1,617054E+09	6,274265E+09	7,891319E+09
-283	8,085739E+08	8,085619E+08	3,137100E+09	3,137155E+09	1,617136E+09	6,274255E+09	7,891391E+09
-282	8,085978E+08	8,086259E+08	3,137161E+09	3,136992E+09	1,617224E+09	6,274153E+09	7,891377E+09
-281	8,085679E+08	8,085827E+08	3,137042E+09	3,137060E+09	1,617151E+09	6,274102E+09	7,891252E+09
-280	8,086688E+08	8,086519E+08	3,137004E+09	3,137010E+09	1,617321E+09	6,274014E+09	7,891334E+09
-279	8,086665E+08	8,086965E+08	3,136977E+09	3,136905E+09	1,617363E+09	6,273883E+09	7,891246E+09
-278	8,086875E+08	8,086830E+08	3,136840E+09	3,136968E+09	1,617370E+09	6,273808E+09	7,891179E+09
-277	8,087778E+08	8,087779E+08	3,136853E+09	3,136818E+09	1,617556E+09	6,273672E+09	7,891227E+09
-276	8,087345E+08	8,087550E+08	3,136838E+09	3,136787E+09	1,617490E+09	6,273624E+09	7,891114E+09
-275	8,087753E+08	8,087413E+08	3,136800E+09	3,136864E+09	1,617517E+09	6,273665E+09	7,891181E+09
-274	8,087985E+08	8,088030E+08	3,136898E+09	3,136760E+09	1,617601E+09	6,273658E+09	7,891260E+09
-273	8,087141E+08	8,087313E+08	3,136853E+09	3,136887E+09	1,617445E+09	6,273739E+09	7,891185E+09
-272	8,087489E+08	8,087345E+08	3,136886E+09	3,136941E+09	1,617483E+09	6,273827E+09	7,891310E+09
-271	8,087117E+08	8,087391E+08	3,136989E+09	3,136895E+09	1,617451E+09	6,273884E+09	7,891335E+09
-270	8,086509E+08	8,086393E+08	3,136945E+09	3,137040E+09	1,617290E+09	6,273985E+09	7,891276E+09
-269	8,086985E+08	8,086694E+08	3,137000E+09	3,136992E+09	1,617368E+09	6,273991E+09	7,891359E+09
-268	8,086298E+08	8,086310E+08	3,137035E+09	3,136983E+09	1,617261E+09	6,274018E+09	7,891279E+09
-267	8,086212E+08	8,085941E+08	3,136967E+09	3,137094E+09	1,617215E+09	6,274061E+09	7,891276E+09
-266	8,086651E+08	8,086717E+08	3,137048E+09	3,136962E+09	1,617337E+09	6,274010E+09	7,891347E+09
-265	8,085895E+08	8,086275E+08	3,137016E+09	3,136988E+09	1,617217E+09	6,274004E+09	7,891221E+09
-264	8,086473E+08	8,086367E+08	3,136974E+09	3,137000E+09	1,617284E+09	6,273974E+09	7,891258E+09
-263	8,086862E+08	8,087048E+08	3,137019E+09	3,136875E+09	1,617391E+09	6,273893E+09	7,891284E+09
-262	8,086583E+08	8,086669E+08	3,136883E+09	3,136947E+09	1,617325E+09	6,273830E+09	7,891155E+09
-261	8,087655E+08	8,087478E+08	3,136817E+09	3,136859E+09	1,617513E+09	6,273676E+09	7,891189E+09
-260	8,087655E+08	8,087943E+08	3,136816E+09	3,136740E+09	1,617560E+09	6,273556E+09	7,891116E+09
-259	8,087797E+08	8,087741E+08	3,136692E+09	3,136803E+09	1,617554E+09	6,273495E+09	7,891048E+09
-258	8,088714E+08	8,088627E+08	3,136746E+09	3,136651E+09	1,617734E+09	6,273397E+09	7,891131E+09
-257	8,088108E+08	8,088390E+08	3,136732E+09	3,136657E+09	1,617650E+09	6,273389E+09	7,891038E+09



1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-256	8,088424E+08	8,088155E+08	3,136667E+09	3,136748E+09	1,617658E+09	6,273415E+09	7,891073E+09
-255	8,088698E+08	8,088822E+08	3,136758E+09	3,136676E+09	1,617752E+09	6,273434E+09	7,891186E+09
-254	8,087832E+08	8,088034E+08	3,136728E+09	3,136795E+09	1,617587E+09	6,273523E+09	7,891109E+09
-253	8,088237E+08	8,087987E+08	3,136748E+09	3,136802E+09	1,617622E+09	6,273550E+09	7,891172E+09
-252	8,087915E+08	8,087983E+08	3,136865E+09	3,136753E+09	1,617590E+09	6,273618E+09	7,891208E+09
-251	8,087264E+08	8,087034E+08	3,136805E+09	3,136910E+09	1,617430E+09	6,273716E+09	7,891145E+09
-250	8,087762E+08	8,087453E+08	3,136878E+09	3,136853E+09	1,617521E+09	6,273731E+09	7,891253E+09
-249	8,086934E+08	8,087225E+08	3,136921E+09	3,136854E+09	1,617416E+09	6,273775E+09	7,891191E+09
-248	8,086812E+08	8,086750E+08	3,136849E+09	3,136951E+09	1,617356E+09	6,273801E+09	7,891157E+09
-247	8,087373E+08	8,087513E+08	3,136941E+09	3,136845E+09	1,617489E+09	6,273786E+09	7,891274E+09
-246	8,086682E+08	8,086993E+08	3,136906E+09	3,136876E+09	1,617367E+09	6,273783E+09	7,891150E+09
-245	8,087357E+08	8,087105E+08	3,136818E+09	3,136864E+09	1,617446E+09	6,273682E+09	7,891128E+09
-244	8,087834E+08	8,087903E+08	3,136847E+09	3,136737E+09	1,617574E+09	6,273584E+09	7,891158E+09
-243	8,087540E+08	8,087642E+08	3,136691E+09	3,136800E+09	1,617518E+09	6,273491E+09	7,891009E+09
-242	8,088659E+08	8,088473E+08	3,136665E+09	3,136680E+09	1,617713E+09	6,273345E+09	7,891058E+09
-241	8,088539E+08	8,088930E+08	3,136684E+09	3,136564E+09	1,617747E+09	6,273249E+09	7,890996E+09
-240	8,088613E+08	8,088535E+08	3,136555E+09	3,136635E+09	1,617715E+09	6,273190E+09	7,890905E+09
-239	8,089560E+08	8,089444E+08	3,136613E+09	3,136536E+09	1,617900E+09	6,273149E+09	7,891049E+09
-238	8,088891E+08	8,089195E+08	3,136601E+09	3,136559E+09	1,617809E+09	6,273159E+09	7,890968E+09
-237	8,089173E+08	8,088974E+08	3,136521E+09	3,136628E+09	1,617815E+09	6,273149E+09	7,890963E+09
-236	8,089470E+08	8,089591E+08	3,136637E+09	3,136552E+09	1,617906E+09	6,273189E+09	7,891095E+09
-235	8,088561E+08	8,088703E+08	3,136609E+09	3,136670E+09	1,617726E+09	6,273279E+09	7,891005E+09
-234	8,089010E+08	8,088599E+08	3,136651E+09	3,136666E+09	1,617761E+09	6,273318E+09	7,891078E+09
-233	8,088567E+08	8,088658E+08	3,136755E+09	3,136633E+09	1,617723E+09	6,273388E+09	7,891111E+09
-232	8,087855E+08	8,087713E+08	3,136667E+09	3,136785E+09	1,617557E+09	6,273452E+09	7,891009E+09
-231	8,088420E+08	8,088262E+08	3,136742E+09	3,136748E+09	1,617668E+09	6,273490E+09	7,891158E+09
-230	8,087617E+08	8,088001E+08	3,136807E+09	3,136736E+09	1,617562E+09	6,273543E+09	7,891105E+09
-229	8,087582E+08	8,087473E+08	3,136721E+09	3,136800E+09	1,617506E+09	6,273521E+09	7,891027E+09
-228	8,088257E+08	8,088221E+08	3,136811E+09	3,136701E+09	1,617648E+09	6,273511E+09	7,891159E+09
-227	8,087592E+08	8,087785E+08	3,136748E+09	3,136746E+09	1,617538E+09	6,273493E+09	7,891031E+09
-226	8,088339E+08	8,088023E+08	3,136662E+09	3,136716E+09	1,617636E+09	6,273379E+09	7,891015E+09
-225	8,088699E+08	8,088965E+08	3,136694E+09	3,136587E+09	1,617766E+09	6,273282E+09	7,891048E+09
-224	8,088376E+08	8,088609E+08	3,136539E+09	3,136628E+09	1,617698E+09	6,273168E+09	7,890866E+09
-223	8,089554E+08	8,089394E+08	3,136527E+09	3,136532E+09	1,617895E+09	6,273059E+09	7,890954E+09
-222	8,089415E+08	8,089758E+08	3,136561E+09	3,136430E+09	1,617917E+09	6,272991E+09	7,890908E+09
-221	8,089481E+08	8,089328E+08	3,136403E+09	3,136491E+09	1,617881E+09	6,272894E+09	7,890775E+09
-220	8,090409E+08	8,090280E+08	3,136462E+09	3,136410E+09	1,618069E+09	6,272872E+09	7,890941E+09
-219	8,089699E+08	8,090059E+08	3,136450E+09	3,136441E+09	1,617976E+09	6,272891E+09	7,890867E+09
-218	8,089995E+08	8,089746E+08	3,136407E+09	3,136483E+09	1,617974E+09	6,272890E+09	7,890864E+09
-217	8,090174E+08	8,090312E+08	3,136535E+09	3,136414E+09	1,618049E+09	6,272948E+09	7,890997E+09
-216	8,089226E+08	8,089277E+08	3,136487E+09	3,136532E+09	1,617850E+09	6,273019E+09	7,890869E+09
-215	8,089703E+08	8,089249E+08	3,136522E+09	3,136568E+09	1,617895E+09	6,273089E+09	7,890985E+09
-214	8,089222E+08	8,089380E+08	3,136632E+09	3,136538E+09	1,617860E+09	6,273171E+09	7,891031E+09
-213	8,088516E+08	8,088476E+08	3,136536E+09	3,136657E+09	1,617699E+09	6,273193E+09	7,890892E+09
-212	8,089131E+08	8,089025E+08	3,136635E+09	3,136616E+09	1,617816E+09	6,273250E+09	7,891066E+09
-211	8,088381E+08	8,088734E+08	3,136696E+09	3,136608E+09	1,617712E+09	6,273304E+09	7,891016E+09
-210	8,088430E+08	8,088191E+08	3,136615E+09	3,136660E+09	1,617662E+09	6,273275E+09	7,890937E+09
-209	8,089049E+08	8,089051E+08	3,136677E+09	3,136573E+09	1,617810E+09	6,273251E+09	7,891061E+09
-208	8,088388E+08	8,088646E+08	3,136572E+09	3,136604E+09	1,617703E+09	6,273176E+09	7,890879E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-207	8,089228E+08	8,089006E+08	3,136488E+09	3,136585E+09	1,617823E+09	6,273072E+09	7,890896E+09
-206	8,089603E+08	8,089886E+08	3,136542E+09	3,136431E+09	1,617949E+09	6,272973E+09	7,890922E+09
-205	8,089311E+08	8,089457E+08	3,136383E+09	3,136441E+09	1,617877E+09	6,272823E+09	7,890700E+09
-204	8,090518E+08	8,090233E+08	3,136382E+09	3,136364E+09	1,618075E+09	6,272746E+09	7,890821E+09
-203	8,090340E+08	8,090634E+08	3,136409E+09	3,136291E+09	1,618097E+09	6,272700E+09	7,890798E+09
-202	8,090390E+08	8,090254E+08	3,136272E+09	3,136352E+09	1,618064E+09	6,272624E+09	7,890689E+09
-201	8,091159E+08	8,091230E+08	3,136342E+09	3,136283E+09	1,618239E+09	6,272624E+09	7,890863E+09
-200	8,090410E+08	8,090820E+08	3,136329E+09	3,136307E+09	1,618123E+09	6,272636E+09	7,890759E+09
-199	8,090742E+08	8,090435E+08	3,136293E+09	3,136378E+09	1,618118E+09	6,272670E+09	7,890788E+09
-198	8,090885E+08	8,090895E+08	3,136423E+09	3,136313E+09	1,618178E+09	6,272736E+09	7,890914E+09
-197	8,089932E+08	8,089893E+08	3,136342E+09	3,136409E+09	1,617983E+09	6,272751E+09	7,890733E+09
-196	8,090417E+08	8,089992E+08	3,136377E+09	3,136447E+09	1,618041E+09	6,272824E+09	7,890865E+09
-195	8,089932E+08	8,090194E+08	3,136498E+09	3,136416E+09	1,618013E+09	6,272914E+09	7,890927E+09
-194	8,089284E+08	8,089251E+08	3,136438E+09	3,136506E+09	1,617854E+09	6,272944E+09	7,890798E+09
-193	8,089812E+08	8,089781E+08	3,136541E+09	3,136475E+09	1,617959E+09	6,273016E+09	7,890976E+09
-192	8,089109E+08	8,089406E+08	3,136571E+09	3,136474E+09	1,617851E+09	6,273045E+09	7,890896E+09
-191	8,089236E+08	8,088970E+08	3,136465E+09	3,136554E+09	1,617821E+09	6,273019E+09	7,890840E+09
-190	8,089863E+08	8,089904E+08	3,136525E+09	3,136459E+09	1,617977E+09	6,272983E+09	7,890960E+09
-189	8,089258E+08	8,089557E+08	3,136402E+09	3,136442E+09	1,617882E+09	6,272845E+09	7,890726E+09
-188	8,090155E+08	8,089919E+08	3,136337E+09	3,136414E+09	1,618007E+09	6,272751E+09	7,890758E+09
-187	8,090560E+08	8,090779E+08	3,136400E+09	3,136269E+09	1,618134E+09	6,272669E+09	7,890803E+09
-186	8,090298E+08	8,090319E+08	3,136256E+09	3,136273E+09	1,618062E+09	6,272529E+09	7,890590E+09
-185	8,091345E+08	8,091176E+08	3,136248E+09	3,136222E+09	1,618252E+09	6,272470E+09	7,890722E+09
-184	8,091140E+08	8,091548E+08	3,136250E+09	3,136158E+09	1,618269E+09	6,272409E+09	7,890677E+09
-183	8,091210E+08	8,091171E+08	3,136128E+09	3,136241E+09	1,618238E+09	6,272369E+09	7,890607E+09
-182	8,091948E+08	8,091988E+08	3,136221E+09	3,136163E+09	1,618394E+09	6,272384E+09	7,890777E+09
-181	8,091223E+08	8,091455E+08	3,136188E+09	3,136162E+09	1,618268E+09	6,272350E+09	7,890618E+09
-180	8,091557E+08	8,091080E+08	3,136152E+09	3,136247E+09	1,618264E+09	6,272399E+09	7,890663E+09
-179	8,091659E+08	8,091616E+08	3,136278E+09	3,136198E+09	1,618327E+09	6,272475E+09	7,890803E+09
-178	8,090678E+08	8,090712E+08	3,136227E+09	3,136275E+09	1,618139E+09	6,272501E+09	7,890640E+09
-177	8,091010E+08	8,090865E+08	3,136287E+09	3,136316E+09	1,618187E+09	6,272603E+09	7,890790E+09
-176	8,090539E+08	8,090899E+08	3,136403E+09	3,136285E+09	1,618144E+09	6,272687E+09	7,890831E+09
-175	8,089968E+08	8,089922E+08	3,136345E+09	3,136407E+09	1,617989E+09	6,272752E+09	7,890741E+09
-174	8,090513E+08	8,090373E+08	3,136429E+09	3,136378E+09	1,618089E+09	6,272807E+09	7,890896E+09
-173	8,089879E+08	8,090067E+08	3,136403E+09	3,136350E+09	1,617995E+09	6,272753E+09	7,890748E+09
-172	8,090097E+08	8,089825E+08	3,136283E+09	3,136420E+09	1,617992E+09	6,272703E+09	7,890695E+09
-171	8,090786E+08	8,090816E+08	3,136350E+09	3,136305E+09	1,618160E+09	6,272654E+09	7,890815E+09
-170	8,090259E+08	8,090491E+08	3,136262E+09	3,136246E+09	1,618075E+09	6,272509E+09	7,890584E+09
-169	8,091058E+08	8,090868E+08	3,136209E+09	3,136227E+09	1,618193E+09	6,272435E+09	7,890628E+09
-168	8,091450E+08	8,091658E+08	3,136251E+09	3,136106E+09	1,618311E+09	6,272357E+09	7,890667E+09
-167	8,091194E+08	8,091286E+08	3,136109E+09	3,136155E+09	1,618248E+09	6,272265E+09	7,890513E+09
-166	8,092155E+08	8,092117E+08	3,136111E+09	3,136113E+09	1,618427E+09	6,272225E+09	7,890652E+09
-165	8,091973E+08	8,092417E+08	3,136102E+09	3,136023E+09	1,618439E+09	6,272125E+09	7,890564E+09
-164	8,092086E+08	8,091980E+08	3,135991E+09	3,136105E+09	1,618407E+09	6,272096E+09	7,890503E+09
-163	8,092818E+08	8,092698E+08	3,136088E+09	3,136035E+09	1,618552E+09	6,272123E+09	7,890674E+09
-162	8,092096E+08	8,092163E+08	3,136063E+09	3,136016E+09	1,618426E+09	6,272079E+09	7,890505E+09
-161	8,092241E+08	8,091884E+08	3,136025E+09	3,136115E+09	1,618413E+09	6,272139E+09	7,890552E+09
-160	8,092300E+08	8,092407E+08	3,136142E+09	3,136073E+09	1,618471E+09	6,272215E+09	7,890686E+09
-159	8,091333E+08	8,091490E+08	3,136121E+09	3,136164E+09	1,618282E+09	6,272285E+09	7,890568E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude <sup>⊙</sup>	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-158	8,091611E+08	8,091496E+08	3,136203E+09	3,136206E+09	1,618311E+09	6,272408E+09	7,890719E+09
-157	8,091229E+08	8,091441E+08	3,136284E+09	3,136159E+09	1,618267E+09	6,272444E+09	7,890711E+09
-156	8,090739E+08	8,090536E+08	3,136202E+09	3,136294E+09	1,618128E+09	6,272496E+09	7,890624E+09
-155	8,091340E+08	8,091103E+08	3,136267E+09	3,136269E+09	1,618244E+09	6,272536E+09	7,890781E+09
-154	8,090778E+08	8,090958E+08	3,136249E+09	3,136197E+09	1,618174E+09	6,272446E+09	7,890620E+09
-153	8,090906E+08	8,090822E+08	3,136149E+09	3,136251E+09	1,618173E+09	6,272400E+09	7,890572E+09
-152	8,091627E+08	8,091718E+08	3,136212E+09	3,136133E+09	1,618335E+09	6,272345E+09	7,890679E+09
-151	8,091146E+08	8,091392E+08	3,136143E+09	3,136101E+09	1,618254E+09	6,272245E+09	7,890498E+09
-150	8,091873E+08	8,091711E+08	3,136086E+09	3,136100E+09	1,618358E+09	6,272185E+09	7,890544E+09
-149	8,092297E+08	8,092521E+08	3,136082E+09	3,135973E+09	1,618482E+09	6,272054E+09	7,890536E+09
-148	8,092099E+08	8,092251E+08	3,135936E+09	3,136029E+09	1,618435E+09	6,271965E+09	7,890400E+09
-147	8,093097E+08	8,093011E+08	3,135953E+09	3,135978E+09	1,618611E+09	6,271931E+09	7,890542E+09
-146	8,092964E+08	8,093247E+08	3,135965E+09	3,135853E+09	1,618621E+09	6,271819E+09	7,890440E+09
-145	8,092952E+08	8,092799E+08	3,135863E+09	3,135942E+09	1,618575E+09	6,271805E+09	7,890381E+09
-144	8,093616E+08	8,093414E+08	3,135937E+09	3,135891E+09	1,618703E+09	6,271829E+09	7,890532E+09
-143	8,092842E+08	8,092982E+08	3,135936E+09	3,135905E+09	1,618582E+09	6,271841E+09	7,890423E+09
-142	8,092847E+08	8,092668E+08	3,135923E+09	3,136009E+09	1,618552E+09	6,271931E+09	7,890483E+09
-141	8,092904E+08	8,093081E+08	3,136031E+09	3,135953E+09	1,618598E+09	6,271984E+09	7,890583E+09
-140	8,092020E+08	8,092141E+08	3,136019E+09	3,136058E+09	1,618416E+09	6,272077E+09	7,890493E+09
-139	8,092344E+08	8,092054E+08	3,136090E+09	3,136107E+09	1,618440E+09	6,272197E+09	7,890637E+09
-138	8,092042E+08	8,092070E+08	3,136153E+09	3,136034E+09	1,618411E+09	6,272187E+09	7,890598E+09
-137	8,091481E+08	8,091373E+08	3,136051E+09	3,136159E+09	1,618285E+09	6,272209E+09	7,890495E+09
-136	8,092113E+08	8,091968E+08	3,136096E+09	3,136124E+09	1,618408E+09	6,272220E+09	7,890628E+09
-135	8,091615E+08	8,091894E+08	3,136114E+09	3,136047E+09	1,618351E+09	6,272161E+09	7,890512E+09
-134	8,091697E+08	8,091668E+08	3,136038E+09	3,136093E+09	1,618336E+09	6,272131E+09	7,890467E+09
-133	8,092466E+08	8,092493E+08	3,136070E+09	3,135971E+09	1,618496E+09	6,272041E+09	7,890537E+09
-132	8,092058E+08	8,092267E+08	3,135987E+09	3,135967E+09	1,618433E+09	6,271954E+09	7,890387E+09
-131	8,092787E+08	8,092635E+08	3,135927E+09	3,135980E+09	1,618542E+09	6,271907E+09	7,890449E+09
-130	8,093271E+08	8,093516E+08	3,135931E+09	3,135822E+09	1,618679E+09	6,271753E+09	7,890431E+09
-129	8,092998E+08	8,093247E+08	3,135801E+09	3,135868E+09	1,618625E+09	6,271669E+09	7,890294E+09
-128	8,094002E+08	8,093830E+08	3,135809E+09	3,135825E+09	1,618783E+09	6,271634E+09	7,890417E+09
-127	8,093869E+08	8,094024E+08	3,135836E+09	3,135719E+09	1,618789E+09	6,271555E+09	7,890344E+09
-126	8,093691E+08	8,093525E+08	3,135737E+09	3,135821E+09	1,618722E+09	6,271558E+09	7,890280E+09
-125	8,094307E+08	8,094149E+08	3,135781E+09	3,135767E+09	1,618846E+09	6,271548E+09	7,890393E+09
-124	8,093553E+08	8,093792E+08	3,135795E+09	3,135791E+09	1,618734E+09	6,271586E+09	7,890320E+09
-123	8,093557E+08	8,093375E+08	3,135813E+09	3,135895E+09	1,618693E+09	6,271707E+09	7,890401E+09
-122	8,093680E+08	8,093729E+08	3,135928E+09	3,135814E+09	1,618741E+09	6,271741E+09	7,890482E+09
-121	8,092738E+08	8,092816E+08	3,135911E+09	3,135926E+09	1,618555E+09	6,271837E+09	7,890392E+09
-120	8,093060E+08	8,092698E+08	3,135945E+09	3,135991E+09	1,618576E+09	6,271935E+09	7,890511E+09
-119	8,092783E+08	8,092867E+08	3,136020E+09	3,135924E+09	1,618565E+09	6,271944E+09	7,890509E+09
-118	8,092139E+08	8,092225E+08	3,135934E+09	3,136033E+09	1,618436E+09	6,271967E+09	7,890403E+09
-117	8,092827E+08	8,092749E+08	3,135962E+09	3,135973E+09	1,618558E+09	6,271935E+09	7,890492E+09
-116	8,092443E+08	8,092720E+08	3,135987E+09	3,135905E+09	1,618516E+09	6,271892E+09	7,890408E+09
-115	8,092576E+08	8,092430E+08	3,135910E+09	3,135961E+09	1,618501E+09	6,271871E+09	7,890372E+09
-114	8,093397E+08	8,093337E+08	3,135919E+09	3,135823E+09	1,618673E+09	6,271743E+09	7,890416E+09
-113	8,092960E+08	8,093284E+08	3,135827E+09	3,135820E+09	1,618624E+09	6,271647E+09	7,890271E+09
-112	8,093709E+08	8,093584E+08	3,135747E+09	3,135831E+09	1,618729E+09	6,271578E+09	7,890307E+09
-111	8,094239E+08	8,094451E+08	3,135789E+09	3,135669E+09	1,618869E+09	6,271458E+09	7,890327E+09
-110	8,093890E+08	8,094087E+08	3,135672E+09	3,135712E+09	1,618798E+09	6,271385E+09	7,890182E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-109	8,094863E+08	8,094545E+08	3,135645E+09	3,135670E+09	1,618941E+09	6,271315E+09	7,890256E+09
-108	8,094735E+08	8,094861E+08	3,135672E+09	3,135592E+09	1,618960E+09	6,271264E+09	7,890223E+09
-107	8,094494E+08	8,094363E+08	3,135595E+09	3,135705E+09	1,618886E+09	6,271300E+09	7,890185E+09
-106	8,095076E+08	8,095010E+08	3,135662E+09	3,135626E+09	1,619009E+09	6,271288E+09	7,890297E+09
-105	8,094256E+08	8,094631E+08	3,135706E+09	3,135652E+09	1,618889E+09	6,271358E+09	7,890247E+09
-104	8,094239E+08	8,094019E+08	3,135712E+09	3,135776E+09	1,618826E+09	6,271488E+09	7,890314E+09
-103	8,094383E+08	8,094339E+08	3,135835E+09	3,135714E+09	1,618872E+09	6,271549E+09	7,890422E+09
-102	8,093347E+08	8,093449E+08	3,135798E+09	3,135829E+09	1,618680E+09	6,271627E+09	7,890307E+09
-101	8,093691E+08	8,093366E+08	3,135782E+09	3,135876E+09	1,618706E+09	6,271659E+09	7,890365E+09
-100	8,093528E+08	8,093675E+08	3,135863E+09	3,135801E+09	1,618720E+09	6,271664E+09	7,890384E+09
-99	8,092944E+08	8,092985E+08	3,135810E+09	3,135891E+09	1,618593E+09	6,271701E+09	7,890294E+09
-98	8,093716E+08	8,093525E+08	3,135838E+09	3,135800E+09	1,618724E+09	6,271638E+09	7,890362E+09
-97	8,093322E+08	8,093576E+08	3,135857E+09	3,135741E+09	1,618690E+09	6,271598E+09	7,890287E+09
-96	8,093447E+08	8,093293E+08	3,135750E+09	3,135824E+09	1,618674E+09	6,271574E+09	7,890248E+09
-95	8,094290E+08	8,094308E+08	3,135773E+09	3,135694E+09	1,618860E+09	6,271467E+09	7,890327E+09
-94	8,093777E+08	8,094260E+08	3,135695E+09	3,135683E+09	1,618804E+09	6,271377E+09	7,890181E+09
-93	8,094572E+08	8,094433E+08	3,135591E+09	3,135678E+09	1,618900E+09	6,271269E+09	7,890170E+09
-92	8,095189E+08	8,095300E+08	3,135633E+09	3,135527E+09	1,619049E+09	6,271159E+09	7,890208E+09
-91	8,094835E+08	8,094866E+08	3,135527E+09	3,135574E+09	1,618970E+09	6,271100E+09	7,890070E+09
-90	8,095772E+08	8,095401E+08	3,135483E+09	3,135513E+09	1,619117E+09	6,270996E+09	7,890113E+09
-89	8,095547E+08	8,095842E+08	3,135526E+09	3,135440E+09	1,619139E+09	6,270966E+09	7,890105E+09
-88	8,095245E+08	8,095225E+08	3,135462E+09	3,135568E+09	1,619047E+09	6,271030E+09	7,890077E+09
-87	8,095808E+08	8,095766E+08	3,135577E+09	3,135499E+09	1,619157E+09	6,271076E+09	7,890233E+09
-86	8,094906E+08	8,095268E+08	3,135628E+09	3,135539E+09	1,619017E+09	6,271167E+09	7,890185E+09
-85	8,094881E+08	8,094530E+08	3,135582E+09	3,135668E+09	1,618941E+09	6,271250E+09	7,890191E+09
-84	8,095085E+08	8,094992E+08	3,135686E+09	3,135625E+09	1,619008E+09	6,271311E+09	7,890319E+09
-83	8,094079E+08	8,094165E+08	3,135661E+09	3,135724E+09	1,618824E+09	6,271385E+09	7,890210E+09
-82	8,094460E+08	8,094158E+08	3,135646E+09	3,135728E+09	1,618862E+09	6,271374E+09	7,890235E+09
-81	8,094324E+08	8,094536E+08	3,135752E+09	3,135640E+09	1,618886E+09	6,271392E+09	7,890278E+09
-80	8,093761E+08	8,093735E+08	3,135685E+09	3,135742E+09	1,618750E+09	6,271427E+09	7,890177E+09
-79	8,094530E+08	8,094302E+08	3,135725E+09	3,135666E+09	1,618883E+09	6,271391E+09	7,890274E+09
-78	8,094076E+08	8,094453E+08	3,135726E+09	3,135617E+09	1,618853E+09	6,271343E+09	7,890196E+09
-77	8,094221E+08	8,094164E+08	3,135570E+09	3,135690E+09	1,618839E+09	6,271260E+09	7,890099E+09
-76	8,095194E+08	8,095269E+08	3,135599E+09	3,135558E+09	1,619046E+09	6,271158E+09	7,890204E+09
-75	8,094774E+08	8,095125E+08	3,135545E+09	3,135527E+09	1,618990E+09	6,271072E+09	7,890062E+09
-74	8,095609E+08	8,095293E+08	3,135428E+09	3,135495E+09	1,619090E+09	6,270923E+09	7,890013E+09
-73	8,096175E+08	8,096238E+08	3,135476E+09	3,135350E+09	1,619241E+09	6,270826E+09	7,890068E+09
-72	8,095732E+08	8,095789E+08	3,135365E+09	3,135424E+09	1,619152E+09	6,270788E+09	7,889940E+09
-71	8,096571E+08	8,096355E+08	3,135369E+09	3,135376E+09	1,619293E+09	6,270744E+09	7,890037E+09
-70	8,096219E+08	8,096730E+08	3,135441E+09	3,135317E+09	1,619295E+09	6,270758E+09	7,890053E+09
-69	8,095892E+08	8,095896E+08	3,135357E+09	3,135453E+09	1,619179E+09	6,270810E+09	7,889989E+09
-68	8,096527E+08	8,096391E+08	3,135462E+09	3,135411E+09	1,619292E+09	6,270873E+09	7,890165E+09
-67	8,095655E+08	8,095798E+08	3,135509E+09	3,135454E+09	1,619145E+09	6,270963E+09	7,890109E+09
-66	8,095638E+08	8,095190E+08	3,135424E+09	3,135551E+09	1,619083E+09	6,270974E+09	7,890057E+09
-65	8,095835E+08	8,095797E+08	3,135531E+09	3,135484E+09	1,619163E+09	6,271016E+09	7,890179E+09
-64	8,094832E+08	8,094951E+08	3,135520E+09	3,135576E+09	1,618978E+09	6,271095E+09	7,890074E+09
-63	8,095226E+08	8,094929E+08	3,135549E+09	3,135569E+09	1,619016E+09	6,271118E+09	7,890134E+09
-62	8,095023E+08	8,095297E+08	3,135657E+09	3,135497E+09	1,619032E+09	6,271154E+09	7,890186E+09
-61	8,094464E+08	8,094447E+08	3,135544E+09	3,135614E+09	1,618891E+09	6,271158E+09	7,890049E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-60	8,095305E+08	8,095164E+08	3,135565E+09	3,135560E+09	1,619047E+09	6,271125E+09	7,890172E+09
-59	8,094933E+08	8,095334E+08	3,135581E+09	3,135498E+09	1,619027E+09	6,271080E+09	7,890106E+09
-58	8,095156E+08	8,095098E+08	3,135411E+09	3,135527E+09	1,619025E+09	6,270939E+09	7,889964E+09
-57	8,096186E+08	8,096218E+08	3,135456E+09	3,135380E+09	1,619240E+09	6,270837E+09	7,890077E+09
-56	8,095778E+08	8,095993E+08	3,135389E+09	3,135362E+09	1,619177E+09	6,270751E+09	7,889928E+09
-55	8,096558E+08	8,096174E+08	3,135292E+09	3,135336E+09	1,619273E+09	6,270628E+09	7,889901E+09
-54	8,096977E+08	8,097203E+08	3,135337E+09	3,135210E+09	1,619418E+09	6,270548E+09	7,889966E+09
-53	8,096477E+08	8,096677E+08	3,135206E+09	3,135288E+09	1,619315E+09	6,270494E+09	7,889810E+09
-52	8,097340E+08	8,097225E+08	3,135235E+09	3,135259E+09	1,619456E+09	6,270495E+09	7,889951E+09
-51	8,097056E+08	8,097414E+08	3,135337E+09	3,135203E+09	1,619447E+09	6,270540E+09	7,889987E+09
-50	8,096736E+08	8,096530E+08	3,135222E+09	3,135321E+09	1,619327E+09	6,270542E+09	7,889869E+09
-49	8,097350E+08	8,097091E+08	3,135320E+09	3,135283E+09	1,619444E+09	6,270604E+09	7,890048E+09
-48	8,096433E+08	8,096528E+08	3,135349E+09	3,135334E+09	1,619296E+09	6,270682E+09	7,889978E+09
-47	8,096341E+08	8,095994E+08	3,135305E+09	3,135416E+09	1,619234E+09	6,270721E+09	7,889955E+09
-46	8,096446E+08	8,096623E+08	3,135441E+09	3,135349E+09	1,619307E+09	6,270790E+09	7,890097E+09
-45	8,095445E+08	8,095631E+08	3,135413E+09	3,135439E+09	1,619108E+09	6,270853E+09	7,889960E+09
-44	8,095905E+08	8,095635E+08	3,135439E+09	3,135461E+09	1,619154E+09	6,270899E+09	7,890053E+09
-43	8,095789E+08	8,095959E+08	3,135539E+09	3,135395E+09	1,619175E+09	6,270933E+09	7,890108E+09
-42	8,095277E+08	8,095263E+08	3,135376E+09	3,135484E+09	1,619054E+09	6,270860E+09	7,889914E+09
-41	8,096190E+08	8,096103E+08	3,135400E+09	3,135409E+09	1,619229E+09	6,270809E+09	7,890038E+09
-40	8,095891E+08	8,096232E+08	3,135417E+09	3,135338E+09	1,619212E+09	6,270755E+09	7,889968E+09
-39	8,096149E+08	8,095986E+08	3,135281E+09	3,135349E+09	1,619214E+09	6,270630E+09	7,889844E+09
-38	8,097100E+08	8,097114E+08	3,135323E+09	3,135214E+09	1,619421E+09	6,270537E+09	7,889958E+09
-37	8,096637E+08	8,096864E+08	3,135220E+09	3,135208E+09	1,619350E+09	6,270428E+09	7,889778E+09
-36	8,097408E+08	8,097170E+08	3,135127E+09	3,135211E+09	1,619458E+09	6,270338E+09	7,889796E+09
-35	8,097830E+08	8,098113E+08	3,135208E+09	3,135091E+09	1,619594E+09	6,270299E+09	7,889893E+09
-34	8,097343E+08	8,097556E+08	3,135075E+09	3,135147E+09	1,619490E+09	6,270222E+09	7,889712E+09
-33	8,098211E+08	8,098018E+08	3,135118E+09	3,135117E+09	1,619623E+09	6,270234E+09	7,889857E+09
-32	8,097914E+08	8,098080E+08	3,135203E+09	3,135084E+09	1,619599E+09	6,270287E+09	7,889886E+09
-31	8,097525E+08	8,097222E+08	3,135097E+09	3,135196E+09	1,619475E+09	6,270293E+09	7,889768E+09
-30	8,097984E+08	8,097866E+08	3,135186E+09	3,135165E+09	1,619585E+09	6,270351E+09	7,889936E+09
-29	8,097028E+08	8,097269E+08	3,135201E+09	3,135203E+09	1,619430E+09	6,270404E+09	7,889834E+09
-28	8,096988E+08	8,096751E+08	3,135185E+09	3,135292E+09	1,619374E+09	6,270477E+09	7,889851E+09
-27	8,097171E+08	8,097240E+08	3,135351E+09	3,135227E+09	1,619441E+09	6,270578E+09	7,890019E+09
-26	8,096215E+08	8,096291E+08	3,135288E+09	3,135303E+09	1,619251E+09	6,270591E+09	7,889842E+09
-25	8,096692E+08	8,096397E+08	3,135304E+09	3,135330E+09	1,619309E+09	6,270634E+09	7,889943E+09
-24	8,096608E+08	8,096782E+08	3,135383E+09	3,135276E+09	1,619339E+09	6,270660E+09	7,889999E+09
-23	8,096121E+08	8,096167E+08	3,135248E+09	3,135339E+09	1,619229E+09	6,270587E+09	7,889816E+09
-22	8,097008E+08	8,097025E+08	3,135278E+09	3,135260E+09	1,619403E+09	6,270538E+09	7,889941E+09
-21	8,096754E+08	8,097060E+08	3,135264E+09	3,135181E+09	1,619381E+09	6,270446E+09	7,889827E+09
-20	8,097062E+08	8,096872E+08	3,135125E+09	3,135212E+09	1,619393E+09	6,270337E+09	7,889730E+09
-19	8,098043E+08	8,097971E+08	3,135169E+09	3,135083E+09	1,619601E+09	6,270252E+09	7,889853E+09
-18	8,097564E+08	8,097844E+08	3,135034E+09	3,135051E+09	1,619541E+09	6,270085E+09	7,889626E+09
-17	8,098325E+08	8,098194E+08	3,134972E+09	3,135048E+09	1,619652E+09	6,270020E+09	7,889672E+09
-16	8,098762E+08	8,098998E+08	3,135065E+09	3,134940E+09	1,619776E+09	6,270006E+09	7,889781E+09
-15	8,098250E+08	8,098345E+08	3,134967E+09	3,134993E+09	1,619660E+09	6,269960E+09	7,889619E+09
-14	8,098988E+08	8,098773E+08	3,135003E+09	3,134988E+09	1,619776E+09	6,269991E+09	7,889767E+09
-13	8,098616E+08	8,098765E+08	3,135047E+09	3,134966E+09	1,619738E+09	6,270012E+09	7,889751E+09
-12	8,098199E+08	8,098026E+08	3,134951E+09	3,135094E+09	1,619622E+09	6,270045E+09	7,889668E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
-11	8,098664E+08	8,098568E+08	3,135076E+09	3,135056E+09	1,619723E+09	6,270132E+09	7,889855E+09
-10	8,097725E+08	8,097983E+08	3,135087E+09	3,135065E+09	1,619571E+09	6,270151E+09	7,889722E+09
-9	8,097718E+08	8,097448E+08	3,135091E+09	3,135154E+09	1,619517E+09	6,270245E+09	7,889761E+09
-8	8,097923E+08	8,097867E+08	3,135234E+09	3,135116E+09	1,619579E+09	6,270350E+09	7,889929E+09
-7	8,096972E+08	8,097012E+08	3,135173E+09	3,135184E+09	1,619398E+09	6,270357E+09	7,889755E+09
-6	8,097373E+08	8,097244E+08	3,135169E+09	3,135212E+09	1,619462E+09	6,270381E+09	7,889842E+09
-5	8,097329E+08	8,097597E+08	3,135222E+09	3,135140E+09	1,619493E+09	6,270362E+09	7,889855E+09
-4	8,096966E+08	8,097049E+08	3,135100E+09	3,135198E+09	1,619401E+09	6,270298E+09	7,889699E+09
-3	8,097953E+08	8,097778E+08	3,135141E+09	3,135114E+09	1,619573E+09	6,270255E+09	7,889828E+09
-2	8,097738E+08	8,097929E+08	3,135089E+09	3,135013E+09	1,619567E+09	6,270102E+09	7,889669E+09
-1	8,098044E+08	8,097855E+08	3,134953E+09	3,135041E+09	1,619590E+09	6,269994E+09	7,889584E+09
1	8,098974E+08	8,098974E+08	3,135001E+09	3,134932E+09	1,619795E+09	6,269933E+09	7,889728E+09
2	8,098478E+08	8,098862E+08	3,134917E+09	3,134887E+09	1,619734E+09	6,269804E+09	7,889538E+09
3	8,099124E+08	8,099129E+08	3,134870E+09	3,134901E+09	1,619825E+09	6,269771E+09	7,889597E+09
4	8,099547E+08	8,099746E+08	3,134935E+09	3,134810E+09	1,619929E+09	6,269745E+09	7,889675E+09
5	8,099064E+08	8,099088E+08	3,134827E+09	3,134890E+09	1,619815E+09	6,269717E+09	7,889532E+09
6	8,099781E+08	8,099427E+08	3,134859E+09	3,134890E+09	1,619921E+09	6,269749E+09	7,889670E+09
7	8,099384E+08	8,099545E+08	3,134871E+09	3,134834E+09	1,619893E+09	6,269705E+09	7,889598E+09
8	8,098966E+08	8,098835E+08	3,134817E+09	3,134941E+09	1,619780E+09	6,269758E+09	7,889538E+09
9	8,099426E+08	8,099267E+08	3,134962E+09	3,134917E+09	1,619869E+09	6,269878E+09	7,889747E+09
10	8,098495E+08	8,098664E+08	3,135005E+09	3,134918E+09	1,619716E+09	6,269923E+09	7,889639E+09
11	8,098364E+08	8,098171E+08	3,134996E+09	3,135037E+09	1,619654E+09	6,270033E+09	7,889686E+09
12	8,098543E+08	8,098577E+08	3,135092E+09	3,135011E+09	1,619712E+09	6,270103E+09	7,889815E+09
13	8,097653E+08	8,097858E+08	3,135033E+09	3,135089E+09	1,619551E+09	6,270121E+09	7,889672E+09
14	8,098143E+08	8,097995E+08	3,135046E+09	3,135101E+09	1,619614E+09	6,270148E+09	7,889761E+09
15	8,098194E+08	8,098385E+08	3,135069E+09	3,134984E+09	1,619658E+09	6,270053E+09	7,889711E+09
16	8,097914E+08	8,097891E+08	3,134959E+09	3,135026E+09	1,619580E+09	6,269985E+09	7,889566E+09
17	8,098916E+08	8,098607E+08	3,134978E+09	3,134960E+09	1,619752E+09	6,269938E+09	7,889691E+09
18	8,098677E+08	8,098893E+08	3,134938E+09	3,134844E+09	1,619757E+09	6,269782E+09	7,889539E+09
19	8,098861E+08	8,098927E+08	3,134809E+09	3,134885E+09	1,619779E+09	6,269693E+09	7,889472E+09
20	8,099768E+08	8,099912E+08	3,134847E+09	3,134778E+09	1,619968E+09	6,269625E+09	7,889593E+09
21	8,099361E+08	8,099763E+08	3,134788E+09	3,134753E+09	1,619912E+09	6,269541E+09	7,889453E+09
22	8,100044E+08	8,099827E+08	3,134746E+09	3,134782E+09	1,619987E+09	6,269528E+09	7,889515E+09
23	8,100452E+08	8,100487E+08	3,134764E+09	3,134676E+09	1,620094E+09	6,269440E+09	7,889534E+09
24	8,099951E+08	8,099934E+08	3,134664E+09	3,134749E+09	1,619989E+09	6,269413E+09	7,889402E+09
25	8,100592E+08	8,100249E+08	3,134704E+09	3,134762E+09	1,620084E+09	6,269466E+09	7,889550E+09
26	8,100155E+08	8,100383E+08	3,134770E+09	3,134681E+09	1,620054E+09	6,269452E+09	7,889505E+09
27	8,099611E+08	8,099632E+08	3,134741E+09	3,134804E+09	1,619924E+09	6,269545E+09	7,889470E+09
28	8,100013E+08	8,099898E+08	3,134862E+09	3,134802E+09	1,619991E+09	6,269664E+09	7,889655E+09
29	8,099145E+08	8,099338E+08	3,134900E+09	3,134834E+09	1,619848E+09	6,269734E+09	7,889582E+09
30	8,099020E+08	8,098782E+08	3,134872E+09	3,134957E+09	1,619780E+09	6,269830E+09	7,889610E+09
31	8,099255E+08	8,099316E+08	3,134924E+09	3,134891E+09	1,619857E+09	6,269815E+09	7,889672E+09
32	8,098489E+08	8,098660E+08	3,134883E+09	3,134931E+09	1,619715E+09	6,269814E+09	7,889529E+09
33	8,099045E+08	8,098728E+08	3,134897E+09	3,134944E+09	1,619777E+09	6,269842E+09	7,889619E+09
34	8,099157E+08	8,099202E+08	3,134939E+09	3,134804E+09	1,619836E+09	6,269742E+09	7,889578E+09
35	8,098771E+08	8,098824E+08	3,134822E+09	3,134862E+09	1,619759E+09	6,269683E+09	7,889443E+09
36	8,099700E+08	8,099552E+08	3,134813E+09	3,134809E+09	1,619925E+09	6,269622E+09	7,889547E+09
37	8,099515E+08	8,099938E+08	3,134795E+09	3,134712E+09	1,619945E+09	6,269506E+09	7,889452E+09
38	8,099721E+08	8,099812E+08	3,134690E+09	3,134760E+09	1,619953E+09	6,269450E+09	7,889403E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
39	8,100679E+08	8,100766E+08	3,134696E+09	3,134634E+09	1,620144E+09	6,269330E+09	7,889474E+09
40	8,100362E+08	8,100593E+08	3,134643E+09	3,134606E+09	1,620095E+09	6,269249E+09	7,889344E+09
41	8,101011E+08	8,100598E+08	3,134578E+09	3,134656E+09	1,620161E+09	6,269234E+09	7,889395E+09
42	8,101370E+08	8,101369E+08	3,134606E+09	3,134522E+09	1,620274E+09	6,269128E+09	7,889402E+09
43	8,100701E+08	8,100902E+08	3,134528E+09	3,134596E+09	1,620160E+09	6,269124E+09	7,889284E+09
44	8,101254E+08	8,101057E+08	3,134574E+09	3,134612E+09	1,620231E+09	6,269186E+09	7,889417E+09
45	8,100857E+08	8,101134E+08	3,134678E+09	3,134560E+09	1,620199E+09	6,269238E+09	7,889437E+09
46	8,100305E+08	8,100206E+08	3,134658E+09	3,134710E+09	1,620051E+09	6,269368E+09	7,889419E+09
47	8,100686E+08	8,100508E+08	3,134722E+09	3,134696E+09	1,620119E+09	6,269418E+09	7,889537E+09
48	8,099881E+08	8,100059E+08	3,134763E+09	3,134721E+09	1,619994E+09	6,269484E+09	7,889478E+09
49	8,099768E+08	8,099501E+08	3,134729E+09	3,134845E+09	1,619927E+09	6,269574E+09	7,889501E+09
50	8,100061E+08	8,100076E+08	3,134807E+09	3,134735E+09	1,620014E+09	6,269543E+09	7,889556E+09
51	8,099264E+08	8,099499E+08	3,134775E+09	3,134773E+09	1,619876E+09	6,269548E+09	7,889424E+09
52	8,099810E+08	8,099483E+08	3,134754E+09	3,134795E+09	1,619929E+09	6,269549E+09	7,889478E+09
53	8,099988E+08	8,100080E+08	3,134796E+09	3,134676E+09	1,620007E+09	6,269472E+09	7,889478E+09
54	8,099594E+08	8,099702E+08	3,134675E+09	3,134741E+09	1,619930E+09	6,269416E+09	7,889346E+09
55	8,100526E+08	8,100504E+08	3,134636E+09	3,134658E+09	1,620103E+09	6,269295E+09	7,889397E+09
56	8,100478E+08	8,100893E+08	3,134649E+09	3,134547E+09	1,620137E+09	6,269196E+09	7,889333E+09
57	8,100733E+08	8,100643E+08	3,134541E+09	3,134611E+09	1,620138E+09	6,269152E+09	7,889290E+09
58	8,101720E+08	8,101624E+08	3,134553E+09	3,134467E+09	1,620334E+09	6,269019E+09	7,889354E+09
59	8,101286E+08	8,101558E+08	3,134490E+09	3,134453E+09	1,620284E+09	6,268943E+09	7,889228E+09
60	8,101799E+08	8,101514E+08	3,134406E+09	3,134513E+09	1,620331E+09	6,268920E+09	7,889251E+09
61	8,102149E+08	8,102314E+08	3,134477E+09	3,134394E+09	1,620446E+09	6,268871E+09	7,889318E+09
62	8,101423E+08	8,101644E+08	3,134435E+09	3,134476E+09	1,620307E+09	6,268911E+09	7,889218E+09
63	8,101938E+08	8,101728E+08	3,134462E+09	3,134484E+09	1,620367E+09	6,268946E+09	7,889312E+09
64	8,101631E+08	8,101770E+08	3,134570E+09	3,134443E+09	1,620340E+09	6,269013E+09	7,889353E+09
65	8,101040E+08	8,100794E+08	3,134524E+09	3,134619E+09	1,620183E+09	6,269142E+09	7,889325E+09
66	8,101433E+08	8,101236E+08	3,134583E+09	3,134573E+09	1,620267E+09	6,269157E+09	7,889423E+09
67	8,100579E+08	8,100884E+08	3,134630E+09	3,134584E+09	1,620146E+09	6,269214E+09	7,889361E+09
68	8,100458E+08	8,100230E+08	3,134587E+09	3,134696E+09	1,620069E+09	6,269283E+09	7,889352E+09
69	8,100865E+08	8,100832E+08	3,134687E+09	3,134596E+09	1,620170E+09	6,269283E+09	7,889453E+09
70	8,100073E+08	8,100216E+08	3,134655E+09	3,134644E+09	1,620029E+09	6,269300E+09	7,889329E+09
71	8,100597E+08	8,100326E+08	3,134586E+09	3,134651E+09	1,620092E+09	6,269237E+09	7,889329E+09
72	8,100867E+08	8,101057E+08	3,134640E+09	3,134530E+09	1,620192E+09	6,269169E+09	7,889362E+09
73	8,100485E+08	8,100644E+08	3,134529E+09	3,134605E+09	1,620113E+09	6,269134E+09	7,889247E+09
74	8,101476E+08	8,101452E+08	3,134511E+09	3,134489E+09	1,620293E+09	6,269001E+09	7,889293E+09
75	8,101414E+08	8,101851E+08	3,134528E+09	3,134388E+09	1,620327E+09	6,268916E+09	7,889242E+09
76	8,101637E+08	8,101483E+08	3,134381E+09	3,134467E+09	1,620312E+09	6,268847E+09	7,889159E+09
77	8,102640E+08	8,102514E+08	3,134393E+09	3,134340E+09	1,620515E+09	6,268732E+09	7,889248E+09
78	8,102141E+08	8,102440E+08	3,134334E+09	3,134329E+09	1,620458E+09	6,268663E+09	7,889121E+09
79	8,102589E+08	8,102383E+08	3,134233E+09	3,134356E+09	1,620497E+09	6,268589E+09	7,889086E+09
80	8,103002E+08	8,103120E+08	3,134349E+09	3,134238E+09	1,620612E+09	6,268587E+09	7,889200E+09
81	8,102262E+08	8,102312E+08	3,134323E+09	3,134350E+09	1,620457E+09	6,268673E+09	7,889130E+09
82	8,102738E+08	8,102404E+08	3,134352E+09	3,134349E+09	1,620514E+09	6,268701E+09	7,889215E+09
83	8,102338E+08	8,102552E+08	3,134453E+09	3,134329E+09	1,620489E+09	6,268782E+09	7,889271E+09
84	8,101664E+08	8,101536E+08	3,134378E+09	3,134509E+09	1,620320E+09	6,268887E+09	7,889207E+09
85	8,102104E+08	8,101998E+08	3,134469E+09	3,134465E+09	1,620410E+09	6,268933E+09	7,889344E+09
86	8,101267E+08	8,101559E+08	3,134530E+09	3,134470E+09	1,620283E+09	6,269001E+09	7,889283E+09
87	8,101164E+08	8,100910E+08	3,134452E+09	3,134556E+09	1,620207E+09	6,269008E+09	7,889215E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
88	8,101698E+08	8,101569E+08	3,134554E+09	3,134460E+09	1,620327E+09	6,269013E+09	7,889340E+09
89	8,100913E+08	8,101006E+08	3,134504E+09	3,134521E+09	1,620192E+09	6,269026E+09	7,889218E+09
90	8,101442E+08	8,101281E+08	3,134437E+09	3,134491E+09	1,620272E+09	6,268928E+09	7,889200E+09
91	8,101711E+08	8,102084E+08	3,134504E+09	3,134366E+09	1,620380E+09	6,268870E+09	7,889250E+09
92	8,101343E+08	8,101527E+08	3,134382E+09	3,134445E+09	1,620287E+09	6,268827E+09	7,889114E+09
93	8,102450E+08	8,102308E+08	3,134380E+09	3,134347E+09	1,620476E+09	6,268727E+09	7,889203E+09
94	8,102380E+08	8,102654E+08	3,134377E+09	3,134259E+09	1,620503E+09	6,268636E+09	7,889139E+09
95	8,102543E+08	8,102378E+08	3,134184E+09	3,134318E+09	1,620492E+09	6,268502E+09	7,888994E+09
96	8,103590E+08	8,103481E+08	3,134217E+09	3,134186E+09	1,620707E+09	6,268404E+09	7,889111E+09
97	8,103034E+08	8,103330E+08	3,134189E+09	3,134183E+09	1,620636E+09	6,268372E+09	7,889008E+09
98	8,103453E+08	8,103260E+08	3,134123E+09	3,134188E+09	1,620671E+09	6,268311E+09	7,888982E+09
99	8,103800E+08	8,103952E+08	3,134252E+09	3,134097E+09	1,620775E+09	6,268349E+09	7,889124E+09
100	8,102973E+08	8,103003E+08	3,134198E+09	3,134239E+09	1,620598E+09	6,268437E+09	7,889035E+09
101	8,103439E+08	8,103131E+08	3,134231E+09	3,134258E+09	1,620657E+09	6,268489E+09	7,889146E+09
102	8,102983E+08	8,103256E+08	3,134327E+09	3,134239E+09	1,620624E+09	6,268566E+09	7,889189E+09
103	8,102293E+08	8,102241E+08	3,134227E+09	3,134377E+09	1,620453E+09	6,268605E+09	7,889058E+09
104	8,102878E+08	8,102666E+08	3,134342E+09	3,134323E+09	1,620554E+09	6,268665E+09	7,889219E+09
105	8,102084E+08	8,102198E+08	3,134406E+09	3,134340E+09	1,620428E+09	6,268746E+09	7,889174E+09
106	8,101995E+08	8,101684E+08	3,134322E+09	3,134399E+09	1,620368E+09	6,268722E+09	7,889090E+09
107	8,102473E+08	8,102500E+08	3,134424E+09	3,134316E+09	1,620497E+09	6,268740E+09	7,889237E+09
108	8,101654E+08	8,101924E+08	3,134361E+09	3,134385E+09	1,620358E+09	6,268746E+09	7,889104E+09
109	8,102239E+08	8,102175E+08	3,134323E+09	3,134361E+09	1,620441E+09	6,268684E+09	7,889125E+09
110	8,102547E+08	8,102895E+08	3,134392E+09	3,134243E+09	1,620544E+09	6,268635E+09	7,889179E+09
111	8,102231E+08	8,102319E+08	3,134216E+09	3,134298E+09	1,620455E+09	6,268514E+09	7,888969E+09
112	8,103461E+08	8,103127E+08	3,134202E+09	3,134207E+09	1,620659E+09	6,268409E+09	7,889068E+09
113	8,103388E+08	8,103556E+08	3,134187E+09	3,134122E+09	1,620694E+09	6,268308E+09	7,889003E+09
114	8,103514E+08	8,103410E+08	3,134005E+09	3,134134E+09	1,620692E+09	6,268139E+09	7,888832E+09
115	8,104481E+08	8,104517E+08	3,134079E+09	3,134004E+09	1,620900E+09	6,268082E+09	7,888982E+09
116	8,103863E+08	8,104189E+08	3,134060E+09	3,134021E+09	1,620805E+09	6,268081E+09	7,888886E+09
117	8,104266E+08	8,104035E+08	3,134028E+09	3,134060E+09	1,620830E+09	6,268088E+09	7,888918E+09
118	8,104524E+08	8,104661E+08	3,134144E+09	3,134005E+09	1,620918E+09	6,268149E+09	7,889068E+09
119	8,103632E+08	8,103729E+08	3,134046E+09	3,134135E+09	1,620736E+09	6,268181E+09	7,888917E+09
120	8,104161E+08	8,103856E+08	3,134092E+09	3,134153E+09	1,620802E+09	6,268245E+09	7,889047E+09
121	8,103723E+08	8,103909E+08	3,134204E+09	3,134127E+09	1,620763E+09	6,268331E+09	7,889095E+09
122	8,103057E+08	8,102951E+08	3,134117E+09	3,134222E+09	1,620601E+09	6,268340E+09	7,888941E+09
123	8,103634E+08	8,103403E+08	3,134236E+09	3,134179E+09	1,620704E+09	6,268415E+09	7,889119E+09
124	8,102801E+08	8,102910E+08	3,134272E+09	3,134213E+09	1,620571E+09	6,268485E+09	7,889056E+09
125	8,102733E+08	8,102513E+08	3,134200E+09	3,134283E+09	1,620525E+09	6,268483E+09	7,889008E+09
126	8,103179E+08	8,103341E+08	3,134291E+09	3,134200E+09	1,620652E+09	6,268492E+09	7,889144E+09
127	8,102406E+08	8,102744E+08	3,134204E+09	3,134237E+09	1,620515E+09	6,268441E+09	7,888956E+09
128	8,103176E+08	8,102958E+08	3,134175E+09	3,134214E+09	1,620613E+09	6,268389E+09	7,889002E+09
129	8,103555E+08	8,103656E+08	3,134230E+09	3,134104E+09	1,620721E+09	6,268335E+09	7,889056E+09
130	8,103269E+08	8,103276E+08	3,134038E+09	3,134123E+09	1,620654E+09	6,268161E+09	7,888816E+09
131	8,104442E+08	8,104209E+08	3,134027E+09	3,134035E+09	1,620865E+09	6,268062E+09	7,888927E+09
132	8,104277E+08	8,104607E+08	3,134020E+09	3,133953E+09	1,620888E+09	6,267972E+09	7,888861E+09
133	8,104385E+08	8,104400E+08	3,133897E+09	3,133975E+09	1,620879E+09	6,267872E+09	7,888751E+09
134	8,105256E+08	8,105359E+08	3,133987E+09	3,133874E+09	1,621062E+09	6,267861E+09	7,888922E+09
135	8,104615E+08	8,104921E+08	3,133935E+09	3,133897E+09	1,620954E+09	6,267832E+09	7,888786E+09
136	8,105072E+08	8,104725E+08	3,133892E+09	3,133963E+09	1,620980E+09	6,267855E+09	7,888835E+09



1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
137	8,105307E+08	8,105360E+08	3,133993E+09	3,133917E+09	1,621067E+09	6,267910E+09	7,888977E+09
138	8,104420E+08	8,104531E+08	3,133894E+09	3,133993E+09	1,620895E+09	6,267887E+09	7,888782E+09
139	8,104916E+08	8,104621E+08	3,133968E+09	3,134002E+09	1,620954E+09	6,267970E+09	7,888924E+09
140	8,104466E+08	8,104570E+08	3,134080E+09	3,133982E+09	1,620904E+09	6,268063E+09	7,888966E+09
141	8,103813E+08	8,103615E+08	3,134020E+09	3,134089E+09	1,620743E+09	6,268109E+09	7,888852E+09
142	8,104288E+08	8,104121E+08	3,134126E+09	3,134073E+09	1,620841E+09	6,268199E+09	7,889040E+09
143	8,103441E+08	8,103708E+08	3,134123E+09	3,134090E+09	1,620715E+09	6,268213E+09	7,888928E+09
144	8,103462E+08	8,103327E+08	3,134064E+09	3,134166E+09	1,620679E+09	6,268230E+09	7,888909E+09
145	8,103986E+08	8,104109E+08	3,134164E+09	3,134082E+09	1,620810E+09	6,268246E+09	7,889056E+09
146	8,103325E+08	8,103586E+08	3,134065E+09	3,134073E+09	1,620691E+09	6,268138E+09	7,888829E+09
147	8,104136E+08	8,103824E+08	3,134029E+09	3,134054E+09	1,620796E+09	6,268083E+09	7,888879E+09
148	8,104500E+08	8,104547E+08	3,134050E+09	3,133951E+09	1,620905E+09	6,268001E+09	7,888906E+09
149	8,104208E+08	8,104294E+08	3,133882E+09	3,133963E+09	1,620850E+09	6,267844E+09	7,888695E+09
150	8,105271E+08	8,105228E+08	3,133881E+09	3,133880E+09	1,621050E+09	6,267761E+09	7,888811E+09
151	8,105096E+08	8,105526E+08	3,133870E+09	3,133781E+09	1,621062E+09	6,267650E+09	7,888713E+09
152	8,105294E+08	8,105212E+08	3,133770E+09	3,133833E+09	1,621051E+09	6,267603E+09	7,888654E+09
153	8,106162E+08	8,106080E+08	3,133854E+09	3,133763E+09	1,621224E+09	6,267617E+09	7,888841E+09
154	8,105519E+08	8,105758E+08	3,133786E+09	3,133763E+09	1,621128E+09	6,267549E+09	7,888677E+09
155	8,105906E+08	8,105598E+08	3,133748E+09	3,133836E+09	1,621150E+09	6,267583E+09	7,888734E+09
156	8,106060E+08	8,106137E+08	3,133847E+09	3,133789E+09	1,621220E+09	6,267636E+09	7,888856E+09
157	8,105175E+08	8,105280E+08	3,133800E+09	3,133856E+09	1,621045E+09	6,267656E+09	7,888701E+09
158	8,105573E+08	8,105293E+08	3,133871E+09	3,133881E+09	1,621087E+09	6,267752E+09	7,888839E+09
159	8,105099E+08	8,105199E+08	3,133952E+09	3,133856E+09	1,621030E+09	6,267808E+09	7,888838E+09
160	8,104519E+08	8,104312E+08	3,133889E+09	3,133987E+09	1,620883E+09	6,267876E+09	7,888759E+09
161	8,104981E+08	8,104859E+08	3,133986E+09	3,133973E+09	1,620984E+09	6,267959E+09	7,888943E+09
162	8,104215E+08	8,104574E+08	3,133983E+09	3,133938E+09	1,620879E+09	6,267921E+09	7,888800E+09
163	8,104289E+08	8,104155E+08	3,133939E+09	3,134005E+09	1,620844E+09	6,267945E+09	7,888789E+09
164	8,104859E+08	8,104857E+08	3,134021E+09	3,133929E+09	1,620972E+09	6,267950E+09	7,888921E+09
165	8,104272E+08	8,104418E+08	3,133935E+09	3,133920E+09	1,620869E+09	6,267855E+09	7,888724E+09
166	8,104994E+08	8,104750E+08	3,133875E+09	3,133918E+09	1,620974E+09	6,267793E+09	7,888767E+09
167	8,105331E+08	8,105528E+08	3,133871E+09	3,133793E+09	1,621086E+09	6,267664E+09	7,888750E+09
168	8,105112E+08	8,105272E+08	3,133732E+09	3,133813E+09	1,621038E+09	6,267545E+09	7,888583E+09
169	8,106165E+08	8,106106E+08	3,133755E+09	3,133739E+09	1,621227E+09	6,267494E+09	7,888721E+09
170	8,106058E+08	8,106428E+08	3,133739E+09	3,133619E+09	1,621249E+09	6,267358E+09	7,888606E+09
171	8,106229E+08	8,106056E+08	3,133638E+09	3,133697E+09	1,621228E+09	6,267335E+09	7,888564E+09
172	8,107034E+08	8,106898E+08	3,133691E+09	3,133646E+09	1,621393E+09	6,267337E+09	7,888730E+09
173	8,106381E+08	8,106619E+08	3,133643E+09	3,133634E+09	1,621300E+09	6,267278E+09	7,888578E+09
174	8,106614E+08	8,106418E+08	3,133614E+09	3,133708E+09	1,621303E+09	6,267323E+09	7,888626E+09
175	8,106742E+08	8,106828E+08	3,133708E+09	3,133637E+09	1,621357E+09	6,267345E+09	7,888702E+09
176	8,105920E+08	8,105918E+08	3,133681E+09	3,133726E+09	1,621184E+09	6,267407E+09	7,888591E+09
177	8,106288E+08	8,105920E+08	3,133754E+09	3,133773E+09	1,621221E+09	6,267528E+09	7,888748E+09
178	8,105842E+08	8,105996E+08	3,133817E+09	3,133723E+09	1,621184E+09	6,267540E+09	7,888724E+09
179	8,105234E+08	8,105158E+08	3,133770E+09	3,133858E+09	1,621039E+09	6,267628E+09	7,888667E+09
180	8,105675E+08	8,105636E+08	3,133862E+09	3,133847E+09	1,621131E+09	6,267709E+09	7,888840E+09
181	8,105005E+08	8,105329E+08	3,133894E+09	3,133799E+09	1,621033E+09	6,267694E+09	7,888727E+09
182	8,105039E+08	8,104902E+08	3,133828E+09	3,133882E+09	1,620994E+09	6,267709E+09	7,888703E+09
183	8,105658E+08	8,105580E+08	3,133859E+09	3,133790E+09	1,621124E+09	6,267649E+09	7,888773E+09
184	8,105181E+08	8,105296E+08	3,133759E+09	3,133791E+09	1,621048E+09	6,267549E+09	7,888597E+09
185	8,105909E+08	8,105700E+08	3,133697E+09	3,133779E+09	1,621161E+09	6,267475E+09	7,888636E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
186	8,106304E+08	8,106577E+08	3,133702E+09	3,133604E+09	1,621288E+09	6,267307E+09	7,888595E+09
187	8,106109E+08	8,106251E+08	3,133598E+09	3,133629E+09	1,621236E+09	6,267227E+09	7,888463E+09
188	8,107115E+08	8,106957E+08	3,133609E+09	3,133582E+09	1,621407E+09	6,267192E+09	7,888599E+09
189	8,107036E+08	8,107311E+08	3,133615E+09	3,133477E+09	1,621435E+09	6,267092E+09	7,888527E+09
190	8,107049E+08	8,106985E+08	3,133492E+09	3,133579E+09	1,621403E+09	6,267071E+09	7,888474E+09
191	8,107772E+08	8,107750E+08	3,133526E+09	3,133511E+09	1,621552E+09	6,267037E+09	7,888589E+09
192	8,107175E+08	8,107438E+08	3,133506E+09	3,133510E+09	1,621461E+09	6,267016E+09	7,888478E+09
193	8,107371E+08	8,107102E+08	3,133497E+09	3,133586E+09	1,621447E+09	6,267083E+09	7,888530E+09
194	8,107530E+08	8,107534E+08	3,133588E+09	3,133490E+09	1,621506E+09	6,267078E+09	7,888584E+09
195	8,106680E+08	8,106617E+08	3,133570E+09	3,133596E+09	1,621330E+09	6,267166E+09	7,888496E+09
196	8,106954E+08	8,106642E+08	3,133621E+09	3,133662E+09	1,621360E+09	6,267283E+09	7,888643E+09
197	8,106552E+08	8,106792E+08	3,133712E+09	3,133601E+09	1,621334E+09	6,267313E+09	7,888647E+09
198	8,105857E+08	8,105935E+08	3,133664E+09	3,133740E+09	1,621179E+09	6,267404E+09	7,888583E+09
199	8,106351E+08	8,106277E+08	3,133732E+09	3,133708E+09	1,621263E+09	6,267440E+09	7,888703E+09
200	8,105852E+08	8,106003E+08	3,133754E+09	3,133679E+09	1,621185E+09	6,267433E+09	7,888618E+09
201	8,105913E+08	8,105644E+08	3,133670E+09	3,133764E+09	1,621156E+09	6,267434E+09	7,888590E+09
202	8,106603E+08	8,106541E+08	3,133676E+09	3,133630E+09	1,621314E+09	6,267305E+09	7,888620E+09
203	8,106123E+08	8,106338E+08	3,133601E+09	3,133619E+09	1,621246E+09	6,267220E+09	7,888466E+09
204	8,106806E+08	8,106695E+08	3,133550E+09	3,133611E+09	1,621350E+09	6,267161E+09	7,888511E+09
205	8,107268E+08	8,107527E+08	3,133594E+09	3,133432E+09	1,621479E+09	6,267027E+09	7,888506E+09
206	8,106959E+08	8,107155E+08	3,133480E+09	3,133492E+09	1,621411E+09	6,266972E+09	7,888384E+09
207	8,107937E+08	8,107767E+08	3,133450E+09	3,133449E+09	1,621570E+09	6,266899E+09	7,888470E+09
208	8,107929E+08	8,108186E+08	3,133442E+09	3,133368E+09	1,621611E+09	6,266810E+09	7,888422E+09
209	8,107907E+08	8,107845E+08	3,133326E+09	3,133461E+09	1,621575E+09	6,266787E+09	7,888362E+09
210	8,108659E+08	8,108598E+08	3,133364E+09	3,133342E+09	1,621726E+09	6,266707E+09	7,888432E+09
211	8,108056E+08	8,108206E+08	3,133382E+09	3,133341E+09	1,621626E+09	6,266723E+09	7,888349E+09
212	8,108166E+08	8,107791E+08	3,133370E+09	3,133443E+09	1,621596E+09	6,266813E+09	7,888409E+09
213	8,108313E+08	8,108271E+08	3,133488E+09	3,133361E+09	1,621658E+09	6,266849E+09	7,888508E+09
214	8,107292E+08	8,107439E+08	3,133464E+09	3,133496E+09	1,621473E+09	6,266960E+09	7,888433E+09
215	8,107505E+08	8,107369E+08	3,133498E+09	3,133551E+09	1,621487E+09	6,267048E+09	7,888536E+09
216	8,107228E+08	8,107500E+08	3,133601E+09	3,133504E+09	1,621473E+09	6,267106E+09	7,888578E+09
217	8,106593E+08	8,106576E+08	3,133549E+09	3,133637E+09	1,621317E+09	6,267186E+09	7,888503E+09
218	8,107202E+08	8,106971E+08	3,133584E+09	3,133569E+09	1,621417E+09	6,267152E+09	7,888570E+09
219	8,106772E+08	8,106809E+08	3,133599E+09	3,133534E+09	1,621358E+09	6,267133E+09	7,888491E+09
220	8,106790E+08	8,106555E+08	3,133488E+09	3,133614E+09	1,621335E+09	6,267102E+09	7,888436E+09
221	8,107523E+08	8,107554E+08	3,133534E+09	3,133455E+09	1,621508E+09	6,266988E+09	7,888496E+09
222	8,106945E+08	8,107358E+08	3,133474E+09	3,133447E+09	1,621430E+09	6,266922E+09	7,888352E+09
223	8,107606E+08	8,107535E+08	3,133411E+09	3,133438E+09	1,621514E+09	6,266850E+09	7,888364E+09
224	8,108193E+08	8,108377E+08	3,133452E+09	3,133306E+09	1,621657E+09	6,266757E+09	7,888414E+09
225	8,107893E+08	8,108003E+08	3,133322E+09	3,133380E+09	1,621590E+09	6,266702E+09	7,888292E+09
226	8,108901E+08	8,108711E+08	3,133267E+09	3,133304E+09	1,621761E+09	6,266572E+09	7,888333E+09
227	8,108893E+08	8,109133E+08	3,133285E+09	3,133212E+09	1,621803E+09	6,266498E+09	7,888300E+09
228	8,108781E+08	8,108702E+08	3,133181E+09	3,133306E+09	1,621748E+09	6,266487E+09	7,888235E+09
229	8,109532E+08	8,109389E+08	3,133264E+09	3,133184E+09	1,621892E+09	6,266448E+09	7,888340E+09
230	8,108762E+08	8,108979E+08	3,133282E+09	3,133215E+09	1,621774E+09	6,266498E+09	7,888272E+09
231	8,108772E+08	8,108474E+08	3,133244E+09	3,133327E+09	1,621725E+09	6,266571E+09	7,888296E+09
232	8,108979E+08	8,109035E+08	3,133356E+09	3,133278E+09	1,621801E+09	6,266634E+09	7,888435E+09
233	8,107951E+08	8,108159E+08	3,133343E+09	3,133406E+09	1,621611E+09	6,266749E+09	7,888360E+09
234	8,108245E+08	8,108056E+08	3,133366E+09	3,133414E+09	1,621630E+09	6,266779E+09	7,888409E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
235	8,108057E+08	8,108136E+08	3,133478E+09	3,133360E+09	1,621619E+09	6,266838E+09	7,888457E+09
236	8,107422E+08	8,107263E+08	3,133401E+09	3,133500E+09	1,621469E+09	6,266901E+09	7,888369E+09
237	8,108092E+08	8,107781E+08	3,133442E+09	3,133417E+09	1,621587E+09	6,266860E+09	7,888447E+09
238	8,107524E+08	8,107798E+08	3,133457E+09	3,133388E+09	1,621532E+09	6,266845E+09	7,888377E+09
239	8,107504E+08	8,107481E+08	3,133345E+09	3,133450E+09	1,621499E+09	6,266795E+09	7,888294E+09
240	8,108345E+08	8,108458E+08	3,133407E+09	3,133316E+09	1,621680E+09	6,266724E+09	7,888404E+09
241	8,107818E+08	8,108178E+08	3,133355E+09	3,133321E+09	1,621600E+09	6,266676E+09	7,888275E+09
242	8,108560E+08	8,108355E+08	3,133253E+09	3,133293E+09	1,621691E+09	6,266546E+09	7,888237E+09
243	8,109205E+08	8,109265E+08	3,133282E+09	3,133165E+09	1,621847E+09	6,266447E+09	7,888294E+09
244	8,108873E+08	8,108981E+08	3,133129E+09	3,133238E+09	1,621785E+09	6,266367E+09	7,888152E+09
245	8,109901E+08	8,109686E+08	3,133113E+09	3,133133E+09	1,621959E+09	6,266245E+09	7,888204E+09
246	8,109745E+08	8,110088E+08	3,133153E+09	3,133044E+09	1,621983E+09	6,266198E+09	7,888181E+09
247	8,109550E+08	8,109461E+08	3,133048E+09	3,133139E+09	1,621901E+09	6,266188E+09	7,888089E+09
248	8,110315E+08	8,110148E+08	3,133139E+09	3,133071E+09	1,622046E+09	6,266210E+09	7,888256E+09
249	8,109491E+08	8,109738E+08	3,133163E+09	3,133123E+09	1,621923E+09	6,266286E+09	7,888209E+09
250	8,109473E+08	8,109265E+08	3,133108E+09	3,133212E+09	1,621874E+09	6,266321E+09	7,888195E+09
251	8,109714E+08	8,109794E+08	3,133244E+09	3,133159E+09	1,621951E+09	6,266403E+09	7,888354E+09
252	8,108683E+08	8,108831E+08	3,133224E+09	3,133284E+09	1,621751E+09	6,266508E+09	7,888259E+09
253	8,109043E+08	8,108683E+08	3,133266E+09	3,133276E+09	1,621773E+09	6,266541E+09	7,888314E+09
254	8,108770E+08	8,108850E+08	3,133359E+09	3,133233E+09	1,621762E+09	6,266592E+09	7,888354E+09
255	8,108087E+08	8,107990E+08	3,133245E+09	3,133361E+09	1,621608E+09	6,266606E+09	7,888214E+09
256	8,108845E+08	8,108671E+08	3,133286E+09	3,133298E+09	1,621752E+09	6,266584E+09	7,888335E+09
257	8,108312E+08	8,108683E+08	3,133319E+09	3,133253E+09	1,621699E+09	6,266572E+09	7,888272E+09
258	8,108370E+08	8,108329E+08	3,133202E+09	3,133279E+09	1,621670E+09	6,266481E+09	7,888151E+09
259	8,109307E+08	8,109279E+08	3,133271E+09	3,133154E+09	1,621859E+09	6,266426E+09	7,888284E+09
260	8,108801E+08	8,109038E+08	3,133192E+09	3,133179E+09	1,621784E+09	6,266372E+09	7,888155E+09
261	8,109588E+08	8,109309E+08	3,133096E+09	3,133142E+09	1,621890E+09	6,266238E+09	7,888127E+09
262	8,110099E+08	8,110342E+08	3,133124E+09	3,133017E+09	1,622044E+09	6,266141E+09	7,888185E+09
263	8,109700E+08	8,109944E+08	3,132972E+09	3,133070E+09	1,621964E+09	6,266042E+09	7,888007E+09
264	8,110774E+08	8,110594E+08	3,132977E+09	3,132992E+09	1,622137E+09	6,265969E+09	7,888106E+09
265	8,110580E+08	8,110875E+08	3,133037E+09	3,132918E+09	1,622145E+09	6,265955E+09	7,888101E+09
266	8,110372E+08	8,110206E+08	3,132913E+09	3,133004E+09	1,622058E+09	6,265917E+09	7,887974E+09
267	8,111114E+08	8,110909E+08	3,133003E+09	3,132951E+09	1,622202E+09	6,265953E+09	7,888156E+09
268	8,110250E+08	8,110540E+08	3,133020E+09	3,133013E+09	1,622079E+09	6,266033E+09	7,888112E+09
269	8,110254E+08	8,110010E+08	3,132997E+09	3,133072E+09	1,622026E+09	6,266069E+09	7,888095E+09
270	8,110383E+08	8,110500E+08	3,133140E+09	3,133023E+09	1,622088E+09	6,266162E+09	7,888251E+09
271	8,109345E+08	8,109422E+08	3,133098E+09	3,133142E+09	1,621877E+09	6,266241E+09	7,888117E+09
272	8,109784E+08	8,109349E+08	3,133125E+09	3,133170E+09	1,621913E+09	6,266295E+09	7,888208E+09
273	8,109508E+08	8,109613E+08	3,133218E+09	3,133127E+09	1,621912E+09	6,266346E+09	7,888258E+09
274	8,108857E+08	8,108853E+08	3,133092E+09	3,133215E+09	1,621771E+09	6,266307E+09	7,888078E+09
275	8,109661E+08	8,109549E+08	3,133160E+09	3,133143E+09	1,621921E+09	6,266302E+09	7,888223E+09
276	8,109178E+08	8,109549E+08	3,133192E+09	3,133105E+09	1,621873E+09	6,266297E+09	7,888170E+09
277	8,109312E+08	8,109164E+08	3,133086E+09	3,133122E+09	1,621848E+09	6,266208E+09	7,888056E+09
278	8,110167E+08	8,110199E+08	3,133133E+09	3,133017E+09	1,622037E+09	6,266149E+09	7,888186E+09
279	8,109661E+08	8,109963E+08	3,133013E+09	3,133032E+09	1,621962E+09	6,266045E+09	7,888008E+09
280	8,110515E+08	8,110328E+08	3,132916E+09	3,133012E+09	1,622084E+09	6,265928E+09	7,888013E+09
281	8,111024E+08	8,111289E+08	3,132970E+09	3,132868E+09	1,622231E+09	6,265838E+09	7,888070E+09
282	8,110642E+08	8,110796E+08	3,132818E+09	3,132887E+09	1,622144E+09	6,265705E+09	7,887849E+09
283	8,111724E+08	8,111397E+08	3,132841E+09	3,132828E+09	1,622312E+09	6,265669E+09	7,887981E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
284	8,111485E+08	8,111689E+08	3,132889E+09	3,132783E+09	1,622317E+09	6,265672E+09	7,887990E+09
285	8,111229E+08	8,111057E+08	3,132788E+09	3,132870E+09	1,622229E+09	6,265658E+09	7,887886E+09
286	8,111792E+08	8,111812E+08	3,132889E+09	3,132832E+09	1,622360E+09	6,265721E+09	7,888082E+09
287	8,110882E+08	8,111253E+08	3,132905E+09	3,132885E+09	1,622214E+09	6,265790E+09	7,888004E+09
288	8,110942E+08	8,110667E+08	3,132890E+09	3,132974E+09	1,622161E+09	6,265864E+09	7,888025E+09
289	8,111081E+08	8,111063E+08	3,133029E+09	3,132926E+09	1,622214E+09	6,265955E+09	7,888169E+09
290	8,110077E+08	8,110043E+08	3,132951E+09	3,133015E+09	1,622012E+09	6,265966E+09	7,887978E+09
291	8,110556E+08	8,110120E+08	3,132970E+09	3,133040E+09	1,622068E+09	6,266010E+09	7,888078E+09
292	8,110300E+08	8,110493E+08	3,133065E+09	3,132990E+09	1,622079E+09	6,266055E+09	7,888134E+09
293	8,109704E+08	8,109730E+08	3,132978E+09	3,133045E+09	1,621943E+09	6,266023E+09	7,887966E+09
294	8,110420E+08	8,110423E+08	3,133053E+09	3,132982E+09	1,622084E+09	6,266035E+09	7,888119E+09
295	8,109970E+08	8,110328E+08	3,133058E+09	3,132952E+09	1,622030E+09	6,266010E+09	7,888040E+09
296	8,110198E+08	8,110037E+08	3,132932E+09	3,133008E+09	1,622024E+09	6,265940E+09	7,887963E+09
297	8,111062E+08	8,111118E+08	3,132971E+09	3,132901E+09	1,622218E+09	6,265872E+09	7,888090E+09
298	8,110612E+08	8,110938E+08	3,132836E+09	3,132872E+09	1,622155E+09	6,265707E+09	7,887862E+09
299	8,111511E+08	8,111266E+08	3,132757E+09	3,132840E+09	1,622278E+09	6,265597E+09	7,887874E+09
300	8,112019E+08	8,112185E+08	3,132821E+09	3,132704E+09	1,622420E+09	6,265525E+09	7,887945E+09
301	8,111641E+08	8,111650E+08	3,132691E+09	3,132715E+09	1,622329E+09	6,265407E+09	7,887736E+09
302	8,112517E+08	8,112293E+08	3,132711E+09	3,132686E+09	1,622481E+09	6,265397E+09	7,887878E+09
303	8,112223E+08	8,112554E+08	3,132740E+09	3,132655E+09	1,622478E+09	6,265395E+09	7,887873E+09
304	8,111981E+08	8,111924E+08	3,132651E+09	3,132769E+09	1,622390E+09	6,265420E+09	7,887810E+09
305	8,112510E+08	8,112527E+08	3,132776E+09	3,132723E+09	1,622504E+09	6,265499E+09	7,888002E+09
306	8,111648E+08	8,111861E+08	3,132773E+09	3,132745E+09	1,622351E+09	6,265518E+09	7,887869E+09
307	8,111738E+08	8,111278E+08	3,132753E+09	3,132843E+09	1,622302E+09	6,265597E+09	7,887898E+09
308	8,111872E+08	8,111770E+08	3,132879E+09	3,132807E+09	1,622364E+09	6,265686E+09	7,888050E+09
309	8,110872E+08	8,110886E+08	3,132823E+09	3,132869E+09	1,622176E+09	6,265692E+09	7,887868E+09
310	8,111202E+08	8,111064E+08	3,132863E+09	3,132894E+09	1,622227E+09	6,265757E+09	7,887984E+09
311	8,110968E+08	8,111313E+08	3,132956E+09	3,132841E+09	1,622228E+09	6,265797E+09	7,888026E+09
312	8,110456E+08	8,110517E+08	3,132877E+09	3,132931E+09	1,622097E+09	6,265809E+09	7,887906E+09
313	8,111200E+08	8,111128E+08	3,132939E+09	3,132878E+09	1,622233E+09	6,265816E+09	7,888049E+09
314	8,110842E+08	8,111075E+08	3,132888E+09	3,132821E+09	1,622192E+09	6,265709E+09	7,887900E+09
315	8,111162E+08	8,110951E+08	3,132742E+09	3,132870E+09	1,622211E+09	6,265612E+09	7,887823E+09
316	8,112083E+08	8,112094E+08	3,132779E+09	3,132741E+09	1,622418E+09	6,265520E+09	7,887937E+09
317	8,111674E+08	8,111917E+08	3,132681E+09	3,132668E+09	1,622359E+09	6,265349E+09	7,887708E+09
318	8,112443E+08	8,112252E+08	3,132621E+09	3,132647E+09	1,622470E+09	6,265268E+09	7,887738E+09
319	8,112902E+08	8,113053E+08	3,132671E+09	3,132536E+09	1,622595E+09	6,265206E+09	7,887802E+09
320	8,112505E+08	8,112578E+08	3,132552E+09	3,132601E+09	1,622508E+09	6,265153E+09	7,887661E+09
321	8,113275E+08	8,113184E+08	3,132582E+09	3,132585E+09	1,622646E+09	6,265167E+09	7,887813E+09
322	8,112989E+08	8,113371E+08	3,132602E+09	3,132529E+09	1,622636E+09	6,265131E+09	7,887767E+09
323	8,112781E+08	8,112672E+08	3,132527E+09	3,132644E+09	1,622545E+09	6,265171E+09	7,887716E+09
324	8,113323E+08	8,113175E+08	3,132650E+09	3,132603E+09	1,622650E+09	6,265253E+09	7,887903E+09
325	8,112484E+08	8,112514E+08	3,132654E+09	3,132604E+09	1,622500E+09	6,265257E+09	7,887757E+09
326	8,112415E+08	8,112054E+08	3,132625E+09	3,132711E+09	1,622447E+09	6,265336E+09	7,887783E+09
327	8,112516E+08	8,112566E+08	3,132735E+09	3,132675E+09	1,622508E+09	6,265410E+09	7,887919E+09
328	8,111562E+08	8,111738E+08	3,132707E+09	3,132752E+09	1,622330E+09	6,265460E+09	7,887790E+09
329	8,111860E+08	8,111788E+08	3,132769E+09	3,132773E+09	1,622365E+09	6,265542E+09	7,887907E+09
330	8,111741E+08	8,111963E+08	3,132832E+09	3,132701E+09	1,622370E+09	6,265533E+09	7,887903E+09
331	8,111339E+08	8,111219E+08	3,132725E+09	3,132803E+09	1,622256E+09	6,265527E+09	7,887783E+09
332	8,112144E+08	8,111938E+08	3,132760E+09	3,132755E+09	1,622408E+09	6,265515E+09	7,887923E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
333	8,111861E+08	8,112060E+08	3,132715E+09	3,132656E+09	1,622392E+09	6,265371E+09	7,887763E+09
334	8,112065E+08	8,112034E+08	3,132586E+09	3,132690E+09	1,622410E+09	6,265276E+09	7,887686E+09
335	8,112988E+08	8,113069E+08	3,132627E+09	3,132558E+09	1,622606E+09	6,265185E+09	7,887791E+09
336	8,112612E+08	8,112875E+08	3,132551E+09	3,132515E+09	1,622549E+09	6,265067E+09	7,887615E+09
337	8,113284E+08	8,113115E+08	3,132498E+09	3,132515E+09	1,622640E+09	6,265013E+09	7,887653E+09
338	8,113752E+08	8,113908E+08	3,132510E+09	3,132401E+09	1,622766E+09	6,264911E+09	7,887677E+09
339	8,113382E+08	8,113499E+08	3,132389E+09	3,132480E+09	1,622688E+09	6,264869E+09	7,887557E+09
340	8,114151E+08	8,114038E+08	3,132433E+09	3,132460E+09	1,622819E+09	6,264894E+09	7,887713E+09
341	8,113907E+08	8,114142E+08	3,132478E+09	3,132369E+09	1,622805E+09	6,264847E+09	7,887652E+09
342	8,113561E+08	8,113425E+08	3,132409E+09	3,132491E+09	1,622699E+09	6,264900E+09	7,887599E+09
343	8,114060E+08	8,113835E+08	3,132508E+09	3,132468E+09	1,622790E+09	6,264976E+09	7,887766E+09
344	8,113200E+08	8,113292E+08	3,132528E+09	3,132499E+09	1,622649E+09	6,265027E+09	7,887676E+09
345	8,113027E+08	8,112845E+08	3,132519E+09	3,132608E+09	1,622587E+09	6,265127E+09	7,887714E+09
346	8,113159E+08	8,113281E+08	3,132616E+09	3,132547E+09	1,622644E+09	6,265164E+09	7,887808E+09
347	8,112299E+08	8,112448E+08	3,132598E+09	3,132633E+09	1,622475E+09	6,265232E+09	7,887706E+09
348	8,112660E+08	8,112437E+08	3,132646E+09	3,132659E+09	1,622510E+09	6,265305E+09	7,887814E+09
349	8,112627E+08	8,112669E+08	3,132692E+09	3,132560E+09	1,622530E+09	6,265253E+09	7,887782E+09
350	8,112165E+08	8,112137E+08	3,132563E+09	3,132658E+09	1,622430E+09	6,265221E+09	7,887652E+09
351	8,113008E+08	8,112878E+08	3,132572E+09	3,132599E+09	1,622589E+09	6,265172E+09	7,887760E+09
352	8,112788E+08	8,113083E+08	3,132561E+09	3,132497E+09	1,622587E+09	6,265059E+09	7,887646E+09
353	8,112942E+08	8,112960E+08	3,132458E+09	3,132522E+09	1,622590E+09	6,264980E+09	7,887570E+09
354	8,113895E+08	8,113899E+08	3,132476E+09	3,132382E+09	1,622779E+09	6,264858E+09	7,887637E+09
355	8,113567E+08	8,113774E+08	3,132394E+09	3,132371E+09	1,622734E+09	6,264765E+09	7,887499E+09
356	8,114216E+08	8,114040E+08	3,132338E+09	3,132391E+09	1,622826E+09	6,264729E+09	7,887555E+09
357	8,114702E+08	8,114888E+08	3,132364E+09	3,132253E+09	1,622959E+09	6,264617E+09	7,887576E+09
358	8,114229E+08	8,114471E+08	3,132264E+09	3,132330E+09	1,622870E+09	6,264593E+09	7,887464E+09
359	8,114969E+08	8,114803E+08	3,132303E+09	3,132319E+09	1,622977E+09	6,264622E+09	7,887599E+09
360	8,114737E+08	8,114864E+08	3,132363E+09	3,132253E+09	1,622960E+09	6,264616E+09	7,887576E+09
361	8,114254E+08	8,114079E+08	3,132292E+09	3,132383E+09	1,622833E+09	6,264675E+09	7,887509E+09
362	8,114738E+08	8,114514E+08	3,132354E+09	3,132349E+09	1,622925E+09	6,264704E+09	7,887629E+09
363	8,113924E+08	8,114088E+08	3,132378E+09	3,132382E+09	1,622801E+09	6,264760E+09	7,887561E+09
364	8,113757E+08	8,113589E+08	3,132396E+09	3,132483E+09	1,622735E+09	6,264879E+09	7,887614E+09
365	8,113966E+08	8,114000E+08	3,132508E+09	3,132392E+09	1,622797E+09	6,264900E+09	7,887697E+09
366	8,113057E+08	8,113194E+08	3,132484E+09	3,132487E+09	1,622625E+09	6,264971E+09	7,887596E+09
367	8,113432E+08	8,113152E+08	3,132495E+09	3,132530E+09	1,622658E+09	6,265025E+09	7,887683E+09
368	8,113456E+08	8,113546E+08	3,132544E+09	3,132443E+09	1,622700E+09	6,264987E+09	7,887687E+09
369	8,112930E+08	8,113080E+08	3,132426E+09	3,132524E+09	1,622601E+09	6,264950E+09	7,887551E+09
370	8,113838E+08	8,113759E+08	3,132419E+09	3,132435E+09	1,622760E+09	6,264854E+09	7,887613E+09
371	8,113719E+08	8,113993E+08	3,132418E+09	3,132339E+09	1,622771E+09	6,264756E+09	7,887528E+09
372	8,113902E+08	8,113803E+08	3,132320E+09	3,132374E+09	1,622770E+09	6,264694E+09	7,887465E+09
373	8,114883E+08	8,114788E+08	3,132325E+09	3,132222E+09	1,622967E+09	6,264547E+09	7,887514E+09
374	8,114473E+08	8,114806E+08	3,132239E+09	3,132222E+09	1,622928E+09	6,264461E+09	7,887389E+09
375	8,115104E+08	8,115006E+08	3,132168E+09	3,132250E+09	1,623011E+09	6,264419E+09	7,887430E+09
376	8,115610E+08	8,115810E+08	3,132232E+09	3,132118E+09	1,623142E+09	6,264350E+09	7,887492E+09
377	8,115057E+08	8,115259E+08	3,132148E+09	3,132193E+09	1,623032E+09	6,264341E+09	7,887373E+09
378	8,115783E+08	8,115429E+08	3,132149E+09	3,132175E+09	1,623121E+09	6,264324E+09	7,887445E+09
379	8,115560E+08	8,115594E+08	3,132204E+09	3,132133E+09	1,623115E+09	6,264337E+09	7,887453E+09
380	8,115030E+08	8,114860E+08	3,132147E+09	3,132268E+09	1,622989E+09	6,264415E+09	7,887404E+09
381	8,115480E+08	8,115342E+08	3,132231E+09	3,132205E+09	1,623082E+09	6,264436E+09	7,887518E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
382	8,114600E+08	8,114942E+08	3,132288E+09	3,132238E+09	1,622954E+09	6,264526E+09	7,887480E+09
383	8,114429E+08	8,114268E+08	3,132294E+09	3,132356E+09	1,622870E+09	6,264650E+09	7,887519E+09
384	8,114687E+08	8,114660E+08	3,132413E+09	3,132286E+09	1,622935E+09	6,264700E+09	7,887635E+09
385	8,113728E+08	8,113879E+08	3,132366E+09	3,132384E+09	1,622761E+09	6,264750E+09	7,887511E+09
386	8,114158E+08	8,113874E+08	3,132321E+09	3,132405E+09	1,622803E+09	6,264726E+09	7,887530E+09
387	8,114308E+08	8,114438E+08	3,132369E+09	3,132307E+09	1,622875E+09	6,264676E+09	7,887551E+09
388	8,113853E+08	8,113953E+08	3,132277E+09	3,132363E+09	1,622781E+09	6,264640E+09	7,887421E+09
389	8,114830E+08	8,114640E+08	3,132276E+09	3,132241E+09	1,622947E+09	6,264517E+09	7,887464E+09
390	8,114681E+08	8,114954E+08	3,132277E+09	3,132157E+09	1,622963E+09	6,264435E+09	7,887398E+09
391	8,114829E+08	8,114735E+08	3,132156E+09	3,132226E+09	1,622956E+09	6,264381E+09	7,887338E+09
392	8,115808E+08	8,115820E+08	3,132180E+09	3,132095E+09	1,623163E+09	6,264275E+09	7,887438E+09
393	8,115313E+08	8,115803E+08	3,132108E+09	3,132093E+09	1,623112E+09	6,264201E+09	7,887312E+09
394	8,115960E+08	8,115841E+08	3,132018E+09	3,132106E+09	1,623180E+09	6,264125E+09	7,887305E+09
395	8,116536E+08	8,116617E+08	3,132080E+09	3,131983E+09	1,623315E+09	6,264064E+09	7,887379E+09
396	8,115959E+08	8,115975E+08	3,132005E+09	3,132061E+09	1,623193E+09	6,264066E+09	7,887259E+09
397	8,116649E+08	8,116209E+08	3,131995E+09	3,132025E+09	1,623286E+09	6,264020E+09	7,887305E+09
398	8,116319E+08	8,116504E+08	3,132062E+09	3,131987E+09	1,623282E+09	6,264048E+09	7,887331E+09
399	8,115727E+08	8,115689E+08	3,132017E+09	3,132133E+09	1,623142E+09	6,264150E+09	7,887292E+09
400	8,116169E+08	8,116101E+08	3,132147E+09	3,132078E+09	1,623227E+09	6,264225E+09	7,887452E+09
401	8,115229E+08	8,115591E+08	3,132213E+09	3,132121E+09	1,623082E+09	6,264334E+09	7,887416E+09
402	8,115084E+08	8,114804E+08	3,132165E+09	3,132242E+09	1,622989E+09	6,264407E+09	7,887396E+09
403	8,115439E+08	8,115340E+08	3,132257E+09	3,132190E+09	1,623078E+09	6,264447E+09	7,887525E+09
404	8,114538E+08	8,114663E+08	3,132213E+09	3,132270E+09	1,622920E+09	6,264482E+09	7,887403E+09
405	8,115034E+08	8,114758E+08	3,132166E+09	3,132244E+09	1,622979E+09	6,264410E+09	7,887389E+09
406	8,115189E+08	8,115402E+08	3,132240E+09	3,132131E+09	1,623059E+09	6,264371E+09	7,887430E+09
407	8,114752E+08	8,114825E+08	3,132142E+09	3,132199E+09	1,622958E+09	6,264341E+09	7,887298E+09
408	8,115722E+08	8,115513E+08	3,132157E+09	3,132096E+09	1,623124E+09	6,264253E+09	7,887376E+09
409	8,115509E+08	8,115891E+08	3,132144E+09	3,132028E+09	1,623140E+09	6,264173E+09	7,887313E+09
410	8,115671E+08	8,115645E+08	3,131972E+09	3,132088E+09	1,623132E+09	6,264060E+09	7,887192E+09
411	8,116737E+08	8,116802E+08	3,132002E+09	3,131961E+09	1,623354E+09	6,263963E+09	7,887317E+09
412	8,116314E+08	8,116681E+08	3,131956E+09	3,131942E+09	1,623300E+09	6,263898E+09	7,887197E+09
413	8,116970E+08	8,116654E+08	3,131860E+09	3,131927E+09	1,623362E+09	6,263787E+09	7,887150E+09
414	8,117469E+08	8,117483E+08	3,131931E+09	3,131814E+09	1,623495E+09	6,263746E+09	7,887241E+09
415	8,116804E+08	8,116818E+08	3,131847E+09	3,131916E+09	1,623362E+09	6,263763E+09	7,887126E+09
416	8,117395E+08	8,117104E+08	3,131881E+09	3,131895E+09	1,623450E+09	6,263776E+09	7,887226E+09
417	8,116945E+08	8,117358E+08	3,131978E+09	3,131868E+09	1,623430E+09	6,263846E+09	7,887276E+09
418	8,116336E+08	8,116337E+08	3,131917E+09	3,132015E+09	1,623267E+09	6,263933E+09	7,887200E+09
419	8,116855E+08	8,116725E+08	3,132037E+09	3,131987E+09	1,623358E+09	6,264024E+09	7,887382E+09
420	8,115987E+08	8,116139E+08	3,132095E+09	3,132030E+09	1,623213E+09	6,264124E+09	7,887337E+09
421	8,115876E+08	8,115484E+08	3,132005E+09	3,132117E+09	1,623136E+09	6,264122E+09	7,887258E+09
422	8,116250E+08	8,116214E+08	3,132094E+09	3,132044E+09	1,623246E+09	6,264139E+09	7,887385E+09
423	8,115371E+08	8,115553E+08	3,132055E+09	3,132112E+09	1,623092E+09	6,264167E+09	7,887259E+09
424	8,115900E+08	8,115652E+08	3,132054E+09	3,132075E+09	1,623155E+09	6,264128E+09	7,887283E+09
425	8,116002E+08	8,116265E+08	3,132129E+09	3,131971E+09	1,623227E+09	6,264100E+09	7,887326E+09
426	8,115567E+08	8,115622E+08	3,131989E+09	3,132050E+09	1,623119E+09	6,264039E+09	7,887158E+09
427	8,116594E+08	8,116456E+08	3,131984E+09	3,131974E+09	1,623305E+09	6,263958E+09	7,887263E+09
428	8,116436E+08	8,116847E+08	3,131987E+09	3,131900E+09	1,623328E+09	6,263886E+09	7,887215E+09
429	8,116652E+08	8,116634E+08	3,131811E+09	3,131923E+09	1,623329E+09	6,263734E+09	7,887063E+09
430	8,117735E+08	8,117767E+08	3,131859E+09	3,131786E+09	1,623550E+09	6,263645E+09	7,887195E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
431	8,117301E+08	8,117531E+08	3,131806E+09	3,131782E+09	1,623483E+09	6,263587E+09	7,887071E+09
432	8,117890E+08	8,117484E+08	3,131728E+09	3,131779E+09	1,623537E+09	6,263507E+09	7,887044E+09
433	8,118226E+08	8,118362E+08	3,131799E+09	3,131684E+09	1,623659E+09	6,263483E+09	7,887141E+09
434	8,117492E+08	8,117642E+08	3,131695E+09	3,131787E+09	1,623513E+09	6,263482E+09	7,886995E+09
435	8,118097E+08	8,117931E+08	3,131752E+09	3,131782E+09	1,623603E+09	6,263534E+09	7,887137E+09
436	8,117710E+08	8,118020E+08	3,131881E+09	3,131754E+09	1,623573E+09	6,263635E+09	7,887208E+09
437	8,117133E+08	8,116955E+08	3,131794E+09	3,131883E+09	1,623409E+09	6,263677E+09	7,887086E+09
438	8,117636E+08	8,117406E+08	3,131905E+09	3,131861E+09	1,623504E+09	6,263765E+09	7,887270E+09
439	8,116768E+08	8,116880E+08	3,131938E+09	3,131913E+09	1,623365E+09	6,263850E+09	7,887215E+09
440	8,116629E+08	8,116328E+08	3,131876E+09	3,131985E+09	1,623296E+09	6,263861E+09	7,887157E+09
441	8,116944E+08	8,117097E+08	3,131988E+09	3,131903E+09	1,623404E+09	6,263891E+09	7,887295E+09
442	8,116093E+08	8,116322E+08	3,131928E+09	3,131956E+09	1,623242E+09	6,263883E+09	7,887125E+09
443	8,116684E+08	8,116455E+08	3,131922E+09	3,131943E+09	1,623314E+09	6,263866E+09	7,887179E+09
444	8,116876E+08	8,117038E+08	3,131995E+09	3,131847E+09	1,623391E+09	6,263843E+09	7,887234E+09
445	8,116478E+08	8,116514E+08	3,131812E+09	3,131904E+09	1,623299E+09	6,263716E+09	7,887015E+09
446	8,117540E+08	8,117479E+08	3,131812E+09	3,131816E+09	1,623502E+09	6,263628E+09	7,887130E+09
447	8,117444E+08	8,117818E+08	3,131816E+09	3,131736E+09	1,623526E+09	6,263552E+09	7,887078E+09
448	8,117674E+08	8,117559E+08	3,131677E+09	3,131746E+09	1,623523E+09	6,263423E+09	7,886946E+09
449	8,118661E+08	8,118656E+08	3,131724E+09	3,131622E+09	1,623732E+09	6,263346E+09	7,887078E+09
450	8,118163E+08	8,118355E+08	3,131635E+09	3,131628E+09	1,623652E+09	6,263263E+09	7,886915E+09
451	8,118717E+08	8,118430E+08	3,131563E+09	3,131657E+09	1,623715E+09	6,263219E+09	7,886934E+09
452	8,119046E+08	8,119241E+08	3,131669E+09	3,131567E+09	1,623829E+09	6,263236E+09	7,887065E+09
453	8,118293E+08	8,118485E+08	3,131574E+09	3,131648E+09	1,623678E+09	6,263222E+09	7,886900E+09
454	8,118881E+08	8,118710E+08	3,131651E+09	3,131647E+09	1,623759E+09	6,263299E+09	7,887058E+09
455	8,118496E+08	8,118660E+08	3,131764E+09	3,131643E+09	1,623716E+09	6,263407E+09	7,887123E+09
456	8,117888E+08	8,117615E+08	3,131683E+09	3,131770E+09	1,623550E+09	6,263453E+09	7,887003E+09
457	8,118290E+08	8,118148E+08	3,131770E+09	3,131747E+09	1,623644E+09	6,263517E+09	7,887161E+09
458	8,117415E+08	8,117633E+08	3,131777E+09	3,131779E+09	1,623505E+09	6,263556E+09	7,887061E+09
459	8,117351E+08	8,117157E+08	3,131735E+09	3,131850E+09	1,623451E+09	6,263585E+09	7,887036E+09
460	8,117751E+08	8,117803E+08	3,131876E+09	3,131760E+09	1,623555E+09	6,263636E+09	7,887191E+09
461	8,116955E+08	8,117080E+08	3,131790E+09	3,131797E+09	1,623404E+09	6,263587E+09	7,886990E+09
462	8,117556E+08	8,117312E+08	3,131776E+09	3,131793E+09	1,623487E+09	6,263569E+09	7,887056E+09
463	8,117777E+08	8,117962E+08	3,131830E+09	3,131714E+09	1,623574E+09	6,263544E+09	7,887118E+09
464	8,117404E+08	8,117514E+08	3,131674E+09	3,131753E+09	1,623492E+09	6,263427E+09	7,886919E+09
465	8,118419E+08	8,118465E+08	3,131684E+09	3,131663E+09	1,623688E+09	6,263347E+09	7,887035E+09
466	8,118349E+08	8,118685E+08	3,131659E+09	3,131576E+09	1,623703E+09	6,263236E+09	7,886939E+09
467	8,118613E+08	8,118453E+08	3,131515E+09	3,131609E+09	1,623707E+09	6,263124E+09	7,886830E+09
468	8,119601E+08	8,119484E+08	3,131570E+09	3,131490E+09	1,623908E+09	6,263060E+09	7,886969E+09
469	8,119072E+08	8,119302E+08	3,131457E+09	3,131474E+09	1,623837E+09	6,262931E+09	7,886768E+09
470	8,119573E+08	8,119420E+08	3,131418E+09	3,131500E+09	1,623899E+09	6,262918E+09	7,886817E+09
471	8,119900E+08	8,120098E+08	3,131544E+09	3,131426E+09	1,624000E+09	6,262970E+09	7,886970E+09
472	8,119127E+08	8,119216E+08	3,131482E+09	3,131506E+09	1,623834E+09	6,262988E+09	7,886823E+09
473	8,119591E+08	8,119387E+08	3,131550E+09	3,131529E+09	1,623898E+09	6,263079E+09	7,886977E+09
474	8,119167E+08	8,119277E+08	3,131611E+09	3,131529E+09	1,623844E+09	6,263140E+09	7,886985E+09
475	8,118555E+08	8,118386E+08	3,131527E+09	3,131670E+09	1,623694E+09	6,263196E+09	7,886890E+09
476	8,119006E+08	8,118876E+08	3,131645E+09	3,131634E+09	1,623788E+09	6,263279E+09	7,887067E+09
477	8,118175E+08	8,118398E+08	3,131647E+09	3,131627E+09	1,623657E+09	6,263274E+09	7,886932E+09
478	8,118148E+08	8,117941E+08	3,131627E+09	3,131693E+09	1,623609E+09	6,263321E+09	7,886929E+09
479	8,118588E+08	8,118534E+08	3,131747E+09	3,131628E+09	1,623712E+09	6,263376E+09	7,887088E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
480	8,117802E+08	8,117895E+08	3,131665E+09	3,131661E+09	1,623570E+09	6,263326E+09	7,886896E+09
481	8,118325E+08	8,118260E+08	3,131630E+09	3,131663E+09	1,623658E+09	6,263293E+09	7,886952E+09
482	8,118587E+08	8,118883E+08	3,131654E+09	3,131566E+09	1,623747E+09	6,263220E+09	7,886967E+09
483	8,118325E+08	8,118496E+08	3,131511E+09	3,131605E+09	1,623682E+09	6,263117E+09	7,886799E+09
484	8,119438E+08	8,119291E+08	3,131537E+09	3,131509E+09	1,623873E+09	6,263046E+09	7,886919E+09
485	8,119378E+08	8,119578E+08	3,131481E+09	3,131402E+09	1,623896E+09	6,262882E+09	7,886778E+09
486	8,119610E+08	8,119447E+08	3,131346E+09	3,131438E+09	1,623906E+09	6,262784E+09	7,886690E+09
487	8,120529E+08	8,120475E+08	3,131406E+09	3,131344E+09	1,624100E+09	6,262749E+09	7,886850E+09
488	8,119958E+08	8,120292E+08	3,131348E+09	3,131320E+09	1,624025E+09	6,262668E+09	7,886693E+09
489	8,120320E+08	8,120309E+08	3,131326E+09	3,131362E+09	1,624063E+09	6,262688E+09	7,886751E+09
490	8,120611E+08	8,120781E+08	3,131425E+09	3,131304E+09	1,624139E+09	6,262729E+09	7,886868E+09
491	8,119871E+08	8,119896E+08	3,131353E+09	3,131414E+09	1,623977E+09	6,262767E+09	7,886744E+09
492	8,120330E+08	8,119959E+08	3,131413E+09	3,131440E+09	1,624029E+09	6,262852E+09	7,886881E+09
493	8,119908E+08	8,120003E+08	3,131439E+09	3,131404E+09	1,623991E+09	6,262843E+09	7,886834E+09
494	8,119317E+08	8,119203E+08	3,131384E+09	3,131517E+09	1,623852E+09	6,262901E+09	7,886753E+09
495	8,119792E+08	8,119619E+08	3,131521E+09	3,131486E+09	1,623941E+09	6,263006E+09	7,886947E+09
496	8,118991E+08	8,119144E+08	3,131555E+09	3,131467E+09	1,623813E+09	6,263023E+09	7,886836E+09
497	8,118856E+08	8,118726E+08	3,131524E+09	3,131558E+09	1,623758E+09	6,263082E+09	7,886840E+09
498	8,119277E+08	8,119319E+08	3,131594E+09	3,131506E+09	1,623860E+09	6,263100E+09	7,886960E+09
499	8,118573E+08	8,118840E+08	3,131509E+09	3,131553E+09	1,623741E+09	6,263062E+09	7,886803E+09
500	8,119179E+08	8,119111E+08	3,131494E+09	3,131542E+09	1,623829E+09	6,263035E+09	7,886864E+09
501	8,119537E+08	8,119773E+08	3,131494E+09	3,131403E+09	1,623931E+09	6,262897E+09	7,886828E+09
502	8,119342E+08	8,119418E+08	3,131363E+09	3,131429E+09	1,623876E+09	6,262793E+09	7,886669E+09
503	8,120469E+08	8,120165E+08	3,131372E+09	3,131352E+09	1,624063E+09	6,262724E+09	7,886788E+09
504	8,120373E+08	8,120537E+08	3,131326E+09	3,131231E+09	1,624091E+09	6,262557E+09	7,886648E+09
505	8,120451E+08	8,120504E+08	3,131198E+09	3,131282E+09	1,624096E+09	6,262481E+09	7,886576E+09
506	8,121311E+08	8,121406E+08	3,131250E+09	3,131190E+09	1,624272E+09	6,262440E+09	7,886712E+09
507	8,120788E+08	8,121168E+08	3,131221E+09	3,131191E+09	1,624196E+09	6,262412E+09	7,886608E+09
508	8,121171E+08	8,120963E+08	3,131215E+09	3,131249E+09	1,624213E+09	6,262463E+09	7,886677E+09
509	8,121452E+08	8,121445E+08	3,131265E+09	3,131178E+09	1,624290E+09	6,262443E+09	7,886733E+09
510	8,120698E+08	8,120670E+08	3,131197E+09	3,131283E+09	1,624137E+09	6,262480E+09	7,886617E+09
511	8,121116E+08	8,120743E+08	3,131256E+09	3,131317E+09	1,624186E+09	6,262574E+09	7,886759E+09
512	8,120674E+08	8,120826E+08	3,131333E+09	3,131251E+09	1,624150E+09	6,262584E+09	7,886734E+09
513	8,119974E+08	8,120029E+08	3,131302E+09	3,131372E+09	1,624000E+09	6,262675E+09	7,886675E+09
514	8,120412E+08	8,120302E+08	3,131413E+09	3,131354E+09	1,624071E+09	6,262767E+09	7,886838E+09
515	8,119685E+08	8,119891E+08	3,131441E+09	3,131368E+09	1,623958E+09	6,262809E+09	7,886767E+09
516	8,119585E+08	8,119423E+08	3,131395E+09	3,131464E+09	1,623901E+09	6,262859E+09	7,886760E+09
517	8,120064E+08	8,120155E+08	3,131419E+09	3,131377E+09	1,624022E+09	6,262796E+09	7,886818E+09
518	8,119490E+08	8,119764E+08	3,131352E+09	3,131392E+09	1,623925E+09	6,262744E+09	7,886669E+09
519	8,120180E+08	8,119942E+08	3,131335E+09	3,131379E+09	1,624012E+09	6,262714E+09	7,886726E+09
520	8,120595E+08	8,120650E+08	3,131354E+09	3,131217E+09	1,624124E+09	6,262571E+09	7,886695E+09
521	8,120288E+08	8,120392E+08	3,131213E+09	3,131253E+09	1,624068E+09	6,262466E+09	7,886534E+09
522	8,121310E+08	8,121129E+08	3,131192E+09	3,131191E+09	1,624244E+09	6,262383E+09	7,886627E+09
523	8,121239E+08	8,121618E+08	3,131173E+09	3,131097E+09	1,624286E+09	6,262270E+09	7,886555E+09
524	8,121304E+08	8,121391E+08	3,131080E+09	3,131157E+09	1,624269E+09	6,262237E+09	7,886507E+09
525	8,122173E+08	8,122237E+08	3,131112E+09	3,131051E+09	1,624441E+09	6,262163E+09	7,886604E+09
526	8,121716E+08	8,121949E+08	3,131091E+09	3,131055E+09	1,624367E+09	6,262146E+09	7,886513E+09
527	8,122060E+08	8,121647E+08	3,131063E+09	3,131135E+09	1,624371E+09	6,262198E+09	7,886569E+09
528	8,122300E+08	8,122225E+08	3,131119E+09	3,131040E+09	1,624453E+09	6,262159E+09	7,886612E+09



1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
529	8,121397E+08	8,121565E+08	3,131063E+09	3,131139E+09	1,624296E+09	6,262202E+09	7,886498E+09
530	8,121742E+08	8,121523E+08	3,131122E+09	3,131169E+09	1,624327E+09	6,262291E+09	7,886618E+09
531	8,121368E+08	8,121592E+08	3,131233E+09	3,131124E+09	1,624296E+09	6,262357E+09	7,886653E+09
532	8,120675E+08	8,120629E+08	3,131216E+09	3,131264E+09	1,624130E+09	6,262480E+09	7,886611E+09
533	8,121116E+08	8,120966E+08	3,131272E+09	3,131237E+09	1,624208E+09	6,262510E+09	7,886718E+09
534	8,120473E+08	8,120686E+08	3,131300E+09	3,131246E+09	1,624116E+09	6,262546E+09	7,886662E+09
535	8,120422E+08	8,120238E+08	3,131243E+09	3,131346E+09	1,624066E+09	6,262589E+09	7,886655E+09
536	8,120983E+08	8,121005E+08	3,131288E+09	3,131213E+09	1,624199E+09	6,262500E+09	7,886699E+09
537	8,120377E+08	8,120693E+08	3,131226E+09	3,131222E+09	1,624107E+09	6,262448E+09	7,886555E+09
538	8,121058E+08	8,120787E+08	3,131172E+09	3,131215E+09	1,624185E+09	6,262386E+09	7,886571E+09
539	8,121515E+08	8,121589E+08	3,131191E+09	3,131075E+09	1,624310E+09	6,262267E+09	7,886577E+09
540	8,121186E+08	8,121322E+08	3,131056E+09	3,131120E+09	1,624251E+09	6,262176E+09	7,886427E+09
541	8,122184E+08	8,122132E+08	3,131008E+09	3,131032E+09	1,624432E+09	6,262040E+09	7,886472E+09
542	8,122206E+08	8,122617E+08	3,131028E+09	3,130929E+09	1,624482E+09	6,261958E+09	7,886440E+09
543	8,122295E+08	8,122231E+08	3,130941E+09	3,131011E+09	1,624453E+09	6,261952E+09	7,886405E+09
544	8,123160E+08	8,123041E+08	3,130983E+09	3,130892E+09	1,624620E+09	6,261875E+09	7,886495E+09
545	8,122571E+08	8,122828E+08	3,130952E+09	3,130914E+09	1,624540E+09	6,261866E+09	7,886406E+09
546	8,122784E+08	8,122472E+08	3,130895E+09	3,131004E+09	1,624526E+09	6,261899E+09	7,886425E+09
547	8,123013E+08	8,123106E+08	3,130989E+09	3,130922E+09	1,624612E+09	6,261911E+09	7,886523E+09
548	8,122080E+08	8,122284E+08	3,130974E+09	3,131022E+09	1,624436E+09	6,261996E+09	7,886432E+09
549	8,122400E+08	8,122194E+08	3,131014E+09	3,131039E+09	1,624459E+09	6,262053E+09	7,886512E+09
550	8,122131E+08	8,122258E+08	3,131132E+09	3,131005E+09	1,624439E+09	6,262137E+09	7,886576E+09
551	8,121441E+08	8,121241E+08	3,131084E+09	3,131168E+09	1,624268E+09	6,262252E+09	7,886520E+09
552	8,121907E+08	8,121723E+08	3,131132E+09	3,131111E+09	1,624363E+09	6,262242E+09	7,886605E+09
553	8,121240E+08	8,121588E+08	3,131155E+09	3,131101E+09	1,624283E+09	6,262256E+09	7,886539E+09
554	8,121187E+08	8,121054E+08	3,131082E+09	3,131186E+09	1,624224E+09	6,262268E+09	7,886492E+09
555	8,121877E+08	8,121862E+08	3,131150E+09	3,131061E+09	1,624374E+09	6,262211E+09	7,886585E+09
556	8,121290E+08	8,121483E+08	3,131090E+09	3,131076E+09	1,624277E+09	6,262166E+09	7,886443E+09
557	8,121947E+08	8,121692E+08	3,130989E+09	3,131054E+09	1,624364E+09	6,262043E+09	7,886407E+09
558	8,122474E+08	8,122636E+08	3,131021E+09	3,130915E+09	1,624511E+09	6,261937E+09	7,886448E+09
559	8,122137E+08	8,122324E+08	3,130902E+09	3,130975E+09	1,624446E+09	6,261877E+09	7,886323E+09
560	8,123147E+08	8,123116E+08	3,130886E+09	3,130861E+09	1,624626E+09	6,261747E+09	7,886374E+09
561	8,123125E+08	8,123578E+08	3,130915E+09	3,130773E+09	1,624670E+09	6,261687E+09	7,886357E+09
562	8,123149E+08	8,123029E+08	3,130792E+09	3,130874E+09	1,624618E+09	6,261665E+09	7,886283E+09
563	8,124024E+08	8,123863E+08	3,130833E+09	3,130778E+09	1,624789E+09	6,261611E+09	7,886400E+09
564	8,123364E+08	8,123619E+08	3,130804E+09	3,130803E+09	1,624698E+09	6,261607E+09	7,886306E+09
565	8,123520E+08	8,123291E+08	3,130729E+09	3,130861E+09	1,624681E+09	6,261590E+09	7,886271E+09
566	8,123819E+08	8,123881E+08	3,130866E+09	3,130773E+09	1,624770E+09	6,261639E+09	7,886409E+09
567	8,122896E+08	8,122937E+08	3,130866E+09	3,130896E+09	1,624583E+09	6,261762E+09	7,886345E+09
568	8,123198E+08	8,122858E+08	3,130905E+09	3,130898E+09	1,624606E+09	6,261803E+09	7,886408E+09
569	8,122847E+08	8,123047E+08	3,131011E+09	3,130881E+09	1,624589E+09	6,261893E+09	7,886482E+09
570	8,122100E+08	8,122034E+08	3,130930E+09	3,131050E+09	1,624413E+09	6,261980E+09	7,886393E+09
571	8,122633E+08	8,122557E+08	3,131001E+09	3,130995E+09	1,624519E+09	6,261996E+09	7,886515E+09
572	8,122011E+08	8,122348E+08	3,131043E+09	3,130977E+09	1,624436E+09	6,262020E+09	7,886455E+09
573	8,121998E+08	8,121833E+08	3,130930E+09	3,131033E+09	1,624383E+09	6,261962E+09	7,886345E+09
574	8,122815E+08	8,122691E+08	3,131002E+09	3,130907E+09	1,624551E+09	6,261909E+09	7,886460E+09
575	8,122240E+08	8,122359E+08	3,130925E+09	3,130934E+09	1,624460E+09	6,261860E+09	7,886320E+09
576	8,122885E+08	8,122714E+08	3,130828E+09	3,130880E+09	1,624560E+09	6,261708E+09	7,886268E+09
577	8,123373E+08	8,123745E+08	3,130878E+09	3,130742E+09	1,624712E+09	6,261621E+09	7,886332E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
578	8,123023E+08	8,123267E+08	3,130753E+09	3,130810E+09	1,624629E+09	6,261563E+09	7,886192E+09
579	8,124100E+08	8,123995E+08	3,130759E+09	3,130722E+09	1,624810E+09	6,261481E+09	7,886290E+09
580	8,124062E+08	8,124357E+08	3,130777E+09	3,130653E+09	1,624842E+09	6,261430E+09	7,886272E+09
581	8,124013E+08	8,123861E+08	3,130605E+09	3,130740E+09	1,624787E+09	6,261345E+09	7,886133E+09
582	8,124923E+08	8,124761E+08	3,130667E+09	3,130642E+09	1,624968E+09	6,261308E+09	7,886277E+09
583	8,124222E+08	8,124440E+08	3,130662E+09	3,130668E+09	1,624866E+09	6,261330E+09	7,886197E+09
584	8,124337E+08	8,124101E+08	3,130623E+09	3,130699E+09	1,624844E+09	6,261322E+09	7,886166E+09
585	8,124568E+08	8,124679E+08	3,130773E+09	3,130631E+09	1,624925E+09	6,261404E+09	7,886329E+09
586	8,123557E+08	8,123592E+08	3,130745E+09	3,130782E+09	1,624715E+09	6,261527E+09	7,886242E+09
587	8,123864E+08	8,123576E+08	3,130787E+09	3,130807E+09	1,624744E+09	6,261594E+09	7,886338E+09
588	8,123498E+08	8,123756E+08	3,130883E+09	3,130789E+09	1,624725E+09	6,261672E+09	7,886397E+09
589	8,122771E+08	8,122789E+08	3,130770E+09	3,130915E+09	1,624556E+09	6,261685E+09	7,886241E+09
590	8,123479E+08	8,123302E+08	3,130862E+09	3,130844E+09	1,624678E+09	6,261706E+09	7,886384E+09
591	8,122930E+08	8,123065E+08	3,130902E+09	3,130831E+09	1,624599E+09	6,261733E+09	7,886333E+09
592	8,122938E+08	8,122681E+08	3,130784E+09	3,130857E+09	1,624562E+09	6,261641E+09	7,886203E+09
593	8,123696E+08	8,123706E+08	3,130851E+09	3,130743E+09	1,624740E+09	6,261594E+09	7,886335E+09
594	8,123064E+08	8,123375E+08	3,130763E+09	3,130780E+09	1,624644E+09	6,261543E+09	7,886187E+09
595	8,123751E+08	8,123726E+08	3,130704E+09	3,130739E+09	1,624748E+09	6,261442E+09	7,886190E+09
596	8,124249E+08	8,124633E+08	3,130766E+09	3,130614E+09	1,624888E+09	6,261380E+09	7,886268E+09
597	8,123938E+08	8,124109E+08	3,130594E+09	3,130669E+09	1,624805E+09	6,261263E+09	7,886068E+09
598	8,125118E+08	8,124804E+08	3,130590E+09	3,130589E+09	1,624992E+09	6,261179E+09	7,886171E+09
599	8,125070E+08	8,125203E+08	3,130592E+09	3,130527E+09	1,625027E+09	6,261119E+09	7,886147E+09
600	8,124968E+08	8,124832E+08	3,130426E+09	3,130566E+09	1,624980E+09	6,260991E+09	7,885971E+09
601	8,125765E+08	8,125748E+08	3,130526E+09	3,130464E+09	1,625151E+09	6,260990E+09	7,886141E+09
602	8,124988E+08	8,125267E+08	3,130538E+09	3,130507E+09	1,625025E+09	6,261045E+09	7,886071E+09
603	8,125081E+08	8,124836E+08	3,130535E+09	3,130571E+09	1,624992E+09	6,261106E+09	7,886097E+09
604	8,125235E+08	8,125337E+08	3,130677E+09	3,130539E+09	1,625057E+09	6,261216E+09	7,886273E+09
605	8,124188E+08	8,124290E+08	3,130597E+09	3,130679E+09	1,624848E+09	6,261276E+09	7,886124E+09
606	8,124579E+08	8,124305E+08	3,130648E+09	3,130702E+09	1,624888E+09	6,261350E+09	7,886239E+09
607	8,124271E+08	8,124446E+08	3,130755E+09	3,130675E+09	1,624872E+09	6,261430E+09	7,886301E+09
608	8,123599E+08	8,123552E+08	3,130649E+09	3,130752E+09	1,624715E+09	6,261401E+09	7,886116E+09
609	8,124312E+08	8,124116E+08	3,130742E+09	3,130687E+09	1,624843E+09	6,261429E+09	7,886272E+09
610	8,123738E+08	8,123863E+08	3,130752E+09	3,130686E+09	1,624760E+09	6,261438E+09	7,886198E+09
611	8,123756E+08	8,123600E+08	3,130646E+09	3,130725E+09	1,624736E+09	6,261371E+09	7,886106E+09
612	8,124482E+08	8,124653E+08	3,130710E+09	3,130616E+09	1,624914E+09	6,261326E+09	7,886240E+09
613	8,123889E+08	8,124302E+08	3,130600E+09	3,130626E+09	1,624819E+09	6,261226E+09	7,886045E+09
614	8,124741E+08	8,124595E+08	3,130557E+09	3,130588E+09	1,624934E+09	6,261145E+09	7,886079E+09
615	8,125312E+08	8,125428E+08	3,130604E+09	3,130473E+09	1,625074E+09	6,261077E+09	7,886151E+09
616	8,125006E+08	8,125041E+08	3,130415E+09	3,130497E+09	1,625005E+09	6,260912E+09	7,885917E+09
617	8,126100E+08	8,125851E+08	3,130412E+09	3,130422E+09	1,625195E+09	6,260834E+09	7,886029E+09
618	8,125928E+08	8,126199E+08	3,130420E+09	3,130364E+09	1,625213E+09	6,260784E+09	7,885996E+09
619	8,125785E+08	8,125778E+08	3,130319E+09	3,130413E+09	1,625156E+09	6,260732E+09	7,885889E+09
620	8,126481E+08	8,126532E+08	3,130441E+09	3,130339E+09	1,625301E+09	6,260780E+09	7,886081E+09
621	8,125673E+08	8,125947E+08	3,130424E+09	3,130387E+09	1,625162E+09	6,260811E+09	7,885973E+09
622	8,125823E+08	8,125474E+08	3,130413E+09	3,130477E+09	1,625130E+09	6,260890E+09	7,886020E+09
623	8,125980E+08	8,125982E+08	3,130533E+09	3,130455E+09	1,625196E+09	6,260988E+09	7,886184E+09
624	8,124959E+08	8,125074E+08	3,130447E+09	3,130541E+09	1,625003E+09	6,260988E+09	7,885991E+09
625	8,125349E+08	8,125096E+08	3,130517E+09	3,130549E+09	1,625044E+09	6,261065E+09	7,886110E+09
626	8,125047E+08	8,125155E+08	3,130620E+09	3,130521E+09	1,625020E+09	6,261140E+09	7,886161E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
627	8,124420E+08	8,124306E+08	3,130539E+09	3,130606E+09	1,624873E+09	6,261146E+09	7,886018E+09
628	8,125056E+08	8,124911E+08	3,130618E+09	3,130565E+09	1,624997E+09	6,261183E+09	7,886180E+09
629	8,124482E+08	8,124769E+08	3,130588E+09	3,130549E+09	1,624925E+09	6,261137E+09	7,886062E+09
630	8,124598E+08	8,124529E+08	3,130496E+09	3,130591E+09	1,624913E+09	6,261087E+09	7,886000E+09
631	8,125392E+08	8,125530E+08	3,130572E+09	3,130484E+09	1,625092E+09	6,261056E+09	7,886148E+09
632	8,124901E+08	8,125236E+08	3,130453E+09	3,130451E+09	1,625014E+09	6,260905E+09	7,885918E+09
633	8,125753E+08	8,125518E+08	3,130405E+09	3,130423E+09	1,625127E+09	6,260828E+09	7,885955E+09
634	8,126285E+08	8,126335E+08	3,130423E+09	3,130319E+09	1,625262E+09	6,260742E+09	7,886004E+09
635	8,125955E+08	8,126042E+08	3,130254E+09	3,130341E+09	1,625200E+09	6,260595E+09	7,885795E+09
636	8,126922E+08	8,126834E+08	3,130265E+09	3,130273E+09	1,625376E+09	6,260538E+09	7,885914E+09
637	8,126717E+08	8,127090E+08	3,130271E+09	3,130197E+09	1,625381E+09	6,260468E+09	7,885849E+09
638	8,126637E+08	8,126546E+08	3,130202E+09	3,130274E+09	1,625318E+09	6,260476E+09	7,885795E+09
639	8,127317E+08	8,127193E+08	3,130322E+09	3,130232E+09	1,625451E+09	6,260554E+09	7,886005E+09
640	8,126509E+08	8,126705E+08	3,130287E+09	3,130259E+09	1,625321E+09	6,260547E+09	7,885868E+09
641	8,126582E+08	8,126294E+08	3,130278E+09	3,130356E+09	1,625288E+09	6,260634E+09	7,885921E+09
642	8,126684E+08	8,126738E+08	3,130391E+09	3,130333E+09	1,625342E+09	6,260724E+09	7,886066E+09
643	8,125687E+08	8,125827E+08	3,130352E+09	3,130409E+09	1,625151E+09	6,260760E+09	7,885912E+09
644	8,126025E+08	8,125795E+08	3,130419E+09	3,130429E+09	1,625182E+09	6,260848E+09	7,886030E+09
645	8,125738E+08	8,125827E+08	3,130483E+09	3,130390E+09	1,625157E+09	6,260873E+09	7,886029E+09
646	8,125209E+08	8,125060E+08	3,130399E+09	3,130491E+09	1,625027E+09	6,260890E+09	7,885916E+09
647	8,125860E+08	8,125724E+08	3,130461E+09	3,130446E+09	1,625158E+09	6,260907E+09	7,886066E+09
648	8,125356E+08	8,125734E+08	3,130430E+09	3,130379E+09	1,625109E+09	6,260809E+09	7,885918E+09
649	8,125511E+08	8,125484E+08	3,130358E+09	3,130416E+09	1,625099E+09	6,260774E+09	7,885874E+09
650	8,126330E+08	8,126370E+08	3,130418E+09	3,130319E+09	1,625270E+09	6,260737E+09	7,886007E+09
651	8,125907E+08	8,126129E+08	3,130317E+09	3,130293E+09	1,625204E+09	6,260610E+09	7,885813E+09
652	8,126670E+08	8,126456E+08	3,130244E+09	3,130285E+09	1,625313E+09	6,260529E+09	7,885842E+09
653	8,127154E+08	8,127317E+08	3,130234E+09	3,130161E+09	1,625447E+09	6,260395E+09	7,885843E+09
654	8,126877E+08	8,127025E+08	3,130100E+09	3,130190E+09	1,625390E+09	6,260289E+09	7,885679E+09
655	8,127814E+08	8,127694E+08	3,130138E+09	3,130132E+09	1,625551E+09	6,260270E+09	7,885820E+09
656	8,127642E+08	8,127963E+08	3,130148E+09	3,130038E+09	1,625560E+09	6,260186E+09	7,885746E+09
657	8,127508E+08	8,127350E+08	3,130084E+09	3,130141E+09	1,625486E+09	6,260225E+09	7,885711E+09
658	8,128094E+08	8,127942E+08	3,130174E+09	3,130123E+09	1,625604E+09	6,260297E+09	7,885901E+09
659	8,127288E+08	8,127520E+08	3,130159E+09	3,130145E+09	1,625481E+09	6,260304E+09	7,885785E+09
660	8,127236E+08	8,127074E+08	3,130153E+09	3,130243E+09	1,625431E+09	6,260395E+09	7,885826E+09
661	8,127350E+08	8,127419E+08	3,130256E+09	3,130189E+09	1,625477E+09	6,260445E+09	7,885922E+09
662	8,126464E+08	8,126477E+08	3,130228E+09	3,130274E+09	1,625294E+09	6,260502E+09	7,885797E+09
663	8,126807E+08	8,126445E+08	3,130289E+09	3,130310E+09	1,625325E+09	6,260600E+09	7,885925E+09
664	8,126567E+08	8,126679E+08	3,130332E+09	3,130239E+09	1,625325E+09	6,260570E+09	7,885895E+09
665	8,126001E+08	8,125991E+08	3,130261E+09	3,130343E+09	1,625199E+09	6,260604E+09	7,885803E+09
666	8,126622E+08	8,126612E+08	3,130325E+09	3,130303E+09	1,625323E+09	6,260628E+09	7,885951E+09
667	8,126220E+08	8,126604E+08	3,130330E+09	3,130229E+09	1,625282E+09	6,260558E+09	7,885841E+09
668	8,126340E+08	8,126318E+08	3,130240E+09	3,130284E+09	1,625266E+09	6,260525E+09	7,885791E+09
669	8,127208E+08	8,127164E+08	3,130249E+09	3,130174E+09	1,625437E+09	6,260424E+09	7,885861E+09
670	8,126887E+08	8,127036E+08	3,130133E+09	3,130159E+09	1,625392E+09	6,260292E+09	7,885684E+09
671	8,127643E+08	8,127421E+08	3,130055E+09	3,130144E+09	1,625506E+09	6,260200E+09	7,885706E+09
672	8,128156E+08	8,128375E+08	3,130057E+09	3,129970E+09	1,625653E+09	6,260027E+09	7,885680E+09
673	8,127851E+08	8,128010E+08	3,129967E+09	3,130003E+09	1,625586E+09	6,259970E+09	7,885557E+09
674	8,128709E+08	8,128532E+08	3,130005E+09	3,129976E+09	1,625724E+09	6,259981E+09	7,885705E+09
675	8,128536E+08	8,128791E+08	3,130041E+09	3,129905E+09	1,625733E+09	6,259947E+09	7,885679E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
676	8,128245E+08	8,128196E+08	3,129958E+09	3,130041E+09	1,625644E+09	6,259999E+09	7,885643E+09
677	8,128763E+08	8,128715E+08	3,130019E+09	3,130006E+09	1,625748E+09	6,260025E+09	7,885773E+09
678	8,128037E+08	8,128272E+08	3,130029E+09	3,130033E+09	1,625631E+09	6,260062E+09	7,885693E+09
679	8,127986E+08	8,127719E+08	3,130032E+09	3,130124E+09	1,625571E+09	6,260156E+09	7,885726E+09
680	8,128147E+08	8,128111E+08	3,130127E+09	3,130037E+09	1,625626E+09	6,260165E+09	7,885790E+09
681	8,127253E+08	8,127209E+08	3,130110E+09	3,130133E+09	1,625446E+09	6,260243E+09	7,885689E+09
682	8,127519E+08	8,127206E+08	3,130144E+09	3,130183E+09	1,625472E+09	6,260328E+09	7,885800E+09
683	8,127334E+08	8,127556E+08	3,130213E+09	3,130103E+09	1,625489E+09	6,260316E+09	7,885805E+09
684	8,126703E+08	8,126869E+08	3,130141E+09	3,130212E+09	1,625357E+09	6,260353E+09	7,885710E+09
685	8,127378E+08	8,127367E+08	3,130182E+09	3,130152E+09	1,625475E+09	6,260334E+09	7,885808E+09
686	8,127158E+08	8,127384E+08	3,130181E+09	3,130095E+09	1,625454E+09	6,260276E+09	7,885730E+09
687	8,127324E+08	8,127131E+08	3,130069E+09	3,130155E+09	1,625446E+09	6,260224E+09	7,885669E+09
688	8,128245E+08	8,128178E+08	3,130052E+09	3,130004E+09	1,625642E+09	6,260055E+09	7,885697E+09
689	8,127902E+08	8,128146E+08	3,129962E+09	3,129976E+09	1,625605E+09	6,259939E+09	7,885543E+09
690	8,128570E+08	8,128464E+08	3,129901E+09	3,129969E+09	1,625703E+09	6,259870E+09	7,885573E+09
691	8,129114E+08	8,129363E+08	3,129955E+09	3,129799E+09	1,625848E+09	6,259754E+09	7,885602E+09
692	8,128674E+08	8,128903E+08	3,129863E+09	3,129874E+09	1,625758E+09	6,259737E+09	7,885495E+09
693	8,129476E+08	8,129295E+08	3,129864E+09	3,129855E+09	1,625877E+09	6,259720E+09	7,885597E+09
694	8,129374E+08	8,129583E+08	3,129884E+09	3,129808E+09	1,625896E+09	6,259692E+09	7,885588E+09
695	8,129044E+08	8,128966E+08	3,129799E+09	3,129936E+09	1,625801E+09	6,259735E+09	7,885536E+09
696	8,129599E+08	8,129505E+08	3,129862E+09	3,129848E+09	1,625910E+09	6,259709E+09	7,885620E+09
697	8,128867E+08	8,128995E+08	3,129905E+09	3,129868E+09	1,625786E+09	6,259773E+09	7,885559E+09
698	8,128751E+08	8,128388E+08	3,129904E+09	3,129981E+09	1,625714E+09	6,259885E+09	7,885599E+09
699	8,128929E+08	8,128844E+08	3,130022E+09	3,129903E+09	1,625777E+09	6,259925E+09	7,885702E+09
700	8,127889E+08	8,128050E+08	3,129998E+09	3,130023E+09	1,625594E+09	6,260020E+09	7,885614E+09
701	8,128111E+08	8,128002E+08	3,130011E+09	3,130059E+09	1,625611E+09	6,260070E+09	7,885682E+09
702	8,128071E+08	8,128349E+08	3,130094E+09	3,129992E+09	1,625642E+09	6,260086E+09	7,885728E+09
703	8,127519E+08	8,127601E+08	3,130018E+09	3,130097E+09	1,625512E+09	6,260115E+09	7,885627E+09
704	8,128324E+08	8,128150E+08	3,130024E+09	3,130000E+09	1,625647E+09	6,260023E+09	7,885671E+09
705	8,128161E+08	8,128263E+08	3,130016E+09	3,129938E+09	1,625642E+09	6,259954E+09	7,885597E+09
706	8,128285E+08	8,128114E+08	3,129876E+09	3,129997E+09	1,625640E+09	6,259873E+09	7,885513E+09
707	8,129229E+08	8,129252E+08	3,129898E+09	3,129824E+09	1,625848E+09	6,259722E+09	7,885570E+09
708	8,128773E+08	8,129220E+08	3,129831E+09	3,129804E+09	1,625799E+09	6,259635E+09	7,885434E+09
709	8,129401E+08	8,129334E+08	3,129761E+09	3,129793E+09	1,625873E+09	6,259555E+09	7,885428E+09
710	8,130044E+08	8,130204E+08	3,129818E+09	3,129672E+09	1,626025E+09	6,259490E+09	7,885515E+09
711	8,129596E+08	8,129704E+08	3,129711E+09	3,129767E+09	1,625930E+09	6,259477E+09	7,885407E+09
712	8,130386E+08	8,130169E+08	3,129687E+09	3,129718E+09	1,626056E+09	6,259405E+09	7,885460E+09
713	8,130269E+08	8,130470E+08	3,129735E+09	3,129664E+09	1,626074E+09	6,259399E+09	7,885473E+09
714	8,129852E+08	8,129758E+08	3,129658E+09	3,129792E+09	1,625961E+09	6,259450E+09	7,885411E+09
715	8,130418E+08	8,130242E+08	3,129765E+09	3,129698E+09	1,626066E+09	6,259462E+09	7,885528E+09
716	8,129547E+08	8,129736E+08	3,129807E+09	3,129744E+09	1,625928E+09	6,259551E+09	7,885479E+09
717	8,129351E+08	8,129057E+08	3,129776E+09	3,129859E+09	1,625841E+09	6,259635E+09	7,885476E+09
718	8,129609E+08	8,129626E+08	3,129886E+09	3,129810E+09	1,625924E+09	6,259696E+09	7,885620E+09
719	8,128593E+08	8,128826E+08	3,129865E+09	3,129922E+09	1,625742E+09	6,259787E+09	7,885529E+09
720	8,128899E+08	8,128781E+08	3,129871E+09	3,129909E+09	1,625768E+09	6,259780E+09	7,885548E+09
721	8,128964E+08	8,129098E+08	3,129966E+09	3,129833E+09	1,625806E+09	6,259799E+09	7,885606E+09
722	8,128423E+08	8,128381E+08	3,129862E+09	3,129950E+09	1,625680E+09	6,259811E+09	7,885492E+09
723	8,129307E+08	8,129043E+08	3,129875E+09	3,129843E+09	1,625835E+09	6,259718E+09	7,885552E+09
724	8,129019E+08	8,129318E+08	3,129859E+09	3,129787E+09	1,625834E+09	6,259645E+09	7,885479E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
725	8,129096E+08	8,129114E+08	3,129716E+09	3,129826E+09	1,625821E+09	6,259542E+09	7,885363E+09
726	8,130135E+08	8,130222E+08	3,129758E+09	3,129674E+09	1,626036E+09	6,259432E+09	7,885468E+09
727	8,129696E+08	8,130081E+08	3,129704E+09	3,129669E+09	1,625978E+09	6,259373E+09	7,885350E+09
728	8,130365E+08	8,130183E+08	3,129608E+09	3,129645E+09	1,626055E+09	6,259252E+09	7,885307E+09
729	8,131021E+08	8,131064E+08	3,129659E+09	3,129535E+09	1,626208E+09	6,259194E+09	7,885403E+09
730	8,130517E+08	8,130618E+08	3,129529E+09	3,129638E+09	1,626114E+09	6,259167E+09	7,885281E+09
731	8,131313E+08	8,131070E+08	3,129541E+09	3,129563E+09	1,626238E+09	6,259104E+09	7,885342E+09
732	8,131045E+08	8,131343E+08	3,129611E+09	3,129511E+09	1,626239E+09	6,259122E+09	7,885361E+09
733	8,130553E+08	8,130454E+08	3,129531E+09	3,129633E+09	1,626101E+09	6,259164E+09	7,885265E+09
734	8,131158E+08	8,130937E+08	3,129643E+09	3,129585E+09	1,626210E+09	6,259228E+09	7,885438E+09
735	8,130253E+08	8,130451E+08	3,129686E+09	3,129649E+09	1,626070E+09	6,259335E+09	7,885406E+09
736	8,130053E+08	8,129856E+08	3,129636E+09	3,129736E+09	1,625991E+09	6,259372E+09	7,885363E+09
737	8,130342E+08	8,130427E+08	3,129771E+09	3,129681E+09	1,626077E+09	6,259453E+09	7,885530E+09
738	8,129352E+08	8,129575E+08	3,129746E+09	3,129794E+09	1,625893E+09	6,259540E+09	7,885433E+09
739	8,129748E+08	8,129485E+08	3,129769E+09	3,129768E+09	1,625923E+09	6,259536E+09	7,885460E+09
740	8,129761E+08	8,129884E+08	3,129842E+09	3,129704E+09	1,625964E+09	6,259546E+09	7,885510E+09
741	8,129204E+08	8,129175E+08	3,129689E+09	3,129801E+09	1,625838E+09	6,259490E+09	7,885328E+09
742	8,130185E+08	8,129999E+08	3,129695E+09	3,129711E+09	1,626018E+09	6,259405E+09	7,885424E+09
743	8,129927E+08	8,130297E+08	3,129695E+09	3,129636E+09	1,626022E+09	6,259331E+09	7,885354E+09
744	8,130050E+08	8,130056E+08	3,129555E+09	3,129636E+09	1,626011E+09	6,259191E+09	7,885202E+09
745	8,131144E+08	8,131123E+08	3,129619E+09	3,129498E+09	1,626227E+09	6,259117E+09	7,885344E+09
746	8,130706E+08	8,130975E+08	3,129543E+09	3,129522E+09	1,626168E+09	6,259065E+09	7,885233E+09
747	8,131382E+08	8,131127E+08	3,129458E+09	3,129497E+09	1,626251E+09	6,258956E+09	7,885207E+09
748	8,131882E+08	8,132107E+08	3,129506E+09	3,129399E+09	1,626399E+09	6,258905E+09	7,885304E+09
749	8,131294E+08	8,131527E+08	3,129376E+09	3,129482E+09	1,626282E+09	6,258858E+09	7,885141E+09
750	8,132128E+08	8,131909E+08	3,129411E+09	3,129434E+09	1,626404E+09	6,258845E+09	7,885249E+09
751	8,131833E+08	8,132058E+08	3,129498E+09	3,129391E+09	1,626389E+09	6,258890E+09	7,885279E+09
752	8,131322E+08	8,131147E+08	3,129402E+09	3,129498E+09	1,626247E+09	6,258901E+09	7,885147E+09
753	8,131910E+08	8,131668E+08	3,129517E+09	3,129464E+09	1,626358E+09	6,258981E+09	7,885339E+09
754	8,130974E+08	8,131243E+08	3,129549E+09	3,129540E+09	1,626222E+09	6,259088E+09	7,885310E+09
755	8,130814E+08	8,130631E+08	3,129531E+09	3,129600E+09	1,626145E+09	6,259131E+09	7,885275E+09
756	8,131027E+08	8,131171E+08	3,129667E+09	3,129547E+09	1,626220E+09	6,259214E+09	7,885434E+09
757	8,130064E+08	8,130217E+08	3,129614E+09	3,129650E+09	1,626028E+09	6,259264E+09	7,885292E+09
758	8,130581E+08	8,130204E+08	3,129613E+09	3,129653E+09	1,626079E+09	6,259266E+09	7,885344E+09
759	8,130606E+08	8,130698E+08	3,129678E+09	3,129584E+09	1,626130E+09	6,259263E+09	7,885393E+09
760	8,130085E+08	8,130137E+08	3,129514E+09	3,129636E+09	1,626022E+09	6,259150E+09	7,885173E+09
761	8,131099E+08	8,130973E+08	3,129549E+09	3,129536E+09	1,626207E+09	6,259085E+09	7,885292E+09
762	8,130870E+08	8,131256E+08	3,129557E+09	3,129472E+09	1,626213E+09	6,259029E+09	7,885242E+09
763	8,131049E+08	8,130965E+08	3,129437E+09	3,129470E+09	1,626201E+09	6,258907E+09	7,885108E+09
764	8,132028E+08	8,132074E+08	3,129483E+09	3,129359E+09	1,626410E+09	6,258842E+09	7,885253E+09
765	8,131567E+08	8,131896E+08	3,129369E+09	3,129380E+09	1,626346E+09	6,258749E+09	7,885095E+09
766	8,132295E+08	8,132106E+08	3,129281E+09	3,129377E+09	1,626440E+09	6,258658E+09	7,885098E+09
767	8,132770E+08	8,133000E+08	3,129354E+09	3,129261E+09	1,626577E+09	6,258615E+09	7,885192E+09
768	8,132191E+08	8,132336E+08	3,129227E+09	3,129305E+09	1,626453E+09	6,258532E+09	7,884985E+09
769	8,133011E+08	8,132652E+08	3,129283E+09	3,129274E+09	1,626566E+09	6,258558E+09	7,885124E+09
770	8,132676E+08	8,132819E+08	3,129361E+09	3,129264E+09	1,626549E+09	6,258625E+09	7,885174E+09
771	8,132127E+08	8,131944E+08	3,129288E+09	3,129370E+09	1,626407E+09	6,258658E+09	7,885065E+09
772	8,132549E+08	8,132542E+08	3,129410E+09	3,129351E+09	1,626509E+09	6,258761E+09	7,885270E+09
773	8,131597E+08	8,131959E+08	3,129433E+09	3,129411E+09	1,626356E+09	6,258844E+09	7,885199E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
774	8,131518E+08	8,131308E+08	3,129418E+09	3,129498E+09	1,626283E+09	6,258917E+09	7,885199E+09
775	8,131779E+08	8,131784E+08	3,129547E+09	3,129444E+09	1,626356E+09	6,258991E+09	7,885347E+09
776	8,130873E+08	8,130900E+08	3,129452E+09	3,129510E+09	1,626177E+09	6,258962E+09	7,885140E+09
777	8,131449E+08	8,131046E+08	3,129444E+09	3,129508E+09	1,626249E+09	6,258952E+09	7,885202E+09
778	8,131506E+08	8,131672E+08	3,129502E+09	3,129431E+09	1,626318E+09	6,258933E+09	7,885251E+09
779	8,131032E+08	8,131124E+08	3,129384E+09	3,129447E+09	1,626216E+09	6,258831E+09	7,885047E+09
780	8,131940E+08	8,131959E+08	3,129432E+09	3,129358E+09	1,626390E+09	6,258790E+09	7,885180E+09
781	8,131727E+08	8,132121E+08	3,129417E+09	3,129305E+09	1,626385E+09	6,258723E+09	7,885107E+09
782	8,131982E+08	8,131887E+08	3,129281E+09	3,129351E+09	1,626387E+09	6,258632E+09	7,885019E+09
783	8,132954E+08	8,133010E+08	3,129319E+09	3,129244E+09	1,626596E+09	6,258563E+09	7,885159E+09
784	8,132518E+08	8,132869E+08	3,129191E+09	3,129224E+09	1,626539E+09	6,258414E+09	7,884953E+09
785	8,133266E+08	8,133027E+08	3,129129E+09	3,129214E+09	1,626629E+09	6,258343E+09	7,884972E+09
786	8,133718E+08	8,133847E+08	3,129213E+09	3,129109E+09	1,626756E+09	6,258322E+09	7,885078E+09
787	8,133130E+08	8,133131E+08	3,129116E+09	3,129146E+09	1,626626E+09	6,258262E+09	7,884888E+09
788	8,133748E+08	8,133469E+08	3,129166E+09	3,129143E+09	1,626722E+09	6,258309E+09	7,885030E+09
789	8,133351E+08	8,133606E+08	3,129220E+09	3,129143E+09	1,626696E+09	6,258363E+09	7,885059E+09
790	8,132830E+08	8,132767E+08	3,129154E+09	3,129275E+09	1,626560E+09	6,258428E+09	7,884988E+09
791	8,133221E+08	8,133230E+08	3,129296E+09	3,129244E+09	1,626645E+09	6,258540E+09	7,885185E+09
792	8,132346E+08	8,132578E+08	3,129303E+09	3,129269E+09	1,626492E+09	6,258572E+09	7,885064E+09
793	8,132333E+08	8,131931E+08	3,129280E+09	3,129362E+09	1,626426E+09	6,258642E+09	7,885069E+09
794	8,132627E+08	8,132514E+08	3,129388E+09	3,129317E+09	1,626514E+09	6,258705E+09	7,885219E+09
795	8,131755E+08	8,131799E+08	3,129309E+09	3,129351E+09	1,626355E+09	6,258660E+09	7,885015E+09
796	8,132193E+08	8,132072E+08	3,129315E+09	3,129347E+09	1,626427E+09	6,258662E+09	7,885089E+09
797	8,132265E+08	8,132598E+08	3,129375E+09	3,129263E+09	1,626486E+09	6,258638E+09	7,885124E+09
798	8,131878E+08	8,132016E+08	3,129268E+09	3,129316E+09	1,626389E+09	6,258584E+09	7,884973E+09
799	8,132790E+08	8,132756E+08	3,129309E+09	3,129240E+09	1,626555E+09	6,258549E+09	7,885104E+09
800	8,132664E+08	8,132949E+08	3,129246E+09	3,129165E+09	1,626561E+09	6,258411E+09	7,884973E+09
801	8,132984E+08	8,132834E+08	3,129093E+09	3,129212E+09	1,626582E+09	6,258305E+09	7,884887E+09
802	8,133995E+08	8,134009E+08	3,129128E+09	3,129093E+09	1,626800E+09	6,258220E+09	7,885021E+09
803	8,133589E+08	8,133837E+08	3,129038E+09	3,129029E+09	1,626743E+09	6,258067E+09	7,884810E+09
804	8,134184E+08	8,133980E+08	3,128995E+09	3,129031E+09	1,626816E+09	6,258026E+09	7,884843E+09
805	8,134572E+08	8,134662E+08	3,129064E+09	3,128943E+09	1,626923E+09	6,258008E+09	7,884931E+09
806	8,133947E+08	8,133989E+08	3,128979E+09	3,129034E+09	1,626794E+09	6,258014E+09	7,884807E+09
807	8,134447E+08	8,134309E+08	3,129042E+09	3,129046E+09	1,626876E+09	6,258088E+09	7,884963E+09
808	8,134056E+08	8,134386E+08	3,129089E+09	3,129019E+09	1,626844E+09	6,258107E+09	7,884951E+09
809	8,133574E+08	8,133484E+08	3,129040E+09	3,129153E+09	1,626706E+09	6,258193E+09	7,884899E+09
810	8,134009E+08	8,133868E+08	3,129173E+09	3,129129E+09	1,626788E+09	6,258302E+09	7,885090E+09
811	8,133191E+08	8,133230E+08	3,129186E+09	3,129127E+09	1,626642E+09	6,258313E+09	7,884956E+09
812	8,133051E+08	8,132731E+08	3,129146E+09	3,129226E+09	1,626578E+09	6,258372E+09	7,884950E+09
813	8,133337E+08	8,133350E+08	3,129228E+09	3,129174E+09	1,626669E+09	6,258402E+09	7,885071E+09
814	8,132525E+08	8,132737E+08	3,129173E+09	3,129220E+09	1,626526E+09	6,258393E+09	7,884919E+09
815	8,132942E+08	8,132909E+08	3,129202E+09	3,129206E+09	1,626585E+09	6,258409E+09	7,884994E+09
816	8,133113E+08	8,133370E+08	3,129239E+09	3,129103E+09	1,626648E+09	6,258342E+09	7,884991E+09
817	8,132832E+08	8,132824E+08	3,129115E+09	3,129176E+09	1,626566E+09	6,258292E+09	7,884857E+09
818	8,133798E+08	8,133637E+08	3,129130E+09	3,129114E+09	1,626744E+09	6,258244E+09	7,884988E+09
819	8,133743E+08	8,133975E+08	3,129074E+09	3,129003E+09	1,626772E+09	6,258078E+09	7,884849E+09
820	8,133937E+08	8,133934E+08	3,128931E+09	3,129037E+09	1,626787E+09	6,257967E+09	7,884755E+09
821	8,134916E+08	8,134968E+08	3,128970E+09	3,128912E+09	1,626988E+09	6,257882E+09	7,884871E+09
822	8,134525E+08	8,134776E+08	3,128904E+09	3,128880E+09	1,626930E+09	6,257784E+09	7,884714E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
823	8,134992E+08	8,134788E+08	3,128873E+09	3,128901E+09	1,626978E+09	6,257774E+09	7,884752E+09
824	8,135367E+08	8,135457E+08	3,128914E+09	3,128812E+09	1,627082E+09	6,257726E+09	7,884809E+09
825	8,134754E+08	8,134836E+08	3,128829E+09	3,128919E+09	1,626959E+09	6,257749E+09	7,884708E+09
826	8,135242E+08	8,135105E+08	3,128904E+09	3,128930E+09	1,627035E+09	6,257834E+09	7,884869E+09
827	8,134905E+08	8,135109E+08	3,128977E+09	3,128866E+09	1,627001E+09	6,257843E+09	7,884844E+09
828	8,134309E+08	8,134200E+08	3,128929E+09	3,129006E+09	1,626851E+09	6,257935E+09	7,884786E+09
829	8,134734E+08	8,134502E+08	3,129031E+09	3,128994E+09	1,626924E+09	6,258025E+09	7,884949E+09
830	8,133943E+08	8,134013E+08	3,129047E+09	3,129018E+09	1,626796E+09	6,258065E+09	7,884860E+09
831	8,133721E+08	8,133567E+08	3,129020E+09	3,129112E+09	1,626729E+09	6,258132E+09	7,884861E+09
832	8,134062E+08	8,134168E+08	3,129094E+09	3,129028E+09	1,626823E+09	6,258122E+09	7,884945E+09
833	8,133340E+08	8,133557E+08	3,129054E+09	3,129082E+09	1,626690E+09	6,258136E+09	7,884826E+09
834	8,133826E+08	8,133685E+08	3,129074E+09	3,129080E+09	1,626751E+09	6,258154E+09	7,884905E+09
835	8,134095E+08	8,134177E+08	3,129097E+09	3,128952E+09	1,626827E+09	6,258049E+09	7,884876E+09
836	8,133753E+08	8,133813E+08	3,128948E+09	3,129028E+09	1,626757E+09	6,257976E+09	7,884732E+09
837	8,134747E+08	8,134636E+08	3,128930E+09	3,128953E+09	1,626938E+09	6,257883E+09	7,884821E+09
838	8,134731E+08	8,135041E+08	3,128904E+09	3,128842E+09	1,626977E+09	6,257746E+09	7,884723E+09
839	8,134852E+08	8,134894E+08	3,128792E+09	3,128866E+09	1,626975E+09	6,257659E+09	7,884633E+09
840	8,135835E+08	8,135798E+08	3,128816E+09	3,128731E+09	1,627163E+09	6,257547E+09	7,884711E+09
841	8,135460E+08	8,135640E+08	3,128754E+09	3,128734E+09	1,627110E+09	6,257488E+09	7,884598E+09
842	8,135883E+08	8,135667E+08	3,128721E+09	3,128781E+09	1,627155E+09	6,257502E+09	7,884657E+09
843	8,136253E+08	8,136374E+08	3,128781E+09	3,128672E+09	1,627263E+09	6,257453E+09	7,884716E+09
844	8,135520E+08	8,135748E+08	3,128717E+09	3,128782E+09	1,627127E+09	6,257500E+09	7,884626E+09
845	8,135976E+08	8,135803E+08	3,128784E+09	3,128799E+09	1,627178E+09	6,257583E+09	7,884761E+09
846	8,135668E+08	8,135777E+08	3,128869E+09	3,128760E+09	1,627144E+09	6,257629E+09	7,884774E+09
847	8,134975E+08	8,134825E+08	3,128813E+09	3,128904E+09	1,626980E+09	6,257717E+09	7,884697E+09
848	8,135413E+08	8,135170E+08	3,128874E+09	3,128873E+09	1,627058E+09	6,257748E+09	7,884806E+09
849	8,134697E+08	8,134844E+08	3,128893E+09	3,128896E+09	1,626954E+09	6,257789E+09	7,884743E+09
850	8,134509E+08	8,134383E+08	3,128886E+09	3,128978E+09	1,626889E+09	6,257864E+09	7,884753E+09
851	8,134942E+08	8,134972E+08	3,128980E+09	3,128859E+09	1,626991E+09	6,257839E+09	7,884830E+09
852	8,134186E+08	8,134397E+08	3,128930E+09	3,128921E+09	1,626858E+09	6,257850E+09	7,884709E+09
853	8,134679E+08	8,134476E+08	3,128912E+09	3,128937E+09	1,626916E+09	6,257848E+09	7,884764E+09
854	8,135013E+08	8,135139E+08	3,128934E+09	3,128826E+09	1,627015E+09	6,257760E+09	7,884775E+09
855	8,134604E+08	8,134821E+08	3,128792E+09	3,128886E+09	1,626943E+09	6,257678E+09	7,884620E+09
856	8,135653E+08	8,135575E+08	3,128763E+09	3,128781E+09	1,627123E+09	6,257545E+09	7,884667E+09
857	8,135718E+08	8,135984E+08	3,128751E+09	3,128676E+09	1,627170E+09	6,257428E+09	7,884598E+09
858	8,135844E+08	8,135756E+08	3,128650E+09	3,128714E+09	1,627160E+09	6,257364E+09	7,884524E+09
859	8,136826E+08	8,136672E+08	3,128672E+09	3,128569E+09	1,627350E+09	6,257241E+09	7,884591E+09
860	8,136335E+08	8,136629E+08	3,128607E+09	3,128590E+09	1,627296E+09	6,257197E+09	7,884493E+09
861	8,136700E+08	8,136583E+08	3,128562E+09	3,128647E+09	1,627328E+09	6,257210E+09	7,884538E+09
862	8,137083E+08	8,137249E+08	3,128657E+09	3,128549E+09	1,627433E+09	6,257206E+09	7,884639E+09
863	8,136261E+08	8,136476E+08	3,128611E+09	3,128657E+09	1,627274E+09	6,257268E+09	7,884541E+09
864	8,136729E+08	8,136386E+08	3,128643E+09	3,128665E+09	1,627311E+09	6,257307E+09	7,884619E+09
865	8,136456E+08	8,136454E+08	3,128717E+09	3,128648E+09	1,627291E+09	6,257365E+09	7,884656E+09
866	8,135755E+08	8,135596E+08	3,128667E+09	3,128791E+09	1,627135E+09	6,257458E+09	7,884593E+09
867	8,136202E+08	8,136016E+08	3,128743E+09	3,128722E+09	1,627222E+09	6,257464E+09	7,884686E+09
868	8,135426E+08	8,135755E+08	3,128791E+09	3,128741E+09	1,627118E+09	6,257531E+09	7,884650E+09
869	8,135243E+08	8,135149E+08	3,128772E+09	3,128833E+09	1,627039E+09	6,257605E+09	7,884644E+09
870	8,135724E+08	8,135725E+08	3,128872E+09	3,128739E+09	1,627145E+09	6,257611E+09	7,884756E+09
871	8,134936E+08	8,135170E+08	3,128804E+09	3,128808E+09	1,627011E+09	6,257611E+09	7,884622E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
872	8,135498E+08	8,135272E+08	3,128728E+09	3,128802E+09	1,627077E+09	6,257530E+09	7,884607E+09
873	8,135953E+08	8,136099E+08	3,128747E+09	3,128683E+09	1,627205E+09	6,257430E+09	7,884635E+09
874	8,135615E+08	8,135774E+08	3,128626E+09	3,128718E+09	1,627139E+09	6,257344E+09	7,884483E+09
875	8,136716E+08	8,136504E+08	3,128611E+09	3,128579E+09	1,627322E+09	6,257190E+09	7,884512E+09
876	8,136712E+08	8,136975E+08	3,128606E+09	3,128489E+09	1,627369E+09	6,257096E+09	7,884465E+09
877	8,136776E+08	8,136683E+08	3,128486E+09	3,128560E+09	1,627346E+09	6,257046E+09	7,884392E+09
878	8,137713E+08	8,137680E+08	3,128532E+09	3,128445E+09	1,627539E+09	6,256977E+09	7,884516E+09
879	8,137118E+08	8,137592E+08	3,128487E+09	3,128471E+09	1,627471E+09	6,256958E+09	7,884429E+09
880	8,137470E+08	8,137359E+08	3,128429E+09	3,128516E+09	1,627483E+09	6,256945E+09	7,884428E+09
881	8,137919E+08	8,137984E+08	3,128525E+09	3,128433E+09	1,627590E+09	6,256958E+09	7,884548E+09
882	8,137102E+08	8,137115E+08	3,128479E+09	3,128542E+09	1,627422E+09	6,257020E+09	7,884442E+09
883	8,137566E+08	8,137082E+08	3,128496E+09	3,128525E+09	1,627465E+09	6,257021E+09	7,884486E+09
884	8,137211E+08	8,137316E+08	3,128571E+09	3,128503E+09	1,627453E+09	6,257073E+09	7,884526E+09
885	8,136456E+08	8,136422E+08	3,128526E+09	3,128648E+09	1,627288E+09	6,257174E+09	7,884462E+09
886	8,136909E+08	8,136830E+08	3,128648E+09	3,128584E+09	1,627374E+09	6,257232E+09	7,884606E+09
887	8,136091E+08	8,136469E+08	3,128705E+09	3,128609E+09	1,627256E+09	6,257315E+09	7,884571E+09
888	8,135955E+08	8,135763E+08	3,128638E+09	3,128704E+09	1,627172E+09	6,257342E+09	7,884514E+09
889	8,136556E+08	8,136480E+08	3,128706E+09	3,128631E+09	1,627304E+09	6,257337E+09	7,884641E+09
890	8,135851E+08	8,136042E+08	3,128634E+09	3,128684E+09	1,627189E+09	6,257317E+09	7,884507E+09
891	8,136491E+08	8,136243E+08	3,128557E+09	3,128630E+09	1,627273E+09	6,257187E+09	7,884460E+09
892	8,136934E+08	8,137141E+08	3,128600E+09	3,128495E+09	1,627407E+09	6,257095E+09	7,884502E+09
893	8,136587E+08	8,136723E+08	3,128478E+09	3,128539E+09	1,627331E+09	6,257017E+09	7,884348E+09
894	8,137665E+08	8,137446E+08	3,128482E+09	3,128423E+09	1,627511E+09	6,256905E+09	7,884416E+09
895	8,137556E+08	8,137938E+08	3,128474E+09	3,128356E+09	1,627549E+09	6,256829E+09	7,884379E+09
896	8,137609E+08	8,137606E+08	3,128314E+09	3,128426E+09	1,627522E+09	6,256740E+09	7,884262E+09
897	8,138599E+08	8,138643E+08	3,128366E+09	3,128324E+09	1,627724E+09	6,256690E+09	7,884414E+09
898	8,138066E+08	8,138428E+08	3,128350E+09	3,128336E+09	1,627649E+09	6,256686E+09	7,884336E+09
899	8,138430E+08	8,138093E+08	3,128284E+09	3,128349E+09	1,627652E+09	6,256634E+09	7,884286E+09
900	8,138792E+08	8,138755E+08	3,128384E+09	3,128276E+09	1,627755E+09	6,256660E+09	7,884414E+09
901	8,137898E+08	8,137887E+08	3,128323E+09	3,128401E+09	1,627579E+09	6,256725E+09	7,884303E+09
902	8,138276E+08	8,137933E+08	3,128375E+09	3,128397E+09	1,627621E+09	6,256773E+09	7,884393E+09
903	8,137817E+08	8,138164E+08	3,128482E+09	3,128381E+09	1,627598E+09	6,256863E+09	7,884461E+09
904	8,137070E+08	8,137095E+08	3,128423E+09	3,128521E+09	1,627416E+09	6,256944E+09	7,884360E+09
905	8,137606E+08	8,137496E+08	3,128538E+09	3,128483E+09	1,627510E+09	6,257021E+09	7,884531E+09
906	8,136892E+08	8,137085E+08	3,128584E+09	3,128509E+09	1,627398E+09	6,257093E+09	7,884491E+09
907	8,136821E+08	8,136495E+08	3,128474E+09	3,128571E+09	1,627332E+09	6,257045E+09	7,884377E+09
908	8,137448E+08	8,137421E+08	3,128532E+09	3,128479E+09	1,627487E+09	6,257011E+09	7,884498E+09
909	8,136778E+08	8,137017E+08	3,128457E+09	3,128513E+09	1,627380E+09	6,256970E+09	7,884350E+09
910	8,137442E+08	8,137227E+08	3,128424E+09	3,128448E+09	1,627467E+09	6,256873E+09	7,884340E+09
911	8,137822E+08	8,138089E+08	3,128478E+09	3,128322E+09	1,627591E+09	6,256799E+09	7,884390E+09
912	8,137460E+08	8,137577E+08	3,128321E+09	3,128379E+09	1,627504E+09	6,256700E+09	7,884204E+09
913	8,138569E+08	8,138422E+08	3,128314E+09	3,128299E+09	1,627699E+09	6,256613E+09	7,884312E+09
914	8,138509E+08	8,138907E+08	3,128317E+09	3,128231E+09	1,627742E+09	6,256548E+09	7,884289E+09
915	8,138590E+08	8,138572E+08	3,128160E+09	3,128270E+09	1,627716E+09	6,256429E+09	7,884146E+09
916	8,139559E+08	8,139568E+08	3,128229E+09	3,128158E+09	1,627913E+09	6,256387E+09	7,884300E+09
917	8,138990E+08	8,139206E+08	3,128205E+09	3,128185E+09	1,627820E+09	6,256390E+09	7,884210E+09
918	8,139283E+08	8,138849E+08	3,128159E+09	3,128214E+09	1,627813E+09	6,256373E+09	7,884186E+09
919	8,139491E+08	8,139540E+08	3,128255E+09	3,128154E+09	1,627903E+09	6,256409E+09	7,884312E+09
920	8,138544E+08	8,138653E+08	3,128174E+09	3,128274E+09	1,627720E+09	6,256448E+09	7,884167E+09



1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
921	8,138952E+08	8,138749E+08	3,128244E+09	3,128283E+09	1,627770E+09	6,256527E+09	7,884297E+09
922	8,138576E+08	8,138851E+08	3,128382E+09	3,128260E+09	1,627743E+09	6,256642E+09	7,884385E+09
923	8,137883E+08	8,137751E+08	3,128301E+09	3,128379E+09	1,627563E+09	6,256681E+09	7,884244E+09
924	8,138421E+08	8,138222E+08	3,128401E+09	3,128348E+09	1,627664E+09	6,256749E+09	7,884413E+09
925	8,137726E+08	8,137887E+08	3,128419E+09	3,128381E+09	1,627561E+09	6,256800E+09	7,884361E+09
926	8,137660E+08	8,137432E+08	3,128330E+09	3,128429E+09	1,627509E+09	6,256759E+09	7,884268E+09
927	8,138231E+08	8,138394E+08	3,128409E+09	3,128326E+09	1,627662E+09	6,256735E+09	7,884398E+09
928	8,137596E+08	8,137894E+08	3,128318E+09	3,128345E+09	1,627549E+09	6,256663E+09	7,884212E+09
929	8,138323E+08	8,138122E+08	3,128281E+09	3,128306E+09	1,627645E+09	6,256588E+09	7,884232E+09
930	8,138786E+08	8,138938E+08	3,128337E+09	3,128189E+09	1,627772E+09	6,256526E+09	7,884298E+09
931	8,138452E+08	8,138509E+08	3,128142E+09	3,128224E+09	1,627696E+09	6,256367E+09	7,884063E+09
932	8,139536E+08	8,139466E+08	3,128140E+09	3,128140E+09	1,627900E+09	6,256280E+09	7,884180E+09
933	8,139506E+08	8,139894E+08	3,128149E+09	3,128070E+09	1,627940E+09	6,256220E+09	7,884160E+09
934	8,139567E+08	8,139468E+08	3,128030E+09	3,128103E+09	1,627904E+09	6,256132E+09	7,884036E+09
935	8,140420E+08	8,140388E+08	3,128104E+09	3,128007E+09	1,628081E+09	6,256111E+09	7,884192E+09
936	8,139792E+08	8,139940E+08	3,128043E+09	3,128042E+09	1,627973E+09	6,256084E+09	7,884058E+09
937	8,140050E+08	8,139703E+08	3,127998E+09	3,128102E+09	1,627975E+09	6,256100E+09	7,884075E+09
938	8,140262E+08	8,140364E+08	3,128127E+09	3,128042E+09	1,628063E+09	6,256169E+09	7,884232E+09
939	8,139308E+08	8,139455E+08	3,128057E+09	3,128135E+09	1,627876E+09	6,256192E+09	7,884068E+09
940	8,139687E+08	8,139517E+08	3,128149E+09	3,128146E+09	1,627920E+09	6,256295E+09	7,884215E+09
941	8,139339E+08	8,139506E+08	3,128269E+09	3,128143E+09	1,627884E+09	6,256412E+09	7,884296E+09
942	8,138637E+08	8,138434E+08	3,128190E+09	3,128264E+09	1,627707E+09	6,256454E+09	7,884161E+09
943	8,139112E+08	8,139003E+08	3,128266E+09	3,128233E+09	1,627811E+09	6,256499E+09	7,884311E+09
944	8,138447E+08	8,138698E+08	3,128249E+09	3,128244E+09	1,627715E+09	6,256492E+09	7,884207E+09
945	8,138479E+08	8,138349E+08	3,128173E+09	3,128289E+09	1,627683E+09	6,256462E+09	7,884145E+09
946	8,139160E+08	8,139194E+08	3,128276E+09	3,128168E+09	1,627835E+09	6,256444E+09	7,884280E+09
947	8,138577E+08	8,138740E+08	3,128164E+09	3,128166E+09	1,627732E+09	6,256330E+09	7,884061E+09
948	8,139292E+08	8,139069E+08	3,128121E+09	3,128136E+09	1,627836E+09	6,256257E+09	7,884093E+09
949	8,139753E+08	8,139932E+08	3,128159E+09	3,128040E+09	1,627969E+09	6,256199E+09	7,884168E+09
950	8,139419E+08	8,139570E+08	3,127999E+09	3,128071E+09	1,627899E+09	6,256071E+09	7,883970E+09
951	8,140424E+08	8,140472E+08	3,128011E+09	3,127989E+09	1,628090E+09	6,256001E+09	7,884090E+09
952	8,140396E+08	8,140745E+08	3,127998E+09	3,127917E+09	1,628114E+09	6,255915E+09	7,884029E+09
953	8,140476E+08	8,140323E+08	3,127872E+09	3,127976E+09	1,628080E+09	6,255848E+09	7,883928E+09
954	8,141323E+08	8,141143E+08	3,127955E+09	3,127884E+09	1,628247E+09	6,255839E+09	7,884086E+09
955	8,140658E+08	8,140808E+08	3,127872E+09	3,127895E+09	1,628147E+09	6,255767E+09	7,883913E+09
956	8,140849E+08	8,140639E+08	3,127857E+09	3,127948E+09	1,628149E+09	6,255805E+09	7,883954E+09
957	8,141047E+08	8,141190E+08	3,128007E+09	3,127901E+09	1,628224E+09	6,255908E+09	7,884132E+09
958	8,140083E+08	8,140180E+08	3,127976E+09	3,127994E+09	1,628026E+09	6,255970E+09	7,883997E+09
959	8,140344E+08	8,140182E+08	3,128058E+09	3,128030E+09	1,628053E+09	6,256088E+09	7,884141E+09
960	8,139997E+08	8,140125E+08	3,128125E+09	3,128033E+09	1,628012E+09	6,256158E+09	7,884170E+09
961	8,139346E+08	8,139227E+08	3,128028E+09	3,128167E+09	1,627857E+09	6,256195E+09	7,884052E+09
962	8,139917E+08	8,139781E+08	3,128125E+09	3,128117E+09	1,627970E+09	6,256242E+09	7,884212E+09
963	8,139326E+08	8,139541E+08	3,128098E+09	3,128077E+09	1,627887E+09	6,256176E+09	7,884063E+09
964	8,139375E+08	8,139224E+08	3,128043E+09	3,128113E+09	1,627860E+09	6,256157E+09	7,884016E+09
965	8,140089E+08	8,140034E+08	3,128133E+09	3,128015E+09	1,628012E+09	6,256148E+09	7,884160E+09
966	8,139502E+08	8,139637E+08	3,128029E+09	3,128014E+09	1,627914E+09	6,256043E+09	7,883957E+09
967	8,140117E+08	8,140079E+08	3,127971E+09	3,127998E+09	1,628020E+09	6,255970E+09	7,883989E+09
968	8,140606E+08	8,140911E+08	3,127979E+09	3,127890E+09	1,628152E+09	6,255869E+09	7,884021E+09
969	8,140365E+08	8,140581E+08	3,127834E+09	3,127928E+09	1,628095E+09	6,255762E+09	7,883857E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
970	8,141449E+08	8,141295E+08	3,127867E+09	3,127840E+09	1,628274E+09	6,255707E+09	7,883981E+09
971	8,141420E+08	8,141585E+08	3,127824E+09	3,127747E+09	1,628300E+09	6,255570E+09	7,883871E+09
972	8,141431E+08	8,141249E+08	3,127707E+09	3,127810E+09	1,628268E+09	6,255517E+09	7,883785E+09
973	8,142203E+08	8,142074E+08	3,127794E+09	3,127741E+09	1,628428E+09	6,255535E+09	7,883963E+09
974	8,141467E+08	8,141745E+08	3,127769E+09	3,127747E+09	1,628321E+09	6,255516E+09	7,883837E+09
975	8,141515E+08	8,141492E+08	3,127780E+09	3,127818E+09	1,628301E+09	6,255598E+09	7,883899E+09
976	8,141688E+08	8,141835E+08	3,127903E+09	3,127786E+09	1,628352E+09	6,255689E+09	7,884041E+09
977	8,140787E+08	8,140829E+08	3,127858E+09	3,127913E+09	1,628162E+09	6,255770E+09	7,883932E+09
978	8,141094E+08	8,140728E+08	3,127922E+09	3,127943E+09	1,628182E+09	6,255866E+09	7,884048E+09
979	8,140784E+08	8,140845E+08	3,127945E+09	3,127906E+09	1,628163E+09	6,255851E+09	7,884014E+09
980	8,140173E+08	8,140108E+08	3,127868E+09	3,128006E+09	1,628028E+09	6,255873E+09	7,883902E+09
981	8,140784E+08	8,140611E+08	3,127978E+09	3,127951E+09	1,628139E+09	6,255929E+09	7,884069E+09
982	8,140227E+08	8,140392E+08	3,127989E+09	3,127898E+09	1,628062E+09	6,255888E+09	7,883950E+09
983	8,140177E+08	8,140108E+08	3,127925E+09	3,127957E+09	1,628028E+09	6,255882E+09	7,883911E+09
984	8,140865E+08	8,140908E+08	3,127969E+09	3,127874E+09	1,628177E+09	6,255844E+09	7,884021E+09
985	8,140356E+08	8,140677E+08	3,127862E+09	3,127896E+09	1,628103E+09	6,255758E+09	7,883861E+09
986	8,141045E+08	8,141010E+08	3,127827E+09	3,127870E+09	1,628206E+09	6,255697E+09	7,883902E+09
987	8,141605E+08	8,141852E+08	3,127817E+09	3,127725E+09	1,628346E+09	6,255542E+09	7,883887E+09
988	8,141407E+08	8,141526E+08	3,127683E+09	3,127752E+09	1,628293E+09	6,255435E+09	7,883728E+09
989	8,142474E+08	8,142153E+08	3,127703E+09	3,127685E+09	1,628463E+09	6,255388E+09	7,883851E+09
990	8,142388E+08	8,142502E+08	3,127677E+09	3,127585E+09	1,628489E+09	6,255262E+09	7,883751E+09
991	8,142215E+08	8,142243E+08	3,127570E+09	3,127666E+09	1,628446E+09	6,255235E+09	7,883681E+09
992	8,142914E+08	8,142952E+08	3,127652E+09	3,127600E+09	1,628587E+09	6,255252E+09	7,883839E+09
993	8,142228E+08	8,142567E+08	3,127653E+09	3,127631E+09	1,628479E+09	6,255283E+09	7,883763E+09
994	8,142300E+08	8,142087E+08	3,127681E+09	3,127713E+09	1,628439E+09	6,255394E+09	7,883833E+09
995	8,142486E+08	8,142444E+08	3,127752E+09	3,127664E+09	1,628493E+09	6,255416E+09	7,883909E+09
996	8,141581E+08	8,141558E+08	3,127702E+09	3,127784E+09	1,628314E+09	6,255486E+09	7,883799E+09
997	8,141886E+08	8,141509E+08	3,127760E+09	3,127821E+09	1,628340E+09	6,255581E+09	7,883921E+09
998	8,141586E+08	8,141687E+08	3,127827E+09	3,127749E+09	1,628327E+09	6,255576E+09	7,883903E+09
999	8,140882E+08	8,140987E+08	3,127774E+09	3,127849E+09	1,628187E+09	6,255623E+09	7,883810E+09
1000	8,141479E+08	8,141372E+08	3,127856E+09	3,127803E+09	1,628285E+09	6,255659E+09	7,883944E+09
1001	8,141005E+08	8,141228E+08	3,127860E+09	3,127783E+09	1,628223E+09	6,255643E+09	7,883866E+09
1002	8,140999E+08	8,140891E+08	3,127787E+09	3,127847E+09	1,628189E+09	6,255634E+09	7,883823E+09
1003	8,141744E+08	8,141827E+08	3,127784E+09	3,127732E+09	1,628357E+09	6,255516E+09	7,883873E+09
1004	8,141341E+08	8,141689E+08	3,127695E+09	3,127727E+09	1,628303E+09	6,255422E+09	7,883725E+09
1005	8,142106E+08	8,141919E+08	3,127662E+09	3,127702E+09	1,628403E+09	6,255364E+09	7,883766E+09
1006	8,142688E+08	8,142756E+08	3,127676E+09	3,127537E+09	1,628544E+09	6,255213E+09	7,883757E+09
1007	8,142361E+08	8,142502E+08	3,127536E+09	3,127581E+09	1,628486E+09	6,255117E+09	7,883603E+09
1008	8,143318E+08	8,143083E+08	3,127523E+09	3,127531E+09	1,628640E+09	6,255053E+09	7,883693E+09
1009	8,143241E+08	8,143547E+08	3,127523E+09	3,127460E+09	1,628679E+09	6,254983E+09	7,883662E+09
1010	8,143046E+08	8,143090E+08	3,127455E+09	3,127544E+09	1,628614E+09	6,254999E+09	7,883612E+09
1011	8,143719E+08	8,143729E+08	3,127523E+09	3,127465E+09	1,628745E+09	6,254987E+09	7,883732E+09
1012	8,143081E+08	8,143309E+08	3,127536E+09	3,127500E+09	1,628639E+09	6,255036E+09	7,883675E+09
1013	8,143121E+08	8,142715E+08	3,127539E+09	3,127605E+09	1,628584E+09	6,255145E+09	7,883728E+09
1014	8,143284E+08	8,143164E+08	3,127616E+09	3,127534E+09	1,628645E+09	6,255150E+09	7,883795E+09
1015	8,142268E+08	8,142432E+08	3,127565E+09	3,127644E+09	1,628470E+09	6,255209E+09	7,883679E+09
1016	8,142535E+08	8,142307E+08	3,127616E+09	3,127670E+09	1,628484E+09	6,255286E+09	7,883770E+09
1017	8,142328E+08	8,142512E+08	3,127713E+09	3,127612E+09	1,628484E+09	6,255325E+09	7,883809E+09
1018	8,141658E+08	8,141656E+08	3,127675E+09	3,127723E+09	1,628331E+09	6,255397E+09	7,883729E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
1019	8,142262E+08	8,142114E+08	3,127706E+09	3,127666E+09	1,628438E+09	6,255372E+09	7,883809E+09
1020	8,141874E+08	8,142125E+08	3,127706E+09	3,127643E+09	1,628400E+09	6,255349E+09	7,883749E+09
1021	8,141911E+08	8,141814E+08	3,127623E+09	3,127716E+09	1,628372E+09	6,255339E+09	7,883712E+09
1022	8,142731E+08	8,142784E+08	3,127648E+09	3,127564E+09	1,628552E+09	6,255212E+09	7,883764E+09
1023	8,142286E+08	8,142688E+08	3,127567E+09	3,127558E+09	1,628497E+09	6,255125E+09	7,883622E+09
1024	8,143035E+08	8,142799E+08	3,127497E+09	3,127541E+09	1,628583E+09	6,255039E+09	7,883622E+09
1025	8,143653E+08	8,143692E+08	3,127507E+09	3,127399E+09	1,628735E+09	6,254906E+09	7,883641E+09
1026	8,143286E+08	8,143399E+08	3,127376E+09	3,127448E+09	1,628669E+09	6,254824E+09	7,883493E+09
1027	8,144192E+08	8,144061E+08	3,127339E+09	3,127372E+09	1,628825E+09	6,254711E+09	7,883536E+09
1028	8,144156E+08	8,144514E+08	3,127382E+09	3,127294E+09	1,628867E+09	6,254676E+09	7,883543E+09
1029	8,143961E+08	8,143888E+08	3,127330E+09	3,127403E+09	1,628785E+09	6,254733E+09	7,883518E+09
1030	8,144614E+08	8,144455E+08	3,127410E+09	3,127316E+09	1,628907E+09	6,254726E+09	7,883633E+09
1031	8,143849E+08	8,144092E+08	3,127412E+09	3,127371E+09	1,628794E+09	6,254783E+09	7,883577E+09
1032	8,143787E+08	8,143464E+08	3,127377E+09	3,127484E+09	1,628725E+09	6,254862E+09	7,883587E+09
1033	8,143977E+08	8,144004E+08	3,127479E+09	3,127423E+09	1,628798E+09	6,254903E+09	7,883701E+09
1034	8,142965E+08	8,143154E+08	3,127468E+09	3,127523E+09	1,628612E+09	6,254991E+09	7,883603E+09
1035	8,143241E+08	8,143017E+08	3,127495E+09	3,127527E+09	1,628626E+09	6,255022E+09	7,883648E+09
1036	8,143137E+08	8,143250E+08	3,127601E+09	3,127475E+09	1,628639E+09	6,255076E+09	7,883714E+09
1037	8,142495E+08	8,142363E+08	3,127537E+09	3,127609E+09	1,628486E+09	6,255146E+09	7,883631E+09
1038	8,143114E+08	8,142953E+08	3,127561E+09	3,127528E+09	1,628607E+09	6,255088E+09	7,883695E+09
1039	8,142713E+08	8,143133E+08	3,127557E+09	3,127494E+09	1,628585E+09	6,255051E+09	7,883636E+09
1040	8,142768E+08	8,142727E+08	3,127452E+09	3,127552E+09	1,628550E+09	6,255004E+09	7,883554E+09
1041	8,143719E+08	8,143723E+08	3,127497E+09	3,127409E+09	1,628744E+09	6,254906E+09	7,883650E+09
1042	8,143300E+08	8,143535E+08	3,127416E+09	3,127401E+09	1,628683E+09	6,254817E+09	7,883500E+09
1043	8,143998E+08	8,143726E+08	3,127300E+09	3,127371E+09	1,628772E+09	6,254671E+09	7,883444E+09
1044	8,144646E+08	8,144761E+08	3,127330E+09	3,127232E+09	1,628941E+09	6,254562E+09	7,883502E+09
1045	8,144242E+08	8,144409E+08	3,127220E+09	3,127299E+09	1,628865E+09	6,254519E+09	7,883384E+09
1046	8,145110E+08	8,145023E+08	3,127228E+09	3,127204E+09	1,629013E+09	6,254432E+09	7,883445E+09
1047	8,145004E+08	8,145434E+08	3,127283E+09	3,127147E+09	1,629044E+09	6,254430E+09	7,883474E+09
1048	8,144730E+08	8,144612E+08	3,127197E+09	3,127279E+09	1,628934E+09	6,254476E+09	7,883410E+09
1049	8,145396E+08	8,145190E+08	3,127273E+09	3,127219E+09	1,629059E+09	6,254492E+09	7,883551E+09
1050	8,144590E+08	8,144787E+08	3,127272E+09	3,127271E+09	1,628938E+09	6,254543E+09	7,883481E+09
1051	8,144487E+08	8,144232E+08	3,127210E+09	3,127349E+09	1,628872E+09	6,254558E+09	7,883430E+09
1052	8,144766E+08	8,144782E+08	3,127351E+09	3,127272E+09	1,628955E+09	6,254623E+09	7,883578E+09
1053	8,143781E+08	8,143840E+08	3,127356E+09	3,127386E+09	1,628762E+09	6,254743E+09	7,883505E+09
1054	8,144056E+08	8,143733E+08	3,127388E+09	3,127376E+09	1,628779E+09	6,254764E+09	7,883543E+09
1055	8,143892E+08	8,144096E+08	3,127478E+09	3,127343E+09	1,628799E+09	6,254821E+09	7,883620E+09
1056	8,143219E+08	8,143223E+08	3,127376E+09	3,127485E+09	1,628644E+09	6,254862E+09	7,883506E+09
1057	8,143931E+08	8,143876E+08	3,127415E+09	3,127406E+09	1,628781E+09	6,254821E+09	7,883601E+09
1058	8,143585E+08	8,143971E+08	3,127430E+09	3,127360E+09	1,628756E+09	6,254790E+09	7,883546E+09
1059	8,143684E+08	8,143593E+08	3,127284E+09	3,127388E+09	1,628728E+09	6,254672E+09	7,883400E+09
1060	8,144736E+08	8,144612E+08	3,127333E+09	3,127242E+09	1,628935E+09	6,254575E+09	7,883510E+09
1061	8,144320E+08	8,144452E+08	3,127243E+09	3,127248E+09	1,628877E+09	6,254491E+09	7,883368E+09
1062	8,144983E+08	8,144765E+08	3,127134E+09	3,127190E+09	1,628975E+09	6,254324E+09	7,883299E+09
1063	8,145551E+08	8,145884E+08	3,127186E+09	3,127058E+09	1,629144E+09	6,254244E+09	7,883387E+09
1064	8,145102E+08	8,145351E+08	3,127077E+09	3,127137E+09	1,629045E+09	6,254215E+09	7,883260E+09
1065	8,146002E+08	8,145869E+08	3,127110E+09	3,127073E+09	1,629187E+09	6,254183E+09	7,883370E+09
1066	8,145869E+08	8,146138E+08	3,127161E+09	3,127037E+09	1,629201E+09	6,254198E+09	7,883398E+09
1067	8,145531E+08	8,145357E+08	3,127019E+09	3,127156E+09	1,629089E+09	6,254175E+09	7,883264E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
1068	8,146226E+08	8,146014E+08	3,127110E+09	3,127092E+09	1,629224E+09	6,254202E+09	7,883426E+09
1069	8,145409E+08	8,145580E+08	3,127132E+09	3,127143E+09	1,629099E+09	6,254276E+09	7,883375E+09
1070	8,145277E+08	8,145026E+08	3,127107E+09	3,127189E+09	1,629030E+09	6,254296E+09	7,883326E+09
1071	8,145505E+08	8,145599E+08	3,127262E+09	3,127130E+09	1,629110E+09	6,254392E+09	7,883502E+09
1072	8,144465E+08	8,144526E+08	3,127234E+09	3,127265E+09	1,628899E+09	6,254499E+09	7,883398E+09
1073	8,144763E+08	8,144495E+08	3,127265E+09	3,127277E+09	1,628926E+09	6,254542E+09	7,883468E+09
1074	8,144617E+08	8,144873E+08	3,127340E+09	3,127238E+09	1,628949E+09	6,254578E+09	7,883527E+09
1075	8,143976E+08	8,144066E+08	3,127200E+09	3,127339E+09	1,628804E+09	6,254539E+09	7,883343E+09
1076	8,144865E+08	8,144726E+08	3,127263E+09	3,127242E+09	1,628959E+09	6,254506E+09	7,883465E+09
1077	8,144605E+08	8,144776E+08	3,127275E+09	3,127199E+09	1,628938E+09	6,254475E+09	7,883413E+09
1078	8,144715E+08	8,144500E+08	3,127127E+09	3,127201E+09	1,628922E+09	6,254328E+09	7,883249E+09
1079	8,145692E+08	8,145678E+08	3,127171E+09	3,127068E+09	1,629137E+09	6,254238E+09	7,883375E+09
1080	8,145197E+08	8,145512E+08	3,127070E+09	3,127086E+09	1,629071E+09	6,254155E+09	7,883226E+09
1081	8,145870E+08	8,145822E+08	3,127005E+09	3,127046E+09	1,629169E+09	6,254051E+09	7,883220E+09
1082	8,146425E+08	8,146775E+08	3,127078E+09	3,126929E+09	1,629320E+09	6,254007E+09	7,883327E+09
1083	8,145975E+08	8,146164E+08	3,126930E+09	3,127003E+09	1,629214E+09	6,253933E+09	7,883147E+09
1084	8,146948E+08	8,146626E+08	3,126959E+09	3,126951E+09	1,629357E+09	6,253910E+09	7,883267E+09
1085	8,146795E+08	8,146888E+08	3,126993E+09	3,126926E+09	1,629368E+09	6,253919E+09	7,883287E+09
1086	8,146406E+08	8,146236E+08	3,126855E+09	3,127002E+09	1,629264E+09	6,253856E+09	7,883121E+09
1087	8,147007E+08	8,146934E+08	3,126975E+09	3,126931E+09	1,629394E+09	6,253905E+09	7,883299E+09
1088	8,146135E+08	8,146365E+08	3,127011E+09	3,126988E+09	1,629250E+09	6,253999E+09	7,883249E+09
1089	8,146008E+08	8,145750E+08	3,127015E+09	3,127058E+09	1,629176E+09	6,254073E+09	7,883248E+09
1090	8,146176E+08	8,146242E+08	3,127163E+09	3,127026E+09	1,629242E+09	6,254189E+09	7,883431E+09
1091	8,145126E+08	8,145255E+08	3,127080E+09	3,127152E+09	1,629038E+09	6,254232E+09	7,883270E+09
1092	8,145517E+08	8,145282E+08	3,127115E+09	3,127162E+09	1,629080E+09	6,254277E+09	7,883356E+09
1093	8,145458E+08	8,145644E+08	3,127201E+09	3,127115E+09	1,629110E+09	6,254316E+09	7,883426E+09
1094	8,144895E+08	8,144916E+08	3,127066E+09	3,127166E+09	1,628981E+09	6,254232E+09	7,883213E+09
1095	8,145798E+08	8,145626E+08	3,127129E+09	3,127074E+09	1,629142E+09	6,254202E+09	7,883345E+09
1096	8,145513E+08	8,145653E+08	3,127109E+09	3,127041E+09	1,629117E+09	6,254150E+09	7,883266E+09
1097	8,145628E+08	8,145485E+08	3,126972E+09	3,127055E+09	1,629111E+09	6,254026E+09	7,883138E+09
1098	8,146551E+08	8,146684E+08	3,127018E+09	3,126928E+09	1,629324E+09	6,253946E+09	7,883270E+09
1099	8,146071E+08	8,146512E+08	3,126898E+09	3,126923E+09	1,629258E+09	6,253821E+09	7,883079E+09
1100	8,146853E+08	8,146741E+08	3,126862E+09	3,126892E+09	1,629359E+09	6,253754E+09	7,883113E+09
1101	8,147460E+08	8,147586E+08	3,126931E+09	3,126794E+09	1,629505E+09	6,253725E+09	7,883229E+09
1102	8,146997E+08	8,147039E+08	3,126768E+09	3,126845E+09	1,629404E+09	6,253613E+09	7,883017E+09
1103	8,147871E+08	8,147589E+08	3,126795E+09	3,126803E+09	1,629546E+09	6,253598E+09	7,883144E+09
1104	8,147605E+08	8,147797E+08	3,126824E+09	3,126778E+09	1,629540E+09	6,253602E+09	7,883142E+09
1105	8,147170E+08	8,147120E+08	3,126747E+09	3,126859E+09	1,629429E+09	6,253606E+09	7,883035E+09
1106	8,147686E+08	8,147674E+08	3,126891E+09	3,126806E+09	1,629536E+09	6,253697E+09	7,883233E+09
1107	8,146782E+08	8,147021E+08	3,126896E+09	3,126864E+09	1,629380E+09	6,253761E+09	7,883141E+09
1108	8,146722E+08	8,146386E+08	3,126899E+09	3,126958E+09	1,629311E+09	6,253857E+09	7,883168E+09
1109	8,146923E+08	8,146891E+08	3,127021E+09	3,126937E+09	1,629381E+09	6,253958E+09	7,883339E+09
1110	8,145923E+08	8,146065E+08	3,126927E+09	3,127013E+09	1,629199E+09	6,253940E+09	7,883139E+09
1111	8,146335E+08	8,146142E+08	3,126975E+09	3,127005E+09	1,629248E+09	6,253980E+09	7,883228E+09
1112	8,146304E+08	8,146427E+08	3,127054E+09	3,126952E+09	1,629273E+09	6,254005E+09	7,883279E+09
1113	8,145799E+08	8,145758E+08	3,126940E+09	3,127008E+09	1,629156E+09	6,253948E+09	7,883104E+09
1114	8,146650E+08	8,146484E+08	3,126987E+09	3,126934E+09	1,629313E+09	6,253921E+09	7,883234E+09
1115	8,146345E+08	8,146632E+08	3,126927E+09	3,126886E+09	1,629298E+09	6,253814E+09	7,883111E+09
1116	8,146542E+08	8,146511E+08	3,126812E+09	3,126907E+09	1,629305E+09	6,253719E+09	7,883025E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
1117	8,147502E+08	8,147632E+08	3,126878E+09	3,126789E+09	1,629513E+09	6,253667E+09	7,883181E+09
1118	8,147099E+08	8,147482E+08	3,126763E+09	3,126753E+09	1,629458E+09	6,253516E+09	7,882974E+09
1119	8,147857E+08	8,147660E+08	3,126721E+09	3,126736E+09	1,629552E+09	6,253458E+09	7,883009E+09
1120	8,148406E+08	8,148437E+08	3,126759E+09	3,126653E+09	1,629684E+09	6,253412E+09	7,883096E+09
1121	8,147914E+08	8,147966E+08	3,126609E+09	3,126703E+09	1,629588E+09	6,253311E+09	7,882899E+09
1122	8,148647E+08	8,148479E+08	3,126646E+09	3,126665E+09	1,629713E+09	6,253311E+09	7,883024E+09
1123	8,148339E+08	8,148633E+08	3,126675E+09	3,126619E+09	1,629697E+09	6,253294E+09	7,882991E+09
1124	8,147962E+08	8,147842E+08	3,126635E+09	3,126719E+09	1,629580E+09	6,253354E+09	7,882934E+09
1125	8,148470E+08	8,148293E+08	3,126781E+09	3,126696E+09	1,629676E+09	6,253477E+09	7,883153E+09
1126	8,147586E+08	8,147747E+08	3,126766E+09	3,126734E+09	1,629533E+09	6,253501E+09	7,883034E+09
1127	8,147466E+08	8,147205E+08	3,126764E+09	3,126836E+09	1,629467E+09	6,253601E+09	7,883068E+09
1128	8,147639E+08	8,147684E+08	3,126874E+09	3,126813E+09	1,629532E+09	6,253687E+09	7,883219E+09
1129	8,146699E+08	8,146882E+08	3,126820E+09	3,126875E+09	1,629358E+09	6,253695E+09	7,883053E+09
1130	8,147088E+08	8,146908E+08	3,126865E+09	3,126875E+09	1,629400E+09	6,253740E+09	7,883140E+09
1131	8,147092E+08	8,147193E+08	3,126901E+09	3,126805E+09	1,629429E+09	6,253706E+09	7,883135E+09
1132	8,146677E+08	8,146601E+08	3,126787E+09	3,126873E+09	1,629328E+09	6,253659E+09	7,882987E+09
1133	8,147549E+08	8,147395E+08	3,126820E+09	3,126801E+09	1,629494E+09	6,253622E+09	7,883116E+09
1134	8,147307E+08	8,147690E+08	3,126761E+09	3,126709E+09	1,629500E+09	6,253469E+09	7,882969E+09
1135	8,147520E+08	8,147556E+08	3,126673E+09	3,126728E+09	1,629508E+09	6,253401E+09	7,882908E+09
1136	8,148482E+08	8,148530E+08	3,126724E+09	3,126621E+09	1,629701E+09	6,253344E+09	7,883046E+09
1137	8,148120E+08	8,148382E+08	3,126626E+09	3,126598E+09	1,629650E+09	6,253225E+09	7,882875E+09
1138	8,148772E+08	8,148557E+08	3,126562E+09	3,126605E+09	1,629733E+09	6,253168E+09	7,882900E+09
1139	8,149244E+08	8,149354E+08	3,126568E+09	3,126503E+09	1,629860E+09	6,253071E+09	7,882931E+09
1140	8,148784E+08	8,148895E+08	3,126456E+09	3,126559E+09	1,629768E+09	6,253016E+09	7,882783E+09
1141	8,149489E+08	8,149281E+08	3,126523E+09	3,126530E+09	1,629877E+09	6,253053E+09	7,882930E+09
1142	8,149200E+08	8,149442E+08	3,126562E+09	3,126465E+09	1,629864E+09	6,253027E+09	7,882891E+09
1143	8,148761E+08	8,148599E+08	3,126531E+09	3,126590E+09	1,629736E+09	6,253121E+09	7,882857E+09
1144	8,149179E+08	8,148984E+08	3,126645E+09	3,126590E+09	1,629816E+09	6,253235E+09	7,883051E+09
1145	8,148314E+08	8,148527E+08	3,126645E+09	3,126625E+09	1,629684E+09	6,253270E+09	7,882954E+09
1146	8,148113E+08	8,147982E+08	3,126637E+09	3,126724E+09	1,629610E+09	6,253361E+09	7,882970E+09
1147	8,148322E+08	8,148401E+08	3,126730E+09	3,126666E+09	1,629672E+09	6,253396E+09	7,883068E+09
1148	8,147527E+08	8,147606E+08	3,126690E+09	3,126732E+09	1,629513E+09	6,253422E+09	7,882935E+09
1149	8,147955E+08	8,147621E+08	3,126724E+09	3,126745E+09	1,629558E+09	6,253469E+09	7,883027E+09
1150	8,148020E+08	8,148110E+08	3,126738E+09	3,126643E+09	1,629613E+09	6,253381E+09	7,882994E+09
1151	8,147578E+08	8,147621E+08	3,126632E+09	3,126710E+09	1,629520E+09	6,253342E+09	7,882862E+09
1152	8,148403E+08	8,148382E+08	3,126667E+09	3,126644E+09	1,629679E+09	6,253311E+09	7,882990E+09
1153	8,148250E+08	8,148668E+08	3,126648E+09	3,126546E+09	1,629692E+09	6,253194E+09	7,882885E+09
1154	8,148405E+08	8,148450E+08	3,126548E+09	3,126589E+09	1,629685E+09	6,253137E+09	7,882822E+09
1155	8,149390E+08	8,149360E+08	3,126554E+09	3,126476E+09	1,629875E+09	6,253029E+09	7,882904E+09
1156	8,149115E+08	8,149272E+08	3,126444E+09	3,126466E+09	1,629839E+09	6,252910E+09	7,882749E+09
1157	8,149743E+08	8,149476E+08	3,126375E+09	3,126471E+09	1,629922E+09	6,252846E+09	7,882768E+09
1158	8,150221E+08	8,150368E+08	3,126391E+09	3,126321E+09	1,630059E+09	6,252712E+09	7,882771E+09
1159	8,149707E+08	8,149845E+08	3,126329E+09	3,126377E+09	1,629955E+09	6,252706E+09	7,882661E+09
1160	8,150312E+08	8,150079E+08	3,126401E+09	3,126376E+09	1,630039E+09	6,252777E+09	7,882816E+09
1161	8,150021E+08	8,150217E+08	3,126467E+09	3,126335E+09	1,630024E+09	6,252801E+09	7,882825E+09
1162	8,149426E+08	8,149376E+08	3,126416E+09	3,126494E+09	1,629880E+09	6,252910E+09	7,882790E+09
1163	8,149795E+08	8,149733E+08	3,126495E+09	3,126479E+09	1,629953E+09	6,252975E+09	7,882927E+09
1164	8,149031E+08	8,149277E+08	3,126518E+09	3,126517E+09	1,629831E+09	6,253035E+09	7,882866E+09
1165	8,148877E+08	8,148655E+08	3,126518E+09	3,126609E+09	1,629753E+09	6,253127E+09	7,882881E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
1166	8,149176E+08	8,149127E+08	3,126597E+09	3,126512E+09	1,629830E+09	6,253109E+09	7,882939E+09
1167	8,148399E+08	8,148399E+08	3,126563E+09	3,126580E+09	1,629680E+09	6,253143E+09	7,882823E+09
1168	8,148770E+08	8,148450E+08	3,126563E+09	3,126600E+09	1,629722E+09	6,253163E+09	7,882885E+09
1169	8,148878E+08	8,149073E+08	3,126599E+09	3,126490E+09	1,629795E+09	6,253090E+09	7,882885E+09
1170	8,148365E+08	8,148607E+08	3,126498E+09	3,126565E+09	1,629697E+09	6,253063E+09	7,882760E+09
1171	8,149219E+08	8,149240E+08	3,126514E+09	3,126480E+09	1,629846E+09	6,252994E+09	7,882840E+09
1172	8,149234E+08	8,149522E+08	3,126499E+09	3,126403E+09	1,629876E+09	6,252902E+09	7,882778E+09
1173	8,149441E+08	8,149289E+08	3,126375E+09	3,126457E+09	1,629873E+09	6,252833E+09	7,882706E+09
1174	8,150458E+08	8,150357E+08	3,126355E+09	3,126307E+09	1,630081E+09	6,252662E+09	7,882744E+09
1175	8,150137E+08	8,150365E+08	3,126270E+09	3,126288E+09	1,630050E+09	6,252559E+09	7,882609E+09
1176	8,150652E+08	8,150484E+08	3,126218E+09	3,126300E+09	1,630114E+09	6,252518E+09	7,882631E+09
1177	8,151124E+08	8,151312E+08	3,126293E+09	3,126156E+09	1,630244E+09	6,252449E+09	7,882693E+09
1178	8,150461E+08	8,150683E+08	3,126237E+09	3,126252E+09	1,630114E+09	6,252489E+09	7,882603E+09
1179	8,150980E+08	8,150776E+08	3,126275E+09	3,126262E+09	1,630176E+09	6,252537E+09	7,882713E+09
1180	8,150770E+08	8,150943E+08	3,126330E+09	3,126248E+09	1,630171E+09	6,252578E+09	7,882750E+09
1181	8,150170E+08	8,150084E+08	3,126269E+09	3,126404E+09	1,630025E+09	6,252673E+09	7,882698E+09
1182	8,150608E+08	8,150492E+08	3,126344E+09	3,126334E+09	1,630110E+09	6,252677E+09	7,882787E+09
1183	8,149880E+08	8,150006E+08	3,126390E+09	3,126353E+09	1,629989E+09	6,252743E+09	7,882732E+09
1184	8,149686E+08	8,149350E+08	3,126378E+09	3,126458E+09	1,629904E+09	6,252836E+09	7,882740E+09
1185	8,150028E+08	8,149914E+08	3,126475E+09	3,126362E+09	1,629994E+09	6,252837E+09	7,882832E+09
1186	8,149114E+08	8,149305E+08	3,126429E+09	3,126450E+09	1,629842E+09	6,252879E+09	7,882721E+09
1187	8,149445E+08	8,149356E+08	3,126410E+09	3,126457E+09	1,629880E+09	6,252867E+09	7,882747E+09
1188	8,149703E+08	8,149989E+08	3,126466E+09	3,126360E+09	1,629969E+09	6,252826E+09	7,882795E+09
1189	8,149272E+08	8,149445E+08	3,126366E+09	3,126438E+09	1,629872E+09	6,252804E+09	7,882676E+09
1190	8,150244E+08	8,150115E+08	3,126351E+09	3,126320E+09	1,630036E+09	6,252672E+09	7,882708E+09
1191	8,150301E+08	8,150453E+08	3,126332E+09	3,126242E+09	1,630075E+09	6,252573E+09	7,882649E+09
1192	8,150444E+08	8,150287E+08	3,126178E+09	3,126299E+09	1,630073E+09	6,252477E+09	7,882550E+09
1193	8,151464E+08	8,151429E+08	3,126194E+09	3,126128E+09	1,630289E+09	6,252322E+09	7,882612E+09
1194	8,150993E+08	8,151429E+08	3,126136E+09	3,126118E+09	1,630242E+09	6,252253E+09	7,882495E+09
1195	8,151440E+08	8,151350E+08	3,126085E+09	3,126128E+09	1,630279E+09	6,252213E+09	7,882492E+09
1196	8,151983E+08	8,152107E+08	3,126173E+09	3,126034E+09	1,630409E+09	6,252208E+09	7,882617E+09
1197	8,151309E+08	8,151407E+08	3,126106E+09	3,126159E+09	1,630272E+09	6,252265E+09	7,882537E+09
1198	8,151819E+08	8,151563E+08	3,126113E+09	3,126140E+09	1,630338E+09	6,252253E+09	7,882592E+09
1199	8,151602E+08	8,151765E+08	3,126190E+09	3,126118E+09	1,630337E+09	6,252308E+09	7,882644E+09
1200	8,150942E+08	8,150840E+08	3,126128E+09	3,126266E+09	1,630178E+09	6,252394E+09	7,882573E+09
1201	8,151409E+08	8,151204E+08	3,126242E+09	3,126185E+09	1,630261E+09	6,252427E+09	7,882688E+09
1202	8,150573E+08	8,150756E+08	3,126286E+09	3,126225E+09	1,630133E+09	6,252512E+09	7,882645E+09
1203	8,150322E+08	8,150046E+08	3,126239E+09	3,126325E+09	1,630037E+09	6,252565E+09	7,882601E+09
1204	8,150762E+08	8,150737E+08	3,126330E+09	3,126255E+09	1,630150E+09	6,252585E+09	7,882735E+09
1205	8,149896E+08	8,150159E+08	3,126283E+09	3,126336E+09	1,630005E+09	6,252619E+09	7,882624E+09
1206	8,150311E+08	8,150240E+08	3,126258E+09	3,126293E+09	1,630055E+09	6,252551E+09	7,882606E+09
1207	8,150667E+08	8,150852E+08	3,126332E+09	3,126189E+09	1,630152E+09	6,252521E+09	7,882673E+09
1208	8,150259E+08	8,150301E+08	3,126202E+09	3,126280E+09	1,630056E+09	6,252482E+09	7,882538E+09
1209	8,151294E+08	8,151047E+08	3,126195E+09	3,126157E+09	1,630234E+09	6,252352E+09	7,882586E+09
1210	8,151221E+08	8,151536E+08	3,126163E+09	3,126087E+09	1,630276E+09	6,252250E+09	7,882526E+09
1211	8,151283E+08	8,151316E+08	3,126006E+09	3,126126E+09	1,630260E+09	6,252132E+09	7,882392E+09
1212	8,152376E+08	8,152422E+08	3,126055E+09	3,125980E+09	1,630480E+09	6,252035E+09	7,882514E+09
1213	8,151910E+08	8,152279E+08	3,126015E+09	3,125987E+09	1,630419E+09	6,252002E+09	7,882421E+09
1214	8,152373E+08	8,152167E+08	3,125947E+09	3,125986E+09	1,630454E+09	6,251932E+09	7,882386E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
1215	8,152911E+08	8,152905E+08	3,126029E+09	3,125905E+09	1,630582E+09	6,251934E+09	7,882516E+09
1216	8,152162E+08	8,152232E+08	3,125935E+09	3,126042E+09	1,630439E+09	6,251977E+09	7,882416E+09
1217	8,152672E+08	8,152402E+08	3,125974E+09	3,125998E+09	1,630507E+09	6,251972E+09	7,882479E+09
1218	8,152314E+08	8,152583E+08	3,126067E+09	3,125974E+09	1,630490E+09	6,252041E+09	7,882531E+09
1219	8,151601E+08	8,151522E+08	3,126001E+09	3,126109E+09	1,630312E+09	6,252111E+09	7,882423E+09
1220	8,152153E+08	8,151897E+08	3,126117E+09	3,126067E+09	1,630405E+09	6,252183E+09	7,882588E+09
1221	8,151316E+08	8,151480E+08	3,126158E+09	3,126120E+09	1,630280E+09	6,252278E+09	7,882557E+09
1222	8,151082E+08	8,150900E+08	3,126089E+09	3,126188E+09	1,630198E+09	6,252277E+09	7,882475E+09
1223	8,151557E+08	8,151625E+08	3,126203E+09	3,126110E+09	1,630318E+09	6,252314E+09	7,882632E+09
1224	8,150721E+08	8,151012E+08	3,126154E+09	3,126195E+09	1,630173E+09	6,252349E+09	7,882522E+09
1225	8,151233E+08	8,151049E+08	3,126148E+09	3,126140E+09	1,630228E+09	6,252288E+09	7,882516E+09
1226	8,151531E+08	8,151721E+08	3,126200E+09	3,126052E+09	1,630325E+09	6,252252E+09	7,882577E+09
1227	8,151112E+08	8,151169E+08	3,126024E+09	3,126127E+09	1,630228E+09	6,252151E+09	7,882380E+09
1228	8,152242E+08	8,152040E+08	3,126007E+09	3,126024E+09	1,630428E+09	6,252031E+09	7,882459E+09
1229	8,152190E+08	8,152548E+08	3,125992E+09	3,125939E+09	1,630474E+09	6,251931E+09	7,882404E+09
1230	8,152282E+08	8,152289E+08	3,125840E+09	3,125934E+09	1,630457E+09	6,251774E+09	7,882231E+09
1231	8,153386E+08	8,153326E+08	3,125920E+09	3,125801E+09	1,630671E+09	6,251721E+09	7,882392E+09
1232	8,152892E+08	8,153147E+08	3,125863E+09	3,125841E+09	1,630604E+09	6,251704E+09	7,882308E+09
1233	8,153318E+08	8,153035E+08	3,125809E+09	3,125845E+09	1,630635E+09	6,251654E+09	7,882289E+09
1234	8,153682E+08	8,153866E+08	3,125889E+09	3,125783E+09	1,630755E+09	6,251671E+09	7,882426E+09
1235	8,152852E+08	8,153061E+08	3,125788E+09	3,125901E+09	1,630591E+09	6,251689E+09	7,882281E+09
1236	8,153417E+08	8,153163E+08	3,125852E+09	3,125881E+09	1,630658E+09	6,251733E+09	7,882391E+09
1237	8,153065E+08	8,153241E+08	3,125957E+09	3,125861E+09	1,630631E+09	6,251818E+09	7,882449E+09
1238	8,152361E+08	8,152190E+08	3,125872E+09	3,125972E+09	1,630455E+09	6,251844E+09	7,882299E+09
1239	8,152914E+08	8,152627E+08	3,125990E+09	3,125936E+09	1,630554E+09	6,251926E+09	7,882480E+09
1240	8,152072E+08	8,152304E+08	3,126011E+09	3,125998E+09	1,630438E+09	6,252008E+09	7,882446E+09
1241	8,151879E+08	8,151746E+08	3,125973E+09	3,126040E+09	1,630363E+09	6,252013E+09	7,882376E+09
1242	8,152291E+08	8,152478E+08	3,126091E+09	3,125965E+09	1,630477E+09	6,252056E+09	7,882533E+09
1243	8,151491E+08	8,151756E+08	3,126015E+09	3,126041E+09	1,630325E+09	6,252055E+09	7,882380E+09
1244	8,152150E+08	8,151852E+08	3,125989E+09	3,126019E+09	1,630400E+09	6,252008E+09	7,882409E+09
1245	8,152487E+08	8,152590E+08	3,126024E+09	3,125927E+09	1,630508E+09	6,251951E+09	7,882458E+09
1246	8,152106E+08	8,152202E+08	3,125831E+09	3,125954E+09	1,630431E+09	6,251785E+09	7,882216E+09
1247	8,153256E+08	8,153091E+08	3,125843E+09	3,125836E+09	1,630635E+09	6,251679E+09	7,882314E+09
1248	8,153187E+08	8,153562E+08	3,125841E+09	3,125763E+09	1,630675E+09	6,251605E+09	7,882280E+09
1249	8,153294E+08	8,153238E+08	3,125724E+09	3,125762E+09	1,630653E+09	6,251486E+09	7,882139E+09
1250	8,154238E+08	8,154265E+08	3,125793E+09	3,125664E+09	1,630850E+09	6,251457E+09	7,882308E+09
1251	8,153690E+08	8,154010E+08	3,125705E+09	3,125709E+09	1,630770E+09	6,251414E+09	7,882184E+09
1252	8,154158E+08	8,153935E+08	3,125645E+09	3,125740E+09	1,630809E+09	6,251385E+09	7,882194E+09
1253	8,154499E+08	8,154674E+08	3,125744E+09	3,125662E+09	1,630917E+09	6,251407E+09	7,882324E+09
1254	8,153684E+08	8,153811E+08	3,125646E+09	3,125735E+09	1,630750E+09	6,251382E+09	7,882131E+09
1255	8,154254E+08	8,153847E+08	3,125729E+09	3,125726E+09	1,630810E+09	6,251454E+09	7,882264E+09
1256	8,153875E+08	8,153954E+08	3,125822E+09	3,125733E+09	1,630783E+09	6,251554E+09	7,882337E+09
1257	8,153154E+08	8,152972E+08	3,125756E+09	3,125838E+09	1,630613E+09	6,251594E+09	7,882207E+09
1258	8,153539E+08	8,153524E+08	3,125878E+09	3,125817E+09	1,630706E+09	6,251694E+09	7,882401E+09
1259	8,152702E+08	8,153095E+08	3,125893E+09	3,125864E+09	1,630580E+09	6,251757E+09	7,882337E+09
1260	8,152623E+08	8,152498E+08	3,125860E+09	3,125935E+09	1,630512E+09	6,251794E+09	7,882307E+09
1261	8,153119E+08	8,153163E+08	3,125968E+09	3,125860E+09	1,630628E+09	6,251828E+09	7,882456E+09
1262	8,152410E+08	8,152512E+08	3,125843E+09	3,125893E+09	1,630492E+09	6,251736E+09	7,882228E+09
1263	8,153128E+08	8,152743E+08	3,125805E+09	3,125865E+09	1,630587E+09	6,251670E+09	7,882257E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
1264	8,153489E+08	8,153630E+08	3,125827E+09	3,125762E+09	1,630712E+09	6,251589E+09	7,882301E+09
1265	8,153124E+08	8,153258E+08	3,125682E+09	3,125751E+09	1,630638E+09	6,251433E+09	7,882072E+09
1266	8,154136E+08	8,154143E+08	3,125719E+09	3,125648E+09	1,630828E+09	6,251367E+09	7,882195E+09
1267	8,154059E+08	8,154462E+08	3,125702E+09	3,125589E+09	1,630852E+09	6,251291E+09	7,882143E+09
1268	8,154219E+08	8,154142E+08	3,125577E+09	3,125645E+09	1,630836E+09	6,251222E+09	7,882058E+09
1269	8,155131E+08	8,155151E+08	3,125637E+09	3,125559E+09	1,631028E+09	6,251196E+09	7,882224E+09
1270	8,154595E+08	8,154923E+08	3,125532E+09	3,125565E+09	1,630952E+09	6,251097E+09	7,882049E+09
1271	8,155062E+08	8,154789E+08	3,125500E+09	3,125589E+09	1,630985E+09	6,251089E+09	7,882075E+09
1272	8,155386E+08	8,155451E+08	3,125608E+09	3,125519E+09	1,631084E+09	6,251127E+09	7,882210E+09
1273	8,154558E+08	8,154547E+08	3,125542E+09	3,125580E+09	1,630910E+09	6,251122E+09	7,882033E+09
1274	8,154941E+08	8,154634E+08	3,125619E+09	3,125597E+09	1,630957E+09	6,251216E+09	7,882174E+09
1275	8,154510E+08	8,154716E+08	3,125686E+09	3,125612E+09	1,630923E+09	6,251298E+09	7,882220E+09
1276	8,153845E+08	8,153808E+08	3,125625E+09	3,125745E+09	1,630765E+09	6,251370E+09	7,882136E+09
1277	8,154233E+08	8,154254E+08	3,125758E+09	3,125709E+09	1,630849E+09	6,251467E+09	7,882316E+09
1278	8,153503E+08	8,153790E+08	3,125759E+09	3,125714E+09	1,630729E+09	6,251472E+09	7,882201E+09
1279	8,153519E+08	8,153203E+08	3,125714E+09	3,125784E+09	1,630672E+09	6,251498E+09	7,882170E+09
1280	8,154060E+08	8,153954E+08	3,125794E+09	3,125718E+09	1,630801E+09	6,251512E+09	7,882313E+09
1281	8,153393E+08	8,153487E+08	3,125683E+09	3,125719E+09	1,630688E+09	6,251403E+09	7,882091E+09
1282	8,153970E+08	8,153853E+08	3,125654E+09	3,125691E+09	1,630782E+09	6,251344E+09	7,882127E+09
1283	8,154322E+08	8,154642E+08	3,125684E+09	3,125580E+09	1,630896E+09	6,251264E+09	7,882160E+09
1284	8,154034E+08	8,154228E+08	3,125558E+09	3,125609E+09	1,630826E+09	6,251167E+09	7,881993E+09
1285	8,155025E+08	8,154987E+08	3,125596E+09	3,125524E+09	1,631001E+09	6,251120E+09	7,882121E+09
1286	8,155009E+08	8,155308E+08	3,125539E+09	3,125449E+09	1,631032E+09	6,250988E+09	7,882020E+09
1287	8,155205E+08	8,155051E+08	3,125400E+09	3,125512E+09	1,631026E+09	6,250911E+09	7,881937E+09
1288	8,156120E+08	8,156095E+08	3,125452E+09	3,125421E+09	1,631222E+09	6,250872E+09	7,882094E+09
1289	8,155600E+08	8,155837E+08	3,125388E+09	3,125385E+09	1,631144E+09	6,250773E+09	7,881916E+09
1290	8,155888E+08	8,155672E+08	3,125377E+09	3,125420E+09	1,631156E+09	6,250796E+09	7,881952E+09
1291	8,156151E+08	8,156194E+08	3,125474E+09	3,125365E+09	1,631235E+09	6,250839E+09	7,882074E+09
1292	8,155315E+08	8,155328E+08	3,125416E+09	3,125477E+09	1,631064E+09	6,250893E+09	7,881958E+09
1293	8,155605E+08	8,155415E+08	3,125500E+09	3,125506E+09	1,631102E+09	6,251006E+09	7,882108E+09
1294	8,155209E+08	8,155491E+08	3,125552E+09	3,125485E+09	1,631070E+09	6,251036E+09	7,882106E+09
1295	8,154592E+08	8,154540E+08	3,125509E+09	3,125617E+09	1,630913E+09	6,251126E+09	7,882040E+09
1296	8,155046E+08	8,154939E+08	3,125632E+09	3,125586E+09	1,630999E+09	6,251219E+09	7,882217E+09
1297	8,154395E+08	8,154487E+08	3,125635E+09	3,125564E+09	1,630888E+09	6,251199E+09	7,882087E+09
1298	8,154307E+08	8,154055E+08	3,125570E+09	3,125641E+09	1,630836E+09	6,251211E+09	7,882048E+09
1299	8,154862E+08	8,154845E+08	3,125618E+09	3,125563E+09	1,630971E+09	6,251181E+09	7,882152E+09
1300	8,154263E+08	8,154508E+08	3,125526E+09	3,125575E+09	1,630877E+09	6,251101E+09	7,881978E+09
1301	8,154819E+08	8,154793E+08	3,125522E+09	3,125534E+09	1,630961E+09	6,251056E+09	7,882017E+09
1302	8,155254E+08	8,155514E+08	3,125537E+09	3,125402E+09	1,631077E+09	6,250939E+09	7,882016E+09
1303	8,155043E+08	8,155101E+08	3,125406E+09	3,125457E+09	1,631014E+09	6,250862E+09	7,881877E+09
1304	8,156061E+08	8,155902E+08	3,125417E+09	3,125394E+09	1,631196E+09	6,250810E+09	7,882006E+09
1305	8,156076E+08	8,156332E+08	3,125371E+09	3,125290E+09	1,631241E+09	6,250661E+09	7,881902E+09
1306	8,156125E+08	8,156147E+08	3,125243E+09	3,125350E+09	1,631227E+09	6,250593E+09	7,881821E+09
1307	8,156985E+08	8,157009E+08	3,125303E+09	3,125254E+09	1,631399E+09	6,250557E+09	7,881956E+09
1308	8,156481E+08	8,156714E+08	3,125266E+09	3,125251E+09	1,631320E+09	6,250517E+09	7,881837E+09
1309	8,156655E+08	8,156407E+08	3,125261E+09	3,125301E+09	1,631306E+09	6,250562E+09	7,881868E+09
1310	8,156903E+08	8,156917E+08	3,125332E+09	3,125238E+09	1,631382E+09	6,250570E+09	7,881952E+09
1311	8,156080E+08	8,156123E+08	3,125274E+09	3,125362E+09	1,631220E+09	6,250635E+09	7,881855E+09
1312	8,156352E+08	8,156189E+08	3,125361E+09	3,125390E+09	1,631254E+09	6,250751E+09	7,882005E+09



1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
1313	8,156023E+08	8,156227E+08	3,125445E+09	3,125331E+09	1,631225E+09	6,250775E+09	7,882000E+09
1314	8,155324E+08	8,155281E+08	3,125398E+09	3,125469E+09	1,631061E+09	6,250867E+09	7,881927E+09
1315	8,155799E+08	8,155596E+08	3,125488E+09	3,125447E+09	1,631139E+09	6,250934E+09	7,882074E+09
1316	8,155218E+08	8,155310E+08	3,125484E+09	3,125449E+09	1,631053E+09	6,250932E+09	7,881985E+09
1317	8,155073E+08	8,154953E+08	3,125423E+09	3,125516E+09	1,631003E+09	6,250939E+09	7,881941E+09
1318	8,155686E+08	8,155765E+08	3,125462E+09	3,125400E+09	1,631145E+09	6,250863E+09	7,882008E+09
1319	8,155173E+08	8,155432E+08	3,125392E+09	3,125415E+09	1,631060E+09	6,250807E+09	7,881867E+09
1320	8,155771E+08	8,155669E+08	3,125384E+09	3,125390E+09	1,631144E+09	6,250774E+09	7,881918E+09
1321	8,156287E+08	8,156406E+08	3,125397E+09	3,125241E+09	1,631269E+09	6,250639E+09	7,881908E+09
1322	8,155983E+08	8,156119E+08	3,125245E+09	3,125311E+09	1,631210E+09	6,250556E+09	7,881766E+09
1323	8,157001E+08	8,156898E+08	3,125226E+09	3,125243E+09	1,631390E+09	6,250470E+09	7,881860E+09
1324	8,157057E+08	8,157370E+08	3,125202E+09	3,125145E+09	1,631443E+09	6,250348E+09	7,881790E+09
1325	8,157020E+08	8,157060E+08	3,125106E+09	3,125193E+09	1,631408E+09	6,250299E+09	7,881707E+09
1326	8,157877E+08	8,157784E+08	3,125151E+09	3,125078E+09	1,631566E+09	6,250229E+09	7,881795E+09
1327	8,157363E+08	8,157493E+08	3,125122E+09	3,125106E+09	1,631486E+09	6,250228E+09	7,881714E+09
1328	8,157486E+08	8,157215E+08	3,125116E+09	3,125183E+09	1,631470E+09	6,250299E+09	7,881769E+09
1329	8,157722E+08	8,157769E+08	3,125205E+09	3,125100E+09	1,631549E+09	6,250305E+09	7,881854E+09
1330	8,156778E+08	8,157001E+08	3,125168E+09	3,125231E+09	1,631378E+09	6,250399E+09	7,881776E+09
1331	8,157036E+08	8,156876E+08	3,125247E+09	3,125261E+09	1,631391E+09	6,250508E+09	7,881899E+09
1332	8,156776E+08	8,156898E+08	3,125338E+09	3,125227E+09	1,631367E+09	6,250565E+09	7,881933E+09
1333	8,156024E+08	8,155932E+08	3,125277E+09	3,125365E+09	1,631196E+09	6,250642E+09	7,881838E+09
1334	8,156556E+08	8,156297E+08	3,125319E+09	3,125316E+09	1,631285E+09	6,250635E+09	7,881921E+09
1335	8,156058E+08	8,156205E+08	3,125313E+09	3,125312E+09	1,631226E+09	6,250625E+09	7,881851E+09
1336	8,155959E+08	8,155884E+08	3,125266E+09	3,125363E+09	1,631184E+09	6,250630E+09	7,881814E+09
1337	8,156644E+08	8,156688E+08	3,125335E+09	3,125211E+09	1,631333E+09	6,250546E+09	7,881879E+09
1338	8,156084E+08	8,156396E+08	3,125266E+09	3,125241E+09	1,631248E+09	6,250507E+09	7,881755E+09
1339	8,156679E+08	8,156540E+08	3,125224E+09	3,125239E+09	1,631322E+09	6,250464E+09	7,881786E+09
1340	8,157259E+08	8,157413E+08	3,125235E+09	3,125118E+09	1,631467E+09	6,250353E+09	7,881820E+09
1341	8,156893E+08	8,157147E+08	3,125081E+09	3,125175E+09	1,631404E+09	6,250256E+09	7,881660E+09
1342	8,157937E+08	8,157835E+08	3,125053E+09	3,125075E+09	1,631577E+09	6,250129E+09	7,881706E+09
1343	8,158044E+08	8,158294E+08	3,125049E+09	3,124982E+09	1,631634E+09	6,250032E+09	7,881665E+09
1344	8,157979E+08	8,157881E+08	3,124963E+09	3,125044E+09	1,631586E+09	6,250007E+09	7,881593E+09
1345	8,158813E+08	8,158592E+08	3,125020E+09	3,124920E+09	1,631741E+09	6,249940E+09	7,881680E+09
1346	8,158164E+08	8,158403E+08	3,124988E+09	3,124970E+09	1,631657E+09	6,249958E+09	7,881615E+09
1347	8,158212E+08	8,158055E+08	3,124971E+09	3,125058E+09	1,631627E+09	6,250029E+09	7,881656E+09
1348	8,158468E+08	8,158599E+08	3,125089E+09	3,124989E+09	1,631707E+09	6,250078E+09	7,881785E+09
1349	8,157460E+08	8,157690E+08	3,125068E+09	3,125113E+09	1,631515E+09	6,250181E+09	7,881696E+09
1350	8,157758E+08	8,157437E+08	3,125111E+09	3,125129E+09	1,631519E+09	6,250240E+09	7,881759E+09
1351	8,157576E+08	8,157558E+08	3,125186E+09	3,125110E+09	1,631513E+09	6,250296E+09	7,881809E+09
1352	8,156840E+08	8,156723E+08	3,125119E+09	3,125244E+09	1,631356E+09	6,250362E+09	7,881719E+09
1353	8,157413E+08	8,157211E+08	3,125174E+09	3,125154E+09	1,631462E+09	6,250328E+09	7,881791E+09
1354	8,156854E+08	8,157207E+08	3,125196E+09	3,125145E+09	1,631406E+09	6,250341E+09	7,881747E+09
1355	8,156763E+08	8,156752E+08	3,125146E+09	3,125206E+09	1,631352E+09	6,250351E+09	7,881703E+09
1356	8,157510E+08	8,157539E+08	3,125218E+09	3,125081E+09	1,631505E+09	6,250299E+09	7,881804E+09
1357	8,156924E+08	8,157241E+08	3,125133E+09	3,125121E+09	1,631416E+09	6,250254E+09	7,881671E+09
1358	8,157585E+08	8,157393E+08	3,125034E+09	3,125097E+09	1,631498E+09	6,250131E+09	7,881629E+09
1359	8,158252E+08	8,158402E+08	3,125038E+09	3,124971E+09	1,631665E+09	6,250009E+09	7,881675E+09
1360	8,157938E+08	8,158136E+08	3,124905E+09	3,125007E+09	1,631607E+09	6,249913E+09	7,881520E+09
1361	8,159012E+08	8,158761E+08	3,124897E+09	3,124872E+09	1,631777E+09	6,249769E+09	7,881547E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
1362	8,159014E+08	8,159254E+08	3,124908E+09	3,124798E+09	1,631827E+09	6,249706E+09	7,881533E+09
1363	8,158867E+08	8,158755E+08	3,124808E+09	3,124892E+09	1,631762E+09	6,249700E+09	7,881462E+09
1364	8,159638E+08	8,159537E+08	3,124887E+09	3,124803E+09	1,631917E+09	6,249690E+09	7,881607E+09
1365	8,158873E+08	8,159312E+08	3,124876E+09	3,124861E+09	1,631819E+09	6,249737E+09	7,881555E+09
1366	8,158909E+08	8,158785E+08	3,124847E+09	3,124933E+09	1,631769E+09	6,249779E+09	7,881549E+09
1367	8,159230E+08	8,159289E+08	3,124969E+09	3,124879E+09	1,631852E+09	6,249847E+09	7,881699E+09
1368	8,158263E+08	8,158315E+08	3,124942E+09	3,125003E+09	1,631658E+09	6,249945E+09	7,881603E+09
1369	8,158585E+08	8,158111E+08	3,124970E+09	3,124991E+09	1,631670E+09	6,249961E+09	7,881630E+09
1370	8,158347E+08	8,158428E+08	3,125040E+09	3,124967E+09	1,631678E+09	6,250007E+09	7,881684E+09
1371	8,157592E+08	8,157595E+08	3,124968E+09	3,125094E+09	1,631519E+09	6,250062E+09	7,881581E+09
1372	8,158195E+08	8,158110E+08	3,125065E+09	3,125006E+09	1,631630E+09	6,250071E+09	7,881702E+09
1373	8,157610E+08	8,158024E+08	3,125095E+09	3,124997E+09	1,631563E+09	6,250091E+09	7,881655E+09
1374	8,157563E+08	8,157459E+08	3,125001E+09	3,125059E+09	1,631502E+09	6,250059E+09	7,881561E+09
1375	8,158422E+08	8,158379E+08	3,125046E+09	3,124959E+09	1,631680E+09	6,250005E+09	7,881685E+09
1376	8,157913E+08	8,158176E+08	3,124950E+09	3,124990E+09	1,631609E+09	6,249940E+09	7,881549E+09
1377	8,158641E+08	8,158413E+08	3,124855E+09	3,124923E+09	1,631705E+09	6,249778E+09	7,881483E+09
1378	8,159272E+08	8,159476E+08	3,124884E+09	3,124782E+09	1,631875E+09	6,249666E+09	7,881541E+09
1379	8,158924E+08	8,159090E+08	3,124755E+09	3,124826E+09	1,631801E+09	6,249581E+09	7,881382E+09
1380	8,159956E+08	8,159692E+08	3,124770E+09	3,124719E+09	1,631965E+09	6,249489E+09	7,881454E+09
1381	8,159830E+08	8,160161E+08	3,124782E+09	3,124669E+09	1,631999E+09	6,249451E+09	7,881450E+09
1382	8,159639E+08	8,159606E+08	3,124649E+09	3,124765E+09	1,631924E+09	6,249413E+09	7,881338E+09
1383	8,160439E+08	8,160431E+08	3,124733E+09	3,124691E+09	1,632087E+09	6,249424E+09	7,881511E+09
1384	8,159721E+08	8,160088E+08	3,124750E+09	3,124737E+09	1,631981E+09	6,249488E+09	7,881469E+09
1385	8,159784E+08	8,159466E+08	3,124722E+09	3,124778E+09	1,631925E+09	6,249500E+09	7,881425E+09
1386	8,160040E+08	8,159994E+08	3,124841E+09	3,124734E+09	1,632003E+09	6,249575E+09	7,881578E+09
1387	8,159037E+08	8,159039E+08	3,124792E+09	3,124870E+09	1,631808E+09	6,249662E+09	7,881470E+09
1388	8,159330E+08	8,158955E+08	3,124836E+09	3,124864E+09	1,631828E+09	6,249701E+09	7,881529E+09
1389	8,159010E+08	8,159311E+08	3,124931E+09	3,124837E+09	1,631832E+09	6,249769E+09	7,881601E+09
1390	8,158280E+08	8,158355E+08	3,124848E+09	3,124948E+09	1,631664E+09	6,249796E+09	7,881460E+09
1391	8,158957E+08	8,158867E+08	3,124941E+09	3,124884E+09	1,631782E+09	6,249825E+09	7,881607E+09
1392	8,158487E+08	8,158754E+08	3,124964E+09	3,124880E+09	1,631724E+09	6,249844E+09	7,881568E+09
1393	8,158519E+08	8,158274E+08	3,124832E+09	3,124913E+09	1,631679E+09	6,249744E+09	7,881424E+09
1394	8,159391E+08	8,159390E+08	3,124864E+09	3,124801E+09	1,631878E+09	6,249666E+09	7,881544E+09
1395	8,158915E+08	8,159228E+08	3,124760E+09	3,124815E+09	1,631814E+09	6,249575E+09	7,881390E+09
1396	8,159656E+08	8,159460E+08	3,124708E+09	3,124738E+09	1,631912E+09	6,249446E+09	7,881357E+09
1397	8,160196E+08	8,160457E+08	3,124755E+09	3,124604E+09	1,632065E+09	6,249359E+09	7,881424E+09
1398	8,159816E+08	8,159949E+08	3,124598E+09	3,124657E+09	1,631977E+09	6,249255E+09	7,881232E+09
1399	8,160834E+08	8,160637E+08	3,124608E+09	3,124593E+09	1,632147E+09	6,249200E+09	7,881348E+09
1400	8,160736E+08	8,161107E+08	3,124634E+09	3,124550E+09	1,632184E+09	6,249184E+09	7,881369E+09
1401	8,160542E+08	8,160520E+08	3,124511E+09	3,124620E+09	1,632106E+09	6,249131E+09	7,881237E+09
1402	8,161297E+08	8,161296E+08	3,124617E+09	3,124546E+09	1,632259E+09	6,249163E+09	7,881422E+09
1403	8,160564E+08	8,160789E+08	3,124622E+09	3,124604E+09	1,632135E+09	6,249226E+09	7,881361E+09
1404	8,160584E+08	8,160149E+08	3,124606E+09	3,124658E+09	1,632073E+09	6,249264E+09	7,881337E+09
1405	8,160722E+08	8,160714E+08	3,124713E+09	3,124618E+09	1,632144E+09	6,249330E+09	7,881474E+09
1406	8,159685E+08	8,159775E+08	3,124635E+09	3,124738E+09	1,631946E+09	6,249373E+09	7,881319E+09
1407	8,160024E+08	8,159803E+08	3,124694E+09	3,124741E+09	1,631983E+09	6,249436E+09	7,881418E+09
1408	8,159802E+08	8,160065E+08	3,124818E+09	3,124702E+09	1,631987E+09	6,249520E+09	7,881507E+09
1409	8,159141E+08	8,159084E+08	3,124724E+09	3,124791E+09	1,631823E+09	6,249515E+09	7,881338E+09
1410	8,159823E+08	8,159668E+08	3,124801E+09	3,124737E+09	1,631949E+09	6,249538E+09	7,881487E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
1411	8,159391E+08	8,159620E+08	3,124793E+09	3,124741E+09	1,631901E+09	6,249535E+09	7,881436E+09
1412	8,159443E+08	8,159287E+08	3,124674E+09	3,124766E+09	1,631873E+09	6,249441E+09	7,881314E+09
1413	8,160262E+08	8,160425E+08	3,124724E+09	3,124642E+09	1,632069E+09	6,249366E+09	7,881435E+09
1414	8,159806E+08	8,160163E+08	3,124608E+09	3,124636E+09	1,631997E+09	6,249244E+09	7,881241E+09
1415	8,160595E+08	8,160405E+08	3,124555E+09	3,124587E+09	1,632100E+09	6,249142E+09	7,881242E+09
1416	8,161181E+08	8,161328E+08	3,124611E+09	3,124465E+09	1,632251E+09	6,249076E+09	7,881327E+09
1417	8,160806E+08	8,160874E+08	3,124433E+09	3,124505E+09	1,632168E+09	6,248938E+09	7,881106E+09
1418	8,161758E+08	8,161647E+08	3,124448E+09	3,124445E+09	1,632341E+09	6,248893E+09	7,881233E+09
1419	8,161671E+08	8,162048E+08	3,124480E+09	3,124405E+09	1,632372E+09	6,248885E+09	7,881257E+09
1420	8,161457E+08	8,161358E+08	3,124390E+09	3,124468E+09	1,632281E+09	6,248858E+09	7,881140E+09
1421	8,162086E+08	8,162031E+08	3,124501E+09	3,124407E+09	1,632412E+09	6,248907E+09	7,881319E+09
1422	8,161313E+08	8,161447E+08	3,124466E+09	3,124466E+09	1,632276E+09	6,248932E+09	7,881208E+09
1423	8,161310E+08	8,160936E+08	3,124441E+09	3,124549E+09	1,632225E+09	6,248990E+09	7,881215E+09
1424	8,161478E+08	8,161522E+08	3,124578E+09	3,124503E+09	1,632300E+09	6,249081E+09	7,881381E+09
1425	8,160462E+08	8,160602E+08	3,124513E+09	3,124589E+09	1,632106E+09	6,249101E+09	7,881208E+09
1426	8,160772E+08	8,160624E+08	3,124596E+09	3,124592E+09	1,632140E+09	6,249188E+09	7,881327E+09
1427	8,160599E+08	8,160799E+08	3,124702E+09	3,124571E+09	1,632140E+09	6,249274E+09	7,881413E+09
1428	8,159954E+08	8,159841E+08	3,124608E+09	3,124667E+09	1,631979E+09	6,249275E+09	7,881255E+09
1429	8,160582E+08	8,160510E+08	3,124661E+09	3,124615E+09	1,632109E+09	6,249276E+09	7,881385E+09
1430	8,160204E+08	8,160505E+08	3,124610E+09	3,124594E+09	1,632071E+09	6,249204E+09	7,881275E+09
1431	8,160344E+08	8,160288E+08	3,124500E+09	3,124617E+09	1,632063E+09	6,249117E+09	7,881180E+09
1432	8,161271E+08	8,161320E+08	3,124578E+09	3,124475E+09	1,632259E+09	6,249053E+09	7,881312E+09
1433	8,160850E+08	8,161068E+08	3,124451E+09	3,124447E+09	1,632192E+09	6,248898E+09	7,881090E+09
1434	8,161599E+08	8,161385E+08	3,124398E+09	3,124414E+09	1,632298E+09	6,248813E+09	7,881111E+09
1435	8,162169E+08	8,162324E+08	3,124436E+09	3,124318E+09	1,632449E+09	6,248753E+09	7,881202E+09
1436	8,161763E+08	8,161920E+08	3,124293E+09	3,124361E+09	1,632368E+09	6,248654E+09	7,881023E+09
1437	8,162597E+08	8,162620E+08	3,124326E+09	3,124303E+09	1,632522E+09	6,248630E+09	7,881151E+09
1438	8,162484E+08	8,162826E+08	3,124340E+09	3,124261E+09	1,632531E+09	6,248601E+09	7,881131E+09
1439	8,162279E+08	8,162131E+08	3,124245E+09	3,124355E+09	1,632441E+09	6,248601E+09	7,881042E+09
1440	8,162922E+08	8,162689E+08	3,124359E+09	3,124296E+09	1,632561E+09	6,248655E+09	7,881216E+09
1441	8,162128E+08	8,162219E+08	3,124304E+09	3,124327E+09	1,632435E+09	6,248632E+09	7,881066E+09
1442	8,162070E+08	8,161826E+08	3,124300E+09	3,124400E+09	1,632390E+09	6,248700E+09	7,881089E+09
1443	8,162242E+08	8,162346E+08	3,124454E+09	3,124359E+09	1,632459E+09	6,248813E+09	7,881272E+09
1444	8,161230E+08	8,161362E+08	3,124430E+09	3,124442E+09	1,632259E+09	6,248872E+09	7,881131E+09
1445	8,161444E+08	8,161327E+08	3,124503E+09	3,124465E+09	1,632277E+09	6,248968E+09	7,881245E+09
1446	8,161292E+08	8,161463E+08	3,124555E+09	3,124450E+09	1,632275E+09	6,249005E+09	7,881280E+09
1447	8,160732E+08	8,160704E+08	3,124435E+09	3,124563E+09	1,632144E+09	6,248998E+09	7,881142E+09
1448	8,161475E+08	8,161370E+08	3,124503E+09	3,124491E+09	1,632285E+09	6,248994E+09	7,881279E+09
1449	8,161183E+08	8,161443E+08	3,124448E+09	3,124421E+09	1,632263E+09	6,248869E+09	7,881131E+09
1450	8,161338E+08	8,161252E+08	3,124356E+09	3,124432E+09	1,632259E+09	6,248788E+09	7,881047E+09
1451	8,162292E+08	8,162238E+08	3,124424E+09	3,124310E+09	1,632453E+09	6,248735E+09	7,881187E+09
1452	8,161852E+08	8,162024E+08	3,124308E+09	3,124285E+09	1,632388E+09	6,248593E+09	7,880980E+09
1453	8,162455E+08	8,162415E+08	3,124246E+09	3,124271E+09	1,632487E+09	6,248517E+09	7,881004E+09
1454	8,163018E+08	8,163322E+08	3,124258E+09	3,124168E+09	1,632634E+09	6,248427E+09	7,881060E+09
1455	8,162671E+08	8,162915E+08	3,124131E+09	3,124226E+09	1,632559E+09	6,248357E+09	7,880916E+09
1456	8,163559E+08	8,163396E+08	3,124194E+09	3,124164E+09	1,632696E+09	6,248357E+09	7,881053E+09
1457	8,163447E+08	8,163583E+08	3,124180E+09	3,124102E+09	1,632703E+09	6,248281E+09	7,880984E+09
1458	8,163162E+08	8,162960E+08	3,124091E+09	3,124201E+09	1,632612E+09	6,248292E+09	7,880904E+09
1459	8,163743E+08	8,163543E+08	3,124202E+09	3,124162E+09	1,632729E+09	6,248363E+09	7,881092E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
1460	8,162892E+08	8,163108E+08	3,124200E+09	3,124184E+09	1,632600E+09	6,248384E+09	7,880984E+09
1461	8,162691E+08	8,162662E+08	3,124224E+09	3,124269E+09	1,632535E+09	6,248493E+09	7,881028E+09
1462	8,162858E+08	8,163003E+08	3,124352E+09	3,124237E+09	1,632586E+09	6,248589E+09	7,881175E+09
1463	8,161923E+08	8,162039E+08	3,124313E+09	3,124356E+09	1,632396E+09	6,248669E+09	7,881065E+09
1464	8,162218E+08	8,161920E+08	3,124371E+09	3,124377E+09	1,632414E+09	6,248749E+09	7,881163E+09
1465	8,162140E+08	8,162222E+08	3,124376E+09	3,124322E+09	1,632436E+09	6,248697E+09	7,881133E+09
1466	8,161639E+08	8,161657E+08	3,124265E+09	3,124401E+09	1,632330E+09	6,248666E+09	7,880995E+09
1467	8,162453E+08	8,162286E+08	3,124336E+09	3,124316E+09	1,632474E+09	6,248652E+09	7,881126E+09
1468	8,162184E+08	8,162378E+08	3,124320E+09	3,124227E+09	1,632456E+09	6,248548E+09	7,881004E+09
1469	8,162228E+08	8,162213E+08	3,124225E+09	3,124258E+09	1,632444E+09	6,248482E+09	7,880926E+09
1470	8,163125E+08	8,163154E+08	3,124252E+09	3,124153E+09	1,632628E+09	6,248404E+09	7,881032E+09
1471	8,162740E+08	8,163101E+08	3,124137E+09	3,124162E+09	1,632584E+09	6,248299E+09	7,880883E+09
1472	8,163396E+08	8,163368E+08	3,124100E+09	3,124144E+09	1,632676E+09	6,248244E+09	7,880920E+09
1473	8,164000E+08	8,164247E+08	3,124104E+09	3,124009E+09	1,632825E+09	6,248113E+09	7,880938E+09
1474	8,163668E+08	8,163819E+08	3,123989E+09	3,124062E+09	1,632749E+09	6,248051E+09	7,880800E+09
1475	8,164531E+08	8,164178E+08	3,124038E+09	3,124022E+09	1,632871E+09	6,248059E+09	7,880930E+09
1476	8,164351E+08	8,164403E+08	3,124043E+09	3,123953E+09	1,632875E+09	6,247995E+09	7,880871E+09
1477	8,163883E+08	8,163865E+08	3,123958E+09	3,124064E+09	1,632775E+09	6,248022E+09	7,880797E+09
1478	8,164385E+08	8,164365E+08	3,124062E+09	3,124023E+09	1,632875E+09	6,248086E+09	7,880961E+09
1479	8,163594E+08	8,163925E+08	3,124088E+09	3,124069E+09	1,632752E+09	6,248157E+09	7,880909E+09
1480	8,163432E+08	8,163261E+08	3,124132E+09	3,124162E+09	1,632669E+09	6,248294E+09	7,880964E+09
1481	8,163643E+08	8,163623E+08	3,124213E+09	3,124115E+09	1,632727E+09	6,248328E+09	7,881055E+09
1482	8,162746E+08	8,162788E+08	3,124157E+09	3,124227E+09	1,632553E+09	6,248384E+09	7,880938E+09
1483	8,163082E+08	8,162747E+08	3,124198E+09	3,124251E+09	1,632583E+09	6,248450E+09	7,881033E+09
1484	8,163039E+08	8,163143E+08	3,124238E+09	3,124155E+09	1,632618E+09	6,248392E+09	7,881011E+09
1485	8,162440E+08	8,162624E+08	3,124149E+09	3,124228E+09	1,632506E+09	6,248376E+09	7,880883E+09
1486	8,163244E+08	8,163150E+08	3,124197E+09	3,124148E+09	1,632639E+09	6,248345E+09	7,880985E+09
1487	8,163047E+08	8,163305E+08	3,124175E+09	3,124095E+09	1,632635E+09	6,248270E+09	7,880905E+09
1488	8,163125E+08	8,163064E+08	3,124081E+09	3,124135E+09	1,632619E+09	6,248216E+09	7,880835E+09
1489	8,164062E+08	8,164126E+08	3,124065E+09	3,124004E+09	1,632819E+09	6,248069E+09	7,880888E+09
1490	8,163750E+08	8,164152E+08	3,123970E+09	3,123996E+09	1,632790E+09	6,247965E+09	7,880755E+09
1491	8,164453E+08	8,164295E+08	3,123940E+09	3,123981E+09	1,632875E+09	6,247920E+09	7,880795E+09
1492	8,165054E+08	8,165117E+08	3,123969E+09	3,123830E+09	1,633017E+09	6,247800E+09	7,880817E+09
1493	8,164566E+08	8,164722E+08	3,123850E+09	3,123901E+09	1,632929E+09	6,247751E+09	7,880680E+09
1494	8,165315E+08	8,165023E+08	3,123864E+09	3,123876E+09	1,633034E+09	6,247741E+09	7,880774E+09
1495	8,165124E+08	8,165369E+08	3,123892E+09	3,123839E+09	1,633049E+09	6,247731E+09	7,880780E+09
1496	8,164641E+08	8,164664E+08	3,123855E+09	3,123951E+09	1,632930E+09	6,247806E+09	7,880737E+09
1497	8,165126E+08	8,165093E+08	3,123948E+09	3,123894E+09	1,633022E+09	6,247842E+09	7,880864E+09
1498	8,164393E+08	8,164635E+08	3,123985E+09	3,123945E+09	1,632903E+09	6,247930E+09	7,880833E+09
1499	8,164239E+08	8,163872E+08	3,123997E+09	3,124056E+09	1,632811E+09	6,248053E+09	7,880864E+09
1500	8,164448E+08	8,164322E+08	3,124077E+09	3,123987E+09	1,632877E+09	6,248063E+09	7,880940E+09
1501	8,163469E+08	8,163684E+08	3,124011E+09	3,124086E+09	1,632715E+09	6,248097E+09	7,880813E+09
1502	8,163792E+08	8,163591E+08	3,124035E+09	3,124092E+09	1,632738E+09	6,248127E+09	7,880865E+09
1503	8,163856E+08	8,164046E+08	3,124104E+09	3,124006E+09	1,632790E+09	6,248110E+09	7,880901E+09
1504	8,163312E+08	8,163382E+08	3,124033E+09	3,124080E+09	1,632669E+09	6,248114E+09	7,880783E+09
1505	8,164123E+08	8,163969E+08	3,124036E+09	3,123991E+09	1,632809E+09	6,248027E+09	7,880836E+09
1506	8,163997E+08	8,164285E+08	3,124011E+09	3,123941E+09	1,632828E+09	6,247952E+09	7,880780E+09
1507	8,164111E+08	8,164063E+08	3,123908E+09	3,123995E+09	1,632817E+09	6,247903E+09	7,880720E+09
1508	8,165083E+08	8,165144E+08	3,123925E+09	3,123835E+09	1,633023E+09	6,247760E+09	7,880783E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
1509	8,164712E+08	8,165178E+08	3,123840E+09	3,123828E+09	1,632989E+09	6,247668E+09	7,880657E+09
1510	8,165365E+08	8,165161E+08	3,123778E+09	3,123824E+09	1,633053E+09	6,247602E+09	7,880655E+09
1511	8,165985E+08	8,166020E+08	3,123808E+09	3,123703E+09	1,633200E+09	6,247511E+09	7,880712E+09
1512	8,165447E+08	8,165550E+08	3,123701E+09	3,123778E+09	1,633100E+09	6,247479E+09	7,880579E+09
1513	8,166141E+08	8,165936E+08	3,123692E+09	3,123730E+09	1,633208E+09	6,247422E+09	7,880630E+09
1514	8,165984E+08	8,166289E+08	3,123757E+09	3,123683E+09	1,633227E+09	6,247440E+09	7,880667E+09
1515	8,165497E+08	8,165423E+08	3,123739E+09	3,123815E+09	1,633092E+09	6,247555E+09	7,880647E+09
1516	8,165959E+08	8,165783E+08	3,123846E+09	3,123748E+09	1,633174E+09	6,247594E+09	7,880768E+09
1517	8,165106E+08	8,165371E+08	3,123868E+09	3,123817E+09	1,633048E+09	6,247686E+09	7,880733E+09
1518	8,164884E+08	8,164598E+08	3,123837E+09	3,123936E+09	1,632948E+09	6,247773E+09	7,880722E+09
1519	8,165162E+08	8,165172E+08	3,123929E+09	3,123877E+09	1,633033E+09	6,247806E+09	7,880839E+09
1520	8,164225E+08	8,164453E+08	3,123901E+09	3,123957E+09	1,632868E+09	6,247858E+09	7,880726E+09
1521	8,164585E+08	8,164377E+08	3,123899E+09	3,123935E+09	1,632896E+09	6,247834E+09	7,880730E+09
1522	8,164752E+08	8,164874E+08	3,123977E+09	3,123851E+09	1,632963E+09	6,247828E+09	7,880791E+09
1523	8,164238E+08	8,164184E+08	3,123886E+09	3,123949E+09	1,632842E+09	6,247835E+09	7,880677E+09
1524	8,165050E+08	8,164881E+08	3,123885E+09	3,123839E+09	1,632993E+09	6,247723E+09	7,880716E+09
1525	8,164883E+08	8,165368E+08	3,123856E+09	3,123785E+09	1,633025E+09	6,247641E+09	7,880666E+09
1526	8,165006E+08	8,165052E+08	3,123733E+09	3,123829E+09	1,633006E+09	6,247563E+09	7,880568E+09
1527	8,166079E+08	8,166119E+08	3,123773E+09	3,123684E+09	1,633220E+09	6,247457E+09	7,880677E+09
1528	8,165731E+08	8,166020E+08	3,123697E+09	3,123678E+09	1,633175E+09	6,247376E+09	7,880551E+09
1529	8,166332E+08	8,166034E+08	3,123587E+09	3,123663E+09	1,633237E+09	6,247250E+09	7,880486E+09
1530	8,166957E+08	8,167017E+08	3,123635E+09	3,123545E+09	1,633397E+09	6,247180E+09	7,880577E+09
1531	8,166376E+08	8,166507E+08	3,123545E+09	3,123634E+09	1,633288E+09	6,247179E+09	7,880467E+09
1532	8,166990E+08	8,166832E+08	3,123587E+09	3,123567E+09	1,633382E+09	6,247154E+09	7,880536E+09
1533	8,166744E+08	8,167157E+08	3,123671E+09	3,123541E+09	1,633390E+09	6,247213E+09	7,880603E+09
1534	8,166179E+08	8,166081E+08	3,123618E+09	3,123698E+09	1,633226E+09	6,247316E+09	7,880542E+09
1535	8,166672E+08	8,166457E+08	3,123719E+09	3,123661E+09	1,633313E+09	6,247380E+09	7,880693E+09
1536	8,165828E+08	8,166015E+08	3,123732E+09	3,123724E+09	1,633184E+09	6,247456E+09	7,880640E+09
1537	8,165605E+08	8,165359E+08	3,123663E+09	3,123803E+09	1,633096E+09	6,247465E+09	7,880562E+09
1538	8,165996E+08	8,165996E+08	3,123788E+09	3,123718E+09	1,633199E+09	6,247506E+09	7,880705E+09
1539	8,165116E+08	8,165216E+08	3,123773E+09	3,123803E+09	1,633033E+09	6,247576E+09	7,880609E+09
1540	8,165474E+08	8,165177E+08	3,123780E+09	3,123764E+09	1,633065E+09	6,247544E+09	7,880609E+09
1541	8,165585E+08	8,165817E+08	3,123842E+09	3,123699E+09	1,633140E+09	6,247542E+09	7,880682E+09
1542	8,165029E+08	8,165137E+08	3,123715E+09	3,123809E+09	1,633017E+09	6,247525E+09	7,880541E+09
1543	8,165926E+08	8,165919E+08	3,123732E+09	3,123713E+09	1,633185E+09	6,247444E+09	7,880629E+09
1544	8,165820E+08	8,166284E+08	3,123727E+09	3,123648E+09	1,633210E+09	6,247375E+09	7,880586E+09
1545	8,165986E+08	8,165965E+08	3,123566E+09	3,123668E+09	1,633195E+09	6,247234E+09	7,880429E+09
1546	8,167147E+08	8,167022E+08	3,123607E+09	3,123518E+09	1,633417E+09	6,247125E+09	7,880542E+09
1547	8,166782E+08	8,166916E+08	3,123521E+09	3,123527E+09	1,633370E+09	6,247048E+09	7,880418E+09
1548	8,167314E+08	8,167032E+08	3,123421E+09	3,123486E+09	1,633435E+09	6,246906E+09	7,880341E+09
1549	8,167812E+08	8,168089E+08	3,123492E+09	3,123377E+09	1,633590E+09	6,246868E+09	7,880458E+09
1550	8,167154E+08	8,167401E+08	3,123413E+09	3,123479E+09	1,633455E+09	6,246893E+09	7,880348E+09
1551	8,167783E+08	8,167622E+08	3,123482E+09	3,123446E+09	1,633541E+09	6,246928E+09	7,880469E+09
1552	8,167518E+08	8,167777E+08	3,123567E+09	3,123441E+09	1,633529E+09	6,247008E+09	7,880537E+09
1553	8,166915E+08	8,166747E+08	3,123453E+09	3,123585E+09	1,633366E+09	6,247038E+09	7,880404E+09
1554	8,167464E+08	8,167221E+08	3,123559E+09	3,123541E+09	1,633468E+09	6,247100E+09	7,880569E+09
1555	8,166646E+08	8,166797E+08	3,123588E+09	3,123597E+09	1,633344E+09	6,247185E+09	7,880529E+09
1556	8,166420E+08	8,166171E+08	3,123550E+09	3,123637E+09	1,633259E+09	6,247187E+09	7,880446E+09
1557	8,166762E+08	8,166857E+08	3,123690E+09	3,123563E+09	1,633362E+09	6,247253E+09	7,880614E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
1558	8,165845E+08	8,165983E+08	3,123645E+09	3,123667E+09	1,633183E+09	6,247311E+09	7,880494E+09
1559	8,166231E+08	8,166014E+08	3,123650E+09	3,123655E+09	1,633225E+09	6,247305E+09	7,880530E+09
1560	8,166381E+08	8,166670E+08	3,123702E+09	3,123589E+09	1,633305E+09	6,247291E+09	7,880596E+09
1561	8,165882E+08	8,166062E+08	3,123530E+09	3,123660E+09	1,633194E+09	6,247190E+09	7,880384E+09
1562	8,166946E+08	8,166849E+08	3,123571E+09	3,123544E+09	1,633379E+09	6,247115E+09	7,880495E+09
1563	8,166928E+08	8,167154E+08	3,123562E+09	3,123479E+09	1,633408E+09	6,247041E+09	7,880450E+09
1564	8,167071E+08	8,166886E+08	3,123399E+09	3,123474E+09	1,633396E+09	6,246873E+09	7,880269E+09
1565	8,168125E+08	8,168085E+08	3,123439E+09	3,123341E+09	1,633621E+09	6,246779E+09	7,880400E+09
1566	8,167654E+08	8,167957E+08	3,123342E+09	3,123363E+09	1,633561E+09	6,246705E+09	7,880266E+09
1567	8,168165E+08	8,168072E+08	3,123292E+09	3,123346E+09	1,633624E+09	6,246638E+09	7,880262E+09
1568	8,168636E+08	8,168942E+08	3,123394E+09	3,123253E+09	1,633758E+09	6,246647E+09	7,880405E+09
1569	8,167960E+08	8,168154E+08	3,123281E+09	3,123354E+09	1,633611E+09	6,246635E+09	7,880246E+09
1570	8,168641E+08	8,168313E+08	3,123348E+09	3,123334E+09	1,633695E+09	6,246683E+09	7,880378E+09
1571	8,168379E+08	8,168442E+08	3,123412E+09	3,123340E+09	1,633682E+09	6,246752E+09	7,880434E+09
1572	8,167733E+08	8,167558E+08	3,123294E+09	3,123441E+09	1,633529E+09	6,246735E+09	7,880264E+09
1573	8,168218E+08	8,168128E+08	3,123421E+09	3,123385E+09	1,633635E+09	6,246806E+09	7,880440E+09
1574	8,167357E+08	8,167600E+08	3,123460E+09	3,123438E+09	1,633496E+09	6,246899E+09	7,880394E+09
1575	8,167166E+08	8,166953E+08	3,123455E+09	3,123500E+09	1,633412E+09	6,246954E+09	7,880366E+09
1576	8,167486E+08	8,167548E+08	3,123587E+09	3,123449E+09	1,633503E+09	6,247036E+09	7,880539E+09
1577	8,166584E+08	8,166774E+08	3,123485E+09	3,123544E+09	1,633336E+09	6,247029E+09	7,880365E+09
1578	8,167075E+08	8,166890E+08	3,123488E+09	3,123527E+09	1,633396E+09	6,247015E+09	7,880411E+09
1579	8,167314E+08	8,167539E+08	3,123548E+09	3,123454E+09	1,633485E+09	6,247002E+09	7,880488E+09
1580	8,166889E+08	8,167003E+08	3,123385E+09	3,123479E+09	1,633389E+09	6,246864E+09	7,880253E+09
1581	8,167948E+08	8,167809E+08	3,123425E+09	3,123369E+09	1,633576E+09	6,246793E+09	7,880369E+09
1582	8,167887E+08	8,168066E+08	3,123390E+09	3,123315E+09	1,633595E+09	6,246705E+09	7,880300E+09
1583	8,168020E+08	8,167882E+08	3,123237E+09	3,123327E+09	1,633590E+09	6,246564E+09	7,880154E+09
1584	8,169000E+08	8,169073E+08	3,123285E+09	3,123201E+09	1,633807E+09	6,246486E+09	7,880293E+09
1585	8,168515E+08	8,168948E+08	3,123174E+09	3,123203E+09	1,633746E+09	6,246378E+09	7,880124E+09
1586	8,169094E+08	8,168962E+08	3,123161E+09	3,123195E+09	1,633806E+09	6,246356E+09	7,880161E+09
1587	8,169591E+08	8,169695E+08	3,123263E+09	3,123126E+09	1,633929E+09	6,246389E+09	7,880318E+09
1588	8,168896E+08	8,168933E+08	3,123136E+09	3,123208E+09	1,633783E+09	6,246345E+09	7,880127E+09
1589	8,169464E+08	8,169169E+08	3,123198E+09	3,123200E+09	1,633863E+09	6,246399E+09	7,880262E+09
1590	8,169111E+08	8,169279E+08	3,123252E+09	3,123206E+09	1,633839E+09	6,246458E+09	7,880297E+09
1591	8,168448E+08	8,168403E+08	3,123187E+09	3,123310E+09	1,633685E+09	6,246497E+09	7,880182E+09
1592	8,168891E+08	8,168849E+08	3,123338E+09	3,123264E+09	1,633774E+09	6,246602E+09	7,880376E+09
1593	8,168040E+08	8,168273E+08	3,123339E+09	3,123308E+09	1,633631E+09	6,246647E+09	7,880279E+09
1594	8,167927E+08	8,167632E+08	3,123333E+09	3,123387E+09	1,633556E+09	6,246720E+09	7,880275E+09
1595	8,168301E+08	8,168260E+08	3,123437E+09	3,123343E+09	1,633656E+09	6,246780E+09	7,880436E+09
1596	8,167449E+08	8,167651E+08	3,123320E+09	3,123393E+09	1,633510E+09	6,246713E+09	7,880223E+09
1597	8,167962E+08	8,167850E+08	3,123337E+09	3,123362E+09	1,633581E+09	6,246699E+09	7,880280E+09
1598	8,168236E+08	8,168416E+08	3,123387E+09	3,123281E+09	1,633665E+09	6,246668E+09	7,880333E+09
1599	8,167872E+08	8,167926E+08	3,123245E+09	3,123313E+09	1,633580E+09	6,246558E+09	7,880138E+09
1600	8,168887E+08	8,168716E+08	3,123270E+09	3,123219E+09	1,633760E+09	6,246489E+09	7,880250E+09
1601	8,168791E+08	8,169078E+08	3,123194E+09	3,123152E+09	1,633787E+09	6,246346E+09	7,880133E+09
1602	8,168973E+08	8,168949E+08	3,123071E+09	3,123171E+09	1,633792E+09	6,246242E+09	7,880034E+09
1603	8,169961E+08	8,170040E+08	3,123145E+09	3,123057E+09	1,634000E+09	6,246202E+09	7,880202E+09
1604	8,169502E+08	8,169900E+08	3,123050E+09	3,123037E+09	1,633940E+09	6,246087E+09	7,880027E+09
1605	8,170021E+08	8,169851E+08	3,123039E+09	3,123050E+09	1,633987E+09	6,246089E+09	7,880076E+09
1606	8,170434E+08	8,170466E+08	3,123111E+09	3,123002E+09	1,634090E+09	6,246113E+09	7,880203E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
1607	8,169717E+08	8,169767E+08	3,122995E+09	3,123090E+09	1,633948E+09	6,246085E+09	7,880034E+09
1608	8,170182E+08	8,169960E+08	3,123058E+09	3,123083E+09	1,634014E+09	6,246140E+09	7,880154E+09
1609	8,169814E+08	8,170053E+08	3,123103E+09	3,123059E+09	1,633987E+09	6,246162E+09	7,880149E+09
1610	8,169228E+08	8,169113E+08	3,123072E+09	3,123166E+09	1,633834E+09	6,246237E+09	7,880072E+09
1611	8,169676E+08	8,169469E+08	3,123224E+09	3,123143E+09	1,633914E+09	6,246366E+09	7,880281E+09
1612	8,168857E+08	8,169023E+08	3,123208E+09	3,123167E+09	1,633788E+09	6,246375E+09	7,880163E+09
1613	8,168693E+08	8,168492E+08	3,123191E+09	3,123255E+09	1,633718E+09	6,246446E+09	7,880165E+09
1614	8,169053E+08	8,169121E+08	3,123282E+09	3,123212E+09	1,633817E+09	6,246494E+09	7,880311E+09
1615	8,168290E+08	8,168555E+08	3,123200E+09	3,123250E+09	1,633685E+09	6,246451E+09	7,880135E+09
1616	8,168803E+08	8,168679E+08	3,123217E+09	3,123224E+09	1,633748E+09	6,246441E+09	7,880189E+09
1617	8,169118E+08	8,169248E+08	3,123222E+09	3,123125E+09	1,633837E+09	6,246347E+09	7,880184E+09
1618	8,168838E+08	8,168824E+08	3,123079E+09	3,123164E+09	1,633766E+09	6,246243E+09	7,880009E+09
1619	8,169861E+08	8,169665E+08	3,123093E+09	3,123075E+09	1,633953E+09	6,246168E+09	7,880121E+09
1620	8,169799E+08	8,170176E+08	3,123020E+09	3,122967E+09	1,633997E+09	6,245987E+09	7,879985E+09
1621	8,169944E+08	8,170027E+08	3,122933E+09	3,122990E+09	1,633997E+09	6,245923E+09	7,879920E+09
1622	8,170896E+08	8,170948E+08	3,123005E+09	3,122895E+09	1,634184E+09	6,245900E+09	7,880085E+09
1623	8,170462E+08	8,170756E+08	3,122930E+09	3,122898E+09	1,634122E+09	6,245828E+09	7,879949E+09
1624	8,170873E+08	8,170650E+08	3,122898E+09	3,122938E+09	1,634152E+09	6,245836E+09	7,879988E+09
1625	8,171222E+08	8,171281E+08	3,122926E+09	3,122869E+09	1,634250E+09	6,245795E+09	7,880045E+09
1626	8,170535E+08	8,170618E+08	3,122843E+09	3,122956E+09	1,634115E+09	6,245799E+09	7,879915E+09
1627	8,170993E+08	8,170718E+08	3,122932E+09	3,122951E+09	1,634171E+09	6,245883E+09	7,880054E+09
1628	8,170639E+08	8,170824E+08	3,122989E+09	3,122901E+09	1,634146E+09	6,245891E+09	7,880037E+09
1629	8,169997E+08	8,169870E+08	3,122972E+09	3,123031E+09	1,633987E+09	6,246002E+09	7,879989E+09
1630	8,170370E+08	8,170169E+08	3,123090E+09	3,123029E+09	1,634054E+09	6,246119E+09	7,880173E+09
1631	8,169594E+08	8,169836E+08	3,123084E+09	3,123054E+09	1,633943E+09	6,246138E+09	7,880081E+09
1632	8,169385E+08	8,169327E+08	3,123058E+09	3,123139E+09	1,633871E+09	6,246196E+09	7,880067E+09
1633	8,169808E+08	8,169917E+08	3,123126E+09	3,123058E+09	1,633973E+09	6,246184E+09	7,880156E+09
1634	8,169203E+08	8,169372E+08	3,123060E+09	3,123094E+09	1,633857E+09	6,246154E+09	7,880011E+09
1635	8,169780E+08	8,169469E+08	3,123060E+09	3,123078E+09	1,633925E+09	6,246138E+09	7,880063E+09
1636	8,170131E+08	8,170220E+08	3,123046E+09	3,122947E+09	1,634035E+09	6,245993E+09	7,880028E+09
1637	8,169808E+08	8,169925E+08	3,122915E+09	3,122989E+09	1,633973E+09	6,245904E+09	7,879877E+09
1638	8,170753E+08	8,170719E+08	3,122934E+09	3,122911E+09	1,634147E+09	6,245846E+09	7,879993E+09
1639	8,170756E+08	8,171208E+08	3,122912E+09	3,122809E+09	1,634196E+09	6,245721E+09	7,879917E+09
1640	8,170835E+08	8,170919E+08	3,122817E+09	3,122859E+09	1,634175E+09	6,245676E+09	7,879852E+09
1641	8,171778E+08	8,171745E+08	3,122845E+09	3,122762E+09	1,634352E+09	6,245607E+09	7,879959E+09
1642	8,171416E+08	8,171575E+08	3,122759E+09	3,122777E+09	1,634299E+09	6,245536E+09	7,879835E+09
1643	8,171784E+08	8,171462E+08	3,122715E+09	3,122817E+09	1,634325E+09	6,245532E+09	7,879857E+09
1644	8,172129E+08	8,172204E+08	3,122755E+09	3,122699E+09	1,634433E+09	6,245454E+09	7,879887E+09
1645	8,171383E+08	8,171504E+08	3,122720E+09	3,122781E+09	1,634289E+09	6,245500E+09	7,879789E+09
1646	8,171746E+08	8,171466E+08	3,122817E+09	3,122799E+09	1,634321E+09	6,245616E+09	7,879937E+09
1647	8,171410E+08	8,171569E+08	3,122899E+09	3,122772E+09	1,634298E+09	6,245671E+09	7,879969E+09
1648	8,170641E+08	8,170613E+08	3,122861E+09	3,122933E+09	1,634125E+09	6,245794E+09	7,879919E+09
1649	8,170983E+08	8,170927E+08	3,122938E+09	3,122916E+09	1,634191E+09	6,245854E+09	7,880045E+09
1650	8,170342E+08	8,170627E+08	3,122951E+09	3,122939E+09	1,634097E+09	6,245890E+09	7,879987E+09
1651	8,170209E+08	8,170059E+08	3,122929E+09	3,123016E+09	1,634027E+09	6,245944E+09	7,879971E+09
1652	8,170747E+08	8,170718E+08	3,122982E+09	3,122893E+09	1,634146E+09	6,245875E+09	7,880021E+09
1653	8,170154E+08	8,170249E+08	3,122919E+09	3,122929E+09	1,634040E+09	6,245849E+09	7,879889E+09
1654	8,170681E+08	8,170379E+08	3,122889E+09	3,122923E+09	1,634106E+09	6,245812E+09	7,879918E+09
1655	8,171075E+08	8,171256E+08	3,122894E+09	3,122788E+09	1,634233E+09	6,245682E+09	7,879915E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
1656	8,170676E+08	8,170979E+08	3,122773E+09	3,122838E+09	1,634165E+09	6,245611E+09	7,879776E+09
1657	8,171624E+08	8,171648E+08	3,122774E+09	3,122741E+09	1,634327E+09	6,245515E+09	7,879842E+09
1658	8,171758E+08	8,172094E+08	3,122764E+09	3,122662E+09	1,634385E+09	6,245426E+09	7,879811E+09
1659	8,171869E+08	8,171751E+08	3,122651E+09	3,122730E+09	1,634362E+09	6,245381E+09	7,879743E+09
1660	8,172811E+08	8,172677E+08	3,122652E+09	3,122601E+09	1,634549E+09	6,245252E+09	7,879801E+09
1661	8,172382E+08	8,172601E+08	3,122591E+09	3,122610E+09	1,634498E+09	6,245201E+09	7,879699E+09
1662	8,172631E+08	8,172405E+08	3,122562E+09	3,122656E+09	1,634504E+09	6,245218E+09	7,879721E+09
1663	8,172961E+08	8,173082E+08	3,122664E+09	3,122543E+09	1,634604E+09	6,245207E+09	7,879811E+09
1664	8,172073E+08	8,172285E+08	3,122638E+09	3,122660E+09	1,634436E+09	6,245298E+09	7,879734E+09
1665	8,172356E+08	8,172120E+08	3,122700E+09	3,122685E+09	1,634448E+09	6,245385E+09	7,879833E+09
1666	8,172111E+08	8,172263E+08	3,122772E+09	3,122684E+09	1,634437E+09	6,245457E+09	7,879894E+09
1667	8,171376E+08	8,171315E+08	3,122715E+09	3,122842E+09	1,634269E+09	6,245558E+09	7,879827E+09
1668	8,171800E+08	8,171707E+08	3,122784E+09	3,122770E+09	1,634351E+09	6,245554E+09	7,879904E+09
1669	8,171222E+08	8,171423E+08	3,122822E+09	3,122773E+09	1,634265E+09	6,245595E+09	7,879860E+09
1670	8,171077E+08	8,170819E+08	3,122782E+09	3,122859E+09	1,634190E+09	6,245641E+09	7,879831E+09
1671	8,171681E+08	8,171568E+08	3,122851E+09	3,122737E+09	1,634325E+09	6,245588E+09	7,879913E+09
1672	8,170977E+08	8,171214E+08	3,122769E+09	3,122787E+09	1,634219E+09	6,245556E+09	7,879775E+09
1673	8,171455E+08	8,171368E+08	3,122717E+09	3,122765E+09	1,634282E+09	6,245482E+09	7,879764E+09
1674	8,171983E+08	8,172269E+08	3,122748E+09	3,122642E+09	1,634425E+09	6,245389E+09	7,879814E+09
1675	8,171639E+08	8,171873E+08	3,122635E+09	3,122702E+09	1,634351E+09	6,245336E+09	7,879687E+09
1676	8,172666E+08	8,172555E+08	3,122617E+09	3,122580E+09	1,634522E+09	6,245196E+09	7,879719E+09
1677	8,172818E+08	8,173016E+08	3,122604E+09	3,122505E+09	1,634583E+09	6,245109E+09	7,879692E+09
1678	8,172844E+08	8,172691E+08	3,122461E+09	3,122583E+09	1,634553E+09	6,245044E+09	7,879597E+09
1679	8,173774E+08	8,173679E+08	3,122494E+09	3,122437E+09	1,634745E+09	6,244930E+09	7,879676E+09
1680	8,173188E+08	8,173587E+08	3,122459E+09	3,122451E+09	1,634677E+09	6,244909E+09	7,879587E+09
1681	8,173352E+08	8,173211E+08	3,122435E+09	3,122490E+09	1,634656E+09	6,244925E+09	7,879581E+09
1682	8,173751E+08	8,173814E+08	3,122553E+09	3,122422E+09	1,634757E+09	6,244975E+09	7,879731E+09
1683	8,172850E+08	8,172942E+08	3,122517E+09	3,122569E+09	1,634579E+09	6,245086E+09	7,879665E+09
1684	8,173134E+08	8,172870E+08	3,122548E+09	3,122568E+09	1,634600E+09	6,245115E+09	7,879716E+09
1685	8,172894E+08	8,173074E+08	3,122638E+09	3,122558E+09	1,634597E+09	6,245196E+09	7,879793E+09
1686	8,172141E+08	8,172095E+08	3,122578E+09	3,122711E+09	1,634424E+09	6,245288E+09	7,879712E+09
1687	8,172645E+08	8,172453E+08	3,122677E+09	3,122622E+09	1,634510E+09	6,245300E+09	7,879810E+09
1688	8,171998E+08	8,172222E+08	3,122707E+09	3,122640E+09	1,634422E+09	6,245347E+09	7,879769E+09
1689	8,171817E+08	8,171593E+08	3,122624E+09	3,122711E+09	1,634341E+09	6,245335E+09	7,879676E+09
1690	8,172512E+08	8,172464E+08	3,122686E+09	3,122610E+09	1,634498E+09	6,245296E+09	7,879793E+09
1691	8,171855E+08	8,172170E+08	3,122606E+09	3,122654E+09	1,634403E+09	6,245260E+09	7,879663E+09
1692	8,172397E+08	8,172356E+08	3,122553E+09	3,122585E+09	1,634475E+09	6,245138E+09	7,879613E+09
1693	8,172996E+08	8,173228E+08	3,122612E+09	3,122460E+09	1,634622E+09	6,245072E+09	7,879694E+09
1694	8,172666E+08	8,172783E+08	3,122472E+09	3,122540E+09	1,634545E+09	6,245012E+09	7,879557E+09
1695	8,173732E+08	8,173486E+08	3,122463E+09	3,122420E+09	1,634722E+09	6,244884E+09	7,879606E+09
1696	8,173737E+08	8,174061E+08	3,122437E+09	3,122359E+09	1,634780E+09	6,244796E+09	7,879576E+09
1697	8,173663E+08	8,173678E+08	3,122285E+09	3,122418E+09	1,634734E+09	6,244703E+09	7,879437E+09
1698	8,174638E+08	8,174618E+08	3,122357E+09	3,122295E+09	1,634926E+09	6,244652E+09	7,879578E+09
1699	8,174048E+08	8,174383E+08	3,122346E+09	3,122325E+09	1,634843E+09	6,244671E+09	7,879514E+09
1700	8,174198E+08	8,173965E+08	3,122311E+09	3,122354E+09	1,634816E+09	6,244665E+09	7,879481E+09
1701	8,174583E+08	8,174553E+08	3,122432E+09	3,122303E+09	1,634914E+09	6,244735E+09	7,879648E+09
1702	8,173625E+08	8,173691E+08	3,122364E+09	3,122465E+09	1,634732E+09	6,244830E+09	7,879562E+09
1703	8,173933E+08	8,173658E+08	3,122419E+09	3,122441E+09	1,634759E+09	6,244860E+09	7,879620E+09
1704	8,173600E+08	8,173868E+08	3,122515E+09	3,122421E+09	1,634747E+09	6,244936E+09	7,879683E+09



1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
1705	8,172820E+08	8,172791E+08	3,122441E+09	3,122552E+09	1,634561E+09	6,244993E+09	7,879554E+09
1706	8,173448E+08	8,173185E+08	3,122540E+09	3,122494E+09	1,634663E+09	6,245033E+09	7,879697E+09
1707	8,172819E+08	8,172984E+08	3,122559E+09	3,122518E+09	1,634580E+09	6,245078E+09	7,879658E+09
1708	8,172661E+08	8,172516E+08	3,122457E+09	3,122555E+09	1,634518E+09	6,245013E+09	7,879530E+09
1709	8,173391E+08	8,173449E+08	3,122544E+09	3,122447E+09	1,634684E+09	6,244990E+09	7,879674E+09
1710	8,172757E+08	8,173120E+08	3,122468E+09	3,122499E+09	1,634588E+09	6,244967E+09	7,879554E+09
1711	8,173382E+08	8,173256E+08	3,122438E+09	3,122424E+09	1,634664E+09	6,244863E+09	7,879526E+09
1712	8,173912E+08	8,174150E+08	3,122478E+09	3,122320E+09	1,634806E+09	6,244797E+09	7,879604E+09
1713	8,173556E+08	8,173674E+08	3,122292E+09	3,122389E+09	1,634723E+09	6,244681E+09	7,879404E+09
1714	8,174707E+08	8,174462E+08	3,122272E+09	3,122289E+09	1,634917E+09	6,244561E+09	7,879478E+09
1715	8,174703E+08	8,175040E+08	3,122261E+09	3,122215E+09	1,634974E+09	6,244476E+09	7,879450E+09
1716	8,174633E+08	8,174637E+08	3,122123E+09	3,122231E+09	1,634927E+09	6,244354E+09	7,879281E+09
1717	8,175586E+08	8,175486E+08	3,122235E+09	3,122122E+09	1,635107E+09	6,244356E+09	7,879464E+09
1718	8,174953E+08	8,175196E+08	3,122213E+09	3,122190E+09	1,635015E+09	6,244402E+09	7,879417E+09
1719	8,175068E+08	8,174759E+08	3,122189E+09	3,122224E+09	1,634983E+09	6,244414E+09	7,879396E+09
1720	8,175287E+08	8,175439E+08	3,122301E+09	3,122193E+09	1,635073E+09	6,244494E+09	7,879567E+09
1721	8,174268E+08	8,174484E+08	3,122220E+09	3,122332E+09	1,634875E+09	6,244551E+09	7,879427E+09
1722	8,174649E+08	8,174387E+08	3,122295E+09	3,122327E+09	1,634904E+09	6,244622E+09	7,879525E+09
1723	8,174360E+08	8,174523E+08	3,122401E+09	3,122308E+09	1,634888E+09	6,244709E+09	7,879597E+09
1724	8,173618E+08	8,173489E+08	3,122302E+09	3,122406E+09	1,634711E+09	6,244709E+09	7,879419E+09
1725	8,174266E+08	8,173959E+08	3,122404E+09	3,122351E+09	1,634823E+09	6,244755E+09	7,879577E+09
1726	8,173649E+08	8,173878E+08	3,122399E+09	3,122382E+09	1,634753E+09	6,244781E+09	7,879534E+09
1727	8,173535E+08	8,173452E+08	3,122329E+09	3,122394E+09	1,634699E+09	6,244723E+09	7,879421E+09
1728	8,174192E+08	8,174405E+08	3,122423E+09	3,122290E+09	1,634860E+09	6,244713E+09	7,879573E+09
1729	8,173593E+08	8,173956E+08	3,122321E+09	3,122335E+09	1,634755E+09	6,244656E+09	7,879411E+09
1730	8,174353E+08	8,174115E+08	3,122275E+09	3,122298E+09	1,634847E+09	6,244574E+09	7,879421E+09
1731	8,174920E+08	8,175049E+08	3,122296E+09	3,122194E+09	1,634997E+09	6,244490E+09	7,879487E+09
1732	8,174576E+08	8,174716E+08	3,122093E+09	3,122217E+09	1,634929E+09	6,244310E+09	7,879239E+09
1733	8,175727E+08	8,175517E+08	3,122110E+09	3,122107E+09	1,635124E+09	6,244217E+09	7,879341E+09
1734	8,175690E+08	8,176026E+08	3,122114E+09	3,122047E+09	1,635172E+09	6,244162E+09	7,879333E+09
1735	8,175609E+08	8,175536E+08	3,122019E+09	3,122068E+09	1,635114E+09	6,244087E+09	7,879202E+09
1736	8,176379E+08	8,176356E+08	3,122121E+09	3,121993E+09	1,635274E+09	6,244114E+09	7,879387E+09
1737	8,175666E+08	8,175967E+08	3,122067E+09	3,122068E+09	1,635163E+09	6,244135E+09	7,879298E+09
1738	8,175822E+08	8,175576E+08	3,122038E+09	3,122131E+09	1,635140E+09	6,244169E+09	7,879309E+09
1739	8,176033E+08	8,176169E+08	3,122161E+09	3,122085E+09	1,635220E+09	6,244245E+09	7,879465E+09
1740	8,175055E+08	8,175194E+08	3,122082E+09	3,122173E+09	1,635025E+09	6,244254E+09	7,879279E+09
1741	8,175477E+08	8,175055E+08	3,122172E+09	3,122171E+09	1,635053E+09	6,244342E+09	7,879396E+09
1742	8,175191E+08	8,175234E+08	3,122260E+09	3,122173E+09	1,635043E+09	6,244433E+09	7,879475E+09
1743	8,174456E+08	8,174306E+08	3,122177E+09	3,122260E+09	1,634876E+09	6,244437E+09	7,879314E+09
1744	8,174953E+08	8,174919E+08	3,122277E+09	3,122216E+09	1,634987E+09	6,244492E+09	7,879480E+09
1745	8,174341E+08	8,174773E+08	3,122266E+09	3,122232E+09	1,634911E+09	6,244498E+09	7,879409E+09
1746	8,174356E+08	8,174315E+08	3,122204E+09	3,122273E+09	1,634867E+09	6,244478E+09	7,879345E+09
1747	8,175088E+08	8,175187E+08	3,122292E+09	3,122174E+09	1,635027E+09	6,244466E+09	7,879493E+09
1748	8,174586E+08	8,174804E+08	3,122148E+09	3,122182E+09	1,634939E+09	6,244330E+09	7,879269E+09
1749	8,175398E+08	8,175049E+08	3,122090E+09	3,122143E+09	1,635045E+09	6,244233E+09	7,879278E+09
1750	8,175979E+08	8,176109E+08	3,122096E+09	3,122032E+09	1,635209E+09	6,244128E+09	7,879337E+09
1751	8,175641E+08	8,175791E+08	3,121936E+09	3,122015E+09	1,635143E+09	6,243951E+09	7,879094E+09
1752	8,176619E+08	8,176573E+08	3,121983E+09	3,121919E+09	1,635319E+09	6,243901E+09	7,879220E+09
1753	8,176538E+08	8,176917E+08	3,121979E+09	3,121873E+09	1,635345E+09	6,243852E+09	7,879197E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
1754	8,176470E+08	8,176379E+08	3,121882E+09	3,121955E+09	1,635285E+09	6,243838E+09	7,879122E+09
1755	8,177186E+08	8,177158E+08	3,121979E+09	3,121899E+09	1,635434E+09	6,243878E+09	7,879313E+09
1756	8,176486E+08	8,176797E+08	3,121906E+09	3,121938E+09	1,635328E+09	6,243843E+09	7,879172E+09
1757	8,176644E+08	8,176352E+08	3,121905E+09	3,121994E+09	1,635300E+09	6,243899E+09	7,879199E+09
1758	8,176865E+08	8,176885E+08	3,122031E+09	3,121952E+09	1,635375E+09	6,243982E+09	7,879357E+09
1759	8,175901E+08	8,175892E+08	3,121979E+09	3,122021E+09	1,635179E+09	6,244001E+09	7,879180E+09
1760	8,176163E+08	8,175832E+08	3,122060E+09	3,122041E+09	1,635200E+09	6,244101E+09	7,879300E+09
1761	8,175846E+08	8,176005E+08	3,122116E+09	3,122043E+09	1,635185E+09	6,244159E+09	7,879344E+09
1762	8,175178E+08	8,175182E+08	3,122037E+09	3,122156E+09	1,635036E+09	6,244193E+09	7,879229E+09
1763	8,175692E+08	8,175733E+08	3,122149E+09	3,122097E+09	1,635142E+09	6,244247E+09	7,879389E+09
1764	8,175193E+08	8,175565E+08	3,122127E+09	3,122072E+09	1,635076E+09	6,244199E+09	7,879275E+09
1765	8,175319E+08	8,175108E+08	3,122061E+09	3,122118E+09	1,635043E+09	6,244178E+09	7,879221E+09
1766	8,176121E+08	8,176034E+08	3,122111E+09	3,122030E+09	1,635215E+09	6,244141E+09	7,879356E+09
1767	8,175664E+08	8,175818E+08	3,121977E+09	3,122006E+09	1,635148E+09	6,243983E+09	7,879131E+09
1768	8,176328E+08	8,176202E+08	3,121920E+09	3,121964E+09	1,635253E+09	6,243884E+09	7,879137E+09
1769	8,176855E+08	8,177147E+08	3,121937E+09	3,121842E+09	1,635400E+09	6,243779E+09	7,879179E+09
1770	8,176567E+08	8,176783E+08	3,121809E+09	3,121868E+09	1,635335E+09	6,243676E+09	7,879012E+09
1771	8,177490E+08	8,177403E+08	3,121862E+09	3,121794E+09	1,635489E+09	6,243656E+09	7,879146E+09
1772	8,177441E+08	8,177726E+08	3,121830E+09	3,121738E+09	1,635517E+09	6,243567E+09	7,879084E+09
1773	8,177390E+08	8,177215E+08	3,121722E+09	3,121832E+09	1,635461E+09	6,243555E+09	7,879015E+09
1774	8,178096E+08	8,178015E+08	3,121806E+09	3,121777E+09	1,635611E+09	6,243583E+09	7,879194E+09
1775	8,177412E+08	8,177636E+08	3,121772E+09	3,121773E+09	1,635505E+09	6,243545E+09	7,879049E+09
1776	8,177407E+08	8,177173E+08	3,121786E+09	3,121835E+09	1,635458E+09	6,243621E+09	7,879079E+09
1777	8,177577E+08	8,177582E+08	3,121899E+09	3,121800E+09	1,635516E+09	6,243699E+09	7,879215E+09
1778	8,176642E+08	8,176661E+08	3,121852E+09	3,121913E+09	1,635330E+09	6,243765E+09	7,879095E+09
1779	8,176828E+08	8,176623E+08	3,121935E+09	3,121941E+09	1,635345E+09	6,243875E+09	7,879220E+09
1780	8,176570E+08	8,176849E+08	3,121978E+09	3,121907E+09	1,635342E+09	6,243885E+09	7,879227E+09
1781	8,175972E+08	8,175988E+08	3,121919E+09	3,122020E+09	1,635196E+09	6,243939E+09	7,879135E+09
1782	8,176571E+08	8,176499E+08	3,122021E+09	3,121970E+09	1,635307E+09	6,243990E+09	7,879297E+09
1783	8,176176E+08	8,176346E+08	3,121997E+09	3,121914E+09	1,635252E+09	6,243911E+09	7,879163E+09
1784	8,176199E+08	8,176027E+08	3,121905E+09	3,121968E+09	1,635223E+09	6,243873E+09	7,879095E+09
1785	8,177010E+08	8,176984E+08	3,121921E+09	3,121866E+09	1,635399E+09	6,243786E+09	7,879186E+09
1786	8,176609E+08	8,176888E+08	3,121800E+09	3,121852E+09	1,635350E+09	6,243652E+09	7,879002E+09
1787	8,177234E+08	8,177191E+08	3,121776E+09	3,121800E+09	1,635443E+09	6,243576E+09	7,879019E+09
1788	8,177819E+08	8,178059E+08	3,121786E+09	3,121657E+09	1,635588E+09	6,243443E+09	7,879031E+09
1789	8,177571E+08	8,177655E+08	3,121666E+09	3,121713E+09	1,635523E+09	6,243379E+09	7,878901E+09
1790	8,178484E+08	8,178284E+08	3,121695E+09	3,121670E+09	1,635677E+09	6,243365E+09	7,879042E+09
1791	8,178444E+08	8,178676E+08	3,121675E+09	3,121590E+09	1,635712E+09	6,243266E+09	7,878978E+09
1792	8,178224E+08	8,178229E+08	3,121578E+09	3,121688E+09	1,635645E+09	6,243266E+09	7,878911E+09
1793	8,178872E+08	8,178840E+08	3,121666E+09	3,121624E+09	1,635771E+09	6,243290E+09	7,879061E+09
1794	8,178209E+08	8,178423E+08	3,121657E+09	3,121651E+09	1,635663E+09	6,243308E+09	7,878972E+09
1795	8,178114E+08	8,177850E+08	3,121677E+09	3,121726E+09	1,635596E+09	6,243403E+09	7,879000E+09
1796	8,178292E+08	8,178259E+08	3,121763E+09	3,121677E+09	1,635655E+09	6,243439E+09	7,879094E+09
1797	8,177394E+08	8,177437E+08	3,121716E+09	3,121798E+09	1,635483E+09	6,243514E+09	7,878997E+09
1798	8,177596E+08	8,177419E+08	3,121791E+09	3,121821E+09	1,635502E+09	6,243612E+09	7,879113E+09
1799	8,177425E+08	8,177640E+08	3,121866E+09	3,121745E+09	1,635506E+09	6,243612E+09	7,879118E+09
1800	8,176764E+08	8,176811E+08	3,121800E+09	3,121861E+09	1,635358E+09	6,243662E+09	7,879019E+09
1801	8,177386E+08	8,177219E+08	3,121865E+09	3,121817E+09	1,635460E+09	6,243682E+09	7,879143E+09
1802	8,177084E+08	8,177235E+08	3,121832E+09	3,121789E+09	1,635432E+09	6,243622E+09	7,879054E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
1803	8,177064E+08	8,176989E+08	3,121735E+09	3,121833E+09	1,635405E+09	6,243568E+09	7,878973E+09
1804	8,177929E+08	8,177982E+08	3,121746E+09	3,121690E+09	1,635591E+09	6,243435E+09	7,879027E+09
1805	8,177597E+08	8,177892E+08	3,121655E+09	3,121677E+09	1,635549E+09	6,243332E+09	7,878881E+09
1806	8,178241E+08	8,178129E+08	3,121633E+09	3,121645E+09	1,635637E+09	6,243278E+09	7,878915E+09
1807	8,178868E+08	8,178984E+08	3,121653E+09	3,121492E+09	1,635785E+09	6,243145E+09	7,878930E+09
1808	8,178495E+08	8,178658E+08	3,121515E+09	3,121572E+09	1,635715E+09	6,243087E+09	7,878802E+09
1809	8,179356E+08	8,179226E+08	3,121517E+09	3,121530E+09	1,635858E+09	6,243047E+09	7,878905E+09
1810	8,179348E+08	8,179658E+08	3,121517E+09	3,121462E+09	1,635901E+09	6,242979E+09	7,878880E+09
1811	8,179030E+08	8,179069E+08	3,121450E+09	3,121548E+09	1,635810E+09	6,242998E+09	7,878808E+09
1812	8,179689E+08	8,179548E+08	3,121528E+09	3,121463E+09	1,635924E+09	6,242992E+09	7,878915E+09
1813	8,179038E+08	8,179126E+08	3,121526E+09	3,121515E+09	1,635816E+09	6,243041E+09	7,878857E+09
1814	8,178915E+08	8,178600E+08	3,121537E+09	3,121613E+09	1,635752E+09	6,243150E+09	7,878902E+09
1815	8,179101E+08	8,179088E+08	3,121634E+09	3,121536E+09	1,635819E+09	6,243170E+09	7,878989E+09
1816	8,178082E+08	8,178327E+08	3,121605E+09	3,121663E+09	1,635641E+09	6,243268E+09	7,878909E+09
1817	8,178278E+08	8,178153E+08	3,121674E+09	3,121685E+09	1,635643E+09	6,243360E+09	7,879003E+09
1818	8,178202E+08	8,178361E+08	3,121754E+09	3,121635E+09	1,635656E+09	6,243389E+09	7,879045E+09
1819	8,177522E+08	8,177518E+08	3,121673E+09	3,121752E+09	1,635504E+09	6,243425E+09	7,878929E+09
1820	8,178235E+08	8,177974E+08	3,121686E+09	3,121678E+09	1,635621E+09	6,243365E+09	7,878986E+09
1821	8,178022E+08	8,178179E+08	3,121648E+09	3,121642E+09	1,635620E+09	6,243290E+09	7,878910E+09
1822	8,178045E+08	8,178000E+08	3,121560E+09	3,121668E+09	1,635604E+09	6,243228E+09	7,878833E+09
1823	8,178966E+08	8,178978E+08	3,121606E+09	3,121486E+09	1,635794E+09	6,243091E+09	7,878886E+09
1824	8,178550E+08	8,178920E+08	3,121526E+09	3,121492E+09	1,635747E+09	6,243018E+09	7,878765E+09
1825	8,179161E+08	8,179036E+08	3,121476E+09	3,121487E+09	1,635820E+09	6,242963E+09	7,878783E+09
1826	8,179816E+08	8,179984E+08	3,121496E+09	3,121372E+09	1,635980E+09	6,242868E+09	7,878848E+09
1827	8,179368E+08	8,179654E+08	3,121360E+09	3,121451E+09	1,635902E+09	6,242811E+09	7,878713E+09
1828	8,180240E+08	8,180103E+08	3,121355E+09	3,121378E+09	1,636034E+09	6,242733E+09	7,878767E+09
1829	8,180278E+08	8,180497E+08	3,121378E+09	3,121317E+09	1,636077E+09	6,242695E+09	7,878772E+09
1830	8,179942E+08	8,179812E+08	3,121312E+09	3,121411E+09	1,635975E+09	6,242723E+09	7,878698E+09
1831	8,180578E+08	8,180278E+08	3,121403E+09	3,121312E+09	1,636086E+09	6,242715E+09	7,878800E+09
1832	8,179790E+08	8,179980E+08	3,121397E+09	3,121381E+09	1,635977E+09	6,242778E+09	7,878755E+09
1833	8,179585E+08	8,179396E+08	3,121392E+09	3,121486E+09	1,635898E+09	6,242878E+09	7,878776E+09
1834	8,179808E+08	8,179920E+08	3,121519E+09	3,121423E+09	1,635973E+09	6,242943E+09	7,878915E+09
1835	8,178759E+08	8,179041E+08	3,121503E+09	3,121543E+09	1,635780E+09	6,243046E+09	7,878826E+09
1836	8,179026E+08	8,178756E+08	3,121538E+09	3,121547E+09	1,635778E+09	6,243085E+09	7,878863E+09
1837	8,179061E+08	8,179071E+08	3,121597E+09	3,121510E+09	1,635813E+09	6,243107E+09	7,878920E+09
1838	8,178429E+08	8,178372E+08	3,121498E+09	3,121621E+09	1,635680E+09	6,243118E+09	7,878799E+09
1839	8,179196E+08	8,178967E+08	3,121523E+09	3,121503E+09	1,635816E+09	6,243025E+09	7,878842E+09
1840	8,178913E+08	8,179278E+08	3,121511E+09	3,121458E+09	1,635819E+09	6,242968E+09	7,878788E+09
1841	8,178917E+08	8,178959E+08	3,121428E+09	3,121492E+09	1,635788E+09	6,242920E+09	7,878707E+09
1842	8,179883E+08	8,179923E+08	3,121486E+09	3,121346E+09	1,635981E+09	6,242832E+09	7,878812E+09
1843	8,179417E+08	8,179811E+08	3,121396E+09	3,121372E+09	1,635923E+09	6,242769E+09	7,878691E+09
1844	8,180075E+08	8,179901E+08	3,121298E+09	3,121354E+09	1,635998E+09	6,242651E+09	7,878649E+09
1845	8,180806E+08	8,180941E+08	3,121307E+09	3,121239E+09	1,636175E+09	6,242546E+09	7,878721E+09
1846	8,180396E+08	8,180599E+08	3,121187E+09	3,121299E+09	1,636100E+09	6,242486E+09	7,878586E+09
1847	8,181283E+08	8,180967E+08	3,121204E+09	3,121185E+09	1,636225E+09	6,242389E+09	7,878614E+09
1848	8,181180E+08	8,181372E+08	3,121242E+09	3,121141E+09	1,636255E+09	6,242383E+09	7,878638E+09
1849	8,180747E+08	8,180604E+08	3,121167E+09	3,121264E+09	1,636135E+09	6,242431E+09	7,878566E+09
1850	8,181325E+08	8,181141E+08	3,121275E+09	3,121201E+09	1,636247E+09	6,242476E+09	7,878722E+09
1851	8,180431E+08	8,180833E+08	3,121291E+09	3,121276E+09	1,636126E+09	6,242567E+09	7,878693E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
1852	8,180237E+08	8,180105E+08	3,121275E+09	3,121361E+09	1,636034E+09	6,242636E+09	7,878670E+09
1853	8,180546E+08	8,180595E+08	3,121405E+09	3,121314E+09	1,636114E+09	6,242719E+09	7,878833E+09
1854	8,179574E+08	8,179684E+08	3,121376E+09	3,121433E+09	1,635926E+09	6,242809E+09	7,878735E+09
1855	8,179904E+08	8,179448E+08	3,121391E+09	3,121405E+09	1,635935E+09	6,242797E+09	7,878732E+09
1856	8,179894E+08	8,179973E+08	3,121440E+09	3,121360E+09	1,635987E+09	6,242800E+09	7,878787E+09
1857	8,179257E+08	8,179321E+08	3,121329E+09	3,121457E+09	1,635858E+09	6,242786E+09	7,878644E+09
1858	8,180054E+08	8,179962E+08	3,121394E+09	3,121340E+09	1,636002E+09	6,242734E+09	7,878736E+09
1859	8,179743E+08	8,180202E+08	3,121400E+09	3,121297E+09	1,635995E+09	6,242698E+09	7,878692E+09
1860	8,179792E+08	8,179751E+08	3,121280E+09	3,121335E+09	1,635954E+09	6,242615E+09	7,878569E+09
1861	8,180852E+08	8,180813E+08	3,121316E+09	3,121221E+09	1,636166E+09	6,242537E+09	7,878703E+09
1862	8,180463E+08	8,180778E+08	3,121208E+09	3,121242E+09	1,636124E+09	6,242450E+09	7,878574E+09
1863	8,181155E+08	8,180922E+08	3,121116E+09	3,121182E+09	1,636208E+09	6,242298E+09	7,878505E+09
1864	8,181814E+08	8,182006E+08	3,121153E+09	3,121056E+09	1,636382E+09	6,242209E+09	7,878591E+09
1865	8,181337E+08	8,181508E+08	3,121038E+09	3,121122E+09	1,636285E+09	6,242160E+09	7,878444E+09
1866	8,182169E+08	8,181842E+08	3,121082E+09	3,121041E+09	1,636401E+09	6,242124E+09	7,878525E+09
1867	8,181933E+08	8,182202E+08	3,121124E+09	3,121020E+09	1,636413E+09	6,242144E+09	7,878557E+09
1868	8,181450E+08	8,181375E+08	3,121021E+09	3,121142E+09	1,636283E+09	6,242163E+09	7,878446E+09
1869	8,182050E+08	8,181977E+08	3,121133E+09	3,121095E+09	1,636403E+09	6,242228E+09	7,878631E+09
1870	8,181220E+08	8,181579E+08	3,121171E+09	3,121157E+09	1,636280E+09	6,242328E+09	7,878608E+09
1871	8,181072E+08	8,180772E+08	3,121159E+09	3,121209E+09	1,636184E+09	6,242368E+09	7,878552E+09
1872	8,181344E+08	8,181300E+08	3,121281E+09	3,121168E+09	1,636264E+09	6,242449E+09	7,878713E+09
1873	8,180358E+08	8,180419E+08	3,121222E+09	3,121296E+09	1,636078E+09	6,242518E+09	7,878595E+09
1874	8,180701E+08	8,180342E+08	3,121246E+09	3,121276E+09	1,636104E+09	6,242523E+09	7,878627E+09
1875	8,180628E+08	8,180918E+08	3,121315E+09	3,121223E+09	1,636155E+09	6,242538E+09	7,878693E+09
1876	8,180033E+08	8,180172E+08	3,121198E+09	3,121299E+09	1,636021E+09	6,242498E+09	7,878518E+09
1877	8,180911E+08	8,180808E+08	3,121260E+09	3,121203E+09	1,636172E+09	6,242463E+09	7,878635E+09
1878	8,180709E+08	8,181026E+08	3,121260E+09	3,121169E+09	1,636174E+09	6,242429E+09	7,878603E+09
1879	8,180826E+08	8,180632E+08	3,121109E+09	3,121180E+09	1,636146E+09	6,242289E+09	7,878435E+09
1880	8,181853E+08	8,181847E+08	3,121131E+09	3,121061E+09	1,636370E+09	6,242192E+09	7,878562E+09
1881	8,181475E+08	8,181838E+08	3,121017E+09	3,121071E+09	1,636331E+09	6,242088E+09	7,878419E+09
1882	8,182165E+08	8,181953E+08	3,120964E+09	3,121006E+09	1,636412E+09	6,241970E+09	7,878382E+09
1883	8,182708E+08	8,182935E+08	3,121027E+09	3,120885E+09	1,636564E+09	6,241912E+09	7,878476E+09
1884	8,182190E+08	8,182307E+08	3,120889E+09	3,120957E+09	1,636450E+09	6,241846E+09	7,878296E+09
1885	8,182992E+08	8,182700E+08	3,120929E+09	3,120920E+09	1,636569E+09	6,241849E+09	7,878418E+09
1886	8,182771E+08	8,183076E+08	3,120984E+09	3,120909E+09	1,636585E+09	6,241892E+09	7,878477E+09
1887	8,182284E+08	8,182222E+08	3,120893E+09	3,121003E+09	1,636451E+09	6,241896E+09	7,878347E+09
1888	8,182816E+08	8,182789E+08	3,121028E+09	3,120957E+09	1,636561E+09	6,241985E+09	7,878545E+09
1889	8,181994E+08	8,182251E+08	3,121053E+09	3,121030E+09	1,636425E+09	6,242083E+09	7,878508E+09
1890	8,181835E+08	8,181441E+08	3,121047E+09	3,121096E+09	1,636328E+09	6,242143E+09	7,878471E+09
1891	8,182036E+08	8,182013E+08	3,121155E+09	3,121058E+09	1,636405E+09	6,242213E+09	7,878617E+09
1892	8,181068E+08	8,181177E+08	3,121056E+09	3,121160E+09	1,636225E+09	6,242216E+09	7,878441E+09
1893	8,181485E+08	8,181251E+08	3,121088E+09	3,121143E+09	1,636274E+09	6,242231E+09	7,878505E+09
1894	8,181526E+08	8,181780E+08	3,121179E+09	3,121070E+09	1,636331E+09	6,242249E+09	7,878579E+09
1895	8,180986E+08	8,181006E+08	3,121061E+09	3,121120E+09	1,636199E+09	6,242181E+09	7,878380E+09
1896	8,181843E+08	8,181719E+08	3,121114E+09	3,121039E+09	1,636356E+09	6,242153E+09	7,878509E+09
1897	8,181668E+08	8,181968E+08	3,121083E+09	3,121018E+09	1,636364E+09	6,242101E+09	7,878465E+09
1898	8,181803E+08	8,181704E+08	3,120946E+09	3,121031E+09	1,636351E+09	6,241977E+09	7,878328E+09
1899	8,182766E+08	8,182916E+08	3,120984E+09	3,120903E+09	1,636568E+09	6,241887E+09	7,878455E+09
1900	8,182394E+08	8,182777E+08	3,120862E+09	3,120893E+09	1,636517E+09	6,241755E+09	7,878273E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
1901	8,183105E+08	8,182880E+08	3,120813E+09	3,120859E+09	1,636599E+09	6,241671E+09	7,878270E+09
1902	8,183672E+08	8,183765E+08	3,120885E+09	3,120751E+09	1,636744E+09	6,241636E+09	7,878380E+09
1903	8,183128E+08	8,183164E+08	3,120737E+09	3,120810E+09	1,636629E+09	6,241547E+09	7,878176E+09
1904	8,183831E+08	8,183644E+08	3,120784E+09	3,120780E+09	1,636748E+09	6,241563E+09	7,878311E+09
1905	8,183596E+08	8,183951E+08	3,120844E+09	3,120774E+09	1,636755E+09	6,241618E+09	7,878372E+09
1906	8,183095E+08	8,183012E+08	3,120790E+09	3,120868E+09	1,636611E+09	6,241659E+09	7,878269E+09
1907	8,183526E+08	8,183458E+08	3,120927E+09	3,120834E+09	1,636698E+09	6,241761E+09	7,878459E+09
1908	8,182711E+08	8,182851E+08	3,120909E+09	3,120904E+09	1,636556E+09	6,241813E+09	7,878369E+09
1909	8,182578E+08	8,182195E+08	3,120878E+09	3,120990E+09	1,636477E+09	6,241868E+09	7,878346E+09
1910	8,182841E+08	8,182831E+08	3,121003E+09	3,120938E+09	1,636567E+09	6,241941E+09	7,878509E+09
1911	8,181916E+08	8,182067E+08	3,120919E+09	3,120994E+09	1,636398E+09	6,241913E+09	7,878312E+09
1912	8,182290E+08	8,182146E+08	3,120974E+09	3,120974E+09	1,636444E+09	6,241949E+09	7,878392E+09
1913	8,182380E+08	8,182608E+08	3,121055E+09	3,120921E+09	1,636499E+09	6,241976E+09	7,878475E+09
1914	8,181868E+08	8,181849E+08	3,120938E+09	3,120985E+09	1,636372E+09	6,241923E+09	7,878295E+09
1915	8,182666E+08	8,182616E+08	3,120969E+09	3,120913E+09	1,636528E+09	6,241882E+09	7,878410E+09
1916	8,182550E+08	8,182904E+08	3,120893E+09	3,120868E+09	1,636545E+09	6,241761E+09	7,878307E+09
1917	8,182767E+08	8,182744E+08	3,120760E+09	3,120881E+09	1,636551E+09	6,241641E+09	7,878192E+09
1918	8,183819E+08	8,183839E+08	3,120829E+09	3,120734E+09	1,636766E+09	6,241563E+09	7,878329E+09
1919	8,183465E+08	8,183683E+08	3,120702E+09	3,120699E+09	1,636715E+09	6,241401E+09	7,878116E+09
1920	8,184086E+08	8,183834E+08	3,120658E+09	3,120685E+09	1,636792E+09	6,241343E+09	7,878135E+09
1921	8,184609E+08	8,184726E+08	3,120719E+09	3,120608E+09	1,636933E+09	6,241327E+09	7,878260E+09
1922	8,184006E+08	8,184158E+08	3,120608E+09	3,120678E+09	1,636816E+09	6,241287E+09	7,878103E+09
1923	8,184573E+08	8,184557E+08	3,120680E+09	3,120656E+09	1,636913E+09	6,241336E+09	7,878249E+09
1924	8,184332E+08	8,184656E+08	3,120720E+09	3,120643E+09	1,636899E+09	6,241364E+09	7,878262E+09
1925	8,183860E+08	8,183719E+08	3,120657E+09	3,120768E+09	1,636758E+09	6,241425E+09	7,878182E+09
1926	8,184340E+08	8,184070E+08	3,120787E+09	3,120729E+09	1,636841E+09	6,241516E+09	7,878357E+09
1927	8,183524E+08	8,183579E+08	3,120745E+09	3,120763E+09	1,636710E+09	6,241509E+09	7,878219E+09
1928	8,183349E+08	8,183097E+08	3,120729E+09	3,120837E+09	1,636645E+09	6,241565E+09	7,878210E+09
1929	8,183634E+08	8,183703E+08	3,120866E+09	3,120781E+09	1,636734E+09	6,241647E+09	7,878380E+09
1930	8,182728E+08	8,182907E+08	3,120827E+09	3,120833E+09	1,636564E+09	6,241660E+09	7,878224E+09
1931	8,183017E+08	8,182936E+08	3,120876E+09	3,120833E+09	1,636595E+09	6,241709E+09	7,878304E+09
1932	8,183143E+08	8,183348E+08	3,120903E+09	3,120787E+09	1,636649E+09	6,241690E+09	7,878339E+09
1933	8,182725E+08	8,182784E+08	3,120757E+09	3,120875E+09	1,636551E+09	6,241632E+09	7,878182E+09
1934	8,183646E+08	8,183545E+08	3,120797E+09	3,120783E+09	1,636719E+09	6,241580E+09	7,878299E+09
1935	8,183601E+08	8,183896E+08	3,120722E+09	3,120688E+09	1,636750E+09	6,241410E+09	7,878160E+09
1936	8,183808E+08	8,183760E+08	3,120609E+09	3,120692E+09	1,636757E+09	6,241300E+09	7,878057E+09
1937	8,184850E+08	8,184774E+08	3,120673E+09	3,120566E+09	1,636962E+09	6,241239E+09	7,878201E+09
1938	8,184453E+08	8,184636E+08	3,120569E+09	3,120542E+09	1,636909E+09	6,241111E+09	7,878020E+09
1939	8,184905E+08	8,184810E+08	3,120520E+09	3,120551E+09	1,636972E+09	6,241072E+09	7,878043E+09
1940	8,185405E+08	8,185653E+08	3,120557E+09	3,120473E+09	1,637106E+09	6,241029E+09	7,878135E+09
1941	8,184849E+08	8,185081E+08	3,120457E+09	3,120559E+09	1,636993E+09	6,241015E+09	7,878008E+09
1942	8,185451E+08	8,185252E+08	3,120557E+09	3,120529E+09	1,637070E+09	6,241086E+09	7,878156E+09
1943	8,185221E+08	8,185331E+08	3,120574E+09	3,120493E+09	1,637055E+09	6,241068E+09	7,878123E+09
1944	8,184675E+08	8,184464E+08	3,120506E+09	3,120622E+09	1,636914E+09	6,241128E+09	7,878042E+09
1945	8,185126E+08	8,184867E+08	3,120629E+09	3,120598E+09	1,636999E+09	6,241227E+09	7,878226E+09
1946	8,184287E+08	8,184463E+08	3,120631E+09	3,120618E+09	1,636875E+09	6,241249E+09	7,878124E+09
1947	8,183987E+08	8,183957E+08	3,120644E+09	3,120697E+09	1,636794E+09	6,241341E+09	7,878136E+09
1948	8,184287E+08	8,184418E+08	3,120758E+09	3,120645E+09	1,636871E+09	6,241402E+09	7,878273E+09
1949	8,183477E+08	8,183659E+08	3,120702E+09	3,120735E+09	1,636714E+09	6,241436E+09	7,878150E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
1950	8,183858E+08	8,183612E+08	3,120738E+09	3,120734E+09	1,636747E+09	6,241471E+09	7,878218E+09
1951	8,184076E+08	8,184182E+08	3,120717E+09	3,120647E+09	1,636826E+09	6,241364E+09	7,878190E+09
1952	8,183704E+08	8,183815E+08	3,120573E+09	3,120706E+09	1,636752E+09	6,241279E+09	7,878031E+09
1953	8,184700E+08	8,184550E+08	3,120619E+09	3,120602E+09	1,636925E+09	6,241222E+09	7,878147E+09
1954	8,184662E+08	8,184894E+08	3,120586E+09	3,120491E+09	1,636956E+09	6,241077E+09	7,878032E+09
1955	8,184740E+08	8,184756E+08	3,120477E+09	3,120515E+09	1,636950E+09	6,240992E+09	7,877942E+09
1956	8,185718E+08	8,185694E+08	3,120501E+09	3,120405E+09	1,637141E+09	6,240906E+09	7,878047E+09
1957	8,185344E+08	8,185697E+08	3,120399E+09	3,120422E+09	1,637104E+09	6,240821E+09	7,877925E+09
1958	8,185817E+08	8,185748E+08	3,120379E+09	3,120428E+09	1,637156E+09	6,240807E+09	7,877963E+09
1959	8,186318E+08	8,186522E+08	3,120413E+09	3,120321E+09	1,637284E+09	6,240734E+09	7,878018E+09
1960	8,185752E+08	8,185912E+08	3,120331E+09	3,120409E+09	1,637166E+09	6,240740E+09	7,877906E+09
1961	8,186335E+08	8,185944E+08	3,120414E+09	3,120401E+09	1,637228E+09	6,240814E+09	7,878042E+09
1962	8,186053E+08	8,186053E+08	3,120448E+09	3,120359E+09	1,637211E+09	6,240807E+09	7,878018E+09
1963	8,185347E+08	8,185298E+08	3,120378E+09	3,120493E+09	1,637065E+09	6,240871E+09	7,877935E+09
1964	8,185751E+08	8,185657E+08	3,120486E+09	3,120460E+09	1,637141E+09	6,240946E+09	7,878087E+09
1965	8,184985E+08	8,185300E+08	3,120513E+09	3,120499E+09	1,637029E+09	6,241012E+09	7,878041E+09
1966	8,184749E+08	8,184603E+08	3,120547E+09	3,120578E+09	1,636935E+09	6,241125E+09	7,878060E+09
1967	8,185100E+08	8,185088E+08	3,120618E+09	3,120510E+09	1,637019E+09	6,241128E+09	7,878147E+09
1968	8,184343E+08	8,184477E+08	3,120544E+09	3,120599E+09	1,636882E+09	6,241142E+09	7,878024E+09
1969	8,184780E+08	8,184503E+08	3,120557E+09	3,120603E+09	1,636928E+09	6,241160E+09	7,878088E+09
1970	8,185050E+08	8,185180E+08	3,120571E+09	3,120480E+09	1,637023E+09	6,241052E+09	7,878074E+09
1971	8,184594E+08	8,184847E+08	3,120445E+09	3,120529E+09	1,636944E+09	6,240974E+09	7,877918E+09
1972	8,185584E+08	8,185466E+08	3,120468E+09	3,120427E+09	1,637105E+09	6,240895E+09	7,878000E+09
1973	8,185603E+08	8,185870E+08	3,120428E+09	3,120349E+09	1,637147E+09	6,240777E+09	7,877924E+09
1974	8,185681E+08	8,185622E+08	3,120326E+09	3,120384E+09	1,637130E+09	6,240710E+09	7,877840E+09
1975	8,186660E+08	8,186664E+08	3,120319E+09	3,120254E+09	1,637332E+09	6,240573E+09	7,877905E+09
1976	8,186316E+08	8,186726E+08	3,120237E+09	3,120261E+09	1,637304E+09	6,240497E+09	7,877802E+09
1977	8,186807E+08	8,186634E+08	3,120231E+09	3,120274E+09	1,637344E+09	6,240506E+09	7,877850E+09
1978	8,187292E+08	8,187323E+08	3,120293E+09	3,120156E+09	1,637461E+09	6,240449E+09	7,877910E+09
1979	8,186567E+08	8,186717E+08	3,120204E+09	3,120262E+09	1,637328E+09	6,240466E+09	7,877795E+09
1980	8,187054E+08	8,186694E+08	3,120247E+09	3,120267E+09	1,637375E+09	6,240514E+09	7,877889E+09
1981	8,186781E+08	8,186949E+08	3,120294E+09	3,120252E+09	1,637373E+09	6,240546E+09	7,877919E+09
1982	8,186075E+08	8,186078E+08	3,120271E+09	3,120378E+09	1,637215E+09	6,240648E+09	7,877864E+09
1983	8,186482E+08	8,186403E+08	3,120372E+09	3,120321E+09	1,637288E+09	6,240692E+09	7,877981E+09
1984	8,185769E+08	8,186050E+08	3,120412E+09	3,120364E+09	1,637182E+09	6,240776E+09	7,877958E+09
1985	8,185568E+08	8,185281E+08	3,120417E+09	3,120466E+09	1,637085E+09	6,240884E+09	7,877969E+09
1986	8,185945E+08	8,185837E+08	3,120484E+09	3,120381E+09	1,637178E+09	6,240865E+09	7,878044E+09
1987	8,185136E+08	8,185427E+08	3,120394E+09	3,120459E+09	1,637056E+09	6,240852E+09	7,877909E+09
1988	8,185595E+08	8,185419E+08	3,120377E+09	3,120438E+09	1,637101E+09	6,240814E+09	7,877916E+09
1989	8,185968E+08	8,186163E+08	3,120416E+09	3,120321E+09	1,637213E+09	6,240737E+09	7,877950E+09
1990	8,185565E+08	8,185697E+08	3,120313E+09	3,120363E+09	1,637126E+09	6,240676E+09	7,877802E+09
1991	8,186538E+08	8,186340E+08	3,120296E+09	3,120253E+09	1,637288E+09	6,240549E+09	7,877837E+09
1992	8,186589E+08	8,186890E+08	3,120260E+09	3,120187E+09	1,637348E+09	6,240447E+09	7,877795E+09
1993	8,186682E+08	8,186646E+08	3,120152E+09	3,120243E+09	1,637333E+09	6,240395E+09	7,877728E+09
1994	8,187654E+08	8,187676E+08	3,120186E+09	3,120093E+09	1,637533E+09	6,240279E+09	7,877812E+09
1995	8,187222E+08	8,187713E+08	3,120120E+09	3,120106E+09	1,637494E+09	6,240225E+09	7,877719E+09
1996	8,187649E+08	8,187422E+08	3,120083E+09	3,120132E+09	1,637507E+09	6,240215E+09	7,877722E+09
1997	8,188142E+08	8,188129E+08	3,120143E+09	3,120046E+09	1,637627E+09	6,240189E+09	7,877816E+09
1998	8,187382E+08	8,187440E+08	3,120064E+09	3,120149E+09	1,637482E+09	6,240213E+09	7,877695E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
1999	8,187815E+08	8,187515E+08	3,120080E+09	3,120128E+09	1,637533E+09	6,240209E+09	7,877742E+09
2000	8,187577E+08	8,187835E+08	3,120164E+09	3,120102E+09	1,637541E+09	6,240266E+09	7,877807E+09
2001	8,186881E+08	8,186825E+08	3,120161E+09	3,120242E+09	1,637371E+09	6,240404E+09	7,877774E+09
2002	8,187279E+08	8,187095E+08	3,120281E+09	3,120176E+09	1,637437E+09	6,240458E+09	7,877895E+09
2003	8,186488E+08	8,186794E+08	3,120299E+09	3,120236E+09	1,637328E+09	6,240536E+09	7,877864E+09
2004	8,186259E+08	8,186028E+08	3,120253E+09	3,120344E+09	1,637229E+09	6,240597E+09	7,877825E+09
2005	8,186738E+08	8,186746E+08	3,120319E+09	3,120265E+09	1,637348E+09	6,240584E+09	7,877932E+09
2006	8,185986E+08	8,186269E+08	3,120260E+09	3,120317E+09	1,637225E+09	6,240578E+09	7,877803E+09
2007	8,186493E+08	8,186291E+08	3,120223E+09	3,120265E+09	1,637278E+09	6,240488E+09	7,877767E+09
2008	8,186952E+08	8,187075E+08	3,120271E+09	3,120149E+09	1,637403E+09	6,240420E+09	7,877823E+09
2009	8,186572E+08	8,186577E+08	3,120157E+09	3,120216E+09	1,637315E+09	6,240372E+09	7,877687E+09
2010	8,187521E+08	8,187307E+08	3,120142E+09	3,120091E+09	1,637483E+09	6,240233E+09	7,877716E+09
2011	8,187502E+08	8,188007E+08	3,120104E+09	3,120030E+09	1,637551E+09	6,240134E+09	7,877685E+09
2012	8,187576E+08	8,187654E+08	3,119981E+09	3,120082E+09	1,637523E+09	6,240063E+09	7,877586E+09
2013	8,188617E+08	8,188642E+08	3,120038E+09	3,119950E+09	1,637726E+09	6,239988E+09	7,877714E+09
2014	8,188189E+08	8,188501E+08	3,119986E+09	3,119966E+09	1,637669E+09	6,239952E+09	7,877621E+09
2015	8,188558E+08	8,188221E+08	3,119903E+09	3,119981E+09	1,637678E+09	6,239884E+09	7,877562E+09
2016	8,189032E+08	8,189034E+08	3,119978E+09	3,119899E+09	1,637807E+09	6,239877E+09	7,877684E+09
2017	8,188239E+08	8,188338E+08	3,119919E+09	3,120015E+09	1,637658E+09	6,239934E+09	7,877592E+09
2018	8,188603E+08	8,188363E+08	3,119985E+09	3,119974E+09	1,637697E+09	6,239958E+09	7,877655E+09
2019	8,188286E+08	8,188670E+08	3,120088E+09	3,119966E+09	1,637696E+09	6,240054E+09	7,877750E+09
2020	8,187540E+08	8,187473E+08	3,120045E+09	3,120125E+09	1,637501E+09	6,240170E+09	7,877671E+09
2021	8,187979E+08	8,187768E+08	3,120153E+09	3,120091E+09	1,637575E+09	6,240244E+09	7,877819E+09
2022	8,187237E+08	8,187455E+08	3,120162E+09	3,120139E+09	1,637469E+09	6,240301E+09	7,877771E+09
2023	8,187038E+08	8,186824E+08	3,120066E+09	3,120205E+09	1,637386E+09	6,240271E+09	7,877657E+09
2024	8,187642E+08	8,187635E+08	3,120164E+09	3,120098E+09	1,637528E+09	6,240262E+09	7,877789E+09
2025	8,186967E+08	8,187123E+08	3,120116E+09	3,120147E+09	1,637409E+09	6,240263E+09	7,877672E+09
2026	8,187470E+08	8,187168E+08	3,120092E+09	3,120078E+09	1,637464E+09	6,240170E+09	7,877634E+09
2027	8,187855E+08	8,188088E+08	3,120128E+09	3,119984E+09	1,637594E+09	6,240112E+09	7,877706E+09
2028	8,187422E+08	8,187583E+08	3,119978E+09	3,120066E+09	1,637500E+09	6,240044E+09	7,877545E+09
2029	8,188422E+08	8,188398E+08	3,119984E+09	3,119963E+09	1,637682E+09	6,239946E+09	7,877628E+09
2030	8,188453E+08	8,188951E+08	3,119977E+09	3,119892E+09	1,637740E+09	6,239869E+09	7,877609E+09
2031	8,188538E+08	8,188551E+08	3,119821E+09	3,119925E+09	1,637709E+09	6,239746E+09	7,877455E+09
2032	8,189638E+08	8,189506E+08	3,119884E+09	3,119797E+09	1,637914E+09	6,239681E+09	7,877595E+09
2033	8,189190E+08	8,189317E+08	3,119823E+09	3,119830E+09	1,637851E+09	6,239652E+09	7,877503E+09
2034	8,189480E+08	8,189116E+08	3,119750E+09	3,119823E+09	1,637860E+09	6,239572E+09	7,877432E+09
2035	8,189830E+08	8,190019E+08	3,119841E+09	3,119744E+09	1,637985E+09	6,239584E+09	7,877569E+09
2036	8,188953E+08	8,189174E+08	3,119791E+09	3,119867E+09	1,637813E+09	6,239658E+09	7,877471E+09
2037	8,189330E+08	8,189128E+08	3,119885E+09	3,119854E+09	1,637846E+09	6,239739E+09	7,877585E+09
2038	8,189006E+08	8,189251E+08	3,119991E+09	3,119862E+09	1,637826E+09	6,239853E+09	7,877678E+09
2039	8,188253E+08	8,188118E+08	3,119886E+09	3,120011E+09	1,637637E+09	6,239897E+09	7,877535E+09
2040	8,188780E+08	8,188533E+08	3,119989E+09	3,119969E+09	1,637731E+09	6,239958E+09	7,877689E+09
2041	8,188106E+08	8,188279E+08	3,120006E+09	3,120009E+09	1,637639E+09	6,240014E+09	7,877653E+09
2042	8,187926E+08	8,187708E+08	3,119940E+09	3,120029E+09	1,637563E+09	6,239969E+09	7,877533E+09
2043	8,188492E+08	8,188577E+08	3,120050E+09	3,119928E+09	1,637707E+09	6,239978E+09	7,877685E+09
2044	8,187779E+08	8,187987E+08	3,119975E+09	3,119992E+09	1,637577E+09	6,239967E+09	7,877543E+09
2045	8,188307E+08	8,188096E+08	3,119950E+09	3,119953E+09	1,637640E+09	6,239902E+09	7,877542E+09
2046	8,188715E+08	8,189009E+08	3,119982E+09	3,119860E+09	1,637772E+09	6,239842E+09	7,877614E+09
2047	8,188329E+08	8,188582E+08	3,119791E+09	3,119913E+09	1,637691E+09	6,239704E+09	7,877396E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
2048	8,189453E+08	8,189377E+08	3,119825E+09	3,119796E+09	1,637883E+09	6,239622E+09	7,877504E+09
2049	8,189563E+08	8,189837E+08	3,119822E+09	3,119732E+09	1,637940E+09	6,239554E+09	7,877494E+09
2050	8,189615E+08	8,189430E+08	3,119664E+09	3,119744E+09	1,637905E+09	6,239407E+09	7,877312E+09
2051	8,190589E+08	8,190490E+08	3,119723E+09	3,119633E+09	1,638108E+09	6,239356E+09	7,877464E+09
2052	8,190024E+08	8,190284E+08	3,119644E+09	3,119674E+09	1,638031E+09	6,239318E+09	7,877349E+09
2053	8,190263E+08	8,190091E+08	3,119619E+09	3,119691E+09	1,638035E+09	6,239310E+09	7,877346E+09
2054	8,190576E+08	8,190813E+08	3,119753E+09	3,119624E+09	1,638139E+09	6,239377E+09	7,877516E+09
2055	8,189680E+08	8,189864E+08	3,119671E+09	3,119746E+09	1,637954E+09	6,239417E+09	7,877371E+09
2056	8,190106E+08	8,189766E+08	3,119767E+09	3,119748E+09	1,637987E+09	6,239515E+09	7,877502E+09
2057	8,189823E+08	8,189871E+08	3,119847E+09	3,119766E+09	1,637969E+09	6,239614E+09	7,877583E+09
2058	8,189061E+08	8,188890E+08	3,119731E+09	3,119873E+09	1,637795E+09	6,239605E+09	7,877400E+09
2059	8,189556E+08	8,189447E+08	3,119843E+09	3,119816E+09	1,637900E+09	6,239659E+09	7,877559E+09
2060	8,188869E+08	8,189126E+08	3,119863E+09	3,119842E+09	1,637800E+09	6,239705E+09	7,877504E+09
2061	8,188733E+08	8,188565E+08	3,119827E+09	3,119879E+09	1,637730E+09	6,239706E+09	7,877436E+09
2062	8,189297E+08	8,189346E+08	3,119935E+09	3,119793E+09	1,637864E+09	6,239728E+09	7,877592E+09
2063	8,188590E+08	8,188852E+08	3,119805E+09	3,119852E+09	1,637744E+09	6,239657E+09	7,877401E+09
2064	8,189211E+08	8,189066E+08	3,119784E+09	3,119815E+09	1,637828E+09	6,239599E+09	7,877426E+09
2065	8,189713E+08	8,189964E+08	3,119823E+09	3,119722E+09	1,637968E+09	6,239546E+09	7,877513E+09
2066	8,189393E+08	8,189571E+08	3,119647E+09	3,119736E+09	1,637896E+09	6,239384E+09	7,877280E+09
2067	8,190496E+08	8,190358E+08	3,119677E+09	3,119624E+09	1,638085E+09	6,239301E+09	7,877386E+09
2068	8,190536E+08	8,190733E+08	3,119647E+09	3,119571E+09	1,638127E+09	6,239218E+09	7,877345E+09
2069	8,190554E+08	8,190397E+08	3,119500E+09	3,119602E+09	1,638095E+09	6,239101E+09	7,877196E+09
2070	8,191429E+08	8,191407E+08	3,119569E+09	3,119497E+09	1,638284E+09	6,239066E+09	7,877350E+09
2071	8,190825E+08	8,191222E+08	3,119482E+09	3,119521E+09	1,638205E+09	6,239003E+09	7,877207E+09
2072	8,191109E+08	8,190937E+08	3,119499E+09	3,119544E+09	1,638205E+09	6,239043E+09	7,877248E+09
2073	8,191446E+08	8,191512E+08	3,119639E+09	3,119502E+09	1,638296E+09	6,239141E+09	7,877437E+09
2074	8,190535E+08	8,190575E+08	3,119545E+09	3,119608E+09	1,638111E+09	6,239153E+09	7,877264E+09
2075	8,190867E+08	8,190558E+08	3,119626E+09	3,119623E+09	1,638142E+09	6,239249E+09	7,877392E+09
2076	8,190522E+08	8,190673E+08	3,119688E+09	3,119638E+09	1,638120E+09	6,239326E+09	7,877446E+09
2077	8,189781E+08	8,189757E+08	3,119612E+09	3,119742E+09	1,637954E+09	6,239354E+09	7,877308E+09
2078	8,190265E+08	8,190202E+08	3,119749E+09	3,119685E+09	1,638047E+09	6,239435E+09	7,877481E+09
2079	8,189611E+08	8,189876E+08	3,119733E+09	3,119699E+09	1,637949E+09	6,239432E+09	7,877381E+09
2080	8,189556E+08	8,189323E+08	3,119699E+09	3,119752E+09	1,637888E+09	6,239451E+09	7,877339E+09
2081	8,190189E+08	8,190136E+08	3,119783E+09	3,119678E+09	1,638032E+09	6,239461E+09	7,877494E+09
2082	8,189543E+08	8,189799E+08	3,119635E+09	3,119695E+09	1,637934E+09	6,239330E+09	7,877265E+09
2083	8,190171E+08	8,190108E+08	3,119625E+09	3,119648E+09	1,638028E+09	6,239272E+09	7,877300E+09
2084	8,190691E+08	8,190915E+08	3,119655E+09	3,119544E+09	1,638161E+09	6,239199E+09	7,877360E+09
2085	8,190407E+08	8,190528E+08	3,119498E+09	3,119569E+09	1,638094E+09	6,239067E+09	7,877161E+09
2086	8,191456E+08	8,191247E+08	3,119522E+09	3,119475E+09	1,638270E+09	6,238997E+09	7,877267E+09
2087	8,191441E+08	8,191698E+08	3,119448E+09	3,119411E+09	1,638314E+09	6,238859E+09	7,877173E+09
2088	8,191476E+08	8,191417E+08	3,119336E+09	3,119450E+09	1,638289E+09	6,238785E+09	7,877075E+09
2089	8,192344E+08	8,192329E+08	3,119437E+09	3,119357E+09	1,638467E+09	6,238794E+09	7,877261E+09
2090	8,191738E+08	8,192102E+08	3,119374E+09	3,119362E+09	1,638384E+09	6,238736E+09	7,877120E+09
2091	8,191935E+08	8,191755E+08	3,119397E+09	3,119410E+09	1,638369E+09	6,238807E+09	7,877176E+09
2092	8,192192E+08	8,192197E+08	3,119502E+09	3,119390E+09	1,638439E+09	6,238892E+09	7,877331E+09
2093	8,191273E+08	8,191327E+08	3,119413E+09	3,119505E+09	1,638260E+09	6,238918E+09	7,877178E+09
2094	8,191547E+08	8,191292E+08	3,119489E+09	3,119515E+09	1,638284E+09	6,239004E+09	7,877288E+09
2095	8,191214E+08	8,191432E+08	3,119534E+09	3,119494E+09	1,638265E+09	6,239028E+09	7,877293E+09
2096	8,190578E+08	8,190509E+08	3,119494E+09	3,119593E+09	1,638109E+09	6,239087E+09	7,877196E+09



1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
2097	8,191111E+08	8,190875E+08	3,119628E+09	3,119552E+09	1,638199E+09	6,239180E+09	7,877379E+09
2098	8,190505E+08	8,190685E+08	3,119594E+09	3,119546E+09	1,638119E+09	6,239140E+09	7,877259E+09
2099	8,190407E+08	8,190269E+08	3,119544E+09	3,119605E+09	1,638068E+09	6,239150E+09	7,877217E+09
2100	8,191012E+08	8,191094E+08	3,119611E+09	3,119534E+09	1,638211E+09	6,239145E+09	7,877355E+09
2101	8,190457E+08	8,190820E+08	3,119502E+09	3,119544E+09	1,638128E+09	6,239046E+09	7,877174E+09
2102	8,191081E+08	8,191003E+08	3,119495E+09	3,119502E+09	1,638208E+09	6,238997E+09	7,877205E+09
2103	8,191630E+08	8,191794E+08	3,119485E+09	3,119384E+09	1,638342E+09	6,238869E+09	7,877211E+09
2104	8,191416E+08	8,191449E+08	3,119329E+09	3,119415E+09	1,638287E+09	6,238744E+09	7,877031E+09
2105	8,192459E+08	8,192180E+08	3,119344E+09	3,119331E+09	1,638464E+09	6,238674E+09	7,877138E+09
2106	8,192442E+08	8,192767E+08	3,119277E+09	3,119230E+09	1,638521E+09	6,238507E+09	7,877028E+09
2107	8,192403E+08	8,192467E+08	3,119203E+09	3,119275E+09	1,638487E+09	6,238478E+09	7,876965E+09
2108	8,193189E+08	8,193194E+08	3,119311E+09	3,119202E+09	1,638638E+09	6,238514E+09	7,877152E+09
2109	8,192597E+08	8,192897E+08	3,119270E+09	3,119234E+09	1,638549E+09	6,238504E+09	7,877053E+09
2110	8,192679E+08	8,192449E+08	3,119275E+09	3,119310E+09	1,638513E+09	6,238585E+09	7,877098E+09
2111	8,192894E+08	8,192927E+08	3,119331E+09	3,119275E+09	1,638582E+09	6,238605E+09	7,877188E+09
2112	8,192034E+08	8,192120E+08	3,119266E+09	3,119384E+09	1,638415E+09	6,238651E+09	7,877066E+09
2113	8,192350E+08	8,192026E+08	3,119364E+09	3,119392E+09	1,638438E+09	6,238755E+09	7,877193E+09
2114	8,192066E+08	8,192200E+08	3,119416E+09	3,119334E+09	1,638427E+09	6,238750E+09	7,877176E+09
2115	8,191384E+08	8,191303E+08	3,119386E+09	3,119448E+09	1,638269E+09	6,238834E+09	7,877103E+09
2116	8,191848E+08	8,191635E+08	3,119488E+09	3,119423E+09	1,638348E+09	6,238910E+09	7,877259E+09
2117	8,191286E+08	8,191558E+08	3,119460E+09	3,119420E+09	1,638284E+09	6,238880E+09	7,877165E+09
2118	8,191159E+08	8,191171E+08	3,119403E+09	3,119481E+09	1,638233E+09	6,238884E+09	7,877117E+09
2119	8,191836E+08	8,191974E+08	3,119443E+09	3,119374E+09	1,638381E+09	6,238816E+09	7,877197E+09
2120	8,191439E+08	8,191709E+08	3,119354E+09	3,119380E+09	1,638315E+09	6,238734E+09	7,877049E+09
2121	8,192138E+08	8,191842E+08	3,119331E+09	3,119348E+09	1,638398E+09	6,238679E+09	7,877077E+09
2122	8,192706E+08	8,192768E+08	3,119301E+09	3,119201E+09	1,638547E+09	6,238502E+09	7,877049E+09
2123	8,192416E+08	8,192560E+08	3,119159E+09	3,119236E+09	1,638498E+09	6,238395E+09	7,876892E+09
2124	8,193354E+08	8,193243E+08	3,119179E+09	3,119163E+09	1,638660E+09	6,238342E+09	7,877002E+09
2125	8,193358E+08	8,193794E+08	3,119170E+09	3,119074E+09	1,638715E+09	6,238245E+09	7,876960E+09
2126	8,193228E+08	8,193326E+08	3,119104E+09	3,119151E+09	1,638655E+09	6,238255E+09	7,876911E+09
2127	8,193975E+08	8,193925E+08	3,119169E+09	3,119084E+09	1,638790E+09	6,238253E+09	7,877043E+09
2128	8,193456E+08	8,193626E+08	3,119123E+09	3,119132E+09	1,638708E+09	6,238256E+09	7,876964E+09
2129	8,193529E+08	8,193158E+08	3,119106E+09	3,119208E+09	1,638669E+09	6,238314E+09	7,876983E+09
2130	8,193761E+08	8,193769E+08	3,119164E+09	3,119120E+09	1,638753E+09	6,238284E+09	7,877037E+09
2131	8,192861E+08	8,192992E+08	3,119139E+09	3,119210E+09	1,638585E+09	6,238349E+09	7,876934E+09
2132	8,193090E+08	8,192781E+08	3,119241E+09	3,119231E+09	1,638587E+09	6,238472E+09	7,877059E+09
2133	8,192840E+08	8,192984E+08	3,119320E+09	3,119193E+09	1,638582E+09	6,238514E+09	7,877096E+09
2134	8,192055E+08	8,192075E+08	3,119271E+09	3,119336E+09	1,638413E+09	6,238607E+09	7,877020E+09
2135	8,192501E+08	8,192448E+08	3,119329E+09	3,119299E+09	1,638495E+09	6,238628E+09	7,877123E+09
2136	8,192093E+08	8,192439E+08	3,119318E+09	3,119295E+09	1,638453E+09	6,238613E+09	7,877066E+09
2137	8,192069E+08	8,191988E+08	3,119265E+09	3,119349E+09	1,638406E+09	6,238614E+09	7,877020E+09
2138	8,192861E+08	8,192848E+08	3,119292E+09	3,119201E+09	1,638571E+09	6,238493E+09	7,877064E+09
2139	8,192472E+08	8,192651E+08	3,119203E+09	3,119207E+09	1,638512E+09	6,238410E+09	7,876922E+09
2140	8,193100E+08	8,192791E+08	3,119150E+09	3,119187E+09	1,638589E+09	6,238337E+09	7,876926E+09
2141	8,193687E+08	8,193836E+08	3,119142E+09	3,119037E+09	1,638752E+09	6,238179E+09	7,876931E+09
2142	8,193287E+08	8,193622E+08	3,119015E+09	3,119085E+09	1,638691E+09	6,238100E+09	7,876791E+09
2143	8,194190E+08	8,194184E+08	3,119029E+09	3,118999E+09	1,638837E+09	6,238028E+09	7,876866E+09
2144	8,194302E+08	8,194650E+08	3,119041E+09	3,118938E+09	1,638895E+09	6,237979E+09	7,876874E+09
2145	8,194199E+08	8,194078E+08	3,118959E+09	3,119039E+09	1,638828E+09	6,237998E+09	7,876825E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
2146	8,194941E+08	8,194744E+08	3,118991E+09	3,118940E+09	1,638968E+09	6,237931E+09	7,876900E+09
2147	8,194345E+08	8,194546E+08	3,118961E+09	3,118982E+09	1,638889E+09	6,237943E+09	7,876832E+09
2148	8,194309E+08	8,194034E+08	3,118953E+09	3,119058E+09	1,638834E+09	6,238011E+09	7,876845E+09
2149	8,194534E+08	8,194590E+08	3,119070E+09	3,118968E+09	1,638912E+09	6,238038E+09	7,876950E+09
2150	8,193516E+08	8,193740E+08	3,119060E+09	3,119087E+09	1,638726E+09	6,238146E+09	7,876872E+09
2151	8,193690E+08	8,193438E+08	3,119122E+09	3,119111E+09	1,638713E+09	6,238233E+09	7,876946E+09
2152	8,193552E+08	8,193692E+08	3,119194E+09	3,119097E+09	1,638724E+09	6,238291E+09	7,877016E+09
2153	8,192833E+08	8,192816E+08	3,119121E+09	3,119239E+09	1,638565E+09	6,238360E+09	7,876925E+09
2154	8,193377E+08	8,193290E+08	3,119165E+09	3,119147E+09	1,638667E+09	6,238313E+09	7,876979E+09
2155	8,193039E+08	8,193327E+08	3,119180E+09	3,119120E+09	1,638637E+09	6,238300E+09	7,876937E+09
2156	8,193017E+08	8,192839E+08	3,119106E+09	3,119180E+09	1,638586E+09	6,238285E+09	7,876871E+09
2157	8,193868E+08	8,193764E+08	3,119147E+09	3,119034E+09	1,638763E+09	6,238181E+09	7,876944E+09
2158	8,193367E+08	8,193675E+08	3,119043E+09	3,119055E+09	1,638704E+09	6,238098E+09	7,876802E+09
2159	8,193932E+08	8,193835E+08	3,118967E+09	3,119022E+09	1,638777E+09	6,237989E+09	7,876765E+09
2160	8,194629E+08	8,194903E+08	3,118994E+09	3,118889E+09	1,638953E+09	6,237883E+09	7,876836E+09
2161	8,194275E+08	8,194539E+08	3,118882E+09	3,118948E+09	1,638881E+09	6,237830E+09	7,876711E+09
2162	8,195212E+08	8,195076E+08	3,118884E+09	3,118843E+09	1,639029E+09	6,237727E+09	7,876756E+09
2163	8,195309E+08	8,195533E+08	3,118895E+09	3,118790E+09	1,639084E+09	6,237685E+09	7,876769E+09
2164	8,195092E+08	8,194922E+08	3,118781E+09	3,118904E+09	1,639001E+09	6,237685E+09	7,876687E+09
2165	8,195815E+08	8,195646E+08	3,118843E+09	3,118794E+09	1,639146E+09	6,237637E+09	7,876783E+09
2166	8,195077E+08	8,195439E+08	3,118832E+09	3,118836E+09	1,639052E+09	6,237669E+09	7,876720E+09
2167	8,194966E+08	8,194785E+08	3,118829E+09	3,118899E+09	1,638975E+09	6,237728E+09	7,876703E+09
2168	8,195279E+08	8,195289E+08	3,118966E+09	3,118845E+09	1,639057E+09	6,237811E+09	7,876867E+09
2169	8,194276E+08	8,194370E+08	3,118944E+09	3,118990E+09	1,638865E+09	6,237934E+09	7,876798E+09
2170	8,194460E+08	8,194186E+08	3,118973E+09	3,118988E+09	1,638865E+09	6,237961E+09	7,876826E+09
2171	8,194347E+08	8,194543E+08	3,119055E+09	3,118964E+09	1,638889E+09	6,238019E+09	7,876908E+09
2172	8,193627E+08	8,193662E+08	3,118976E+09	3,119102E+09	1,638729E+09	6,238078E+09	7,876806E+09
2173	8,194276E+08	8,194117E+08	3,119052E+09	3,118994E+09	1,638839E+09	6,238046E+09	7,876885E+09
2174	8,193883E+08	8,194186E+08	3,119056E+09	3,118981E+09	1,638807E+09	6,238037E+09	7,876844E+09
2175	8,193836E+08	8,193682E+08	3,118940E+09	3,119027E+09	1,638752E+09	6,237967E+09	7,876719E+09
2176	8,194787E+08	8,194702E+08	3,118974E+09	3,118899E+09	1,638949E+09	6,237873E+09	7,876822E+09
2177	8,194332E+08	8,194673E+08	3,118870E+09	3,118916E+09	1,638900E+09	6,237786E+09	7,876686E+09
2178	8,194937E+08	8,194879E+08	3,118794E+09	3,118835E+09	1,638982E+09	6,237629E+09	7,876610E+09
2179	8,195654E+08	8,195899E+08	3,118857E+09	3,118703E+09	1,639155E+09	6,237560E+09	7,876715E+09
2180	8,195283E+08	8,195451E+08	3,118729E+09	3,118789E+09	1,639073E+09	6,237518E+09	7,876592E+09
2181	8,196219E+08	8,195944E+08	3,118741E+09	3,118693E+09	1,639216E+09	6,237434E+09	7,876651E+09
2182	8,196159E+08	8,196474E+08	3,118740E+09	3,118659E+09	1,639263E+09	6,237400E+09	7,876663E+09
2183	8,195839E+08	8,195822E+08	3,118608E+09	3,118755E+09	1,639166E+09	6,237363E+09	7,876530E+09
2184	8,196611E+08	8,196502E+08	3,118710E+09	3,118664E+09	1,639311E+09	6,237373E+09	7,876685E+09
2185	8,195881E+08	8,196172E+08	3,118725E+09	3,118716E+09	1,639205E+09	6,237441E+09	7,876647E+09
2186	8,195765E+08	8,195495E+08	3,118711E+09	3,118762E+09	1,639126E+09	6,237473E+09	7,876599E+09
2187	8,196063E+08	8,196006E+08	3,118853E+09	3,118722E+09	1,639207E+09	6,237575E+09	7,876782E+09
2188	8,195024E+08	8,195115E+08	3,118796E+09	3,118883E+09	1,639014E+09	6,237679E+09	7,876693E+09
2189	8,195239E+08	8,194994E+08	3,118844E+09	3,118861E+09	1,639023E+09	6,237705E+09	7,876728E+09
2190	8,195067E+08	8,195395E+08	3,118931E+09	3,118829E+09	1,639046E+09	6,237761E+09	7,876807E+09
2191	8,194356E+08	8,194432E+08	3,118833E+09	3,118941E+09	1,638879E+09	6,237774E+09	7,876653E+09
2192	8,195165E+08	8,194915E+08	3,118908E+09	3,118859E+09	1,639008E+09	6,237767E+09	7,876775E+09
2193	8,194822E+08	8,195009E+08	3,118893E+09	3,118846E+09	1,638983E+09	6,237740E+09	7,876723E+09
2194	8,194790E+08	8,194671E+08	3,118755E+09	3,118855E+09	1,638946E+09	6,237610E+09	7,876557E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
2195	8,195751E+08	8,195781E+08	3,118816E+09	3,118719E+09	1,639153E+09	6,237535E+09	7,876688E+09
2196	8,195282E+08	8,195699E+08	3,118721E+09	3,118747E+09	1,639098E+09	6,237468E+09	7,876566E+09
2197	8,195933E+08	8,195832E+08	3,118683E+09	3,118670E+09	1,639176E+09	6,237353E+09	7,876529E+09
2198	8,196560E+08	8,196829E+08	3,118730E+09	3,118567E+09	1,639339E+09	6,237297E+09	7,876636E+09
2199	8,196141E+08	8,196299E+08	3,118558E+09	3,118651E+09	1,639244E+09	6,237209E+09	7,876453E+09
2200	8,197146E+08	8,196837E+08	3,118561E+09	3,118577E+09	1,639398E+09	6,237139E+09	7,876537E+09
2201	8,197075E+08	8,197354E+08	3,118568E+09	3,118532E+09	1,639443E+09	6,237100E+09	7,876543E+09
2202	8,196738E+08	8,196709E+08	3,118452E+09	3,118580E+09	1,639345E+09	6,237032E+09	7,876377E+09
2203	8,197482E+08	8,197311E+08	3,118596E+09	3,118495E+09	1,639479E+09	6,237090E+09	7,876569E+09
2204	8,196698E+08	8,196922E+08	3,118604E+09	3,118582E+09	1,639362E+09	6,237186E+09	7,876548E+09
2205	8,196554E+08	8,196241E+08	3,118604E+09	3,118637E+09	1,639280E+09	6,237241E+09	7,876520E+09
2206	8,196701E+08	8,196843E+08	3,118732E+09	3,118619E+09	1,639354E+09	6,237351E+09	7,876705E+09
2207	8,195640E+08	8,195906E+08	3,118656E+09	3,118759E+09	1,639155E+09	6,237414E+09	7,876569E+09
2208	8,195980E+08	8,195739E+08	3,118718E+09	3,118750E+09	1,639172E+09	6,237468E+09	7,876640E+09
2209	8,195895E+08	8,196080E+08	3,118810E+09	3,118713E+09	1,639198E+09	6,237523E+09	7,876720E+09
2210	8,195248E+08	8,195199E+08	3,118679E+09	3,118783E+09	1,639045E+09	6,237462E+09	7,876506E+09
2211	8,196076E+08	8,195752E+08	3,118755E+09	3,118699E+09	1,639183E+09	6,237454E+09	7,876637E+09
2212	8,195739E+08	8,195977E+08	3,118718E+09	3,118693E+09	1,639172E+09	6,237411E+09	7,876582E+09
2213	8,195738E+08	8,195689E+08	3,118610E+09	3,118680E+09	1,639143E+09	6,237290E+09	7,876433E+09
2214	8,196604E+08	8,196818E+08	3,118688E+09	3,118553E+09	1,639342E+09	6,237240E+09	7,876583E+09
2215	8,196155E+08	8,196605E+08	3,118574E+09	3,118578E+09	1,639276E+09	6,237151E+09	7,876427E+09
2216	8,196921E+08	8,196711E+08	3,118525E+09	3,118544E+09	1,639363E+09	6,237069E+09	7,876433E+09
2217	8,197565E+08	8,197701E+08	3,118554E+09	3,118447E+09	1,639527E+09	6,237002E+09	7,876528E+09
2218	8,197144E+08	8,197295E+08	3,118359E+09	3,118488E+09	1,639444E+09	6,236847E+09	7,876291E+09
2219	8,198118E+08	8,197844E+08	3,118400E+09	3,118404E+09	1,639596E+09	6,236804E+09	7,876400E+09
2220	8,197999E+08	8,198292E+08	3,118428E+09	3,118370E+09	1,639629E+09	6,236798E+09	7,876427E+09
2221	8,197624E+08	8,197546E+08	3,118361E+09	3,118422E+09	1,639517E+09	6,236783E+09	7,876300E+09
2222	8,198181E+08	8,198122E+08	3,118503E+09	3,118375E+09	1,639630E+09	6,236878E+09	7,876508E+09
2223	8,197330E+08	8,197627E+08	3,118476E+09	3,118470E+09	1,639496E+09	6,236947E+09	7,876442E+09
2224	8,197254E+08	8,196997E+08	3,118466E+09	3,118556E+09	1,639425E+09	6,237022E+09	7,876447E+09
2225	8,197436E+08	8,197551E+08	3,118591E+09	3,118518E+09	1,639499E+09	6,237109E+09	7,876608E+09
2226	8,196439E+08	8,196634E+08	3,118510E+09	3,118601E+09	1,639307E+09	6,237111E+09	7,876418E+09
2227	8,196849E+08	8,196456E+08	3,118589E+09	3,118586E+09	1,639331E+09	6,237175E+09	7,876506E+09
2228	8,196786E+08	8,196828E+08	3,118656E+09	3,118565E+09	1,639361E+09	6,237221E+09	7,876583E+09
2229	8,196154E+08	8,196068E+08	3,118541E+09	3,118622E+09	1,639222E+09	6,237164E+09	7,876386E+09
2230	8,196843E+08	8,196783E+08	3,118610E+09	3,118550E+09	1,639363E+09	6,237159E+09	7,876522E+09
2231	8,196503E+08	8,196968E+08	3,118568E+09	3,118530E+09	1,639347E+09	6,237099E+09	7,876446E+09
2232	8,196624E+08	8,196645E+08	3,118480E+09	3,118548E+09	1,639327E+09	6,237028E+09	7,876355E+09
2233	8,197551E+08	8,197661E+08	3,118554E+09	3,118431E+09	1,639521E+09	6,236985E+09	7,876506E+09
2234	8,197179E+08	8,197485E+08	3,118403E+09	3,118426E+09	1,639466E+09	6,236829E+09	7,876296E+09
2235	8,197974E+08	8,197630E+08	3,118346E+09	3,118392E+09	1,639560E+09	6,236738E+09	7,876298E+09
2236	8,198597E+08	8,198705E+08	3,118357E+09	3,118294E+09	1,639730E+09	6,236651E+09	7,876382E+09
2237	8,198160E+08	8,198326E+08	3,118208E+09	3,118299E+09	1,639649E+09	6,236507E+09	7,876156E+09
2238	8,198945E+08	8,198839E+08	3,118280E+09	3,118229E+09	1,639778E+09	6,236509E+09	7,876288E+09
2239	8,198768E+08	8,199115E+08	3,118308E+09	3,118208E+09	1,639788E+09	6,236516E+09	7,876304E+09
2240	8,198417E+08	8,198303E+08	3,118240E+09	3,118318E+09	1,639672E+09	6,236558E+09	7,876230E+09
2241	8,198919E+08	8,198830E+08	3,118372E+09	3,118291E+09	1,639775E+09	6,236663E+09	7,876438E+09
2242	8,198094E+08	8,198406E+08	3,118320E+09	3,118346E+09	1,639650E+09	6,236666E+09	7,876316E+09
2243	8,198029E+08	8,197746E+08	3,118333E+09	3,118420E+09	1,639577E+09	6,236754E+09	7,876331E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
2244	8,198252E+08	8,198265E+08	3,118461E+09	3,118386E+09	1,639652E+09	6,236846E+09	7,876498E+09
2245	8,197306E+08	8,197354E+08	3,118402E+09	3,118444E+09	1,639466E+09	6,236847E+09	7,876313E+09
2246	8,197587E+08	8,197271E+08	3,118467E+09	3,118449E+09	1,639486E+09	6,236917E+09	7,876402E+09
2247	8,197510E+08	8,197655E+08	3,118500E+09	3,118422E+09	1,639516E+09	6,236922E+09	7,876438E+09
2248	8,196958E+08	8,197016E+08	3,118386E+09	3,118503E+09	1,639397E+09	6,236889E+09	7,876286E+09
2249	8,197659E+08	8,197698E+08	3,118468E+09	3,118417E+09	1,639536E+09	6,236885E+09	7,876421E+09
2250	8,197427E+08	8,197877E+08	3,118420E+09	3,118354E+09	1,639530E+09	6,236774E+09	7,876304E+09
2251	8,197636E+08	8,197526E+08	3,118336E+09	3,118381E+09	1,639516E+09	6,236717E+09	7,876233E+09
2252	8,198621E+08	8,198564E+08	3,118376E+09	3,118283E+09	1,639718E+09	6,236659E+09	7,876377E+09
2253	8,198270E+08	8,198497E+08	3,118235E+09	3,118254E+09	1,639677E+09	6,236488E+09	7,876165E+09
2254	8,198904E+08	8,198766E+08	3,118178E+09	3,118226E+09	1,639767E+09	6,236404E+09	7,876171E+09
2255	8,199457E+08	8,199707E+08	3,118198E+09	3,118116E+09	1,639916E+09	6,236314E+09	7,876230E+09
2256	8,199057E+08	8,199271E+08	3,118087E+09	3,118160E+09	1,639833E+09	6,236247E+09	7,876080E+09
2257	8,199773E+08	8,199615E+08	3,118167E+09	3,118110E+09	1,639939E+09	6,236277E+09	7,876216E+09
2258	8,199599E+08	8,199853E+08	3,118170E+09	3,118079E+09	1,639945E+09	6,236249E+09	7,876194E+09
2259	8,199248E+08	8,199058E+08	3,118100E+09	3,118204E+09	1,639831E+09	6,236303E+09	7,876134E+09
2260	8,199738E+08	8,199602E+08	3,118209E+09	3,118181E+09	1,639934E+09	6,236390E+09	7,876324E+09
2261	8,198945E+08	8,199184E+08	3,118196E+09	3,118193E+09	1,639813E+09	6,236389E+09	7,876202E+09
2262	8,198753E+08	8,198540E+08	3,118218E+09	3,118269E+09	1,639729E+09	6,236487E+09	7,876216E+09
2263	8,198960E+08	8,198946E+08	3,118328E+09	3,118234E+09	1,639791E+09	6,236562E+09	7,876352E+09
2264	8,198079E+08	8,198134E+08	3,118269E+09	3,118329E+09	1,639621E+09	6,236598E+09	7,876219E+09
2265	8,198316E+08	8,198090E+08	3,118327E+09	3,118337E+09	1,639641E+09	6,236663E+09	7,876304E+09
2266	8,198302E+08	8,198574E+08	3,118345E+09	3,118271E+09	1,639688E+09	6,236616E+09	7,876303E+09
2267	8,197824E+08	8,197926E+08	3,118258E+09	3,118349E+09	1,639575E+09	6,236607E+09	7,876182E+09
2268	8,198589E+08	8,198557E+08	3,118334E+09	3,118276E+09	1,639715E+09	6,236609E+09	7,876324E+09
2269	8,198458E+08	8,198742E+08	3,118293E+09	3,118193E+09	1,639720E+09	6,236486E+09	7,876206E+09
2270	8,198569E+08	8,198485E+08	3,118182E+09	3,118236E+09	1,639705E+09	6,236417E+09	7,876123E+09
2271	8,199555E+08	8,199515E+08	3,118186E+09	3,118126E+09	1,639907E+09	6,236312E+09	7,876219E+09
2272	8,199265E+08	8,199562E+08	3,118049E+09	3,118105E+09	1,639883E+09	6,236154E+09	7,876037E+09
2273	8,199834E+08	8,199746E+08	3,118022E+09	3,118066E+09	1,639958E+09	6,236088E+09	7,876046E+09
2274	8,200410E+08	8,200616E+08	3,118047E+09	3,117929E+09	1,640103E+09	6,235975E+09	7,876078E+09
2275	8,200005E+08	8,200098E+08	3,117953E+09	3,118003E+09	1,640010E+09	6,235957E+09	7,875967E+09
2276	8,200680E+08	8,200427E+08	3,118018E+09	3,117990E+09	1,640111E+09	6,236008E+09	7,876119E+09
2277	8,200506E+08	8,200719E+08	3,118031E+09	3,117942E+09	1,640122E+09	6,235973E+09	7,876095E+09
2278	8,199988E+08	8,199997E+08	3,117967E+09	3,118074E+09	1,639999E+09	6,236041E+09	7,876039E+09
2279	8,200437E+08	8,200373E+08	3,118077E+09	3,118039E+09	1,640081E+09	6,236116E+09	7,876197E+09
2280	8,199705E+08	8,199928E+08	3,118085E+09	3,118078E+09	1,639963E+09	6,236163E+09	7,876126E+09
2281	8,199453E+08	8,199204E+08	3,118107E+09	3,118161E+09	1,639866E+09	6,236268E+09	7,876134E+09
2282	8,199701E+08	8,199636E+08	3,118186E+09	3,118101E+09	1,639934E+09	6,236287E+09	7,876221E+09
2283	8,198863E+08	8,198940E+08	3,118127E+09	3,118200E+09	1,639780E+09	6,236327E+09	7,876107E+09
2284	8,199131E+08	8,198966E+08	3,118174E+09	3,118205E+09	1,639810E+09	6,236379E+09	7,876189E+09
2285	8,199206E+08	8,199459E+08	3,118226E+09	3,118100E+09	1,639866E+09	6,236326E+09	7,876192E+09
2286	8,198674E+08	8,198845E+08	3,118139E+09	3,118187E+09	1,639752E+09	6,236326E+09	7,876078E+09
2287	8,199474E+08	8,199346E+08	3,118176E+09	3,118120E+09	1,639882E+09	6,236296E+09	7,876178E+09
2288	8,199446E+08	8,199671E+08	3,118122E+09	3,118067E+09	1,639912E+09	6,236189E+09	7,876101E+09
2289	8,199514E+08	8,199479E+08	3,117997E+09	3,118098E+09	1,639899E+09	6,236095E+09	7,875995E+09
2290	8,200523E+08	8,200535E+08	3,117994E+09	3,117946E+09	1,640106E+09	6,235940E+09	7,876046E+09
2291	8,200270E+08	8,200582E+08	3,117900E+09	3,117925E+09	1,640085E+09	6,235825E+09	7,875910E+09
2292	8,200828E+08	8,200671E+08	3,117881E+09	3,117908E+09	1,640150E+09	6,235789E+09	7,875939E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
2293	8,201412E+08	8,201493E+08	3,117928E+09	3,117769E+09	1,640290E+09	6,235696E+09	7,875987E+09
2294	8,200852E+08	8,201023E+08	3,117823E+09	3,117874E+09	1,640187E+09	6,235697E+09	7,875884E+09
2295	8,201448E+08	8,201259E+08	3,117858E+09	3,117867E+09	1,640271E+09	6,235725E+09	7,875996E+09
2296	8,201309E+08	8,201601E+08	3,117886E+09	3,117834E+09	1,640291E+09	6,235720E+09	7,876011E+09
2297	8,200716E+08	8,200754E+08	3,117843E+09	3,117950E+09	1,640147E+09	6,235793E+09	7,875940E+09
2298	8,201197E+08	8,201021E+08	3,117944E+09	3,117885E+09	1,640222E+09	6,235830E+09	7,876052E+09
2299	8,200509E+08	8,200596E+08	3,117958E+09	3,117940E+09	1,640110E+09	6,235898E+09	7,876008E+09
2300	8,200249E+08	8,199935E+08	3,117963E+09	3,118043E+09	1,640018E+09	6,236006E+09	7,876024E+09
2301	8,200527E+08	8,200484E+08	3,118055E+09	3,117955E+09	1,640101E+09	6,236010E+09	7,876111E+09
2302	8,199592E+08	8,199892E+08	3,118008E+09	3,118058E+09	1,639948E+09	6,236066E+09	7,876015E+09
2303	8,199865E+08	8,199783E+08	3,118051E+09	3,118061E+09	1,639965E+09	6,236112E+09	7,876077E+09
2304	8,200063E+08	8,200280E+08	3,118104E+09	3,117979E+09	1,640034E+09	6,236083E+09	7,876117E+09
2305	8,199522E+08	8,199635E+08	3,117999E+09	3,118069E+09	1,639916E+09	6,236069E+09	7,875984E+09
2306	8,200416E+08	8,200174E+08	3,117989E+09	3,117971E+09	1,640059E+09	6,235960E+09	7,876019E+09
2307	8,200459E+08	8,200651E+08	3,117926E+09	3,117910E+09	1,640111E+09	6,235837E+09	7,875948E+09
2308	8,200553E+08	8,200536E+08	3,117809E+09	3,117928E+09	1,640109E+09	6,235737E+09	7,875846E+09
2309	8,201594E+08	8,201569E+08	3,117848E+09	3,117735E+09	1,640316E+09	6,235583E+09	7,875900E+09
2310	8,201218E+08	8,201626E+08	3,117775E+09	3,117738E+09	1,640284E+09	6,235512E+09	7,875797E+09
2311	8,201706E+08	8,201560E+08	3,117737E+09	3,117751E+09	1,640327E+09	6,235488E+09	7,875815E+09
2312	8,202297E+08	8,202430E+08	3,117784E+09	3,117658E+09	1,640473E+09	6,235442E+09	7,875915E+09
2313	8,201643E+08	8,201932E+08	3,117680E+09	3,117769E+09	1,640357E+09	6,235450E+09	7,875807E+09
2314	8,202243E+08	8,202059E+08	3,117706E+09	3,117730E+09	1,640430E+09	6,235436E+09	7,875866E+09
2315	8,202142E+08	8,202351E+08	3,117760E+09	3,117701E+09	1,640449E+09	6,235460E+09	7,875910E+09
2316	8,201553E+08	8,201442E+08	3,117716E+09	3,117825E+09	1,640300E+09	6,235541E+09	7,875841E+09
2317	8,202041E+08	8,201697E+08	3,117827E+09	3,117744E+09	1,640374E+09	6,235570E+09	7,875944E+09
2318	8,201241E+08	8,201417E+08	3,117836E+09	3,117812E+09	1,640266E+09	6,235648E+09	7,875913E+09
2319	8,200930E+08	8,200728E+08	3,117816E+09	3,117913E+09	1,640166E+09	6,235728E+09	7,875894E+09
2320	8,201263E+08	8,201356E+08	3,117930E+09	3,117838E+09	1,640262E+09	6,235767E+09	7,876029E+09
2321	8,200318E+08	8,200684E+08	3,117896E+09	3,117929E+09	1,640100E+09	6,235824E+09	7,875925E+09
2322	8,200664E+08	8,200461E+08	3,117907E+09	3,117910E+09	1,640113E+09	6,235817E+09	7,875929E+09
2323	8,200983E+08	8,201050E+08	3,117946E+09	3,117843E+09	1,640203E+09	6,235788E+09	7,875991E+09
2324	8,200509E+08	8,200539E+08	3,117811E+09	3,117930E+09	1,640105E+09	6,235741E+09	7,875846E+09
2325	8,201462E+08	8,201206E+08	3,117811E+09	3,117789E+09	1,640267E+09	6,235600E+09	7,875867E+09
2326	8,201419E+08	8,201805E+08	3,117775E+09	3,117720E+09	1,640322E+09	6,235494E+09	7,875817E+09
2327	8,201468E+08	8,201533E+08	3,117668E+09	3,117744E+09	1,640300E+09	6,235412E+09	7,875712E+09
2328	8,202524E+08	8,202536E+08	3,117729E+09	3,117592E+09	1,640506E+09	6,235321E+09	7,875827E+09
2329	8,202075E+08	8,202504E+08	3,117651E+09	3,117619E+09	1,640458E+09	6,235270E+09	7,875728E+09
2330	8,202564E+08	8,202375E+08	3,117573E+09	3,117624E+09	1,640494E+09	6,235198E+09	7,875692E+09
2331	8,203208E+08	8,203321E+08	3,117613E+09	3,117539E+09	1,640653E+09	6,235151E+09	7,875804E+09
2332	8,202579E+08	8,202798E+08	3,117518E+09	3,117637E+09	1,640538E+09	6,235155E+09	7,875692E+09
2333	8,203198E+08	8,202841E+08	3,117572E+09	3,117556E+09	1,640604E+09	6,235129E+09	7,875732E+09
2334	8,202978E+08	8,203143E+08	3,117635E+09	3,117540E+09	1,640612E+09	6,235175E+09	7,875787E+09
2335	8,202311E+08	8,202168E+08	3,117578E+09	3,117684E+09	1,640448E+09	6,235262E+09	7,875709E+09
2336	8,202773E+08	8,202530E+08	3,117695E+09	3,117630E+09	1,640530E+09	6,235325E+09	7,875856E+09
2337	8,201875E+08	8,202272E+08	3,117718E+09	3,117701E+09	1,640415E+09	6,235419E+09	7,875834E+09
2338	8,201592E+08	8,201495E+08	3,117692E+09	3,117777E+09	1,640309E+09	6,235470E+09	7,875779E+09
2339	8,202022E+08	8,202089E+08	3,117813E+09	3,117714E+09	1,640411E+09	6,235528E+09	7,875939E+09
2340	8,201180E+08	8,201398E+08	3,117766E+09	3,117811E+09	1,640258E+09	6,235577E+09	7,875834E+09
2341	8,201617E+08	8,201214E+08	3,117758E+09	3,117761E+09	1,640283E+09	6,235518E+09	7,875801E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
2342	8,201896E+08	8,201997E+08	3,117780E+09	3,117688E+09	1,640389E+09	6,235469E+09	7,875858E+09
2343	8,201415E+08	8,201548E+08	3,117628E+09	3,117759E+09	1,640296E+09	6,235387E+09	7,875683E+09
2344	8,202403E+08	8,202273E+08	3,117661E+09	3,117620E+09	1,640468E+09	6,235281E+09	7,875749E+09
2345	8,202302E+08	8,202794E+08	3,117653E+09	3,117550E+09	1,640510E+09	6,235203E+09	7,875712E+09
2346	8,202375E+08	8,202377E+08	3,117521E+09	3,117576E+09	1,640475E+09	6,235097E+09	7,875573E+09
2347	8,203473E+08	8,203420E+08	3,117569E+09	3,117464E+09	1,640689E+09	6,235034E+09	7,875723E+09
2348	8,203079E+08	8,203442E+08	3,117477E+09	3,117501E+09	1,640652E+09	6,234978E+09	7,875630E+09
2349	8,203583E+08	8,203330E+08	3,117406E+09	3,117472E+09	1,640691E+09	6,234878E+09	7,875569E+09
2350	8,204138E+08	8,204305E+08	3,117473E+09	3,117379E+09	1,640844E+09	6,234852E+09	7,875696E+09
2351	8,203448E+08	8,203618E+08	3,117378E+09	3,117475E+09	1,640707E+09	6,234853E+09	7,875560E+09
2352	8,204020E+08	8,203627E+08	3,117455E+09	3,117426E+09	1,640765E+09	6,234881E+09	7,875646E+09
2353	8,203674E+08	8,203894E+08	3,117522E+09	3,117425E+09	1,640757E+09	6,234947E+09	7,875704E+09
2354	8,202963E+08	8,202868E+08	3,117435E+09	3,117561E+09	1,640583E+09	6,234996E+09	7,875579E+09
2355	8,203453E+08	8,203329E+08	3,117558E+09	3,117522E+09	1,640678E+09	6,235080E+09	7,875758E+09
2356	8,202649E+08	8,203035E+08	3,117595E+09	3,117579E+09	1,640568E+09	6,235174E+09	7,875742E+09
2357	8,202435E+08	8,202195E+08	3,117578E+09	3,117620E+09	1,640463E+09	6,235198E+09	7,875661E+09
2358	8,202851E+08	8,202843E+08	3,117689E+09	3,117564E+09	1,640569E+09	6,235253E+09	7,875822E+09
2359	8,202024E+08	8,202173E+08	3,117604E+09	3,117666E+09	1,640420E+09	6,235270E+09	7,875690E+09
2360	8,202497E+08	8,202161E+08	3,117596E+09	3,117626E+09	1,640466E+09	6,235222E+09	7,875687E+09
2361	8,202723E+08	8,203011E+08	3,117632E+09	3,117540E+09	1,640573E+09	6,235171E+09	7,875745E+09
2362	8,202270E+08	8,202488E+08	3,117479E+09	3,117583E+09	1,640476E+09	6,235063E+09	7,875538E+09
2363	8,203322E+08	8,203212E+08	3,117522E+09	3,117467E+09	1,640653E+09	6,234989E+09	7,875643E+09
2364	8,203309E+08	8,203685E+08	3,117511E+09	3,117415E+09	1,640699E+09	6,234926E+09	7,875625E+09
2365	8,203429E+08	8,203281E+08	3,117364E+09	3,117425E+09	1,640671E+09	6,234789E+09	7,875460E+09
2366	8,204462E+08	8,204435E+08	3,117396E+09	3,117316E+09	1,640890E+09	6,234712E+09	7,875602E+09
2367	8,204055E+08	8,204456E+08	3,117293E+09	3,117345E+09	1,640851E+09	6,234638E+09	7,875490E+09
2368	8,204542E+08	8,204316E+08	3,117258E+09	3,117310E+09	1,640886E+09	6,234568E+09	7,875454E+09
2369	8,204957E+08	8,205151E+08	3,117351E+09	3,117219E+09	1,641011E+09	6,234570E+09	7,875581E+09
2370	8,204224E+08	8,204340E+08	3,117241E+09	3,117316E+09	1,640856E+09	6,234557E+09	7,875414E+09
2371	8,204773E+08	8,204396E+08	3,117311E+09	3,117308E+09	1,640917E+09	6,234619E+09	7,875536E+09
2372	8,204454E+08	8,204701E+08	3,117387E+09	3,117318E+09	1,640915E+09	6,234705E+09	7,875620E+09
2373	8,203753E+08	8,203684E+08	3,117313E+09	3,117424E+09	1,640744E+09	6,234737E+09	7,875480E+09
2374	8,204179E+08	8,204137E+08	3,117457E+09	3,117385E+09	1,640832E+09	6,234842E+09	7,875674E+09
2375	8,203403E+08	8,203727E+08	3,117482E+09	3,117449E+09	1,640713E+09	6,234932E+09	7,875645E+09
2376	8,203221E+08	8,202901E+08	3,117463E+09	3,117506E+09	1,640612E+09	6,234969E+09	7,875581E+09
2377	8,203591E+08	8,203584E+08	3,117556E+09	3,117451E+09	1,640717E+09	6,235007E+09	7,875725E+09
2378	8,202811E+08	8,202987E+08	3,117428E+09	3,117522E+09	1,640580E+09	6,234950E+09	7,875530E+09
2379	8,203359E+08	8,203132E+08	3,117421E+09	3,117483E+09	1,640649E+09	6,234904E+09	7,875553E+09
2380	8,203697E+08	8,203965E+08	3,117483E+09	3,117378E+09	1,640766E+09	6,234860E+09	7,875627E+09
2381	8,203300E+08	8,203396E+08	3,117339E+09	3,117394E+09	1,640670E+09	6,234732E+09	7,875402E+09
2382	8,204303E+08	8,204176E+08	3,117379E+09	3,117298E+09	1,640848E+09	6,234677E+09	7,875525E+09
2383	8,204301E+08	8,204654E+08	3,117335E+09	3,117261E+09	1,640895E+09	6,234596E+09	7,875492E+09
2384	8,204411E+08	8,204346E+08	3,117199E+09	3,117283E+09	1,640876E+09	6,234481E+09	7,875357E+09
2385	8,205352E+08	8,205478E+08	3,117250E+09	3,117168E+09	1,641083E+09	6,234418E+09	7,875501E+09
2386	8,204930E+08	8,205333E+08	3,117142E+09	3,117176E+09	1,641026E+09	6,234318E+09	7,875344E+09
2387	8,205419E+08	8,205158E+08	3,117115E+09	3,117173E+09	1,641058E+09	6,234289E+09	7,875347E+09
2388	8,205857E+08	8,205894E+08	3,117216E+09	3,117095E+09	1,641175E+09	6,234311E+09	7,875486E+09
2389	8,205095E+08	8,205100E+08	3,117102E+09	3,117176E+09	1,641019E+09	6,234278E+09	7,875298E+09
2390	8,205534E+08	8,205267E+08	3,117176E+09	3,117175E+09	1,641080E+09	6,234351E+09	7,875431E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
2391	8,205210E+08	8,205532E+08	3,117252E+09	3,117187E+09	1,641074E+09	6,234439E+09	7,875513E+09
2392	8,204510E+08	8,204467E+08	3,117214E+09	3,117292E+09	1,640898E+09	6,234507E+09	7,875405E+09
2393	8,204860E+08	8,204812E+08	3,117359E+09	3,117262E+09	1,640967E+09	6,234621E+09	7,875588E+09
2394	8,204120E+08	8,204339E+08	3,117340E+09	3,117319E+09	1,640846E+09	6,234659E+09	7,875505E+09
2395	8,204002E+08	8,203691E+08	3,117292E+09	3,117397E+09	1,640769E+09	6,234689E+09	7,875458E+09
2396	8,204470E+08	8,204454E+08	3,117390E+09	3,117326E+09	1,640892E+09	6,234716E+09	7,875608E+09
2397	8,203755E+08	8,203961E+08	3,117277E+09	3,117345E+09	1,640772E+09	6,234623E+09	7,875394E+09
2398	8,204266E+08	8,204129E+08	3,117293E+09	3,117298E+09	1,640839E+09	6,234590E+09	7,875430E+09
2399	8,204636E+08	8,204891E+08	3,117348E+09	3,117212E+09	1,640953E+09	6,234560E+09	7,875512E+09
2400	8,204251E+08	8,204333E+08	3,117210E+09	3,117248E+09	1,640858E+09	6,234457E+09	7,875316E+09
2401	8,205153E+08	8,205107E+08	3,117233E+09	3,117167E+09	1,641026E+09	6,234400E+09	7,875426E+09
2402	8,205190E+08	8,205597E+08	3,117151E+09	3,117113E+09	1,641079E+09	6,234264E+09	7,875343E+09
2403	8,205369E+08	8,205370E+08	3,117013E+09	3,117142E+09	1,641074E+09	6,234154E+09	7,875228E+09
2404	8,206379E+08	8,206364E+08	3,117097E+09	3,117010E+09	1,641274E+09	6,234106E+09	7,875381E+09
2405	8,205963E+08	8,206178E+08	3,116992E+09	3,116990E+09	1,641214E+09	6,233982E+09	7,875196E+09
2406	8,206336E+08	8,206027E+08	3,116972E+09	3,117009E+09	1,641236E+09	6,233981E+09	7,875217E+09
2407	8,206710E+08	8,206763E+08	3,117061E+09	3,116960E+09	1,641347E+09	6,234021E+09	7,875369E+09
2408	8,205887E+08	8,206021E+08	3,116981E+09	3,117053E+09	1,641191E+09	6,234034E+09	7,875225E+09
2409	8,206174E+08	8,206121E+08	3,117082E+09	3,117058E+09	1,641229E+09	6,234140E+09	7,875370E+09
2410	8,205866E+08	8,206207E+08	3,117143E+09	3,117061E+09	1,641207E+09	6,234204E+09	7,875411E+09
2411	8,205223E+08	8,205140E+08	3,117092E+09	3,117199E+09	1,641036E+09	6,234291E+09	7,875327E+09
2412	8,205669E+08	8,205408E+08	3,117227E+09	3,117165E+09	1,641108E+09	6,234393E+09	7,875500E+09
2413	8,204983E+08	8,205053E+08	3,117176E+09	3,117181E+09	1,641004E+09	6,234357E+09	7,875361E+09
2414	8,204843E+08	8,204619E+08	3,117129E+09	3,117242E+09	1,640946E+09	6,234371E+09	7,875317E+09
2415	8,205350E+08	8,205400E+08	3,117231E+09	3,117155E+09	1,641075E+09	6,234386E+09	7,875461E+09
2416	8,204643E+08	8,204898E+08	3,117164E+09	3,117166E+09	1,640954E+09	6,234331E+09	7,875285E+09
2417	8,205059E+08	8,205016E+08	3,117185E+09	3,117138E+09	1,641007E+09	6,234324E+09	7,875331E+09
2418	8,205460E+08	8,205700E+08	3,117191E+09	3,117062E+09	1,641116E+09	6,234253E+09	7,875369E+09
2419	8,205160E+08	8,205305E+08	3,117028E+09	3,117132E+09	1,641046E+09	6,234160E+09	7,875206E+09
2420	8,206173E+08	8,206067E+08	3,117055E+09	3,117038E+09	1,641224E+09	6,234093E+09	7,875317E+09
2421	8,206268E+08	8,206593E+08	3,116977E+09	3,116937E+09	1,641286E+09	6,233915E+09	7,875201E+09
2422	8,206401E+08	8,206377E+08	3,116863E+09	3,116958E+09	1,641278E+09	6,233821E+09	7,875098E+09
2423	8,207382E+08	8,207261E+08	3,116943E+09	3,116846E+09	1,641464E+09	6,233789E+09	7,875253E+09
2424	8,206896E+08	8,207077E+08	3,116866E+09	3,116840E+09	1,641397E+09	6,233706E+09	7,875103E+09
2425	8,207079E+08	8,206930E+08	3,116847E+09	3,116882E+09	1,641401E+09	6,233728E+09	7,875129E+09
2426	8,207408E+08	8,207610E+08	3,116913E+09	3,116833E+09	1,641502E+09	6,233746E+09	7,875248E+09
2427	8,206631E+08	8,206888E+08	3,116847E+09	3,116947E+09	1,641352E+09	6,233794E+09	7,875146E+09
2428	8,206971E+08	8,206768E+08	3,116973E+09	3,116945E+09	1,641374E+09	6,233918E+09	7,875292E+09
2429	8,206712E+08	8,206832E+08	3,117013E+09	3,116921E+09	1,641354E+09	6,233935E+09	7,875289E+09
2430	8,206033E+08	8,205863E+08	3,116944E+09	3,117057E+09	1,641190E+09	6,234002E+09	7,875191E+09
2431	8,206485E+08	8,206198E+08	3,117059E+09	3,117032E+09	1,641268E+09	6,234092E+09	7,875360E+09
2432	8,205800E+08	8,205985E+08	3,117045E+09	3,117028E+09	1,641179E+09	6,234073E+09	7,875252E+09
2433	8,205538E+08	8,205542E+08	3,117025E+09	3,117087E+09	1,641108E+09	6,234111E+09	7,875220E+09
2434	8,206067E+08	8,206197E+08	3,117112E+09	3,117000E+09	1,641226E+09	6,234113E+09	7,875339E+09
2435	8,205463E+08	8,205741E+08	3,117031E+09	3,117053E+09	1,641120E+09	6,234083E+09	7,875204E+09
2436	8,205968E+08	8,205769E+08	3,117042E+09	3,117030E+09	1,641174E+09	6,234072E+09	7,875246E+09
2437	8,206456E+08	8,206588E+08	3,117006E+09	3,116918E+09	1,641304E+09	6,233924E+09	7,875228E+09
2438	8,206187E+08	8,206369E+08	3,116839E+09	3,116967E+09	1,641256E+09	6,233805E+09	7,875061E+09
2439	8,207251E+08	8,207091E+08	3,116872E+09	3,116861E+09	1,641434E+09	6,233734E+09	7,875168E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
2440	8,207334E+08	8,207588E+08	3,116838E+09	3,116744E+09	1,641492E+09	6,233582E+09	7,875074E+09
2441	8,207297E+08	8,207331E+08	3,116734E+09	3,116785E+09	1,641463E+09	6,233519E+09	7,874982E+09
2442	8,208198E+08	8,208121E+08	3,116783E+09	3,116691E+09	1,641632E+09	6,233474E+09	7,875106E+09
2443	8,207711E+08	8,208053E+08	3,116708E+09	3,116731E+09	1,641576E+09	6,233440E+09	7,875016E+09
2444	8,207908E+08	8,207792E+08	3,116721E+09	3,116774E+09	1,641570E+09	6,233494E+09	7,875064E+09
2445	8,208247E+08	8,208399E+08	3,116786E+09	3,116694E+09	1,641665E+09	6,233480E+09	7,875145E+09
2446	8,207458E+08	8,207644E+08	3,116735E+09	3,116811E+09	1,641510E+09	6,233546E+09	7,875056E+09
2447	8,207801E+08	8,207407E+08	3,116837E+09	3,116825E+09	1,641521E+09	6,233662E+09	7,875183E+09
2448	8,207509E+08	8,207500E+08	3,116888E+09	3,116793E+09	1,641501E+09	6,233680E+09	7,875181E+09
2449	8,206697E+08	8,206674E+08	3,116813E+09	3,116929E+09	1,641337E+09	6,233742E+09	7,875079E+09
2450	8,207144E+08	8,207004E+08	3,116902E+09	3,116887E+09	1,641415E+09	6,233789E+09	7,875204E+09
2451	8,206551E+08	8,206883E+08	3,116911E+09	3,116897E+09	1,641343E+09	6,233808E+09	7,875152E+09
2452	8,206369E+08	8,206281E+08	3,116916E+09	3,116950E+09	1,641265E+09	6,233866E+09	7,875131E+09
2453	8,206955E+08	8,206952E+08	3,116968E+09	3,116848E+09	1,641391E+09	6,233816E+09	7,875207E+09
2454	8,206394E+08	8,206644E+08	3,116869E+09	3,116906E+09	1,641304E+09	6,233774E+09	7,875078E+09
2455	8,206958E+08	8,206736E+08	3,116853E+09	3,116890E+09	1,641369E+09	6,233743E+09	7,875113E+09
2456	8,207479E+08	8,207653E+08	3,116850E+09	3,116748E+09	1,641513E+09	6,233598E+09	7,875112E+09
2457	8,207116E+08	8,207457E+08	3,116704E+09	3,116787E+09	1,641457E+09	6,233491E+09	7,874949E+09
2458	8,208153E+08	8,208018E+08	3,116719E+09	3,116685E+09	1,641617E+09	6,233405E+09	7,875022E+09
2459	8,208269E+08	8,208552E+08	3,116686E+09	3,116609E+09	1,641682E+09	6,233295E+09	7,874977E+09
2460	8,208223E+08	8,208152E+08	3,116593E+09	3,116662E+09	1,641638E+09	6,233255E+09	7,874893E+09
2461	8,209103E+08	8,209016E+08	3,116617E+09	3,116551E+09	1,641812E+09	6,233168E+09	7,874980E+09
2462	8,208618E+08	8,209019E+08	3,116557E+09	3,116583E+09	1,641764E+09	6,233140E+09	7,874903E+09
2463	8,208803E+08	8,208612E+08	3,116583E+09	3,116632E+09	1,641742E+09	6,233216E+09	7,874957E+09
2464	8,209121E+08	8,209135E+08	3,116681E+09	3,116543E+09	1,641826E+09	6,233224E+09	7,875050E+09
2465	8,208182E+08	8,208359E+08	3,116619E+09	3,116676E+09	1,641654E+09	6,233296E+09	7,874950E+09
2466	8,208464E+08	8,208073E+08	3,116678E+09	3,116700E+09	1,641654E+09	6,233378E+09	7,875032E+09
2467	8,208219E+08	8,208348E+08	3,116729E+09	3,116690E+09	1,641657E+09	6,233419E+09	7,875076E+09
2468	8,207443E+08	8,207460E+08	3,116694E+09	3,116809E+09	1,641490E+09	6,233503E+09	7,874994E+09
2469	8,207916E+08	8,207794E+08	3,116781E+09	3,116735E+09	1,641571E+09	6,233515E+09	7,875086E+09
2470	8,207382E+08	8,207702E+08	3,116802E+09	3,116748E+09	1,641508E+09	6,233549E+09	7,875058E+09
2471	8,207241E+08	8,207039E+08	3,116782E+09	3,116825E+09	1,641428E+09	6,233607E+09	7,875035E+09
2472	8,207855E+08	8,207773E+08	3,116830E+09	3,116711E+09	1,641563E+09	6,233541E+09	7,875104E+09
2473	8,207234E+08	8,207640E+08	3,116713E+09	3,116763E+09	1,641487E+09	6,233476E+09	7,874964E+09
2474	8,207830E+08	8,207708E+08	3,116667E+09	3,116727E+09	1,641554E+09	6,233394E+09	7,874948E+09
2475	8,208451E+08	8,208675E+08	3,116686E+09	3,116592E+09	1,641713E+09	6,233279E+09	7,874991E+09
2476	8,208139E+08	8,208333E+08	3,116569E+09	3,116622E+09	1,641647E+09	6,233191E+09	7,874838E+09
2477	8,209159E+08	8,208891E+08	3,116546E+09	3,116507E+09	1,641805E+09	6,233054E+09	7,874859E+09
2478	8,209261E+08	8,209548E+08	3,116519E+09	3,116446E+09	1,641881E+09	6,232965E+09	7,874845E+09
2479	8,209196E+08	8,209151E+08	3,116423E+09	3,116522E+09	1,641835E+09	6,232945E+09	7,874780E+09
2480	8,210015E+08	8,209977E+08	3,116490E+09	3,116397E+09	1,641999E+09	6,232887E+09	7,874887E+09
2481	8,209419E+08	8,209936E+08	3,116456E+09	3,116441E+09	1,641936E+09	6,232897E+09	7,874832E+09
2482	8,209546E+08	8,209317E+08	3,116450E+09	3,116502E+09	1,641886E+09	6,232952E+09	7,874838E+09
2483	8,209889E+08	8,209852E+08	3,116543E+09	3,116448E+09	1,641974E+09	6,232991E+09	7,874965E+09
2484	8,208948E+08	8,209009E+08	3,116486E+09	3,116572E+09	1,641796E+09	6,233059E+09	7,874854E+09
2485	8,209213E+08	8,208844E+08	3,116511E+09	3,116565E+09	1,641806E+09	6,233075E+09	7,874881E+09
2486	8,209010E+08	8,209238E+08	3,116592E+09	3,116537E+09	1,641825E+09	6,233129E+09	7,874954E+09
2487	8,208267E+08	8,208259E+08	3,116577E+09	3,116661E+09	1,641653E+09	6,233237E+09	7,874890E+09
2488	8,208725E+08	8,208549E+08	3,116688E+09	3,116576E+09	1,641727E+09	6,233264E+09	7,874991E+09



1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
2489	8,208128E+08	8,208524E+08	3,116691E+09	3,116609E+09	1,641665E+09	6,233300E+09	7,874965E+09
2490	8,207977E+08	8,207844E+08	3,116616E+09	3,116697E+09	1,641582E+09	6,233312E+09	7,874894E+09
2491	8,208712E+08	8,208748E+08	3,116659E+09	3,116597E+09	1,641746E+09	6,233256E+09	7,875002E+09
2492	8,208178E+08	8,208547E+08	3,116567E+09	3,116620E+09	1,641673E+09	6,233188E+09	7,874860E+09
2493	8,208828E+08	8,208633E+08	3,116502E+09	3,116551E+09	1,641746E+09	6,233053E+09	7,874799E+09
2494	8,209505E+08	8,209636E+08	3,116530E+09	3,116412E+09	1,641914E+09	6,232942E+09	7,874856E+09
2495	8,209183E+08	8,209240E+08	3,116405E+09	3,116465E+09	1,641842E+09	6,232870E+09	7,874713E+09
2496	8,210138E+08	8,209854E+08	3,116398E+09	3,116343E+09	1,641999E+09	6,232742E+09	7,874741E+09
2497	8,210132E+08	8,210624E+08	3,116370E+09	3,116295E+09	1,642076E+09	6,232665E+09	7,874741E+09
2498	8,210018E+08	8,210100E+08	3,116266E+09	3,116373E+09	1,642012E+09	6,232639E+09	7,874650E+09
2499	8,210883E+08	8,210871E+08	3,116356E+09	3,116272E+09	1,642175E+09	6,232628E+09	7,874803E+09
2500	8,210294E+08	8,210620E+08	3,116339E+09	3,116317E+09	1,642091E+09	6,232656E+09	7,874748E+09
2501	8,210374E+08	8,210004E+08	3,116286E+09	3,116366E+09	1,642038E+09	6,232652E+09	7,874690E+09
2502	8,210711E+08	8,210651E+08	3,116384E+09	3,116311E+09	1,642136E+09	6,232695E+09	7,874831E+09
2503	8,209759E+08	8,209851E+08	3,116340E+09	3,116441E+09	1,641961E+09	6,232781E+09	7,874742E+09
2504	8,209977E+08	8,209686E+08	3,116412E+09	3,116407E+09	1,641966E+09	6,232819E+09	7,874785E+09
2505	8,209696E+08	8,210083E+08	3,116516E+09	3,116394E+09	1,641978E+09	6,232909E+09	7,874887E+09
2506	8,208927E+08	8,208948E+08	3,116465E+09	3,116538E+09	1,641787E+09	6,233003E+09	7,874791E+09
2507	8,209451E+08	8,209267E+08	3,116560E+09	3,116489E+09	1,641872E+09	6,233049E+09	7,874921E+09
2508	8,208941E+08	8,209230E+08	3,116552E+09	3,116511E+09	1,641817E+09	6,233063E+09	7,874880E+09
2509	8,208858E+08	8,208704E+08	3,116418E+09	3,116552E+09	1,641756E+09	6,232970E+09	7,874726E+09
2510	8,209711E+08	8,209713E+08	3,116485E+09	3,116421E+09	1,641942E+09	6,232906E+09	7,874849E+09
2511	8,209254E+08	8,209497E+08	3,116407E+09	3,116435E+09	1,641875E+09	6,232843E+09	7,874718E+09
2512	8,209872E+08	8,209569E+08	3,116358E+09	3,116350E+09	1,641944E+09	6,232708E+09	7,874652E+09
2513	8,210443E+08	8,210681E+08	3,116382E+09	3,116237E+09	1,642112E+09	6,232620E+09	7,874732E+09
2514	8,210049E+08	8,210259E+08	3,116226E+09	3,116311E+09	1,642031E+09	6,232537E+09	7,874567E+09
2515	8,211016E+08	8,210946E+08	3,116241E+09	3,116220E+09	1,642196E+09	6,232461E+09	7,874657E+09
2516	8,211040E+08	8,211549E+08	3,116253E+09	3,116165E+09	1,642259E+09	6,232418E+09	7,874676E+09
2517	8,210922E+08	8,210936E+08	3,116121E+09	3,116227E+09	1,642186E+09	6,232348E+09	7,874534E+09
2518	8,211815E+08	8,211651E+08	3,116219E+09	3,116133E+09	1,642347E+09	6,232352E+09	7,874699E+09
2519	8,211218E+08	8,211341E+08	3,116188E+09	3,116194E+09	1,642256E+09	6,232382E+09	7,874638E+09
2520	8,211209E+08	8,210794E+08	3,116143E+09	3,116221E+09	1,642200E+09	6,232364E+09	7,874564E+09
2521	8,211434E+08	8,211571E+08	3,116253E+09	3,116168E+09	1,642301E+09	6,232422E+09	7,874722E+09
2522	8,210419E+08	8,210656E+08	3,116216E+09	3,116297E+09	1,642107E+09	6,232513E+09	7,874621E+09
2523	8,210672E+08	8,210456E+08	3,116317E+09	3,116290E+09	1,642113E+09	6,232607E+09	7,874720E+09
2524	8,210428E+08	8,210681E+08	3,116421E+09	3,116285E+09	1,642111E+09	6,232706E+09	7,874817E+09
2525	8,209682E+08	8,209618E+08	3,116306E+09	3,116420E+09	1,641930E+09	6,232726E+09	7,874656E+09
2526	8,210307E+08	8,210081E+08	3,116388E+09	3,116361E+09	1,642039E+09	6,232749E+09	7,874787E+09
2527	8,209880E+08	8,210115E+08	3,116379E+09	3,116371E+09	1,642000E+09	6,232751E+09	7,874750E+09
2528	8,209822E+08	8,209662E+08	3,116278E+09	3,116368E+09	1,641948E+09	6,232646E+09	7,874594E+09
2529	8,210638E+08	8,210716E+08	3,116356E+09	3,116240E+09	1,642135E+09	6,232597E+09	7,874732E+09
2530	8,210135E+08	8,210415E+08	3,116256E+09	3,116268E+09	1,642055E+09	6,232524E+09	7,874579E+09
2531	8,210765E+08	8,210543E+08	3,116208E+09	3,116216E+09	1,642131E+09	6,232424E+09	7,874555E+09
2532	8,211340E+08	8,211611E+08	3,116235E+09	3,116110E+09	1,642295E+09	6,232345E+09	7,874640E+09
2533	8,210964E+08	8,211257E+08	3,116043E+09	3,116162E+09	1,642222E+09	6,232205E+09	7,874427E+09
2534	8,212010E+08	8,211911E+08	3,116089E+09	3,116060E+09	1,642392E+09	6,232149E+09	7,874541E+09
2535	8,212085E+08	8,212389E+08	3,116111E+09	3,116013E+09	1,642447E+09	6,232124E+09	7,874571E+09
2536	8,211918E+08	8,211741E+08	3,115980E+09	3,116060E+09	1,642366E+09	6,232040E+09	7,874406E+09
2537	8,212670E+08	8,212521E+08	3,116071E+09	3,115986E+09	1,642519E+09	6,232057E+09	7,874576E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
2538	8,211966E+08	8,212205E+08	3,116022E+09	3,116055E+09	1,642417E+09	6,232077E+09	7,874494E+09
2539	8,211931E+08	8,211701E+08	3,116014E+09	3,116103E+09	1,642363E+09	6,232117E+09	7,874480E+09
2540	8,212145E+08	8,212322E+08	3,116168E+09	3,116053E+09	1,642447E+09	6,232221E+09	7,874668E+09
2541	8,211133E+08	8,211343E+08	3,116098E+09	3,116171E+09	1,642248E+09	6,232269E+09	7,874517E+09
2542	8,211430E+08	8,211110E+08	3,116200E+09	3,116177E+09	1,642254E+09	6,232376E+09	7,874630E+09
2543	8,211257E+08	8,211338E+08	3,116280E+09	3,116182E+09	1,642260E+09	6,232462E+09	7,874722E+09
2544	8,210523E+08	8,210417E+08	3,116147E+09	3,116277E+09	1,642094E+09	6,232425E+09	7,874519E+09
2545	8,211137E+08	8,211042E+08	3,116233E+09	3,116204E+09	1,642218E+09	6,232438E+09	7,874655E+09
2546	8,210721E+08	8,211036E+08	3,116221E+09	3,116196E+09	1,642176E+09	6,232417E+09	7,874593E+09
2547	8,210712E+08	8,210602E+08	3,116148E+09	3,116207E+09	1,642131E+09	6,232354E+09	7,874486E+09
2548	8,211528E+08	8,211555E+08	3,116231E+09	3,116090E+09	1,642308E+09	6,232321E+09	7,874629E+09
2549	8,211022E+08	8,211337E+08	3,116078E+09	3,116114E+09	1,642236E+09	6,232191E+09	7,874427E+09
2550	8,211706E+08	8,211563E+08	3,116039E+09	3,116070E+09	1,642327E+09	6,232109E+09	7,874435E+09
2551	8,212356E+08	8,212612E+08	3,116077E+09	3,115969E+09	1,642497E+09	6,232045E+09	7,874542E+09
2552	8,212002E+08	8,212239E+08	3,115908E+09	3,115991E+09	1,642424E+09	6,231899E+09	7,874323E+09
2553	8,212990E+08	8,212855E+08	3,115958E+09	3,115904E+09	1,642585E+09	6,231862E+09	7,874446E+09
2554	8,212987E+08	8,213202E+08	3,115950E+09	3,115873E+09	1,642619E+09	6,231824E+09	7,874443E+09
2555	8,212784E+08	8,212606E+08	3,115829E+09	3,115942E+09	1,642539E+09	6,231770E+09	7,874309E+09
2556	8,213458E+08	8,213324E+08	3,115925E+09	3,115866E+09	1,642678E+09	6,231791E+09	7,874469E+09
2557	8,212713E+08	8,213059E+08	3,115863E+09	3,115911E+09	1,642577E+09	6,231773E+09	7,874351E+09
2558	8,212713E+08	8,212505E+08	3,115899E+09	3,115956E+09	1,642522E+09	6,231856E+09	7,874378E+09
2559	8,212953E+08	8,212981E+08	3,116061E+09	3,115927E+09	1,642593E+09	6,231988E+09	7,874581E+09
2560	8,211940E+08	8,212021E+08	3,115983E+09	3,116034E+09	1,642396E+09	6,232017E+09	7,874413E+09
2561	8,212167E+08	8,211884E+08	3,116063E+09	3,116053E+09	1,642405E+09	6,232116E+09	7,874521E+09
2562	8,211969E+08	8,212144E+08	3,116116E+09	3,116055E+09	1,642411E+09	6,232171E+09	7,874582E+09
2563	8,211294E+08	8,211339E+08	3,116013E+09	3,116144E+09	1,642263E+09	6,232157E+09	7,874421E+09
2564	8,211935E+08	8,211849E+08	3,116123E+09	3,116064E+09	1,642378E+09	6,232187E+09	7,874565E+09
2565	8,211556E+08	8,211859E+08	3,116076E+09	3,116038E+09	1,642342E+09	6,232114E+09	7,874456E+09
2566	8,211621E+08	8,211445E+08	3,116005E+09	3,116060E+09	1,642307E+09	6,232066E+09	7,874372E+09
2567	8,212489E+08	8,212414E+08	3,116070E+09	3,115959E+09	1,642490E+09	6,232030E+09	7,874520E+09
2568	8,212023E+08	8,212349E+08	3,115908E+09	3,115950E+09	1,642437E+09	6,231858E+09	7,874295E+09
2569	8,212678E+08	8,212652E+08	3,115881E+09	3,115905E+09	1,642533E+09	6,231786E+09	7,874319E+09
2570	8,213324E+08	8,213587E+08	3,115917E+09	3,115800E+09	1,642691E+09	6,231717E+09	7,874408E+09
2571	8,213003E+08	8,213180E+08	3,115765E+09	3,115838E+09	1,642618E+09	6,231602E+09	7,874221E+09
2572	8,213928E+08	8,213675E+08	3,115811E+09	3,115767E+09	1,642760E+09	6,231578E+09	7,874339E+09
2573	8,213860E+08	8,214087E+08	3,115756E+09	3,115722E+09	1,642795E+09	6,231478E+09	7,874273E+09
2574	8,213639E+08	8,213547E+08	3,115665E+09	3,115795E+09	1,642719E+09	6,231460E+09	7,874179E+09
2575	8,214304E+08	8,214195E+08	3,115799E+09	3,115729E+09	1,642850E+09	6,231528E+09	7,874378E+09
2576	8,213546E+08	8,213879E+08	3,115765E+09	3,115754E+09	1,642742E+09	6,231519E+09	7,874262E+09
2577	8,213455E+08	8,213275E+08	3,115812E+09	3,115827E+09	1,642673E+09	6,231639E+09	7,874312E+09
2578	8,213633E+08	8,213631E+08	3,115936E+09	3,115820E+09	1,642726E+09	6,231756E+09	7,874482E+09
2579	8,212646E+08	8,212743E+08	3,115856E+09	3,115939E+09	1,642539E+09	6,231795E+09	7,874334E+09
2580	8,212858E+08	8,212605E+08	3,115924E+09	3,115950E+09	1,642546E+09	6,231874E+09	7,874420E+09
2581	8,212711E+08	8,212931E+08	3,115950E+09	3,115909E+09	1,642564E+09	6,231859E+09	7,874423E+09
2582	8,212148E+08	8,212158E+08	3,115881E+09	3,115983E+09	1,642431E+09	6,231865E+09	7,874295E+09
2583	8,212865E+08	8,212611E+08	3,115988E+09	3,115913E+09	1,642548E+09	6,231902E+09	7,874449E+09
2584	8,212515E+08	8,212734E+08	3,115928E+09	3,115869E+09	1,642525E+09	6,231797E+09	7,874322E+09
2585	8,212527E+08	8,212462E+08	3,115849E+09	3,115906E+09	1,642499E+09	6,231755E+09	7,874254E+09
2586	8,213358E+08	8,213435E+08	3,115895E+09	3,115812E+09	1,642679E+09	6,231707E+09	7,874386E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
2587	8,212979E+08	8,213423E+08	3,115772E+09	3,115805E+09	1,642640E+09	6,231577E+09	7,874217E+09
2588	8,213627E+08	8,213567E+08	3,115752E+09	3,115762E+09	1,642719E+09	6,231514E+09	7,874234E+09
2589	8,214272E+08	8,214447E+08	3,115747E+09	3,115645E+09	1,642872E+09	6,231393E+09	7,874265E+09
2590	8,213993E+08	8,214062E+08	3,115600E+09	3,115690E+09	1,642805E+09	6,231291E+09	7,874096E+09
2591	8,214895E+08	8,214521E+08	3,115636E+09	3,115631E+09	1,642942E+09	6,231266E+09	7,874208E+09
2592	8,214797E+08	8,215056E+08	3,115592E+09	3,115553E+09	1,642985E+09	6,231145E+09	7,874131E+09
2593	8,214483E+08	8,214524E+08	3,115541E+09	3,115629E+09	1,642901E+09	6,231170E+09	7,874071E+09
2594	8,215052E+08	8,214989E+08	3,115686E+09	3,115582E+09	1,643004E+09	6,231267E+09	7,874272E+09
2595	8,214312E+08	8,214618E+08	3,115676E+09	3,115634E+09	1,642893E+09	6,231310E+09	7,874203E+09
2596	8,214133E+08	8,213900E+08	3,115702E+09	3,115734E+09	1,642803E+09	6,231436E+09	7,874239E+09
2597	8,214294E+08	8,214312E+08	3,115770E+09	3,115711E+09	1,642861E+09	6,231481E+09	7,874342E+09
2598	8,213402E+08	8,213536E+08	3,115704E+09	3,115818E+09	1,642694E+09	6,231522E+09	7,874216E+09
2599	8,213690E+08	8,213368E+08	3,115788E+09	3,115821E+09	1,642706E+09	6,231609E+09	7,874315E+09
2600	8,213614E+08	8,213753E+08	3,115825E+09	3,115740E+09	1,642737E+09	6,231565E+09	7,874302E+09
2601	8,213015E+08	8,213031E+08	3,115765E+09	3,115826E+09	1,642605E+09	6,231591E+09	7,874195E+09
2602	8,213675E+08	8,213452E+08	3,115842E+09	3,115772E+09	1,642713E+09	6,231615E+09	7,874327E+09
2603	8,213382E+08	8,213693E+08	3,115784E+09	3,115734E+09	1,642707E+09	6,231518E+09	7,874226E+09
2604	8,213363E+08	8,213437E+08	3,115699E+09	3,115774E+09	1,642680E+09	6,231473E+09	7,874153E+09
2605	8,214245E+08	8,214400E+08	3,115718E+09	3,115646E+09	1,642865E+09	6,231364E+09	7,874229E+09
2606	8,213991E+08	8,214358E+08	3,115619E+09	3,115637E+09	1,642835E+09	6,231256E+09	7,874091E+09
2607	8,214702E+08	8,214414E+08	3,115591E+09	3,115609E+09	1,642912E+09	6,231200E+09	7,874112E+09
2608	8,215343E+08	8,215374E+08	3,115567E+09	3,115467E+09	1,643072E+09	6,231034E+09	7,874105E+09
2609	8,214959E+08	8,215113E+08	3,115433E+09	3,115519E+09	1,643007E+09	6,230952E+09	7,873960E+09
2610	8,215738E+08	8,215527E+08	3,115475E+09	3,115471E+09	1,643127E+09	6,230946E+09	7,874072E+09
2611	8,215639E+08	8,216023E+08	3,115492E+09	3,115408E+09	1,643166E+09	6,230900E+09	7,874066E+09
2612	8,215219E+08	8,215306E+08	3,115459E+09	3,115515E+09	1,643053E+09	6,230974E+09	7,874026E+09
2613	8,215741E+08	8,215646E+08	3,115559E+09	3,115473E+09	1,643139E+09	6,231032E+09	7,874171E+09
2614	8,215073E+08	8,215269E+08	3,115546E+09	3,115542E+09	1,643034E+09	6,231088E+09	7,874122E+09
2615	8,214925E+08	8,214550E+08	3,115546E+09	3,115642E+09	1,642947E+09	6,231188E+09	7,874135E+09
2616	8,215129E+08	8,215100E+08	3,115608E+09	3,115566E+09	1,643023E+09	6,231174E+09	7,874197E+09
2617	8,214228E+08	8,214413E+08	3,115577E+09	3,115650E+09	1,642864E+09	6,231226E+09	7,874091E+09
2618	8,214473E+08	8,214155E+08	3,115658E+09	3,115657E+09	1,642863E+09	6,231315E+09	7,874178E+09
2619	8,214453E+08	8,214589E+08	3,115718E+09	3,115591E+09	1,642904E+09	6,231309E+09	7,874213E+09
2620	8,213772E+08	8,213864E+08	3,115637E+09	3,115699E+09	1,642764E+09	6,231335E+09	7,874099E+09
2621	8,214398E+08	8,214337E+08	3,115668E+09	3,115633E+09	1,642874E+09	6,231302E+09	7,874175E+09
2622	8,214253E+08	8,214671E+08	3,115633E+09	3,115596E+09	1,642892E+09	6,231228E+09	7,874120E+09
2623	8,214339E+08	8,214325E+08	3,115553E+09	3,115633E+09	1,642866E+09	6,231186E+09	7,874052E+09
2624	8,215318E+08	8,215309E+08	3,115566E+09	3,115471E+09	1,643063E+09	6,231037E+09	7,874100E+09
2625	8,215058E+08	8,215321E+08	3,115465E+09	3,115465E+09	1,643038E+09	6,230931E+09	7,873968E+09
2626	8,215679E+08	8,215343E+08	3,115408E+09	3,115452E+09	1,643102E+09	6,230860E+09	7,873962E+09
2627	8,216308E+08	8,216403E+08	3,115408E+09	3,115310E+09	1,643271E+09	6,230718E+09	7,873989E+09
2628	8,215800E+08	8,216125E+08	3,115292E+09	3,115373E+09	1,643192E+09	6,230664E+09	7,873857E+09
2629	8,216506E+08	8,216426E+08	3,115333E+09	3,115312E+09	1,643293E+09	6,230645E+09	7,873938E+09
2630	8,216494E+08	8,216832E+08	3,115379E+09	3,115275E+09	1,643333E+09	6,230654E+09	7,873986E+09
2631	8,216087E+08	8,215979E+08	3,115333E+09	3,115411E+09	1,643207E+09	6,230744E+09	7,873950E+09
2632	8,216605E+08	8,216378E+08	3,115403E+09	3,115345E+09	1,643298E+09	6,230748E+09	7,874047E+09
2633	8,215888E+08	8,216113E+08	3,115396E+09	3,115408E+09	1,643200E+09	6,230805E+09	7,874005E+09
2634	8,215672E+08	8,215390E+08	3,115396E+09	3,115504E+09	1,643106E+09	6,230900E+09	7,874006E+09
2635	8,215916E+08	8,215923E+08	3,115507E+09	3,115415E+09	1,643184E+09	6,230922E+09	7,874106E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
2636	8,214924E+08	8,215184E+08	3,115488E+09	3,115517E+09	1,643011E+09	6,231005E+09	7,874016E+09
2637	8,215130E+08	8,214876E+08	3,115528E+09	3,115521E+09	1,643001E+09	6,231049E+09	7,874050E+09
2638	8,215216E+08	8,215358E+08	3,115581E+09	3,115477E+09	1,643057E+09	6,231058E+09	7,874116E+09
2639	8,214614E+08	8,214672E+08	3,115481E+09	3,115589E+09	1,642929E+09	6,231070E+09	7,873999E+09
2640	8,215337E+08	8,215254E+08	3,115497E+09	3,115474E+09	1,643059E+09	6,230971E+09	7,874030E+09
2641	8,215256E+08	8,215640E+08	3,115489E+09	3,115417E+09	1,643090E+09	6,230905E+09	7,873995E+09
2642	8,215344E+08	8,215240E+08	3,115389E+09	3,115460E+09	1,643058E+09	6,230850E+09	7,873908E+09
2643	8,216370E+08	8,216246E+08	3,115416E+09	3,115303E+09	1,643262E+09	6,230719E+09	7,873981E+09
2644	8,215982E+08	8,216330E+08	3,115303E+09	3,115313E+09	1,643231E+09	6,230616E+09	7,873847E+09
2645	8,216519E+08	8,216370E+08	3,115218E+09	3,115288E+09	1,643289E+09	6,230506E+09	7,873795E+09
2646	8,217213E+08	8,217440E+08	3,115260E+09	3,115164E+09	1,643465E+09	6,230424E+09	7,873890E+09
2647	8,216731E+08	8,217005E+08	3,115172E+09	3,115242E+09	1,643374E+09	6,230415E+09	7,873788E+09
2648	8,217431E+08	8,217241E+08	3,115209E+09	3,115169E+09	1,643467E+09	6,230378E+09	7,873845E+09
2649	8,217393E+08	8,217625E+08	3,115259E+09	3,115147E+09	1,643502E+09	6,230406E+09	7,873908E+09
2650	8,216892E+08	8,216714E+08	3,115174E+09	3,115297E+09	1,643361E+09	6,230471E+09	7,873832E+09
2651	8,217412E+08	8,217178E+08	3,115263E+09	3,115220E+09	1,643459E+09	6,230483E+09	7,873942E+09
2652	8,216588E+08	8,216943E+08	3,115266E+09	3,115273E+09	1,643353E+09	6,230538E+09	7,873891E+09
2653	8,216311E+08	8,216120E+08	3,115261E+09	3,115345E+09	1,643243E+09	6,230606E+09	7,873849E+09
2654	8,216664E+08	8,216637E+08	3,115397E+09	3,115282E+09	1,643330E+09	6,230680E+09	7,874010E+09
2655	8,215718E+08	8,215846E+08	3,115364E+09	3,115405E+09	1,643156E+09	6,230769E+09	7,873926E+09
2656	8,215941E+08	8,215667E+08	3,115373E+09	3,115385E+09	1,643161E+09	6,230758E+09	7,873919E+09
2657	8,216065E+08	8,216291E+08	3,115434E+09	3,115333E+09	1,643236E+09	6,230766E+09	7,874002E+09
2658	8,215476E+08	8,215608E+08	3,115325E+09	3,115443E+09	1,643108E+09	6,230768E+09	7,873877E+09
2659	8,216302E+08	8,216171E+08	3,115376E+09	3,115315E+09	1,643247E+09	6,230690E+09	7,873938E+09
2660	8,216175E+08	8,216561E+08	3,115357E+09	3,115270E+09	1,643274E+09	6,230627E+09	7,873900E+09
2661	8,216224E+08	8,216135E+08	3,115214E+09	3,115302E+09	1,643236E+09	6,230516E+09	7,873752E+09
2662	8,217334E+08	8,217214E+08	3,115238E+09	3,115162E+09	1,643455E+09	6,230400E+09	7,873855E+09
2663	8,216964E+08	8,217327E+08	3,115128E+09	3,115171E+09	1,643429E+09	6,230298E+09	7,873728E+09
2664	8,217509E+08	8,217412E+08	3,115053E+09	3,115106E+09	1,643492E+09	6,230159E+09	7,873651E+09
2665	8,218195E+08	8,218416E+08	3,115138E+09	3,114986E+09	1,643661E+09	6,230124E+09	7,873785E+09
2666	8,217671E+08	8,217861E+08	3,115039E+09	3,115097E+09	1,643553E+09	6,230137E+09	7,873690E+09
2667	8,218354E+08	8,218030E+08	3,115083E+09	3,115034E+09	1,643638E+09	6,230117E+09	7,873756E+09
2668	8,218151E+08	8,218452E+08	3,115117E+09	3,115033E+09	1,643660E+09	6,230150E+09	7,873810E+09
2669	8,217558E+08	8,217531E+08	3,115007E+09	3,115162E+09	1,643509E+09	6,230169E+09	7,873678E+09
2670	8,218147E+08	8,217961E+08	3,115129E+09	3,115097E+09	1,643611E+09	6,230226E+09	7,873837E+09
2671	8,217361E+08	8,217628E+08	3,115160E+09	3,115154E+09	1,643499E+09	6,230314E+09	7,873813E+09
2672	8,217103E+08	8,216818E+08	3,115142E+09	3,115203E+09	1,643392E+09	6,230346E+09	7,873738E+09
2673	8,217454E+08	8,217368E+08	3,115284E+09	3,115152E+09	1,643482E+09	6,230437E+09	7,873919E+09
2674	8,216490E+08	8,216625E+08	3,115217E+09	3,115289E+09	1,643311E+09	6,230506E+09	7,873818E+09
2675	8,216756E+08	8,216525E+08	3,115238E+09	3,115252E+09	1,643328E+09	6,230490E+09	7,873818E+09
2676	8,216833E+08	8,217208E+08	3,115303E+09	3,115193E+09	1,643404E+09	6,230496E+09	7,873900E+09
2677	8,216272E+08	8,216459E+08	3,115172E+09	3,115275E+09	1,643273E+09	6,230447E+09	7,873720E+09
2678	8,217255E+08	8,217021E+08	3,115224E+09	3,115171E+09	1,643428E+09	6,230395E+09	7,873823E+09
2679	8,217185E+08	8,217424E+08	3,115188E+09	3,115131E+09	1,643461E+09	6,230319E+09	7,873779E+09
2680	8,217237E+08	8,217143E+08	3,115021E+09	3,115128E+09	1,643438E+09	6,230149E+09	7,873587E+09
2681	8,218339E+08	8,218315E+08	3,115077E+09	3,114982E+09	1,643665E+09	6,230059E+09	7,873724E+09
2682	8,217939E+08	8,218370E+08	3,114977E+09	3,115002E+09	1,643631E+09	6,229979E+09	7,873610E+09
2683	8,218485E+08	8,218356E+08	3,114948E+09	3,114945E+09	1,643684E+09	6,229893E+09	7,873578E+09
2684	8,219049E+08	8,219306E+08	3,115023E+09	3,114858E+09	1,643835E+09	6,229881E+09	7,873717E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
2685	8,218444E+08	8,218625E+08	3,114880E+09	3,114972E+09	1,643707E+09	6,229852E+09	7,873559E+09
2686	8,219183E+08	8,218813E+08	3,114920E+09	3,114934E+09	1,643800E+09	6,229854E+09	7,873654E+09
2687	8,218991E+08	8,219221E+08	3,114953E+09	3,114921E+09	1,643821E+09	6,229874E+09	7,873695E+09
2688	8,218393E+08	8,218342E+08	3,114855E+09	3,114998E+09	1,643674E+09	6,229853E+09	7,873526E+09
2689	8,218972E+08	8,218736E+08	3,115018E+09	3,114930E+09	1,643771E+09	6,229948E+09	7,873719E+09
2690	8,218152E+08	8,218363E+08	3,115040E+09	3,115015E+09	1,643651E+09	6,230055E+09	7,873706E+09
2691	8,217877E+08	8,217574E+08	3,115037E+09	3,115072E+09	1,643545E+09	6,230108E+09	7,873653E+09
2692	8,218099E+08	8,218227E+08	3,115160E+09	3,115040E+09	1,643633E+09	6,230200E+09	7,873833E+09
2693	8,217125E+08	8,217475E+08	3,115068E+09	3,115158E+09	1,643460E+09	6,230226E+09	7,873686E+09
2694	8,217543E+08	8,217356E+08	3,115108E+09	3,115133E+09	1,643490E+09	6,230241E+09	7,873731E+09
2695	8,217727E+08	8,217958E+08	3,115176E+09	3,115070E+09	1,643568E+09	6,230246E+09	7,873815E+09
2696	8,217242E+08	8,217295E+08	3,115013E+09	3,115115E+09	1,643454E+09	6,230128E+09	7,873582E+09
2697	8,218261E+08	8,217911E+08	3,115061E+09	3,115008E+09	1,643617E+09	6,230069E+09	7,873686E+09
2698	8,218186E+08	8,218431E+08	3,115001E+09	3,114973E+09	1,643662E+09	6,229974E+09	7,873636E+09
2699	8,218249E+08	8,218211E+08	3,114865E+09	3,114946E+09	1,643646E+09	6,229811E+09	7,873457E+09
2700	8,219210E+08	8,219378E+08	3,114943E+09	3,114812E+09	1,643859E+09	6,229755E+09	7,873613E+09
2701	8,218792E+08	8,219291E+08	3,114837E+09	3,114833E+09	1,643808E+09	6,229670E+09	7,873478E+09
2702	8,219416E+08	8,219192E+08	3,114804E+09	3,114825E+09	1,643861E+09	6,229629E+09	7,873490E+09
2703	8,219980E+08	8,220086E+08	3,114863E+09	3,114754E+09	1,644007E+09	6,229617E+09	7,873624E+09
2704	8,219367E+08	8,219513E+08	3,114693E+09	3,114827E+09	1,643888E+09	6,229520E+09	7,873408E+09
2705	8,220074E+08	8,219714E+08	3,114766E+09	3,114779E+09	1,643979E+09	6,229545E+09	7,873524E+09
2706	8,219841E+08	8,220070E+08	3,114819E+09	3,114771E+09	1,643991E+09	6,229590E+09	7,873582E+09
2707	8,219216E+08	8,219113E+08	3,114769E+09	3,114845E+09	1,643833E+09	6,229614E+09	7,873447E+09
2708	8,219618E+08	8,219499E+08	3,114931E+09	3,114812E+09	1,643912E+09	6,229743E+09	7,873654E+09
2709	8,218747E+08	8,219053E+08	3,114916E+09	3,114901E+09	1,643780E+09	6,229816E+09	7,873596E+09
2710	8,218551E+08	8,218321E+08	3,114902E+09	3,114988E+09	1,643687E+09	6,229890E+09	7,873577E+09
2711	8,218842E+08	8,218963E+08	3,115020E+09	3,114941E+09	1,643780E+09	6,229961E+09	7,873742E+09
2712	8,217970E+08	8,218255E+08	3,114919E+09	3,115001E+09	1,643622E+09	6,229920E+09	7,873542E+09
2713	8,218487E+08	8,218137E+08	3,114974E+09	3,114967E+09	1,643662E+09	6,229941E+09	7,873604E+09
2714	8,218719E+08	8,218771E+08	3,115009E+09	3,114913E+09	1,643749E+09	6,229922E+09	7,873671E+09
2715	8,218243E+08	8,218228E+08	3,114858E+09	3,114941E+09	1,643647E+09	6,229800E+09	7,873447E+09
2716	8,219117E+08	8,219012E+08	3,114898E+09	3,114844E+09	1,643813E+09	6,229743E+09	7,873555E+09
2717	8,219004E+08	8,219488E+08	3,114835E+09	3,114796E+09	1,643849E+09	6,229631E+09	7,873480E+09
2718	8,219163E+08	8,219219E+08	3,114732E+09	3,114806E+09	1,643838E+09	6,229539E+09	7,873377E+09
2719	8,220159E+08	8,220242E+08	3,114813E+09	3,114688E+09	1,644040E+09	6,229502E+09	7,873542E+09
2720	8,219792E+08	8,220154E+08	3,114678E+09	3,114688E+09	1,643995E+09	6,229366E+09	7,873361E+09
2721	8,220417E+08	8,220057E+08	3,114642E+09	3,114685E+09	1,644047E+09	6,229326E+09	7,873374E+09
2722	8,220945E+08	8,220995E+08	3,114678E+09	3,114617E+09	1,644194E+09	6,229295E+09	7,873489E+09
2723	8,220302E+08	8,220455E+08	3,114551E+09	3,114655E+09	1,644076E+09	6,229205E+09	7,873281E+09
2724	8,220825E+08	8,220632E+08	3,114651E+09	3,114615E+09	1,644146E+09	6,229266E+09	7,873412E+09
2725	8,220521E+08	8,220826E+08	3,114706E+09	3,114615E+09	1,644135E+09	6,229320E+09	7,873455E+09
2726	8,219936E+08	8,219826E+08	3,114661E+09	3,114744E+09	1,643976E+09	6,229405E+09	7,873381E+09
2727	8,220299E+08	8,220160E+08	3,114810E+09	3,114730E+09	1,644046E+09	6,229540E+09	7,873586E+09
2728	8,219484E+08	8,219821E+08	3,114768E+09	3,114781E+09	1,643930E+09	6,229549E+09	7,873480E+09
2729	8,219341E+08	8,219094E+08	3,114769E+09	3,114854E+09	1,643843E+09	6,229624E+09	7,873467E+09
2730	8,219704E+08	8,219717E+08	3,114885E+09	3,114808E+09	1,643942E+09	6,229692E+09	7,873635E+09
2731	8,218906E+08	8,219040E+08	3,114800E+09	3,114838E+09	1,643795E+09	6,229639E+09	7,873433E+09
2732	8,219302E+08	8,219004E+08	3,114836E+09	3,114821E+09	1,643831E+09	6,229657E+09	7,873488E+09
2733	8,219517E+08	8,219652E+08	3,114840E+09	3,114758E+09	1,643917E+09	6,229598E+09	7,873515E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
2734	8,219123E+08	8,219228E+08	3,114689E+09	3,114808E+09	1,643835E+09	6,229497E+09	7,873332E+09
2735	8,219998E+08	8,219983E+08	3,114746E+09	3,114702E+09	1,643998E+09	6,229447E+09	7,873446E+09
2736	8,219973E+08	8,220461E+08	3,114682E+09	3,114614E+09	1,644043E+09	6,229296E+09	7,873340E+09
2737	8,220192E+08	8,220127E+08	3,114594E+09	3,114638E+09	1,644032E+09	6,229233E+09	7,873265E+09
2738	8,221209E+08	8,221131E+08	3,114645E+09	3,114547E+09	1,644234E+09	6,229192E+09	7,873426E+09
2739	8,220844E+08	8,221106E+08	3,114517E+09	3,114528E+09	1,644195E+09	6,229045E+09	7,873240E+09
2740	8,221282E+08	8,221109E+08	3,114479E+09	3,114534E+09	1,644239E+09	6,229013E+09	7,873253E+09
2741	8,221729E+08	8,221921E+08	3,114524E+09	3,114451E+09	1,644365E+09	6,228975E+09	7,873340E+09
2742	8,221110E+08	8,221313E+08	3,114439E+09	3,114525E+09	1,644242E+09	6,228964E+09	7,873206E+09
2743	8,221574E+08	8,221334E+08	3,114552E+09	3,114507E+09	1,644291E+09	6,229060E+09	7,873350E+09
2744	8,221289E+08	8,221501E+08	3,114580E+09	3,114495E+09	1,644279E+09	6,229075E+09	7,873354E+09
2745	8,220717E+08	8,220527E+08	3,114535E+09	3,114636E+09	1,644124E+09	6,229171E+09	7,873295E+09
2746	8,221091E+08	8,220909E+08	3,114651E+09	3,114623E+09	1,644200E+09	6,229274E+09	7,873474E+09
2747	8,220324E+08	8,220606E+08	3,114641E+09	3,114629E+09	1,644093E+09	6,229270E+09	7,873363E+09
2748	8,220083E+08	8,219934E+08	3,114650E+09	3,114700E+09	1,644002E+09	6,229349E+09	7,873351E+09
2749	8,220452E+08	8,220441E+08	3,114742E+09	3,114646E+09	1,644089E+09	6,229388E+09	7,873478E+09
2750	8,219745E+08	8,219873E+08	3,114656E+09	3,114711E+09	1,643962E+09	6,229367E+09	7,873328E+09
2751	8,220122E+08	8,219884E+08	3,114678E+09	3,114695E+09	1,644001E+09	6,229372E+09	7,873373E+09
2752	8,220399E+08	8,220652E+08	3,114667E+09	3,114592E+09	1,644105E+09	6,229259E+09	7,873364E+09
2753	8,220064E+08	8,220235E+08	3,114552E+09	3,114638E+09	1,644030E+09	6,229190E+09	7,873220E+09
2754	8,220979E+08	8,220921E+08	3,114608E+09	3,114550E+09	1,644190E+09	6,229157E+09	7,873347E+09
2755	8,221024E+08	8,221376E+08	3,114561E+09	3,114449E+09	1,644240E+09	6,229010E+09	7,873250E+09
2756	8,221125E+08	8,221097E+08	3,114447E+09	3,114497E+09	1,644222E+09	6,228945E+09	7,873167E+09
2757	8,222102E+08	8,222035E+08	3,114463E+09	3,114400E+09	1,644414E+09	6,228864E+09	7,873277E+09
2758	8,221789E+08	8,222105E+08	3,114341E+09	3,114398E+09	1,644389E+09	6,228739E+09	7,873128E+09
2759	8,222157E+08	8,222007E+08	3,114329E+09	3,114393E+09	1,644416E+09	6,228722E+09	7,873139E+09
2760	8,222618E+08	8,222750E+08	3,114384E+09	3,114280E+09	1,644537E+09	6,228665E+09	7,873201E+09
2761	8,221994E+08	8,222065E+08	3,114320E+09	3,114375E+09	1,644406E+09	6,228695E+09	7,873101E+09
2762	8,222405E+08	8,222067E+08	3,114415E+09	3,114393E+09	1,644447E+09	6,228808E+09	7,873256E+09
2763	8,222122E+08	8,222303E+08	3,114453E+09	3,114362E+09	1,644442E+09	6,228815E+09	7,873257E+09
2764	8,221388E+08	8,221412E+08	3,114405E+09	3,114512E+09	1,644280E+09	6,228917E+09	7,873197E+09
2765	8,221742E+08	8,221655E+08	3,114523E+09	3,114486E+09	1,644340E+09	6,229009E+09	7,873348E+09
2766	8,221084E+08	8,221343E+08	3,114528E+09	3,114515E+09	1,644243E+09	6,229043E+09	7,873286E+09
2767	8,220825E+08	8,220612E+08	3,114531E+09	3,114590E+09	1,644144E+09	6,229121E+09	7,873265E+09
2768	8,221264E+08	8,221170E+08	3,114589E+09	3,114505E+09	1,644243E+09	6,229094E+09	7,873337E+09
2769	8,220612E+08	8,220729E+08	3,114502E+09	3,114567E+09	1,644134E+09	6,229069E+09	7,873203E+09
2770	8,221018E+08	8,220836E+08	3,114510E+09	3,114548E+09	1,644185E+09	6,229059E+09	7,873244E+09
2771	8,221374E+08	8,221629E+08	3,114535E+09	3,114406E+09	1,644300E+09	6,228941E+09	7,873242E+09
2772	8,220960E+08	8,221236E+08	3,114429E+09	3,114467E+09	1,644220E+09	6,228896E+09	7,873115E+09
2773	8,221884E+08	8,221776E+08	3,114454E+09	3,114390E+09	1,644366E+09	6,228843E+09	7,873209E+09
2774	8,222017E+08	8,222312E+08	3,114395E+09	3,114328E+09	1,644433E+09	6,228723E+09	7,873156E+09
2775	8,222071E+08	8,222065E+08	3,114267E+09	3,114373E+09	1,644414E+09	6,228641E+09	7,873054E+09
2776	8,223069E+08	8,223014E+08	3,114272E+09	3,114232E+09	1,644608E+09	6,228504E+09	7,873112E+09
2777	8,222776E+08	8,223079E+08	3,114195E+09	3,114226E+09	1,644585E+09	6,228421E+09	7,873007E+09
2778	8,223113E+08	8,222887E+08	3,114192E+09	3,114239E+09	1,644600E+09	6,228431E+09	7,873031E+09
2779	8,223545E+08	8,223562E+08	3,114274E+09	3,114124E+09	1,644711E+09	6,228398E+09	7,873109E+09
2780	8,222747E+08	8,222923E+08	3,114207E+09	3,114253E+09	1,644567E+09	6,228460E+09	7,873027E+09
2781	8,223066E+08	8,222817E+08	3,114271E+09	3,114277E+09	1,644588E+09	6,228548E+09	7,873136E+09
2782	8,222840E+08	8,223116E+08	3,114319E+09	3,114265E+09	1,644596E+09	6,228585E+09	7,873180E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
2783	8,222073E+08	8,222136E+08	3,114286E+09	3,114397E+09	1,644421E+09	6,228683E+09	7,873104E+09
2784	8,222498E+08	8,222294E+08	3,114390E+09	3,114335E+09	1,644479E+09	6,228726E+09	7,873205E+09
2785	8,221916E+08	8,222025E+08	3,114399E+09	3,114372E+09	1,644394E+09	6,228772E+09	7,873166E+09
2786	8,221678E+08	8,221378E+08	3,114375E+09	3,114461E+09	1,644306E+09	6,228836E+09	7,873142E+09
2787	8,222152E+08	8,222070E+08	3,114444E+09	3,114346E+09	1,644422E+09	6,228790E+09	7,873212E+09
2788	8,221404E+08	8,221775E+08	3,114369E+09	3,114410E+09	1,644318E+09	6,228779E+09	7,873097E+09
2789	8,221795E+08	8,221744E+08	3,114379E+09	3,114390E+09	1,644354E+09	6,228769E+09	7,873123E+09
2790	8,222274E+08	8,222539E+08	3,114414E+09	3,114281E+09	1,644481E+09	6,228695E+09	7,873176E+09
2791	8,221862E+08	8,222075E+08	3,114290E+09	3,114353E+09	1,644394E+09	6,228642E+09	7,873036E+09
2792	8,222874E+08	8,222619E+08	3,114271E+09	3,114248E+09	1,644549E+09	6,228518E+09	7,873068E+09
2793	8,223073E+08	8,223275E+08	3,114200E+09	3,114176E+09	1,644635E+09	6,228376E+09	7,873011E+09
2794	8,223124E+08	8,223092E+08	3,114072E+09	3,114210E+09	1,644622E+09	6,228282E+09	7,872904E+09
2795	8,224120E+08	8,224015E+08	3,114125E+09	3,114027E+09	1,644813E+09	6,228152E+09	7,872965E+09
2796	8,223663E+08	8,224062E+08	3,114075E+09	3,114043E+09	1,644772E+09	6,228118E+09	7,872890E+09
2797	8,223897E+08	8,223696E+08	3,114064E+09	3,114088E+09	1,644759E+09	6,228151E+09	7,872911E+09
2798	8,224333E+08	8,224402E+08	3,114146E+09	3,114023E+09	1,644873E+09	6,228170E+09	7,873043E+09
2799	8,223445E+08	8,223728E+08	3,114077E+09	3,114163E+09	1,644717E+09	6,228240E+09	7,872957E+09
2800	8,223780E+08	8,223549E+08	3,114129E+09	3,114152E+09	1,644733E+09	6,228281E+09	7,873014E+09
2801	8,223619E+08	8,223808E+08	3,114202E+09	3,114139E+09	1,644743E+09	6,228341E+09	7,873083E+09
2802	8,222886E+08	8,222802E+08	3,114160E+09	3,114276E+09	1,644569E+09	6,228436E+09	7,873004E+09
2803	8,223357E+08	8,222971E+08	3,114267E+09	3,114190E+09	1,644633E+09	6,228458E+09	7,873090E+09
2804	8,222672E+08	8,222865E+08	3,114269E+09	3,114237E+09	1,644554E+09	6,228506E+09	7,873059E+09
2805	8,222397E+08	8,22227E+08	3,114220E+09	3,114320E+09	1,644462E+09	6,228540E+09	7,873002E+09
2806	8,222943E+08	8,223016E+08	3,114308E+09	3,114218E+09	1,644596E+09	6,228526E+09	7,873122E+09
2807	8,222198E+08	8,222660E+08	3,114251E+09	3,114273E+09	1,644486E+09	6,228524E+09	7,873010E+09
2808	8,222675E+08	8,222521E+08	3,114231E+09	3,114230E+09	1,644520E+09	6,228460E+09	7,872980E+09
2809	8,223267E+08	8,223383E+08	3,114254E+09	3,114137E+09	1,644665E+09	6,228391E+09	7,873056E+09
2810	8,222919E+08	8,223034E+08	3,114094E+09	3,114209E+09	1,644595E+09	6,228303E+09	7,872898E+09
2811	8,223962E+08	8,223661E+08	3,114083E+09	3,114064E+09	1,644762E+09	6,228147E+09	7,872909E+09
2812	8,224043E+08	8,224435E+08	3,114043E+09	3,113987E+09	1,644848E+09	6,228030E+09	7,872878E+09
2813	8,224020E+08	8,224074E+08	3,113930E+09	3,114025E+09	1,644809E+09	6,227955E+09	7,872764E+09
2814	8,225009E+08	8,224941E+08	3,114013E+09	3,113888E+09	1,644995E+09	6,227901E+09	7,872896E+09
2815	8,224456E+08	8,224881E+08	3,113965E+09	3,113933E+09	1,644934E+09	6,227897E+09	7,872831E+09
2816	8,224670E+08	8,224427E+08	3,113918E+09	3,113972E+09	1,644910E+09	6,227890E+09	7,872800E+09
2817	8,225142E+08	8,225195E+08	3,113995E+09	3,113919E+09	1,645034E+09	6,227913E+09	7,872947E+09
2818	8,224293E+08	8,224511E+08	3,113924E+09	3,114046E+09	1,644880E+09	6,227970E+09	7,872851E+09
2819	8,224656E+08	8,224260E+08	3,114005E+09	3,113992E+09	1,644892E+09	6,227996E+09	7,872888E+09
2820	8,224400E+08	8,224558E+08	3,114086E+09	3,113985E+09	1,644896E+09	6,228071E+09	7,872967E+09
2821	8,223606E+08	8,223498E+08	3,114023E+09	3,114135E+09	1,644710E+09	6,228158E+09	7,872869E+09
2822	8,224095E+08	8,223803E+08	3,114134E+09	3,114078E+09	1,644790E+09	6,228212E+09	7,873001E+09
2823	8,223350E+08	8,223746E+08	3,114141E+09	3,114121E+09	1,644710E+09	6,228262E+09	7,872972E+09
2824	8,223126E+08	8,223062E+08	3,114086E+09	3,114175E+09	1,644619E+09	6,228262E+09	7,872880E+09
2825	8,223777E+08	8,223836E+08	3,114184E+09	3,114080E+09	1,644761E+09	6,228264E+09	7,873025E+09
2826	8,223134E+08	8,223457E+08	3,114111E+09	3,114145E+09	1,644659E+09	6,228255E+09	7,872914E+09
2827	8,223698E+08	8,223343E+08	3,114078E+09	3,114073E+09	1,644704E+09	6,228152E+09	7,872856E+09
2828	8,224232E+08	8,224358E+08	3,114083E+09	3,113980E+09	1,644859E+09	6,228062E+09	7,872921E+09
2829	8,223863E+08	8,224055E+08	3,113903E+09	3,114037E+09	1,644792E+09	6,227941E+09	7,872732E+09
2830	8,224939E+08	8,224743E+08	3,113922E+09	3,113896E+09	1,644968E+09	6,227818E+09	7,872786E+09
2831	8,224938E+08	8,225417E+08	3,113916E+09	3,113818E+09	1,645035E+09	6,227734E+09	7,872770E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
2832	8,224910E+08	8,224905E+08	3,113791E+09	3,113856E+09	1,644981E+09	6,227647E+09	7,872629E+09
2833	8,225905E+08	8,225770E+08	3,113868E+09	3,113762E+09	1,645168E+09	6,227631E+09	7,872798E+09
2834	8,225378E+08	8,225745E+08	3,113805E+09	3,113825E+09	1,645112E+09	6,227630E+09	7,872742E+09
2835	8,225592E+08	8,225304E+08	3,113766E+09	3,113832E+09	1,645090E+09	6,227598E+09	7,872687E+09
2836	8,225957E+08	8,226098E+08	3,113867E+09	3,113775E+09	1,645206E+09	6,227642E+09	7,872848E+09
2837	8,225062E+08	8,225266E+08	3,113800E+09	3,113900E+09	1,645033E+09	6,227699E+09	7,872732E+09
2838	8,225421E+08	8,224989E+08	3,113894E+09	3,113875E+09	1,645041E+09	6,227770E+09	7,872811E+09
2839	8,225081E+08	8,225265E+08	3,113977E+09	3,113879E+09	1,645035E+09	6,227856E+09	7,872890E+09
2840	8,224284E+08	8,224194E+08	3,113878E+09	3,114007E+09	1,644848E+09	6,227886E+09	7,872733E+09
2841	8,224813E+08	8,224627E+08	3,113990E+09	3,113959E+09	1,644944E+09	6,227948E+09	7,872892E+09
2842	8,224174E+08	8,224593E+08	3,114005E+09	3,113987E+09	1,644877E+09	6,227992E+09	7,872868E+09
2843	8,224015E+08	8,223842E+08	3,113964E+09	3,114003E+09	1,644786E+09	6,227968E+09	7,872754E+09
2844	8,224648E+08	8,224671E+08	3,114058E+09	3,113921E+09	1,644932E+09	6,227979E+09	7,872911E+09
2845	8,224034E+08	8,224293E+08	3,113943E+09	3,113993E+09	1,644833E+09	6,227937E+09	7,872769E+09
2846	8,224647E+08	8,224330E+08	3,113906E+09	3,113937E+09	1,644898E+09	6,227844E+09	7,872741E+09
2847	8,225125E+08	8,225406E+08	3,113921E+09	3,113829E+09	1,645053E+09	6,227750E+09	7,872803E+09
2848	8,224774E+08	8,225032E+08	3,113743E+09	3,113855E+09	1,644981E+09	6,227598E+09	7,872579E+09
2849	8,225883E+08	8,225700E+08	3,113782E+09	3,113737E+09	1,645158E+09	6,227519E+09	7,872677E+09
2850	8,225941E+08	8,226310E+08	3,113776E+09	3,113682E+09	1,645225E+09	6,227458E+09	7,872683E+09
2851	8,225913E+08	8,225765E+08	3,113648E+09	3,113710E+09	1,645168E+09	6,227358E+09	7,872526E+09
2852	8,226801E+08	8,226717E+08	3,113717E+09	3,113629E+09	1,645352E+09	6,227346E+09	7,872698E+09
2853	8,226238E+08	8,226652E+08	3,113640E+09	3,113690E+09	1,645289E+09	6,227330E+09	7,872619E+09
2854	8,226443E+08	8,226190E+08	3,113635E+09	3,113698E+09	1,645263E+09	6,227332E+09	7,872595E+09
2855	8,226698E+08	8,226839E+08	3,113757E+09	3,113636E+09	1,645354E+09	6,227393E+09	7,872747E+09
2856	8,225789E+08	8,225907E+08	3,113670E+09	3,113751E+09	1,645170E+09	6,227421E+09	7,872591E+09
2857	8,226156E+08	8,225706E+08	3,113751E+09	3,113757E+09	1,645186E+09	6,227508E+09	7,872694E+09
2858	8,225852E+08	8,226045E+08	3,113831E+09	3,113766E+09	1,645190E+09	6,227597E+09	7,872787E+09
2859	8,225083E+08	8,225032E+08	3,113751E+09	3,113860E+09	1,645011E+09	6,227611E+09	7,872622E+09
2860	8,225547E+08	8,225484E+08	3,113882E+09	3,113810E+09	1,645103E+09	6,227693E+09	7,872796E+09
2861	8,224951E+08	8,225348E+08	3,113890E+09	3,113846E+09	1,645030E+09	6,227737E+09	7,872767E+09
2862	8,224856E+08	8,224626E+08	3,113843E+09	3,113884E+09	1,644948E+09	6,227727E+09	7,872675E+09
2863	8,225462E+08	8,225467E+08	3,113917E+09	3,113804E+09	1,645093E+09	6,227721E+09	7,872813E+09
2864	8,224907E+08	8,225162E+08	3,113758E+09	3,113842E+09	1,645007E+09	6,227600E+09	7,872607E+09
2865	8,225597E+08	8,225353E+08	3,113715E+09	3,113786E+09	1,645095E+09	6,227502E+09	7,872597E+09
2866	8,226161E+08	8,226418E+08	3,113756E+09	3,113658E+09	1,645258E+09	6,227414E+09	7,872672E+09
2867	8,225841E+08	8,225997E+08	3,113601E+09	3,113654E+09	1,645184E+09	6,227254E+09	7,872438E+09
2868	8,226845E+08	8,226683E+08	3,113646E+09	3,113563E+09	1,645353E+09	6,227209E+09	7,872562E+09
2869	8,226882E+08	8,227263E+08	3,113617E+09	3,113535E+09	1,645415E+09	6,227152E+09	7,872566E+09
2870	8,226832E+08	8,226774E+08	3,113498E+09	3,113586E+09	1,645361E+09	6,227084E+09	7,872444E+09
2871	8,227613E+08	8,227679E+08	3,113584E+09	3,113504E+09	1,645529E+09	6,227088E+09	7,872617E+09
2872	8,227047E+08	8,227448E+08	3,113501E+09	3,113536E+09	1,645449E+09	6,227037E+09	7,872487E+09
2873	8,227247E+08	8,226938E+08	3,113502E+09	3,113573E+09	1,645418E+09	6,227075E+09	7,872493E+09
2874	8,227536E+08	8,227511E+08	3,113628E+09	3,113521E+09	1,645505E+09	6,227148E+09	7,872653E+09
2875	8,226606E+08	8,226595E+08	3,113536E+09	3,113612E+09	1,645320E+09	6,227149E+09	7,872469E+09
2876	8,226868E+08	8,226532E+08	3,113621E+09	3,113625E+09	1,645340E+09	6,227246E+09	7,872586E+09
2877	8,226581E+08	8,226874E+08	3,113694E+09	3,113632E+09	1,645345E+09	6,227327E+09	7,872672E+09
2878	8,225838E+08	8,225848E+08	3,113649E+09	3,113727E+09	1,645169E+09	6,227376E+09	7,872545E+09
2879	8,226243E+08	8,226205E+08	3,113785E+09	3,113682E+09	1,645245E+09	6,227467E+09	7,872712E+09
2880	8,225714E+08	8,226009E+08	3,113747E+09	3,113708E+09	1,645172E+09	6,227455E+09	7,872627E+09



1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
2881	8,225702E+08	8,225459E+08	3,113667E+09	3,113768E+09	1,645116E+09	6,227435E+09	7,872551E+09
2882	8,226425E+08	8,226387E+08	3,113734E+09	3,113670E+09	1,645281E+09	6,227404E+09	7,872686E+09
2883	8,225926E+08	8,226191E+08	3,113591E+09	3,113655E+09	1,645212E+09	6,227246E+09	7,872458E+09
2884	8,226562E+08	8,226421E+08	3,113579E+09	3,113593E+09	1,645298E+09	6,227172E+09	7,872470E+09
2885	8,227133E+08	8,227385E+08	3,113619E+09	3,113486E+09	1,645452E+09	6,227105E+09	7,872557E+09
2886	8,226810E+08	8,226955E+08	3,113478E+09	3,113512E+09	1,645377E+09	6,226991E+09	7,872367E+09
2887	8,227688E+08	8,227593E+08	3,113509E+09	3,113440E+09	1,645528E+09	6,226950E+09	7,872478E+09
2888	8,227742E+08	8,228154E+08	3,113444E+09	3,113399E+09	1,645590E+09	6,226843E+09	7,872432E+09
2889	8,227739E+08	8,227734E+08	3,113321E+09	3,113458E+09	1,645547E+09	6,226779E+09	7,872326E+09
2890	8,228563E+08	8,228479E+08	3,113435E+09	3,113358E+09	1,645704E+09	6,226793E+09	7,872498E+09
2891	8,228000E+08	8,228199E+08	3,113364E+09	3,113361E+09	1,645620E+09	6,226725E+09	7,872345E+09
2892	8,228081E+08	8,227717E+08	3,113367E+09	3,113417E+09	1,645580E+09	6,226784E+09	7,872364E+09
2893	8,228316E+08	8,228296E+08	3,113480E+09	3,113391E+09	1,645661E+09	6,226870E+09	7,872531E+09
2894	8,227347E+08	8,227479E+08	3,113417E+09	3,113491E+09	1,645483E+09	6,226908E+09	7,872391E+09
2895	8,227472E+08	8,227379E+08	3,113525E+09	3,113507E+09	1,645485E+09	6,227032E+09	7,872517E+09
2896	8,227223E+08	8,227576E+08	3,113588E+09	3,113500E+09	1,645480E+09	6,227088E+09	7,872568E+09
2897	8,226568E+08	8,226563E+08	3,113527E+09	3,113626E+09	1,645313E+09	6,227153E+09	7,872466E+09
2898	8,227090E+08	8,226852E+08	3,113649E+09	3,113580E+09	1,645394E+09	6,227229E+09	7,872623E+09
2899	8,226645E+08	8,226778E+08	3,113581E+09	3,113564E+09	1,645342E+09	6,227145E+09	7,872487E+09
2900	8,226605E+08	8,226440E+08	3,113494E+09	3,113608E+09	1,645305E+09	6,227102E+09	7,872406E+09
2901	8,227376E+08	8,227404E+08	3,113563E+09	3,113495E+09	1,645478E+09	6,227058E+09	7,872536E+09
2902	8,226891E+08	8,227211E+08	3,113466E+09	3,113469E+09	1,645410E+09	6,226935E+09	7,872345E+09
2903	8,227419E+08	8,227373E+08	3,113466E+09	3,113426E+09	1,645479E+09	6,226892E+09	7,872371E+09
2904	8,228006E+08	8,228243E+08	3,113462E+09	3,113328E+09	1,645625E+09	6,226790E+09	7,872415E+09
2905	8,227729E+08	8,227925E+08	3,113299E+09	3,113397E+09	1,645565E+09	6,226696E+09	7,872262E+09
2906	8,228681E+08	8,228536E+08	3,113337E+09	3,113319E+09	1,645722E+09	6,226656E+09	7,872378E+09
2907	8,228767E+08	8,229092E+08	3,113278E+09	3,113233E+09	1,645786E+09	6,226511E+09	7,872297E+09
2908	8,228689E+08	8,228662E+08	3,113182E+09	3,113290E+09	1,645735E+09	6,226472E+09	7,872208E+09
2909	8,229482E+08	8,229282E+08	3,113292E+09	3,113209E+09	1,645876E+09	6,226501E+09	7,872377E+09
2910	8,228852E+08	8,229001E+08	3,113247E+09	3,113226E+09	1,645785E+09	6,226473E+09	7,872259E+09
2911	8,228745E+08	8,228524E+08	3,113253E+09	3,113300E+09	1,645727E+09	6,226553E+09	7,872280E+09
2912	8,228949E+08	8,229061E+08	3,113340E+09	3,113268E+09	1,645801E+09	6,226608E+09	7,872409E+09
2913	8,228031E+08	8,228304E+08	3,113289E+09	3,113389E+09	1,645633E+09	6,226677E+09	7,872311E+09
2914	8,228230E+08	8,228030E+08	3,113419E+09	3,113393E+09	1,645626E+09	6,226811E+09	7,872437E+09
2915	8,228049E+08	8,228204E+08	3,113465E+09	3,113357E+09	1,645625E+09	6,226822E+09	7,872448E+09
2916	8,227387E+08	8,227313E+08	3,113384E+09	3,113486E+09	1,645470E+09	6,226870E+09	7,872340E+09
2917	8,227958E+08	8,227663E+08	3,113475E+09	3,113447E+09	1,645562E+09	6,226922E+09	7,872484E+09
2918	8,227546E+08	8,227759E+08	3,113435E+09	3,113410E+09	1,645531E+09	6,226845E+09	7,872375E+09
2919	8,227403E+08	8,227441E+08	3,113369E+09	3,113442E+09	1,645484E+09	6,226810E+09	7,872295E+09
2920	8,228189E+08	8,228283E+08	3,113428E+09	3,113323E+09	1,645647E+09	6,226751E+09	7,872398E+09
2921	8,227785E+08	8,228143E+08	3,113323E+09	3,113338E+09	1,645593E+09	6,226661E+09	7,872254E+09
2922	8,228371E+08	8,228185E+08	3,113317E+09	3,113306E+09	1,645656E+09	6,226623E+09	7,872279E+09
2923	8,229018E+08	8,229149E+08	3,113285E+09	3,113181E+09	1,645817E+09	6,226466E+09	7,872283E+09
2924	8,228746E+08	8,228979E+08	3,113116E+09	3,113239E+09	1,645772E+09	6,226355E+09	7,872127E+09
2925	8,229721E+08	8,229523E+08	3,113159E+09	3,113155E+09	1,645924E+09	6,226314E+09	7,872238E+09
2926	8,229778E+08	8,230036E+08	3,113147E+09	3,113053E+09	1,645981E+09	6,226200E+09	7,872182E+09
2927	8,229514E+08	8,229538E+08	3,113063E+09	3,113128E+09	1,645905E+09	6,226191E+09	7,872096E+09
2928	8,230220E+08	8,230052E+08	3,113144E+09	3,113062E+09	1,646027E+09	6,226206E+09	7,872233E+09
2929	8,229587E+08	8,229890E+08	3,113098E+09	3,113123E+09	1,645948E+09	6,226221E+09	7,872169E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude $\odot$	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
2930	8,229487E+08	8,229324E+08	3,113134E+09	3,113196E+09	1,645881E+09	6,226329E+09	7,872210E+09
2931	8,229716E+08	8,229821E+08	3,113226E+09	3,113132E+09	1,645954E+09	6,226358E+09	7,872312E+09
2932	8,228793E+08	8,229034E+08	3,113189E+09	3,113258E+09	1,645783E+09	6,226448E+09	7,872230E+09
2933	8,229029E+08	8,228662E+08	3,113295E+09	3,113281E+09	1,645769E+09	6,226576E+09	7,872345E+09
2934	8,228867E+08	8,228876E+08	3,113341E+09	3,113235E+09	1,645774E+09	6,226577E+09	7,872351E+09
2935	8,228105E+08	8,228141E+08	3,113244E+09	3,113359E+09	1,645625E+09	6,226604E+09	7,872228E+09
2936	8,228706E+08	8,228520E+08	3,113299E+09	3,113293E+09	1,645723E+09	6,226592E+09	7,872315E+09
2937	8,228378E+08	8,228729E+08	3,113278E+09	3,113264E+09	1,645711E+09	6,226542E+09	7,872253E+09
2938	8,228312E+08	8,228274E+08	3,113246E+09	3,113286E+09	1,645659E+09	6,226533E+09	7,872191E+09
2939	8,229142E+08	8,229108E+08	3,113279E+09	3,113153E+09	1,645825E+09	6,226432E+09	7,872257E+09
2940	8,228756E+08	8,229094E+08	3,113163E+09	3,113184E+09	1,645785E+09	6,226347E+09	7,872132E+09
2941	8,229383E+08	8,229180E+08	3,113130E+09	3,113167E+09	1,645856E+09	6,226296E+09	7,872153E+09
2942	8,230043E+08	8,230218E+08	3,113128E+09	3,113021E+09	1,646026E+09	6,226149E+09	7,872175E+09
2943	8,229654E+08	8,230042E+08	3,112983E+09	3,113071E+09	1,645970E+09	6,226054E+09	7,872024E+09
2944	8,230592E+08	8,230390E+08	3,113011E+09	3,112987E+09	1,646098E+09	6,225998E+09	7,872097E+09
2945	8,230655E+08	8,230916E+08	3,113002E+09	3,112929E+09	1,646157E+09	6,225931E+09	7,872088E+09
2946	8,230371E+08	8,230279E+08	3,112932E+09	3,113013E+09	1,646065E+09	6,225945E+09	7,872010E+09
2947	8,231037E+08	8,230843E+08	3,112993E+09	3,112931E+09	1,646188E+09	6,225924E+09	7,872112E+09
2948	8,230391E+08	8,230780E+08	3,112964E+09	3,112989E+09	1,646117E+09	6,225953E+09	7,872070E+09
2949	8,230296E+08	8,230089E+08	3,113009E+09	3,113067E+09	1,646039E+09	6,226076E+09	7,872114E+09
2950	8,230527E+08	8,230519E+08	3,113134E+09	3,112993E+09	1,646105E+09	6,226126E+09	7,872231E+09
2951	8,229494E+08	8,229728E+08	3,113079E+09	3,113129E+09	1,645922E+09	6,226208E+09	7,872130E+09
2952	8,229702E+08	8,229312E+08	3,113133E+09	3,113155E+09	1,645901E+09	6,226288E+09	7,872190E+09
2953	8,229619E+08	8,229744E+08	3,113171E+09	3,113128E+09	1,645936E+09	6,226299E+09	7,872235E+09
2954	8,228911E+08	8,228985E+08	3,113104E+09	3,113226E+09	1,645790E+09	6,226329E+09	7,872119E+09
2955	8,229556E+08	8,229393E+08	3,113164E+09	3,113122E+09	1,645895E+09	6,226286E+09	7,872181E+09
2956	8,229281E+08	8,229648E+08	3,113157E+09	3,113096E+09	1,645893E+09	6,226253E+09	7,872146E+09
2957	8,229252E+08	8,229125E+08	3,113106E+09	3,113147E+09	1,645838E+09	6,226253E+09	7,872090E+09
2958	8,230091E+08	8,230007E+08	3,113142E+09	3,113008E+09	1,646010E+09	6,226150E+09	7,872160E+09
2959	8,229633E+08	8,230124E+08	3,113008E+09	3,113041E+09	1,645976E+09	6,226050E+09	7,872025E+09
2960	8,230274E+08	8,230167E+08	3,112944E+09	3,113008E+09	1,646044E+09	6,225952E+09	7,871996E+09
2961	8,231012E+08	8,231240E+08	3,112962E+09	3,112871E+09	1,646225E+09	6,225833E+09	7,872058E+09
2962	8,230648E+08	8,230890E+08	3,112850E+09	3,112911E+09	1,646154E+09	6,225761E+09	7,871914E+09
2963	8,231558E+08	8,231211E+08	3,112851E+09	3,112817E+09	1,646277E+09	6,225668E+09	7,871945E+09
2964	8,231577E+08	8,231824E+08	3,112847E+09	3,112779E+09	1,646340E+09	6,225626E+09	7,871967E+09
2965	8,231264E+08	8,231189E+08	3,112778E+09	3,112888E+09	1,646245E+09	6,225666E+09	7,871911E+09
2966	8,231864E+08	8,231731E+08	3,112879E+09	3,112791E+09	1,646359E+09	6,225670E+09	7,872029E+09
2967	8,231102E+08	8,231628E+08	3,112876E+09	3,112858E+09	1,646273E+09	6,225735E+09	7,872008E+09
2968	8,230966E+08	8,230741E+08	3,112888E+09	3,112944E+09	1,646171E+09	6,225832E+09	7,872003E+09
2969	8,231236E+08	8,231178E+08	3,113000E+09	3,112905E+09	1,646241E+09	6,225905E+09	7,872146E+09
2970	8,230241E+08	8,230340E+08	3,112949E+09	3,113029E+09	1,646058E+09	6,225978E+09	7,872037E+09
2971	8,230480E+08	8,230061E+08	3,112960E+09	3,113019E+09	1,646054E+09	6,225979E+09	7,872033E+09
2972	8,230451E+08	8,230651E+08	3,113022E+09	3,112969E+09	1,646110E+09	6,225991E+09	7,872101E+09
2973	8,229796E+08	8,229856E+08	3,112973E+09	3,113063E+09	1,645965E+09	6,226036E+09	7,872001E+09
2974	8,230427E+08	8,230227E+08	3,113061E+09	3,112948E+09	1,646065E+09	6,226010E+09	7,872075E+09
2975	8,230081E+08	8,230549E+08	3,113041E+09	3,112945E+09	1,646063E+09	6,225986E+09	7,872049E+09
2976	8,230048E+08	8,229991E+08	3,112935E+09	3,113009E+09	1,646004E+09	6,225944E+09	7,871948E+09
2977	8,230987E+08	8,231029E+08	3,112964E+09	3,112893E+09	1,646202E+09	6,225856E+09	7,872058E+09
2978	8,230616E+08	8,231080E+08	3,112856E+09	3,112900E+09	1,646170E+09	6,225755E+09	7,871925E+09

1	14	15	16	17	18	19	20
	Astronomical season (northern hemisphere)				Summer half year (northern hemisphere)	Winter half year (northern hemisphere)	Tropical year
	Spring	Summer	Autumn	Winter			
Longitude ☉	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
Years							
2979	8,231294E+08	8,231099E+08	3,112778E+09	3,112834E+09	1,646239E+09	6,225612E+09	7,871852E+09
2980	8,232059E+08	8,232183E+08	3,112812E+09	3,112698E+09	1,646424E+09	6,225510E+09	7,871935E+09
2981	8,231680E+08	8,231763E+08	3,112691E+09	3,112761E+09	1,646344E+09	6,225453E+09	7,871797E+09
2982	8,232502E+08	8,232116E+08	3,112712E+09	3,112663E+09	1,646462E+09	6,225376E+09	7,871838E+09
2983	8,232389E+08	8,232834E+08	3,112709E+09	3,112637E+09	1,646522E+09	6,225345E+09	7,871868E+09
2984	8,231996E+08	8,232066E+08	3,112630E+09	3,112748E+09	1,646406E+09	6,225378E+09	7,871784E+09
2985	8,232623E+08	8,232567E+08	3,112758E+09	3,112677E+09	1,646519E+09	6,225435E+09	7,871954E+09
2986	8,231881E+08	8,232239E+08	3,112773E+09	3,112742E+09	1,646412E+09	6,225515E+09	7,871927E+09
2987	8,231729E+08	8,231359E+08	3,112739E+09	3,112816E+09	1,646309E+09	6,225554E+09	7,871863E+09
2988	8,232026E+08	8,231927E+08	3,112845E+09	3,112774E+09	1,646395E+09	6,225619E+09	7,872014E+09
2989	8,231060E+08	8,231176E+08	3,112796E+09	3,112896E+09	1,646224E+09	6,225692E+09	7,871916E+09
2990	8,231277E+08	8,230947E+08	3,112850E+09	3,112854E+09	1,646222E+09	6,225704E+09	7,871926E+09
2991	8,231182E+08	8,231557E+08	3,112933E+09	3,112813E+09	1,646274E+09	6,225747E+09	7,872020E+09
2992	8,230505E+08	8,230621E+08	3,112854E+09	3,112925E+09	1,646113E+09	6,225780E+09	7,871892E+09
2993	8,231201E+08	8,231034E+08	3,112927E+09	3,112850E+09	1,646224E+09	6,225777E+09	7,872001E+09
2994	8,230938E+08	8,231317E+08	3,112900E+09	3,112839E+09	1,646226E+09	6,225739E+09	7,871965E+09
2995	8,230985E+08	8,230906E+08	3,112739E+09	3,112865E+09	1,646189E+09	6,225605E+09	7,871794E+09
2996	8,232035E+08	8,232032E+08	3,112785E+09	3,112723E+09	1,646407E+09	6,225508E+09	7,871915E+09
2997	8,231741E+08	8,232056E+08	3,112693E+09	3,112719E+09	1,646380E+09	6,225413E+09	7,871792E+09
2998	8,232374E+08	8,232038E+08	3,112632E+09	3,112636E+09	1,646441E+09	6,225267E+09	7,871708E+09
2999	8,232990E+08	8,233189E+08	3,112666E+09	3,112527E+09	1,646618E+09	6,225192E+09	7,871810E+09