

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 ° Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
-3000	8,229173E+21	8,228568E+21	1,181847E+20	1,182267E+20	1,645774E+22	2,364114E+20	1,669415E+22
-2999	8,228403E+21	8,228819E+21	1,182368E+20	1,182048E+20	1,645722E+22	2,364416E+20	1,669366E+22
-2998	8,228302E+21	8,228436E+21	1,182483E+20	1,182668E+20	1,645674E+22	2,365151E+20	1,669325E+22
-2997	8,228354E+21	8,227824E+21	1,182013E+20	1,182228E+20	1,645618E+22	2,364241E+20	1,669260E+22
-2996	8,227509E+21	8,227929E+21	1,182725E+20	1,182295E+20	1,645544E+22	2,365021E+20	1,669194E+22
-2995	8,227673E+21	8,227334E+21	1,182318E+20	1,182753E+20	1,645501E+22	2,365071E+20	1,669151E+22
-2994	8,227431E+21	8,227221E+21	1,182248E+20	1,182235E+20	1,645465E+22	2,364483E+20	1,669110E+22
-2993	8,226989E+21	8,227416E+21	1,182779E+20	1,182623E+20	1,645441E+22	2,365402E+20	1,669095E+22
-2992	8,227526E+21	8,226951E+21	1,182156E+20	1,182669E+20	1,645448E+22	2,364825E+20	1,669096E+22
-2991	8,227173E+21	8,227377E+21	1,182474E+20	1,182136E+20	1,645455E+22	2,364610E+20	1,669101E+22
-2990	8,227306E+21	8,227577E+21	1,182700E+20	1,182692E+20	1,645488E+22	2,365392E+20	1,669142E+22
-2989	8,227850E+21	8,227383E+21	1,182088E+20	1,182333E+20	1,645523E+22	2,364421E+20	1,669168E+22
-2988	8,227432E+21	8,227995E+21	1,182547E+20	1,182161E+20	1,645543E+22	2,364708E+20	1,669190E+22
-2987	8,227971E+21	8,227939E+21	1,182346E+20	1,182753E+20	1,645591E+22	2,365099E+20	1,669242E+22
-2986	8,228342E+21	8,228037E+21	1,181975E+20	1,182108E+20	1,645638E+22	2,364083E+20	1,669279E+22
-2985	8,228156E+21	8,228550E+21	1,182579E+20	1,182318E+20	1,645671E+22	2,364897E+20	1,669320E+22
-2984	8,228774E+21	8,228241E+21	1,182073E+20	1,182485E+20	1,645701E+22	2,364558E+20	1,669347E+22
-2983	8,228477E+21	8,228477E+21	1,182142E+20	1,181944E+20	1,645695E+22	2,364086E+20	1,669336E+22
-2982	8,228187E+21	8,228611E+21	1,182651E+20	1,182525E+20	1,645680E+22	2,365176E+20	1,669331E+22
-2981	8,228484E+21	8,228001E+21	1,181974E+20	1,182389E+20	1,645649E+22	2,364364E+20	1,669292E+22
-2980	8,227762E+21	8,228080E+21	1,182469E+20	1,182148E+20	1,645584E+22	2,364617E+20	1,669230E+22
-2979	8,227688E+21	8,227701E+21	1,182548E+20	1,182753E+20	1,645539E+22	2,365301E+20	1,669192E+22
-2978	8,227730E+21	8,227175E+21	1,182093E+20	1,182337E+20	1,645490E+22	2,364430E+20	1,669135E+22
-2977	8,226949E+21	8,227326E+21	1,182777E+20	1,182406E+20	1,645427E+22	2,365183E+20	1,669079E+22
-2976	8,227114E+21	8,226784E+21	1,182369E+20	1,182846E+20	1,645390E+22	2,365215E+20	1,669042E+22
-2975	8,226841E+21	8,226663E+21	1,182341E+20	1,182334E+20	1,645350E+22	2,364675E+20	1,668997E+22
-2974	8,226446E+21	8,226944E+21	1,182889E+20	1,182665E+20	1,645339E+22	2,365553E+20	1,668995E+22
-2973	8,227010E+21	8,226492E+21	1,182299E+20	1,182725E+20	1,645350E+22	2,365024E+20	1,669000E+22
-2972	8,226662E+21	8,226817E+21	1,182556E+20	1,182200E+20	1,645348E+22	2,364756E+20	1,668995E+22
-2971	8,226760E+21	8,227051E+21	1,182727E+20	1,182792E+20	1,645381E+22	2,365519E+20	1,669036E+22
-2970	8,227338E+21	8,226911E+21	1,182118E+20	1,182464E+20	1,645425E+22	2,364582E+20	1,669071E+22
-2969	8,227070E+21	8,227514E+21	1,182574E+20	1,182251E+20	1,645458E+22	2,364825E+20	1,669107E+22
-2968	8,227646E+21	8,227511E+21	1,182407E+20	1,182761E+20	1,645516E+22	2,365169E+20	1,669167E+22
-2967	8,227943E+21	8,227588E+21	1,182086E+20	1,182118E+20	1,645553E+22	2,364203E+20	1,669195E+22
-2966	8,227664E+21	8,228174E+21	1,182699E+20	1,182324E+20	1,645584E+22	2,365023E+20	1,669234E+22
-2965	8,228181E+21	8,227830E+21	1,182194E+20	1,182572E+20	1,645601E+22	2,364766E+20	1,669249E+22
-2964	8,227854E+21	8,227862E+21	1,182213E+20	1,182080E+20	1,645572E+22	2,364293E+20	1,669215E+22
-2963	8,227554E+21	8,227954E+21	1,182690E+20	1,182657E+20	1,645551E+22	2,365347E+20	1,669204E+22
-2962	8,227886E+21	8,227355E+21	1,182049E+20	1,182518E+20	1,645524E+22	2,364567E+20	1,669170E+22
-2961	8,227266E+21	8,227404E+21	1,182552E+20	1,182234E+20	1,645467E+22	2,364786E+20	1,669115E+22
-2960	8,227129E+21	8,227082E+21	1,182628E+20	1,182800E+20	1,645421E+22	2,365428E+20	1,669075E+22
-2959	8,227039E+21	8,226548E+21	1,182205E+20	1,182443E+20	1,645359E+22	2,364648E+20	1,669005E+22
-2958	8,226270E+21	8,226776E+21	1,182876E+20	1,182495E+20	1,645305E+22	2,365371E+20	1,668958E+22
-2957	8,226489E+21	8,226242E+21	1,182498E+20	1,182956E+20	1,645273E+22	2,365455E+20	1,668928E+22
-2956	8,226298E+21	8,226024E+21	1,182437E+20	1,182413E+20	1,645232E+22	2,364850E+20	1,668881E+22
-2955	8,225943E+21	8,226366E+21	1,182943E+20	1,182718E+20	1,645231E+22	2,365662E+20	1,668887E+22
-2954	8,226488E+21	8,226015E+21	1,182365E+20	1,182807E+20	1,645250E+22	2,365172E+20	1,668902E+22
-2953	8,226222E+21	8,226349E+21	1,182584E+20	1,182293E+20	1,645257E+22	2,364876E+20	1,668906E+22
-2952	8,226326E+21	8,226612E+21	1,182758E+20	1,182847E+20	1,645294E+22	2,365605E+20	1,668950E+22

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 ° Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
-2951	8,226860E+21	8,226461E+21	1,182199E+20	1,182534E+20	1,645332E+22	2,364733E+20	1,668980E+22
-2950	8,226658E+21	8,227129E+21	1,182671E+20	1,182267E+20	1,645379E+22	2,364939E+20	1,669028E+22
-2949	8,227227E+21	8,227109E+21	1,182550E+20	1,182798E+20	1,645434E+22	2,365347E+20	1,669087E+22
-2948	8,227457E+21	8,227063E+21	1,182172E+20	1,182191E+20	1,645452E+22	2,364363E+20	1,669096E+22
-2947	8,227094E+21	8,227633E+21	1,182736E+20	1,182435E+20	1,645473E+22	2,365171E+20	1,669124E+22
-2946	8,227581E+21	8,227288E+21	1,182243E+20	1,182719E+20	1,645487E+22	2,364962E+20	1,669137E+22
-2945	8,227365E+21	8,227252E+21	1,182259E+20	1,182210E+20	1,645462E+22	2,364469E+20	1,669106E+22
-2944	8,227056E+21	8,227351E+21	1,182761E+20	1,182693E+20	1,645441E+22	2,365454E+20	1,669095E+22
-2943	8,227288E+21	8,226733E+21	1,182173E+20	1,182580E+20	1,645402E+22	2,364753E+20	1,669050E+22
-2942	8,226621E+21	8,226845E+21	1,182669E+20	1,182279E+20	1,645347E+22	2,364948E+20	1,668996E+22
-2941	8,226442E+21	8,226512E+21	1,182756E+20	1,182910E+20	1,645295E+22	2,365666E+20	1,668952E+22
-2940	8,226369E+21	8,225856E+21	1,182294E+20	1,182584E+20	1,645223E+22	2,364878E+20	1,668871E+22
-2939	8,225647E+21	8,226121E+21	1,182928E+20	1,182607E+20	1,645177E+22	2,365535E+20	1,668832E+22
-2938	8,225942E+21	8,225668E+21	1,182596E+20	1,183055E+20	1,645161E+22	2,365651E+20	1,668817E+22
-2937	8,225861E+21	8,225455E+21	1,182520E+20	1,182478E+20	1,645132E+22	2,364998E+20	1,668782E+22
-2936	8,225436E+21	8,225880E+21	1,183010E+20	1,182732E+20	1,645132E+22	2,365742E+20	1,668789E+22
-2935	8,225878E+21	8,225531E+21	1,182456E+20	1,182888E+20	1,645141E+22	2,365344E+20	1,668794E+22
-2934	8,225661E+21	8,225912E+21	1,182664E+20	1,182346E+20	1,645157E+22	2,365010E+20	1,668807E+22
-2933	8,225845E+21	8,226179E+21	1,182874E+20	1,182917E+20	1,645202E+22	2,365792E+20	1,668860E+22
-2932	8,226443E+21	8,225930E+21	1,182287E+20	1,182590E+20	1,645237E+22	2,364876E+20	1,668886E+22
-2931	8,226253E+21	8,226639E+21	1,182708E+20	1,182327E+20	1,645289E+22	2,365035E+20	1,668940E+22
-2930	8,226775E+21	8,226688E+21	1,182599E+20	1,182897E+20	1,645346E+22	2,365496E+20	1,669001E+22
-2929	8,227039E+21	8,226588E+21	1,182183E+20	1,182323E+20	1,645363E+22	2,364507E+20	1,669008E+22
-2928	8,226623E+21	8,227147E+21	1,182764E+20	1,182509E+20	1,645377E+22	2,365273E+20	1,669030E+22
-2927	8,227009E+21	8,226754E+21	1,182337E+20	1,182807E+20	1,645376E+22	2,365144E+20	1,669028E+22
-2926	8,226813E+21	8,226725E+21	1,182392E+20	1,182243E+20	1,645354E+22	2,364635E+20	1,669000E+22
-2925	8,226469E+21	8,226780E+21	1,182929E+20	1,182744E+20	1,645325E+22	2,365673E+20	1,668982E+22
-2924	8,226608E+21	8,226043E+21	1,182291E+20	1,182684E+20	1,645265E+22	2,364976E+20	1,668915E+22
-2923	8,225921E+21	8,226151E+21	1,182721E+20	1,182418E+20	1,645207E+22	2,365138E+20	1,668859E+22
-2922	8,225775E+21	8,225861E+21	1,182826E+20	1,183059E+20	1,645164E+22	2,365885E+20	1,668822E+22
-2921	8,225853E+21	8,225210E+21	1,182362E+20	1,182706E+20	1,645106E+22	2,365069E+20	1,668757E+22
-2920	8,225156E+21	8,225540E+21	1,183005E+20	1,182620E+20	1,645070E+22	2,365625E+20	1,668726E+22
-2919	8,225342E+21	8,225137E+21	1,182725E+20	1,183097E+20	1,645048E+22	2,365822E+20	1,668706E+22
-2918	8,225243E+21	8,225013E+21	1,182627E+20	1,182515E+20	1,645026E+22	2,365142E+20	1,668677E+22
-2917	8,224823E+21	8,225408E+21	1,183115E+20	1,182823E+20	1,645023E+22	2,365938E+20	1,668682E+22
-2916	8,225299E+21	8,224950E+21	1,182519E+20	1,183011E+20	1,645025E+22	2,365530E+20	1,668680E+22
-2915	8,225194E+21	8,225356E+21	1,182679E+20	1,182448E+20	1,645055E+22	2,365128E+20	1,668706E+22
-2914	8,225473E+21	8,225699E+21	1,182937E+20	1,183005E+20	1,645117E+22	2,365942E+20	1,668777E+22
-2913	8,226157E+21	8,225474E+21	1,182334E+20	1,182665E+20	1,645163E+22	2,364999E+20	1,668813E+22
-2912	8,225866E+21	8,226239E+21	1,182741E+20	1,182358E+20	1,645211E+22	2,365099E+20	1,668862E+22
-2911	8,226228E+21	8,226273E+21	1,182681E+20	1,182977E+20	1,645250E+22	2,365658E+20	1,668907E+22
-2910	8,226488E+21	8,226166E+21	1,182278E+20	1,182381E+20	1,645265E+22	2,364659E+20	1,668912E+22
-2909	8,226078E+21	8,226652E+21	1,182909E+20	1,182567E+20	1,645273E+22	2,365476E+20	1,668928E+22
-2908	8,226430E+21	8,226114E+21	1,182462E+20	1,182866E+20	1,645254E+22	2,365328E+20	1,668908E+22
-2907	8,226204E+21	8,226071E+21	1,182472E+20	1,182322E+20	1,645228E+22	2,364794E+20	1,668875E+22
-2906	8,225829E+21	8,226162E+21	1,183007E+20	1,182868E+20	1,645199E+22	2,365875E+20	1,668858E+22
-2905	8,226031E+21	8,225381E+21	1,182338E+20	1,182843E+20	1,645141E+22	2,365181E+20	1,668793E+22
-2904	8,225334E+21	8,225527E+21	1,182764E+20	1,182510E+20	1,645086E+22	2,365274E+20	1,668739E+22
-2903	8,225146E+21	8,225269E+21	1,182932E+20	1,183151E+20	1,645041E+22	2,366083E+20	1,668702E+22

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 ° Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
-2902	8,225266E+21	8,224677E+21	1,182510E+20	1,182742E+20	1,644994E+22	2,365251E+20	1,668647E+22
-2901	8,224547E+21	8,225011E+21	1,183164E+20	1,182666E+20	1,644956E+22	2,365831E+20	1,668614E+22
-2900	8,224645E+21	8,224514E+21	1,182830E+20	1,183191E+20	1,644916E+22	2,366021E+20	1,668576E+22
-2899	8,224581E+21	8,224386E+21	1,182659E+20	1,182645E+20	1,644897E+22	2,365304E+20	1,668550E+22
-2898	8,224284E+21	8,224832E+21	1,183153E+20	1,182961E+20	1,644912E+22	2,366114E+20	1,668573E+22
-2897	8,224951E+21	8,224405E+21	1,182554E+20	1,183117E+20	1,644936E+22	2,365671E+20	1,668592E+22
-2896	8,224904E+21	8,224915E+21	1,182709E+20	1,182456E+20	1,644982E+22	2,365165E+20	1,668634E+22
-2895	8,225076E+21	8,225338E+21	1,183022E+20	1,183038E+20	1,645041E+22	2,366059E+20	1,668702E+22
-2894	8,225701E+21	8,225185E+21	1,182426E+20	1,182688E+20	1,645089E+22	2,365114E+20	1,668740E+22
-2893	8,225360E+21	8,225876E+21	1,182850E+20	1,182429E+20	1,645124E+22	2,365279E+20	1,668776E+22
-2892	8,225636E+21	8,225749E+21	1,182770E+20	1,183064E+20	1,645138E+22	2,365834E+20	1,668797E+22
-2891	8,225934E+21	8,225579E+21	1,182337E+20	1,182482E+20	1,645151E+22	2,364820E+20	1,668800E+22
-2890	8,225562E+21	8,226035E+21	1,183008E+20	1,182662E+20	1,645160E+22	2,365670E+20	1,668816E+22
-2889	8,225939E+21	8,225476E+21	1,182532E+20	1,182980E+20	1,645142E+22	2,365511E+20	1,668797E+22
-2888	8,225642E+21	8,225455E+21	1,182511E+20	1,182407E+20	1,645110E+22	2,364918E+20	1,668759E+22
-2887	8,225150E+21	8,225555E+21	1,183081E+20	1,182989E+20	1,645070E+22	2,366070E+20	1,668731E+22
-2886	8,225393E+21	8,224833E+21	1,182453E+20	1,182927E+20	1,645023E+22	2,365380E+20	1,668676E+22
-2885	8,224736E+21	8,224952E+21	1,182919E+20	1,182578E+20	1,644969E+22	2,365497E+20	1,668624E+22
-2884	8,224487E+21	8,224609E+21	1,183068E+20	1,183207E+20	1,644910E+22	2,366274E+20	1,668572E+22
-2883	8,224597E+21	8,224032E+21	1,182592E+20	1,182838E+20	1,644863E+22	2,365430E+20	1,668517E+22
-2882	8,223889E+21	8,224389E+21	1,183227E+20	1,182799E+20	1,644828E+22	2,366026E+20	1,668488E+22
-2881	8,224096E+21	8,223882E+21	1,182855E+20	1,183344E+20	1,644798E+22	2,366200E+20	1,668460E+22
-2880	8,224107E+21	8,223823E+21	1,182670E+20	1,182721E+20	1,644793E+22	2,365391E+20	1,668447E+22
-2879	8,223841E+21	8,224356E+21	1,183227E+20	1,183023E+20	1,644820E+22	2,366249E+20	1,668482E+22
-2878	8,224578E+21	8,224050E+21	1,182688E+20	1,183113E+20	1,644863E+22	2,365801E+20	1,668521E+22
-2877	8,224494E+21	8,224580E+21	1,182845E+20	1,182476E+20	1,644907E+22	2,365321E+20	1,668561E+22
-2876	8,224513E+21	8,224901E+21	1,183116E+20	1,183098E+20	1,644941E+22	2,366214E+20	1,668604E+22
-2875	8,225111E+21	8,224687E+21	1,182466E+20	1,182794E+20	1,644980E+22	2,365259E+20	1,668632E+22
-2874	8,224831E+21	8,225336E+21	1,182909E+20	1,182556E+20	1,645017E+22	2,365465E+20	1,668671E+22
-2873	8,225206E+21	8,225153E+21	1,182821E+20	1,183162E+20	1,645036E+22	2,365983E+20	1,668696E+22
-2872	8,225499E+21	8,225008E+21	1,182381E+20	1,182524E+20	1,645051E+22	2,364905E+20	1,668700E+22
-2871	8,225027E+21	8,225504E+21	1,183078E+20	1,182744E+20	1,645053E+22	2,365822E+20	1,668711E+22
-2870	8,225365E+21	8,224994E+21	1,182629E+20	1,183053E+20	1,645036E+22	2,365682E+20	1,668693E+22
-2869	8,225045E+21	8,224924E+21	1,182623E+20	1,182518E+20	1,644997E+22	2,365140E+20	1,668648E+22
-2868	8,224471E+21	8,224912E+21	1,183178E+20	1,183087E+20	1,644938E+22	2,366265E+20	1,668601E+22
-2867	8,224745E+21	8,224166E+21	1,182548E+20	1,183033E+20	1,644891E+22	2,365581E+20	1,668547E+22
-2866	8,224129E+21	8,224283E+21	1,183045E+20	1,182687E+20	1,644841E+22	2,365732E+20	1,668499E+22
-2865	8,223886E+21	8,223934E+21	1,183146E+20	1,183317E+20	1,644782E+22	2,366462E+20	1,668447E+22
-2864	8,223961E+21	8,223394E+21	1,182632E+20	1,182933E+20	1,644735E+22	2,365566E+20	1,668391E+22
-2863	8,223245E+21	8,223783E+21	1,183280E+20	1,182912E+20	1,644703E+22	2,366191E+20	1,668365E+22
-2862	8,223570E+21	8,223390E+21	1,182962E+20	1,183397E+20	1,644696E+22	2,366359E+20	1,668360E+22
-2861	8,223682E+21	8,223375E+21	1,182801E+20	1,182750E+20	1,644706E+22	2,365551E+20	1,668361E+22
-2860	8,223357E+21	8,223882E+21	1,183336E+20	1,183041E+20	1,644724E+22	2,366376E+20	1,668388E+22
-2859	8,224074E+21	8,223621E+21	1,182759E+20	1,183178E+20	1,644770E+22	2,365937E+20	1,668429E+22
-2858	8,223985E+21	8,224127E+21	1,182894E+20	1,182598E+20	1,644811E+22	2,365492E+20	1,668466E+22
-2857	8,224043E+21	8,224388E+21	1,183130E+20	1,183225E+20	1,644843E+22	2,366355E+20	1,668507E+22
-2856	8,224671E+21	8,224168E+21	1,182463E+20	1,182877E+20	1,644884E+22	2,365340E+20	1,668537E+22
-2855	8,224385E+21	8,224815E+21	1,182970E+20	1,182633E+20	1,644920E+22	2,365603E+20	1,668576E+22
-2854	8,224781E+21	8,224706E+21	1,182948E+20	1,183182E+20	1,644949E+22	2,366130E+20	1,668610E+22

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 ° Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
-2853	8,225006E+21	8,224544E+21	1,182515E+20	1,182580E+20	1,644955E+22	2,365095E+20	1,668606E+22
-2852	8,224366E+21	8,224923E+21	1,183169E+20	1,182831E+20	1,644929E+22	2,366000E+20	1,668589E+22
-2851	8,224693E+21	8,224372E+21	1,182700E+20	1,183175E+20	1,644906E+22	2,365876E+20	1,668565E+22
-2850	8,224429E+21	8,224266E+21	1,182721E+20	1,182660E+20	1,644870E+22	2,365381E+20	1,668523E+22
-2849	8,223916E+21	8,224224E+21	1,183262E+20	1,183178E+20	1,644814E+22	2,366440E+20	1,668478E+22
-2848	8,224162E+21	8,223515E+21	1,182624E+20	1,183092E+20	1,644768E+22	2,365717E+20	1,668425E+22
-2847	8,223460E+21	8,223673E+21	1,183137E+20	1,182781E+20	1,644713E+22	2,365918E+20	1,668372E+22
-2846	8,223222E+21	8,223389E+21	1,183254E+20	1,183387E+20	1,644661E+22	2,366641E+20	1,668327E+22
-2845	8,223337E+21	8,222839E+21	1,182746E+20	1,183033E+20	1,644618E+22	2,365779E+20	1,668275E+22
-2844	8,222621E+21	8,223170E+21	1,183359E+20	1,182991E+20	1,644579E+22	2,366350E+20	1,668243E+22
-2843	8,223046E+21	8,222819E+21	1,183057E+20	1,183468E+20	1,644587E+22	2,366525E+20	1,668252E+22
-2842	8,223233E+21	8,222863E+21	1,182904E+20	1,182840E+20	1,644610E+22	2,365744E+20	1,668267E+22
-2841	8,222918E+21	8,223382E+21	1,183378E+20	1,183128E+20	1,644630E+22	2,366505E+20	1,668295E+22
-2840	8,223578E+21	8,223150E+21	1,182768E+20	1,183257E+20	1,644673E+22	2,366024E+20	1,668333E+22
-2839	8,223486E+21	8,223663E+21	1,182918E+20	1,182705E+20	1,644715E+22	2,365623E+20	1,668371E+22
-2838	8,223615E+21	8,223976E+21	1,183222E+20	1,183253E+20	1,644759E+22	2,366476E+20	1,668424E+22
-2837	8,224279E+21	8,223746E+21	1,182585E+20	1,182899E+20	1,644802E+22	2,365484E+20	1,668457E+22
-2836	8,223885E+21	8,224304E+21	1,183068E+20	1,182664E+20	1,644819E+22	2,365732E+20	1,668476E+22
-2835	8,224222E+21	8,224193E+21	1,183031E+20	1,183258E+20	1,644841E+22	2,366289E+20	1,668504E+22
-2834	8,224433E+21	8,223988E+21	1,182591E+20	1,182729E+20	1,644842E+22	2,365320E+20	1,668495E+22
-2833	8,223807E+21	8,224292E+21	1,183207E+20	1,182966E+20	1,644810E+22	2,366172E+20	1,668472E+22
-2832	8,224129E+21	8,223744E+21	1,182744E+20	1,183270E+20	1,644787E+22	2,366014E+20	1,668448E+22
-2831	8,223853E+21	8,223641E+21	1,182825E+20	1,182760E+20	1,644749E+22	2,365584E+20	1,668405E+22
-2830	8,223327E+21	8,223666E+21	1,183415E+20	1,183208E+20	1,644699E+22	2,366623E+20	1,668366E+22
-2829	8,223498E+21	8,222944E+21	1,182770E+20	1,183174E+20	1,644644E+22	2,365944E+20	1,668304E+22
-2828	8,222668E+21	8,222980E+21	1,183232E+20	1,182881E+20	1,644565E+22	2,366113E+20	1,668226E+22
-2827	8,222502E+21	8,222701E+21	1,183334E+20	1,183501E+20	1,644520E+22	2,366835E+20	1,668189E+22
-2826	8,222758E+21	8,222177E+21	1,182846E+20	1,183159E+20	1,644493E+22	2,366006E+20	1,668154E+22
-2825	8,222160E+21	8,222547E+21	1,183413E+20	1,183065E+20	1,644471E+22	2,366478E+20	1,668136E+22
-2824	8,222608E+21	8,222310E+21	1,183102E+20	1,183521E+20	1,644492E+22	2,366623E+20	1,668158E+22
-2823	8,222747E+21	8,222432E+21	1,182949E+20	1,182928E+20	1,644518E+22	2,365877E+20	1,668177E+22
-2822	8,222449E+21	8,223022E+21	1,183452E+20	1,183167E+20	1,644547E+22	2,366619E+20	1,668213E+22
-2821	8,223113E+21	8,222768E+21	1,182856E+20	1,183310E+20	1,644588E+22	2,366167E+20	1,668250E+22
-2820	8,222960E+21	8,223166E+21	1,182998E+20	1,182748E+20	1,644613E+22	2,365747E+20	1,668270E+22
-2819	8,223140E+21	8,223472E+21	1,183334E+20	1,183291E+20	1,644661E+22	2,366625E+20	1,668327E+22
-2818	8,223814E+21	8,223238E+21	1,182704E+20	1,182993E+20	1,644705E+22	2,365697E+20	1,668362E+22
-2817	8,223389E+21	8,223749E+21	1,183112E+20	1,182773E+20	1,644714E+22	2,365885E+20	1,668373E+22
-2816	8,223670E+21	8,223626E+21	1,183050E+20	1,183366E+20	1,644730E+22	2,366416E+20	1,668394E+22
-2815	8,223871E+21	8,223421E+21	1,182640E+20	1,182863E+20	1,644729E+22	2,365504E+20	1,668384E+22
-2814	8,223295E+21	8,223768E+21	1,183326E+20	1,183005E+20	1,644706E+22	2,366331E+20	1,668370E+22
-2813	8,223586E+21	8,223212E+21	1,182897E+20	1,183305E+20	1,644680E+22	2,366202E+20	1,668342E+22
-2812	8,223157E+21	8,223012E+21	1,182956E+20	1,182826E+20	1,644617E+22	2,365782E+20	1,668275E+22
-2811	8,222577E+21	8,223011E+21	1,183523E+20	1,183298E+20	1,644559E+22	2,366821E+20	1,668227E+22
-2810	8,222771E+21	8,222252E+21	1,182867E+20	1,183345E+20	1,644502E+22	2,366212E+20	1,668164E+22
-2809	8,222040E+21	8,222237E+21	1,183257E+20	1,183024E+20	1,644428E+22	2,366281E+20	1,668091E+22
-2808	8,221955E+21	8,222024E+21	1,183369E+20	1,183593E+20	1,644398E+22	2,366962E+20	1,668068E+22
-2807	8,222284E+21	8,221617E+21	1,182935E+20	1,183246E+20	1,644390E+22	2,366180E+20	1,668052E+22
-2806	8,221728E+21	8,222124E+21	1,183533E+20	1,183076E+20	1,644385E+22	2,366609E+20	1,668051E+22
-2805	8,222102E+21	8,221933E+21	1,183222E+20	1,183563E+20	1,644403E+22	2,366786E+20	1,668071E+22

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 ° Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
-2804	8,222119E+21	8,221954E+21	1,183024E+20	1,182998E+20	1,644407E+22	2,366022E+20	1,668067E+22
-2803	8,221870E+21	8,222521E+21	1,183529E+20	1,183231E+20	1,644439E+22	2,366760E+20	1,668107E+22
-2802	8,222626E+21	8,22256E+21	1,182955E+20	1,183404E+20	1,644488E+22	2,366360E+20	1,668152E+22
-2801	8,222551E+21	8,222609E+21	1,183043E+20	1,182815E+20	1,644516E+22	2,365858E+20	1,668175E+22
-2800	8,222719E+21	8,222965E+21	1,183370E+20	1,183359E+20	1,644568E+22	2,366729E+20	1,668236E+22
-2799	8,223342E+21	8,222778E+21	1,182745E+20	1,183113E+20	1,644612E+22	2,365859E+20	1,668271E+22
-2798	8,222931E+21	8,223319E+21	1,183178E+20	1,182852E+20	1,644625E+22	2,366029E+20	1,668285E+22
-2797	8,223177E+21	8,223173E+21	1,183138E+20	1,183439E+20	1,644635E+22	2,366578E+20	1,668301E+22
-2796	8,223257E+21	8,222839E+21	1,182747E+20	1,182934E+20	1,644610E+22	2,365681E+20	1,668266E+22
-2795	8,222676E+21	8,223158E+21	1,183476E+20	1,183051E+20	1,644583E+22	2,366527E+20	1,668249E+22
-2794	8,222918E+21	8,222569E+21	1,183047E+20	1,183417E+20	1,644549E+22	2,366464E+20	1,668213E+22
-2793	8,222436E+21	8,222276E+21	1,183027E+20	1,182959E+20	1,644471E+22	2,365986E+20	1,668131E+22
-2792	8,221871E+21	8,222263E+21	1,183554E+20	1,183427E+20	1,644413E+22	2,366981E+20	1,668083E+22
-2791	8,222135E+21	8,221561E+21	1,182932E+20	1,183484E+20	1,644370E+22	2,366416E+20	1,668034E+22
-2790	8,221545E+21	8,221662E+21	1,183363E+20	1,183062E+20	1,644321E+22	2,366425E+20	1,667985E+22
-2789	8,221482E+21	8,221541E+21	1,183502E+20	1,183611E+20	1,644302E+22	2,367113E+20	1,667973E+22
-2788	8,221667E+21	8,221124E+21	1,183055E+20	1,183291E+20	1,644279E+22	2,366346E+20	1,667943E+22
-2787	8,221096E+21	8,221652E+21	1,183634E+20	1,183135E+20	1,644275E+22	2,366768E+20	1,667943E+22
-2786	8,221492E+21	8,221430E+21	1,183315E+20	1,183693E+20	1,644292E+22	2,367008E+20	1,667962E+22
-2785	8,221581E+21	8,221374E+21	1,183042E+20	1,183112E+20	1,644295E+22	2,366155E+20	1,667957E+22
-2784	8,221427E+21	8,221947E+21	1,183550E+20	1,183312E+20	1,644337E+22	2,366862E+20	1,668006E+22
-2783	8,222241E+21	8,221770E+21	1,183020E+20	1,183495E+20	1,644401E+22	2,366515E+20	1,668066E+22
-2782	8,222209E+21	8,222214E+21	1,183122E+20	1,182858E+20	1,644442E+22	2,365980E+20	1,668102E+22
-2781	8,222284E+21	8,222590E+21	1,183450E+20	1,183416E+20	1,644487E+22	2,366866E+20	1,668156E+22
-2780	8,222761E+21	8,222301E+21	1,182821E+20	1,183197E+20	1,644506E+22	2,366017E+20	1,668166E+22
-2779	8,222366E+21	8,222794E+21	1,183284E+20	1,182908E+20	1,644516E+22	2,366192E+20	1,668178E+22
-2778	8,222612E+21	8,222614E+21	1,183278E+20	1,183517E+20	1,644523E+22	2,366796E+20	1,668191E+22
-2777	8,222683E+21	8,222188E+21	1,182829E+20	1,183022E+20	1,644487E+22	2,365851E+20	1,668146E+22
-2776	8,222042E+21	8,222486E+21	1,183536E+20	1,183150E+20	1,644453E+22	2,366686E+20	1,668120E+22
-2775	8,222242E+21	8,221927E+21	1,183106E+20	1,183567E+20	1,644417E+22	2,366674E+20	1,668084E+22
-2774	8,221835E+21	8,221649E+21	1,183104E+20	1,183063E+20	1,644348E+22	2,366167E+20	1,668010E+22
-2773	8,221287E+21	8,221661E+21	1,183640E+20	1,183500E+20	1,644295E+22	2,367140E+20	1,667966E+22
-2772	8,221494E+21	8,220931E+21	1,183060E+20	1,183553E+20	1,644242E+22	2,366613E+20	1,667909E+22
-2771	8,220949E+21	8,221086E+21	1,183515E+20	1,183104E+20	1,644204E+22	2,366619E+20	1,667870E+22
-2770	8,220856E+21	8,221008E+21	1,183643E+20	1,183717E+20	1,644186E+22	2,367361E+20	1,667860E+22
-2769	8,221010E+21	8,220524E+21	1,183105E+20	1,183421E+20	1,644153E+22	2,366526E+20	1,667819E+22
-2768	8,220495E+21	8,221030E+21	1,183641E+20	1,183256E+20	1,644153E+22	2,366897E+20	1,667822E+22
-2767	8,220981E+21	8,220876E+21	1,183353E+20	1,183805E+20	1,644186E+22	2,367158E+20	1,667857E+22
-2766	8,221226E+21	8,220905E+21	1,183113E+20	1,183144E+20	1,644213E+22	2,366257E+20	1,667876E+22
-2765	8,221097E+21	8,221555E+21	1,183634E+20	1,183328E+20	1,644265E+22	2,366962E+20	1,667935E+22
-2764	8,221749E+21	8,221362E+21	1,183117E+20	1,183539E+20	1,644311E+22	2,366657E+20	1,667978E+22
-2763	8,221699E+21	8,221811E+21	1,183213E+20	1,182914E+20	1,644351E+22	2,366128E+20	1,668012E+22
-2762	8,221758E+21	8,222135E+21	1,183543E+20	1,183525E+20	1,644389E+22	2,367069E+20	1,668060E+22
-2761	8,222212E+21	8,221729E+21	1,182867E+20	1,183294E+20	1,644394E+22	2,366161E+20	1,668056E+22
-2760	8,221849E+21	8,222172E+21	1,183345E+20	1,182992E+20	1,644402E+22	2,366337E+20	1,668066E+22
-2759	8,222067E+21	8,222027E+21	1,183376E+20	1,183606E+20	1,644409E+22	2,366982E+20	1,668079E+22
-2758	8,222124E+21	8,221627E+21	1,182935E+20	1,183107E+20	1,644375E+22	2,366042E+20	1,668036E+22
-2757	8,221410E+21	8,221893E+21	1,183619E+20	1,183242E+20	1,644330E+22	2,366861E+20	1,667999E+22
-2756	8,221488E+21	8,221249E+21	1,183199E+20	1,183680E+20	1,644274E+22	2,366880E+20	1,667943E+22

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 $\odot$ Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
-2755	8,221169E+21	8,220983E+21	1,183228E+20	1,183138E+20	1,644215E+22	2,366366E+20	1,667879E+22
-2754	8,220677E+21	8,221025E+21	1,183777E+20	1,183590E+20	1,644170E+22	2,367367E+20	1,667844E+22
-2753	8,220879E+21	8,220282E+21	1,183155E+20	1,183649E+20	1,644116E+22	2,366804E+20	1,667784E+22
-2752	8,220333E+21	8,220461E+21	1,183564E+20	1,183219E+20	1,644079E+22	2,366783E+20	1,667747E+22
-2751	8,220241E+21	8,220451E+21	1,183688E+20	1,183853E+20	1,644069E+22	2,367541E+20	1,667745E+22
-2750	8,220506E+21	8,220006E+21	1,183153E+20	1,183521E+20	1,644051E+22	2,366675E+20	1,667718E+22
-2749	8,220037E+21	8,220534E+21	1,183693E+20	1,183301E+20	1,644057E+22	2,366994E+20	1,667727E+22
-2748	8,220480E+21	8,220378E+21	1,183463E+20	1,183838E+20	1,644086E+22	2,367301E+20	1,667759E+22
-2747	8,220786E+21	8,220464E+21	1,183249E+20	1,183151E+20	1,644125E+22	2,366400E+20	1,667789E+22
-2746	8,220611E+21	8,221144E+21	1,183751E+20	1,183409E+20	1,644176E+22	2,367160E+20	1,667847E+22
-2745	8,221210E+21	8,220870E+21	1,183166E+20	1,183644E+20	1,644208E+22	2,366810E+20	1,667876E+22
-2744	8,221196E+21	8,221252E+21	1,183225E+20	1,183030E+20	1,644245E+22	2,366255E+20	1,667907E+22
-2743	8,221280E+21	8,221618E+21	1,183591E+20	1,183615E+20	1,644290E+22	2,367206E+20	1,667962E+22
-2742	8,221806E+21	8,221230E+21	1,182949E+20	1,183343E+20	1,644304E+22	2,366291E+20	1,667967E+22
-2741	8,221376E+21	8,221668E+21	1,183436E+20	1,183035E+20	1,644304E+22	2,366472E+20	1,667969E+22
-2740	8,221385E+21	8,221469E+21	1,183483E+20	1,183687E+20	1,644285E+22	2,367170E+20	1,667957E+22
-2739	8,221434E+21	8,221027E+21	1,183051E+20	1,183207E+20	1,644246E+22	2,366258E+20	1,667909E+22
-2738	8,220734E+21	8,221242E+21	1,183716E+20	1,183385E+20	1,644198E+22	2,367101E+20	1,667869E+22
-2737	8,220825E+21	8,220515E+21	1,183269E+20	1,183803E+20	1,644134E+22	2,367072E+20	1,667805E+22
-2736	8,220592E+21	8,220248E+21	1,183304E+20	1,183250E+20	1,644084E+22	2,366553E+20	1,667750E+22
-2735	8,220101E+21	8,220407E+21	1,183869E+20	1,183686E+20	1,644051E+22	2,367555E+20	1,667726E+22
-2734	8,220307E+21	8,219738E+21	1,183256E+20	1,183745E+20	1,644005E+22	2,367001E+20	1,667675E+22
-2733	8,219734E+21	8,219920E+21	1,183636E+20	1,183300E+20	1,643965E+22	2,366936E+20	1,667635E+22
-2732	8,219552E+21	8,219868E+21	1,183786E+20	1,183915E+20	1,643942E+22	2,367701E+20	1,667619E+22
-2731	8,219926E+21	8,219467E+21	1,183286E+20	1,183544E+20	1,643939E+22	2,366829E+20	1,667608E+22
-2730	8,219550E+21	8,220024E+21	1,183813E+20	1,183352E+20	1,643957E+22	2,367165E+20	1,667629E+22
-2729	8,219974E+21	8,219856E+21	1,183546E+20	1,183901E+20	1,643983E+22	2,367447E+20	1,667657E+22
-2728	8,220314E+21	8,219962E+21	1,183275E+20	1,183257E+20	1,644028E+22	2,366532E+20	1,667693E+22
-2727	8,220152E+21	8,220697E+21	1,183769E+20	1,183528E+20	1,644085E+22	2,367297E+20	1,667758E+22
-2726	8,220817E+21	8,220441E+21	1,183200E+20	1,183734E+20	1,644126E+22	2,366934E+20	1,667795E+22
-2725	8,220805E+21	8,220800E+21	1,183268E+20	1,183085E+20	1,644160E+22	2,366353E+20	1,667824E+22
-2724	8,220753E+21	8,221115E+21	1,183706E+20	1,183647E+20	1,644187E+22	2,367352E+20	1,667860E+22
-2723	8,221252E+21	8,220737E+21	1,183096E+20	1,183383E+20	1,644199E+22	2,366479E+20	1,667864E+22
-2722	8,220743E+21	8,221113E+21	1,183558E+20	1,183156E+20	1,644186E+22	2,366714E+20	1,667853E+22
-2721	8,220676E+21	8,220780E+21	1,183551E+20	1,183820E+20	1,644146E+22	2,367371E+20	1,667819E+22
-2720	8,220798E+21	8,220273E+21	1,183094E+20	1,183354E+20	1,644107E+22	2,366448E+20	1,667772E+22
-2719	8,220163E+21	8,220562E+21	1,183776E+20	1,183489E+20	1,644072E+22	2,367266E+20	1,667745E+22
-2718	8,220340E+21	8,219913E+21	1,183371E+20	1,183875E+20	1,644025E+22	2,367246E+20	1,667698E+22
-2717	8,220046E+21	8,219693E+21	1,183404E+20	1,183308E+20	1,643974E+22	2,366712E+20	1,667641E+22
-2716	8,219372E+21	8,219853E+21	1,183986E+20	1,183751E+20	1,643923E+22	2,367738E+20	1,667600E+22
-2715	8,219603E+21	8,219179E+21	1,183392E+20	1,183819E+20	1,643878E+22	2,367211E+20	1,667550E+22
-2714	8,219061E+21	8,219323E+21	1,183745E+20	1,183407E+20	1,643838E+22	2,367152E+20	1,667510E+22
-2713	8,218920E+21	8,219206E+21	1,183865E+20	1,183995E+20	1,643813E+22	2,367859E+20	1,667491E+22
-2712	8,219430E+21	8,218819E+21	1,183351E+20	1,183636E+20	1,643825E+22	2,366987E+20	1,667495E+22
-2711	8,219106E+21	8,219516E+21	1,183857E+20	1,183446E+20	1,643862E+22	2,367304E+20	1,667535E+22
-2710	8,219575E+21	8,219431E+21	1,183596E+20	1,184003E+20	1,643901E+22	2,367599E+20	1,667577E+22
-2709	8,219900E+21	8,219542E+21	1,183294E+20	1,183339E+20	1,643944E+22	2,366632E+20	1,667611E+22
-2708	8,219642E+21	8,220250E+21	1,183838E+20	1,183574E+20	1,643989E+22	2,367412E+20	1,667663E+22
-2707	8,220349E+21	8,220013E+21	1,183327E+20	1,183737E+20	1,644036E+22	2,367065E+20	1,667707E+22

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 $\odot$ Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
-2706	8,220324E+21	8,220337E+21	1,183397E+20	1,183144E+20	1,644066E+22	2,366540E+20	1,667732E+22
-2705	8,220153E+21	8,220554E+21	1,183804E+20	1,183716E+20	1,644071E+22	2,367520E+20	1,667746E+22
-2704	8,220646E+21	8,220108E+21	1,183146E+20	1,183523E+20	1,644075E+22	2,366669E+20	1,667742E+22
-2703	8,220156E+21	8,220487E+21	1,183589E+20	1,183302E+20	1,644064E+22	2,366891E+20	1,667733E+22
-2702	8,220153E+21	8,220159E+21	1,183607E+20	1,183931E+20	1,644031E+22	2,367538E+20	1,667707E+22
-2701	8,220296E+21	8,219661E+21	1,183173E+20	1,183422E+20	1,643996E+22	2,366595E+20	1,667662E+22
-2700	8,219539E+21	8,219949E+21	1,183924E+20	1,183519E+20	1,643949E+22	2,367442E+20	1,667623E+22
-2699	8,219661E+21	8,219369E+21	1,183561E+20	1,183914E+20	1,643903E+22	2,367474E+20	1,667578E+22
-2698	8,219302E+21	8,219112E+21	1,183550E+20	1,183439E+20	1,643841E+22	2,366989E+20	1,667511E+22
-2697	8,218564E+21	8,219138E+21	1,184070E+20	1,183868E+20	1,643770E+22	2,367938E+20	1,667450E+22
-2696	8,218924E+21	8,218423E+21	1,183443E+20	1,183958E+20	1,643735E+22	2,367401E+20	1,667409E+22
-2695	8,218521E+21	8,218653E+21	1,183785E+20	1,183502E+20	1,643717E+22	2,367286E+20	1,667390E+22
-2694	8,218514E+21	8,218648E+21	1,183931E+20	1,184065E+20	1,643716E+22	2,367997E+20	1,667396E+22
-2693	8,219030E+21	8,218370E+21	1,183400E+20	1,183696E+20	1,643740E+22	2,367096E+20	1,667411E+22
-2692	8,218595E+21	8,219108E+21	1,183920E+20	1,183509E+20	1,643770E+22	2,367429E+20	1,667445E+22
-2691	8,219094E+21	8,219072E+21	1,183702E+20	1,184052E+20	1,643817E+22	2,367754E+20	1,667494E+22
-2690	8,219423E+21	8,219141E+21	1,183380E+20	1,183424E+20	1,643856E+22	2,366804E+20	1,667524E+22
-2689	8,219123E+21	8,219726E+21	1,183926E+20	1,183614E+20	1,643885E+22	2,367540E+20	1,667560E+22
-2688	8,219872E+21	8,219438E+21	1,183408E+20	1,183811E+20	1,643931E+22	2,367219E+20	1,667603E+22
-2687	8,219814E+21	8,219805E+21	1,183459E+20	1,183248E+20	1,643962E+22	2,366707E+20	1,667629E+22
-2686	8,219647E+21	8,220012E+21	1,183866E+20	1,183837E+20	1,643966E+22	2,367702E+20	1,667643E+22
-2685	8,220111E+21	8,219524E+21	1,183190E+20	1,183623E+20	1,643964E+22	2,366813E+20	1,667632E+22
-2684	8,219543E+21	8,219882E+21	1,183677E+20	1,183367E+20	1,643943E+22	2,367044E+20	1,667613E+22
-2683	8,219585E+21	8,219602E+21	1,183762E+20	1,183949E+20	1,643919E+22	2,367711E+20	1,667596E+22
-2682	8,219677E+21	8,219096E+21	1,183331E+20	1,183505E+20	1,643877E+22	2,366836E+20	1,667546E+22
-2681	8,218788E+21	8,219297E+21	1,184044E+20	1,183606E+20	1,643809E+22	2,367650E+20	1,667485E+22
-2680	8,218921E+21	8,218650E+21	1,183636E+20	1,184070E+20	1,643757E+22	2,367706E+20	1,667434E+22
-2679	8,218604E+21	8,218409E+21	1,183593E+20	1,183605E+20	1,643701E+22	2,367198E+20	1,667373E+22
-2678	8,217990E+21	8,218450E+21	1,184113E+20	1,183990E+20	1,643644E+22	2,368103E+20	1,667325E+22
-2677	8,218426E+21	8,217785E+21	1,183500E+20	1,184028E+20	1,643621E+22	2,367528E+20	1,667296E+22
-2676	8,217997E+21	8,218098E+21	1,183885E+20	1,183535E+20	1,643609E+22	2,367420E+20	1,667284E+22
-2675	8,218006E+21	8,218230E+21	1,184078E+20	1,184093E+20	1,643624E+22	2,368171E+20	1,667305E+22
-2674	8,218487E+21	8,217975E+21	1,183519E+20	1,183792E+20	1,643646E+22	2,367311E+20	1,667319E+22
-2673	8,218005E+21	8,218598E+21	1,183994E+20	1,183577E+20	1,643660E+22	2,367571E+20	1,667336E+22
-2672	8,218592E+21	8,218523E+21	1,183764E+20	1,184132E+20	1,643711E+22	2,367895E+20	1,667390E+22
-2671	8,218983E+21	8,218639E+21	1,183428E+20	1,183495E+20	1,643762E+22	2,366923E+20	1,667431E+22
-2670	8,218717E+21	8,219237E+21	1,183994E+20	1,183678E+20	1,643795E+22	2,367672E+20	1,667472E+22
-2669	8,219405E+21	8,218973E+21	1,183454E+20	1,183882E+20	1,643838E+22	2,367336E+20	1,667511E+22
-2668	8,219240E+21	8,219295E+21	1,183526E+20	1,183334E+20	1,643853E+22	2,366860E+20	1,667522E+22
-2667	8,219085E+21	8,219515E+21	1,183981E+20	1,183899E+20	1,643860E+22	2,367881E+20	1,667539E+22
-2666	8,219544E+21	8,218994E+21	1,183303E+20	1,183730E+20	1,643854E+22	2,367033E+20	1,667524E+22
-2665	8,218918E+21	8,219219E+21	1,183792E+20	1,183432E+20	1,643814E+22	2,367224E+20	1,667486E+22
-2664	8,218972E+21	8,218917E+21	1,183866E+20	1,184051E+20	1,643789E+22	2,367918E+20	1,667468E+22
-2663	8,219008E+21	8,218456E+21	1,183411E+20	1,183657E+20	1,643746E+22	2,367068E+20	1,667417E+22
-2662	8,218125E+21	8,218621E+21	1,184109E+20	1,183756E+20	1,643675E+22	2,367866E+20	1,667353E+22
-2661	8,218269E+21	8,217959E+21	1,183681E+20	1,184182E+20	1,643623E+22	2,367863E+20	1,667301E+22
-2660	8,217945E+21	8,217729E+21	1,183684E+20	1,183672E+20	1,643567E+22	2,367356E+20	1,667241E+22
-2659	8,217434E+21	8,217878E+21	1,184262E+20	1,183998E+20	1,643531E+22	2,368260E+20	1,667214E+22
-2658	8,217870E+21	8,217292E+21	1,183649E+20	1,184095E+20	1,643516E+22	2,367745E+20	1,667194E+22

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 $\odot$ Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
-2657	8,217371E+21	8,217565E+21	1,183982E+20	1,183603E+20	1,643494E+22	2,367585E+20	1,667170E+22
-2656	8,217445E+21	8,217686E+21	1,184136E+20	1,184216E+20	1,643513E+22	2,368352E+20	1,667197E+22
-2655	8,217964E+21	8,217484E+21	1,183550E+20	1,183919E+20	1,643545E+22	2,367470E+20	1,667219E+22
-2654	8,217591E+21	8,218095E+21	1,184028E+20	1,183666E+20	1,643569E+22	2,367694E+20	1,667246E+22
-2653	8,218196E+21	8,218026E+21	1,183814E+20	1,184161E+20	1,643622E+22	2,367975E+20	1,667302E+22
-2652	8,218495E+21	8,218172E+21	1,183518E+20	1,183532E+20	1,643667E+22	2,367050E+20	1,667337E+22
-2651	8,218214E+21	8,218825E+21	1,184118E+20	1,183727E+20	1,643704E+22	2,367846E+20	1,667382E+22
-2650	8,218830E+21	8,218519E+21	1,183557E+20	1,184002E+20	1,643735E+22	2,367559E+20	1,667411E+22
-2649	8,218622E+21	8,218685E+21	1,183598E+20	1,183428E+20	1,643731E+22	2,367026E+20	1,667401E+22
-2648	8,218551E+21	8,218853E+21	1,184046E+20	1,183994E+20	1,643740E+22	2,368040E+20	1,667421E+22
-2647	8,219018E+21	8,218388E+21	1,183379E+20	1,183828E+20	1,643741E+22	2,367207E+20	1,667413E+22
-2646	8,218394E+21	8,218613E+21	1,183877E+20	1,183536E+20	1,643701E+22	2,367414E+20	1,667375E+22
-2645	8,218350E+21	8,218319E+21	1,183928E+20	1,184142E+20	1,643667E+22	2,368069E+20	1,667348E+22
-2644	8,218284E+21	8,217833E+21	1,183503E+20	1,183775E+20	1,643612E+22	2,367278E+20	1,667284E+22
-2643	8,217441E+21	8,218009E+21	1,184241E+20	1,183827E+20	1,643545E+22	2,368068E+20	1,667226E+22
-2642	8,217597E+21	8,217340E+21	1,183817E+20	1,184272E+20	1,643494E+22	2,368089E+20	1,667175E+22
-2641	8,217273E+21	8,217015E+21	1,183817E+20	1,183721E+20	1,643429E+22	2,367539E+20	1,667104E+22
-2640	8,216834E+21	8,217208E+21	1,184363E+20	1,184088E+20	1,643404E+22	2,368450E+20	1,667089E+22
-2639	8,217267E+21	8,216743E+21	1,183729E+20	1,184238E+20	1,643401E+22	2,367967E+20	1,667081E+22
-2638	8,216836E+21	8,217009E+21	1,184021E+20	1,183741E+20	1,643384E+22	2,367761E+20	1,667062E+22
-2637	8,216954E+21	8,217161E+21	1,184155E+20	1,184292E+20	1,643411E+22	2,368447E+20	1,667096E+22
-2636	8,217478E+21	8,216991E+21	1,183612E+20	1,183958E+20	1,643447E+22	2,367571E+20	1,667123E+22
-2635	8,217163E+21	8,217675E+21	1,184149E+20	1,183660E+20	1,643484E+22	2,367809E+20	1,667162E+22
-2634	8,217708E+21	8,217648E+21	1,183933E+20	1,184214E+20	1,643536E+22	2,368147E+20	1,667217E+22
-2633	8,217913E+21	8,217668E+21	1,183599E+20	1,183607E+20	1,643558E+22	2,367206E+20	1,667230E+22
-2632	8,217691E+21	8,218258E+21	1,184159E+20	1,183859E+20	1,643595E+22	2,368018E+20	1,667275E+22
-2631	8,218323E+21	8,217980E+21	1,183596E+20	1,184143E+20	1,643630E+22	2,367739E+20	1,667308E+22
-2630	8,218191E+21	8,218094E+21	1,183641E+20	1,183538E+20	1,643629E+22	2,367180E+20	1,667300E+22
-2629	8,218101E+21	8,218275E+21	1,184105E+20	1,184035E+20	1,643638E+22	2,368139E+20	1,667319E+22
-2628	8,218427E+21	8,217844E+21	1,183491E+20	1,183894E+20	1,643627E+22	2,367386E+20	1,667301E+22
-2627	8,217740E+21	8,218090E+21	1,184035E+20	1,183611E+20	1,643583E+22	2,367646E+20	1,667260E+22
-2626	8,217600E+21	8,217740E+21	1,184063E+20	1,184255E+20	1,643534E+22	2,368317E+20	1,667217E+22
-2625	8,217492E+21	8,217082E+21	1,183620E+20	1,183876E+20	1,643457E+22	2,367496E+20	1,667132E+22
-2624	8,216775E+21	8,217216E+21	1,184326E+20	1,183926E+20	1,643399E+22	2,368252E+20	1,667082E+22
-2623	8,216967E+21	8,216647E+21	1,183912E+20	1,184381E+20	1,643361E+22	2,368293E+20	1,667044E+22
-2622	8,216721E+21	8,216370E+21	1,183885E+20	1,183844E+20	1,643309E+22	2,367730E+20	1,666986E+22
-2621	8,216282E+21	8,216629E+21	1,184388E+20	1,184180E+20	1,643291E+22	2,368567E+20	1,666977E+22
-2620	8,216673E+21	8,216233E+21	1,183796E+20	1,184343E+20	1,643291E+22	2,368138E+20	1,666972E+22
-2619	8,216332E+21	8,216565E+21	1,184116E+20	1,183796E+20	1,643290E+22	2,367912E+20	1,666969E+22
-2618	8,216449E+21	8,216725E+21	1,184266E+20	1,184330E+20	1,643317E+22	2,368596E+20	1,667003E+22
-2617	8,216935E+21	8,216455E+21	1,183724E+20	1,183981E+20	1,643339E+22	2,367705E+20	1,667016E+22
-2616	8,216668E+21	8,217126E+21	1,184225E+20	1,183737E+20	1,643379E+22	2,367962E+20	1,667059E+22
-2615	8,217165E+21	8,217162E+21	1,183999E+20	1,184344E+20	1,643433E+22	2,368343E+20	1,667116E+22
-2614	8,217447E+21	8,217118E+21	1,183630E+20	1,183745E+20	1,643456E+22	2,367375E+20	1,667130E+22
-2613	8,217261E+21	8,217705E+21	1,184169E+20	1,183928E+20	1,643497E+22	2,368097E+20	1,667178E+22
-2612	8,217857E+21	8,217478E+21	1,183678E+20	1,184184E+20	1,643533E+22	2,367862E+20	1,667212E+22
-2611	8,217729E+21	8,217644E+21	1,183781E+20	1,183560E+20	1,643537E+22	2,367341E+20	1,667211E+22
-2610	8,217495E+21	8,217828E+21	1,184245E+20	1,184089E+20	1,643532E+22	2,368334E+20	1,667216E+22
-2609	8,217670E+21	8,217223E+21	1,183611E+20	1,183996E+20	1,643489E+22	2,367607E+20	1,667165E+22

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 $\odot$ Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
-2608	8,217020E+21	8,217361E+21	1,184118E+20	1,183761E+20	1,643438E+22	2,367879E+20	1,667117E+22
-2607	8,216889E+21	8,217024E+21	1,184137E+20	1,184410E+20	1,643391E+22	2,368547E+20	1,667077E+22
-2606	8,216892E+21	8,216298E+21	1,183694E+20	1,184007E+20	1,643319E+22	2,367701E+20	1,666996E+22
-2605	8,216223E+21	8,216491E+21	1,184372E+20	1,183991E+20	1,643271E+22	2,368364E+20	1,666955E+22
-2604	8,216358E+21	8,216053E+21	1,184010E+20	1,184473E+20	1,643241E+22	2,368482E+20	1,666926E+22
-2603	8,216125E+21	8,215870E+21	1,184011E+20	1,183930E+20	1,643199E+22	2,367941E+20	1,666879E+22
-2602	8,215662E+21	8,216156E+21	1,184491E+20	1,184258E+20	1,643182E+22	2,368749E+20	1,666869E+22
-2601	8,216035E+21	8,215648E+21	1,183907E+20	1,184394E+20	1,643168E+22	2,368300E+20	1,666851E+22
-2600	8,215811E+21	8,215965E+21	1,184198E+20	1,183848E+20	1,643178E+22	2,368046E+20	1,666858E+22
-2599	8,215927E+21	8,216217E+21	1,184355E+20	1,184400E+20	1,643214E+22	2,368755E+20	1,666902E+22
-2598	8,216457E+21	8,215931E+21	1,183773E+20	1,184087E+20	1,643239E+22	2,367861E+20	1,666917E+22
-2597	8,216218E+21	8,216618E+21	1,184217E+20	1,183830E+20	1,643284E+22	2,368047E+20	1,666964E+22
-2596	8,216693E+21	8,216705E+21	1,184046E+20	1,184446E+20	1,643340E+22	2,368491E+20	1,667025E+22
-2595	8,217043E+21	8,216704E+21	1,183721E+20	1,183802E+20	1,643375E+22	2,367523E+20	1,667050E+22
-2594	8,216817E+21	8,217280E+21	1,184283E+20	1,183953E+20	1,643410E+22	2,368235E+20	1,667092E+22
-2593	8,217283E+21	8,216933E+21	1,183815E+20	1,184213E+20	1,643422E+22	2,368028E+20	1,667102E+22
-2592	8,217118E+21	8,217046E+21	1,183885E+20	1,183673E+20	1,643416E+22	2,367558E+20	1,667092E+22
-2591	8,216765E+21	8,217219E+21	1,184340E+20	1,184239E+20	1,643398E+22	2,368579E+20	1,667084E+22
-2590	8,216995E+21	8,216486E+21	1,183669E+20	1,184167E+20	1,643348E+22	2,367837E+20	1,667027E+22
-2589	8,216419E+21	8,216578E+21	1,184143E+20	1,183855E+20	1,643300E+22	2,367998E+20	1,666980E+22
-2588	8,216279E+21	8,216324E+21	1,184232E+20	1,184471E+20	1,643260E+22	2,368703E+20	1,666947E+22
-2587	8,216337E+21	8,215717E+21	1,183839E+20	1,184056E+20	1,643205E+22	2,367895E+20	1,666884E+22
-2586	8,215590E+21	8,215978E+21	1,184494E+20	1,184048E+20	1,643157E+22	2,368543E+20	1,666842E+22
-2585	8,215627E+21	8,215459E+21	1,184138E+20	1,184563E+20	1,643109E+22	2,368701E+20	1,666796E+22
-2584	8,215473E+21	8,215248E+21	1,184098E+20	1,184054E+20	1,643072E+22	2,368153E+20	1,666754E+22
-2583	8,215024E+21	8,215579E+21	1,184576E+20	1,184358E+20	1,643060E+22	2,368934E+20	1,666750E+22
-2582	8,215513E+21	8,215013E+21	1,183982E+20	1,184482E+20	1,643053E+22	2,368464E+20	1,666737E+22
-2581	8,215345E+21	8,215364E+21	1,184229E+20	1,183895E+20	1,643071E+22	2,368124E+20	1,666752E+22
-2580	8,215408E+21	8,215741E+21	1,184430E+20	1,184480E+20	1,643115E+22	2,368910E+20	1,666804E+22
-2579	8,215986E+21	8,215528E+21	1,183866E+20	1,184176E+20	1,643151E+22	2,368042E+20	1,666832E+22
-2578	8,215754E+21	8,216216E+21	1,184284E+20	1,183901E+20	1,643197E+22	2,368184E+20	1,666879E+22
-2577	8,216189E+21	8,216197E+21	1,184147E+20	1,184486E+20	1,643239E+22	2,368633E+20	1,666925E+22
-2576	8,216593E+21	8,216174E+21	1,183808E+20	1,183856E+20	1,643277E+22	2,367664E+20	1,666953E+22
-2575	8,216286E+21	8,216796E+21	1,184387E+20	1,184026E+20	1,643308E+22	2,368412E+20	1,666992E+22
-2574	8,216708E+21	8,216347E+21	1,183887E+20	1,184330E+20	1,643305E+22	2,368217E+20	1,666988E+22
-2573	8,216517E+21	8,216402E+21	1,183906E+20	1,183798E+20	1,643292E+22	2,367704E+20	1,666969E+22
-2572	8,216128E+21	8,216592E+21	1,184405E+20	1,184360E+20	1,643272E+22	2,368765E+20	1,666960E+22
-2571	8,216419E+21	8,215875E+21	1,183783E+20	1,184253E+20	1,643229E+22	2,368036E+20	1,666910E+22
-2570	8,215843E+21	8,215968E+21	1,184262E+20	1,183892E+20	1,643181E+22	2,368154E+20	1,666863E+22
-2569	8,215600E+21	8,215649E+21	1,184385E+20	1,184514E+20	1,643125E+22	2,368899E+20	1,666814E+22
-2568	8,215645E+21	8,215069E+21	1,183968E+20	1,184172E+20	1,643071E+22	2,368139E+20	1,666753E+22
-2567	8,214844E+21	8,215369E+21	1,184603E+20	1,184190E+20	1,643021E+22	2,368792E+20	1,666709E+22
-2566	8,214958E+21	8,214763E+21	1,184215E+20	1,184709E+20	1,642972E+22	2,368924E+20	1,666661E+22
-2565	8,214903E+21	8,214562E+21	1,184126E+20	1,184139E+20	1,642946E+22	2,368265E+20	1,666629E+22
-2564	8,214479E+21	8,214999E+21	1,184651E+20	1,184409E+20	1,642948E+22	2,369060E+20	1,666638E+22
-2563	8,215031E+21	8,214548E+21	1,184091E+20	1,184532E+20	1,642958E+22	2,368623E+20	1,666644E+22
-2562	8,214842E+21	8,214946E+21	1,184299E+20	1,183948E+20	1,642979E+22	2,368246E+20	1,666661E+22
-2561	8,214846E+21	8,215246E+21	1,184525E+20	1,184560E+20	1,643009E+22	2,369085E+20	1,666700E+22
-2560	8,215510E+21	8,215040E+21	1,183936E+20	1,184282E+20	1,643055E+22	2,368218E+20	1,666737E+22

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 ° Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
-2559	8,215277E+21	8,215749E+21	1,184363E+20	1,183982E+20	1,643103E+22	2,368345E+20	1,666786E+22
-2558	8,215758E+21	8,215649E+21	1,184228E+20	1,184551E+20	1,643141E+22	2,368779E+20	1,666829E+22
-2557	8,216142E+21	8,215617E+21	1,183844E+20	1,183919E+20	1,643176E+22	2,367763E+20	1,666854E+22
-2556	8,215697E+21	8,216289E+21	1,184471E+20	1,184115E+20	1,643199E+22	2,368586E+20	1,666884E+22
-2555	8,216115E+21	8,215842E+21	1,183992E+20	1,184430E+20	1,643196E+22	2,368423E+20	1,666880E+22
-2554	8,215910E+21	8,215828E+21	1,184000E+20	1,183871E+20	1,643174E+22	2,367871E+20	1,666853E+22
-2553	8,215461E+21	8,215899E+21	1,184541E+20	1,184404E+20	1,643136E+22	2,368945E+20	1,666825E+22
-2552	8,215795E+21	8,215193E+21	1,183916E+20	1,184325E+20	1,643099E+22	2,368241E+20	1,666781E+22
-2551	8,215151E+21	8,215341E+21	1,184384E+20	1,183997E+20	1,643049E+22	2,368381E+20	1,666733E+22
-2550	8,214908E+21	8,214960E+21	1,184466E+20	1,184659E+20	1,642987E+22	2,369125E+20	1,666678E+22
-2549	8,214982E+21	8,214369E+21	1,183998E+20	1,184326E+20	1,642935E+22	2,368324E+20	1,666618E+22
-2548	8,214190E+21	8,214741E+21	1,184668E+20	1,184313E+20	1,642893E+22	2,368980E+20	1,666583E+22
-2547	8,214405E+21	8,214191E+21	1,184326E+20	1,184783E+20	1,642860E+22	2,369109E+20	1,666551E+22
-2546	8,214375E+21	8,214019E+21	1,184229E+20	1,184165E+20	1,642839E+22	2,368394E+20	1,666523E+22
-2545	8,213871E+21	8,214423E+21	1,184778E+20	1,184448E+20	1,642829E+22	2,369226E+20	1,666522E+22
-2544	8,214434E+21	8,214029E+21	1,184194E+20	1,184633E+20	1,642846E+22	2,368827E+20	1,666535E+22
-2543	8,214268E+21	8,214462E+21	1,184373E+20	1,184071E+20	1,642873E+22	2,368444E+20	1,666557E+22
-2542	8,214381E+21	8,214676E+21	1,184578E+20	1,184665E+20	1,642906E+22	2,369243E+20	1,666598E+22
-2541	8,215116E+21	8,214495E+21	1,183958E+20	1,184333E+20	1,642961E+22	2,368292E+20	1,666644E+22
-2540	8,214867E+21	8,215304E+21	1,184431E+20	1,184019E+20	1,643017E+22	2,368450E+20	1,666702E+22
-2539	8,215314E+21	8,215262E+21	1,184333E+20	1,184588E+20	1,643058E+22	2,368921E+20	1,666747E+22
-2538	8,215600E+21	8,215202E+21	1,183917E+20	1,183982E+20	1,643080E+22	2,367899E+20	1,666759E+22
-2537	8,215038E+21	8,215717E+21	1,184580E+20	1,184207E+20	1,643075E+22	2,368787E+20	1,666763E+22
-2536	8,215475E+21	8,215229E+21	1,184090E+20	1,184546E+20	1,643070E+22	2,368636E+20	1,666757E+22
-2535	8,215279E+21	8,215181E+21	1,184110E+20	1,183981E+20	1,643046E+22	2,368091E+20	1,666727E+22
-2534	8,214874E+21	8,215147E+21	1,184635E+20	1,184502E+20	1,643002E+22	2,369137E+20	1,666693E+22
-2533	8,215186E+21	8,214481E+21	1,183973E+20	1,184444E+20	1,642967E+22	2,368417E+20	1,666651E+22
-2532	8,214467E+21	8,214715E+21	1,184465E+20	1,184140E+20	1,642918E+22	2,368605E+20	1,666604E+22
-2531	8,214260E+21	8,214370E+21	1,184567E+20	1,184785E+20	1,642863E+22	2,369352E+20	1,666557E+22
-2530	8,214354E+21	8,213770E+21	1,184090E+20	1,184405E+20	1,642812E+22	2,368494E+20	1,666497E+22
-2529	8,213520E+21	8,214070E+21	1,184804E+20	1,184346E+20	1,642759E+22	2,369150E+20	1,666451E+22
-2528	8,213781E+21	8,213585E+21	1,184463E+20	1,184829E+20	1,642737E+22	2,369291E+20	1,666430E+22
-2527	8,213723E+21	8,213464E+21	1,184347E+20	1,184246E+20	1,642719E+22	2,368593E+20	1,666405E+22
-2526	8,213275E+21	8,213811E+21	1,184841E+20	1,184564E+20	1,642709E+22	2,369405E+20	1,666403E+22
-2525	8,213930E+21	8,213454E+21	1,184210E+20	1,184760E+20	1,642738E+22	2,368970E+20	1,666428E+22
-2524	8,213810E+21	8,213984E+21	1,184409E+20	1,184167E+20	1,642779E+22	2,368576E+20	1,666465E+22
-2523	8,214023E+21	8,214264E+21	1,184661E+20	1,184706E+20	1,642829E+22	2,369367E+20	1,666522E+22
-2522	8,214728E+21	8,214101E+21	1,184042E+20	1,184332E+20	1,642883E+22	2,368374E+20	1,666567E+22
-2521	8,214310E+21	8,214833E+21	1,184554E+20	1,184057E+20	1,642914E+22	2,368611E+20	1,666600E+22
-2520	8,214683E+21	8,214786E+21	1,184442E+20	1,184681E+20	1,642947E+22	2,369122E+20	1,666638E+22
-2519	8,214936E+21	8,214651E+21	1,184008E+20	1,184127E+20	1,642959E+22	2,368135E+20	1,666640E+22
-2518	8,214456E+21	8,215004E+21	1,184641E+20	1,184335E+20	1,642946E+22	2,368976E+20	1,666636E+22
-2517	8,214952E+21	8,214513E+21	1,184127E+20	1,184645E+20	1,642946E+22	2,368771E+20	1,666634E+22
-2516	8,214743E+21	8,214557E+21	1,184186E+20	1,184072E+20	1,642930E+22	2,368258E+20	1,666613E+22
-2515	8,214326E+21	8,214594E+21	1,184728E+20	1,184586E+20	1,642892E+22	2,369314E+20	1,666585E+22
-2514	8,214558E+21	8,213940E+21	1,184059E+20	1,184536E+20	1,642850E+22	2,368595E+20	1,666536E+22
-2513	8,213739E+21	8,214074E+21	1,184594E+20	1,184248E+20	1,642781E+22	2,368842E+20	1,666470E+22
-2512	8,213537E+21	8,213741E+21	1,184700E+20	1,184867E+20	1,642728E+22	2,369567E+20	1,666423E+22
-2511	8,213655E+21	8,213121E+21	1,184236E+20	1,184497E+20	1,642678E+22	2,368733E+20	1,666365E+22

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 $\odot$ Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
-2510	8,212889E+21	8,213313E+21	1,184907E+20	1,184421E+20	1,642620E+22	2,369328E+20	1,666314E+22
-2509	8,213151E+21	8,212899E+21	1,184517E+20	1,184934E+20	1,642605E+22	2,369451E+20	1,666300E+22
-2508	8,213119E+21	8,212898E+21	1,184398E+20	1,184378E+20	1,642602E+22	2,368777E+20	1,666289E+22
-2507	8,212801E+21	8,213308E+21	1,184896E+20	1,184671E+20	1,642611E+22	2,369566E+20	1,666307E+22
-2506	8,213508E+21	8,213013E+21	1,184273E+20	1,184799E+20	1,642652E+22	2,369072E+20	1,666343E+22
-2505	8,213350E+21	8,213507E+21	1,184513E+20	1,184184E+20	1,642686E+22	2,368697E+20	1,666373E+22
-2504	8,213532E+21	8,213855E+21	1,184777E+20	1,184722E+20	1,642739E+22	2,369498E+20	1,666434E+22
-2503	8,214152E+21	8,213681E+21	1,184139E+20	1,184420E+20	1,642783E+22	2,368559E+20	1,666469E+22
-2502	8,213735E+21	8,214237E+21	1,184605E+20	1,184188E+20	1,642797E+22	2,368793E+20	1,666485E+22
-2501	8,214130E+21	8,214164E+21	1,184456E+20	1,184822E+20	1,642829E+22	2,369278E+20	1,666522E+22
-2500	8,214419E+21	8,214062E+21	1,184054E+20	1,184252E+20	1,642848E+22	2,368306E+20	1,666531E+22
-2499	8,214033E+21	8,214427E+21	1,184721E+20	1,184404E+20	1,642846E+22	2,369125E+20	1,666537E+22
-2498	8,214473E+21	8,213971E+21	1,184224E+20	1,184673E+20	1,642844E+22	2,368898E+20	1,666533E+22
-2497	8,214078E+21	8,213967E+21	1,184328E+20	1,184145E+20	1,642804E+22	2,368473E+20	1,666489E+22
-2496	8,213583E+21	8,214028E+21	1,184866E+20	1,184675E+20	1,642761E+22	2,369541E+20	1,666457E+22
-2495	8,213782E+21	8,213303E+21	1,184204E+20	1,184669E+20	1,642708E+22	2,368873E+20	1,666397E+22
-2494	8,213020E+21	8,213278E+21	1,184706E+20	1,184356E+20	1,642630E+22	2,369063E+20	1,666320E+22
-2493	8,212875E+21	8,212969E+21	1,184770E+20	1,184951E+20	1,642584E+22	2,369720E+20	1,666282E+22
-2492	8,213004E+21	8,212449E+21	1,184321E+20	1,184597E+20	1,642545E+22	2,368919E+20	1,666235E+22
-2491	8,212318E+21	8,212718E+21	1,184965E+20	1,184524E+20	1,642504E+22	2,369488E+20	1,666199E+22
-2490	8,212602E+21	8,212369E+21	1,184570E+20	1,185023E+20	1,642497E+22	2,369594E+20	1,666193E+22
-2489	8,212550E+21	8,212358E+21	1,184485E+20	1,184473E+20	1,642491E+22	2,368958E+20	1,666180E+22
-2488	8,212295E+21	8,212854E+21	1,184993E+20	1,184717E+20	1,642515E+22	2,369711E+20	1,666212E+22
-2487	8,213017E+21	8,212568E+21	1,184398E+20	1,184854E+20	1,642559E+22	2,369253E+20	1,666251E+22
-2486	8,212870E+21	8,212953E+21	1,184593E+20	1,184249E+20	1,642582E+22	2,368843E+20	1,666271E+22
-2485	8,212993E+21	8,213321E+21	1,184811E+20	1,184818E+20	1,642631E+22	2,369629E+20	1,666328E+22
-2484	8,213592E+21	8,213177E+21	1,184177E+20	1,184557E+20	1,642677E+22	2,368735E+20	1,666364E+22
-2483	8,213292E+21	8,213697E+21	1,184646E+20	1,184302E+20	1,642699E+22	2,368947E+20	1,666388E+22
-2482	8,213702E+21	8,213641E+21	1,184523E+20	1,184856E+20	1,642734E+22	2,369380E+20	1,666428E+22
-2481	8,213918E+21	8,213502E+21	1,184181E+20	1,184284E+20	1,642742E+22	2,368465E+20	1,666427E+22
-2480	8,213455E+21	8,213928E+21	1,184857E+20	1,184424E+20	1,642738E+22	2,369281E+20	1,666431E+22
-2479	8,213778E+21	8,213456E+21	1,184366E+20	1,184774E+20	1,642723E+22	2,369140E+20	1,666415E+22
-2478	8,213366E+21	8,213258E+21	1,184421E+20	1,184297E+20	1,642662E+22	2,368718E+20	1,666350E+22
-2477	8,212860E+21	8,213287E+21	1,184917E+20	1,184816E+20	1,642615E+22	2,369733E+20	1,666312E+22
-2476	8,213098E+21	8,212593E+21	1,184282E+20	1,184811E+20	1,642569E+22	2,369093E+20	1,666260E+22
-2475	8,212461E+21	8,212553E+21	1,184796E+20	1,184448E+20	1,642501E+22	2,369244E+20	1,666194E+22
-2474	8,212282E+21	8,212319E+21	1,184857E+20	1,184995E+20	1,642460E+22	2,369852E+20	1,666159E+22
-2473	8,212304E+21	8,211816E+21	1,184441E+20	1,184697E+20	1,642412E+22	2,369138E+20	1,666103E+22
-2472	8,211644E+21	8,212169E+21	1,185061E+20	1,184612E+20	1,642381E+22	2,369673E+20	1,666078E+22
-2471	8,211988E+21	8,211841E+21	1,184692E+20	1,185137E+20	1,642383E+22	2,369828E+20	1,666081E+22
-2470	8,212036E+21	8,211733E+21	1,184568E+20	1,184550E+20	1,642377E+22	2,369118E+20	1,666068E+22
-2469	8,211827E+21	8,212293E+21	1,185045E+20	1,184760E+20	1,642412E+22	2,369805E+20	1,666110E+22
-2468	8,212522E+21	8,212108E+21	1,184466E+20	1,184923E+20	1,642463E+22	2,369389E+20	1,666157E+22
-2467	8,212418E+21	8,212494E+21	1,184634E+20	1,184343E+20	1,642491E+22	2,368976E+20	1,666181E+22
-2466	8,212512E+21	8,212871E+21	1,184857E+20	1,184882E+20	1,642538E+22	2,369739E+20	1,666236E+22
-2465	8,213043E+21	8,212671E+21	1,184271E+20	1,184641E+20	1,642571E+22	2,368912E+20	1,666261E+22
-2464	8,212788E+21	8,213221E+21	1,184754E+20	1,184337E+20	1,642601E+22	2,369091E+20	1,666292E+22
-2463	8,213185E+21	8,213125E+21	1,184675E+20	1,184907E+20	1,642631E+22	2,369582E+20	1,666327E+22
-2462	8,213337E+21	8,212856E+21	1,184291E+20	1,184369E+20	1,642619E+22	2,368660E+20	1,666306E+22

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 ° Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
-2461	8,212795E+21	8,213286E+21	1,184912E+20	1,184548E+20	1,642608E+22	2,369460E+20	1,666303E+22
-2460	8,213074E+21	8,212818E+21	1,184432E+20	1,184939E+20	1,642589E+22	2,369371E+20	1,666283E+22
-2459	8,212768E+21	8,212566E+21	1,184484E+20	1,184450E+20	1,642533E+22	2,368934E+20	1,666223E+22
-2458	8,212271E+21	8,212609E+21	1,184995E+20	1,184864E+20	1,642488E+22	2,369859E+20	1,666187E+22
-2457	8,212431E+21	8,211903E+21	1,184419E+20	1,184874E+20	1,642433E+22	2,369293E+20	1,666126E+22
-2456	8,211775E+21	8,211948E+21	1,184922E+20	1,184491E+20	1,642372E+22	2,369413E+20	1,666066E+22
-2455	8,211564E+21	8,211726E+21	1,184989E+20	1,185104E+20	1,642329E+22	2,370093E+20	1,666030E+22
-2454	8,211633E+21	8,211123E+21	1,184530E+20	1,184838E+20	1,642276E+22	2,369369E+20	1,665969E+22
-2453	8,211051E+21	8,211528E+21	1,185095E+20	1,184730E+20	1,642258E+22	2,369825E+20	1,665956E+22
-2452	8,211470E+21	8,211294E+21	1,184769E+20	1,185237E+20	1,642276E+22	2,370007E+20	1,665977E+22
-2451	8,211645E+21	8,211206E+21	1,184637E+20	1,184617E+20	1,642285E+22	2,369254E+20	1,665978E+22
-2450	8,211368E+21	8,211841E+21	1,185111E+20	1,184769E+20	1,642321E+22	2,369880E+20	1,666020E+22
-2449	8,211927E+21	8,211650E+21	1,184566E+20	1,184998E+20	1,642358E+22	2,369564E+20	1,666053E+22
-2448	8,211836E+21	8,212042E+21	1,184725E+20	1,184404E+20	1,642388E+22	2,369129E+20	1,666079E+22
-2447	8,211961E+21	8,212384E+21	1,184982E+20	1,184967E+20	1,642435E+22	2,369948E+20	1,666134E+22
-2446	8,212552E+21	8,212051E+21	1,184364E+20	1,184716E+20	1,642460E+22	2,369080E+20	1,666151E+22
-2445	8,212303E+21	8,212620E+21	1,184800E+20	1,184408E+20	1,642492E+22	2,369208E+20	1,666184E+22
-2444	8,212640E+21	8,212598E+21	1,184738E+20	1,185014E+20	1,642524E+22	2,369752E+20	1,666221E+22
-2443	8,212820E+21	8,212284E+21	1,184330E+20	1,184516E+20	1,642510E+22	2,368846E+20	1,666199E+22
-2442	8,212215E+21	8,212702E+21	1,184964E+20	1,184635E+20	1,642492E+22	2,369600E+20	1,666188E+22
-2441	8,212395E+21	8,212189E+21	1,184547E+20	1,185042E+20	1,642458E+22	2,369590E+20	1,666154E+22
-2440	8,212107E+21	8,211945E+21	1,184629E+20	1,184500E+20	1,642405E+22	2,369130E+20	1,666096E+22
-2439	8,211591E+21	8,211957E+21	1,185171E+20	1,184923E+20	1,642355E+22	2,370094E+20	1,666056E+22
-2438	8,211694E+21	8,211143E+21	1,184551E+20	1,184979E+20	1,642284E+22	2,369530E+20	1,665979E+22
-2437	8,211035E+21	8,211215E+21	1,184978E+20	1,184626E+20	1,642225E+22	2,369604E+20	1,665921E+22
-2436	8,210878E+21	8,211061E+21	1,185060E+20	1,185259E+20	1,642194E+22	2,370319E+20	1,665897E+22
-2435	8,211118E+21	8,210484E+21	1,184595E+20	1,184966E+20	1,642160E+22	2,369561E+20	1,665856E+22
-2434	8,210587E+21	8,210980E+21	1,185162E+20	1,184744E+20	1,642157E+22	2,369906E+20	1,665856E+22
-2433	8,210916E+21	8,210798E+21	1,184901E+20	1,185264E+20	1,642171E+22	2,370166E+20	1,665873E+22
-2432	8,211060E+21	8,210802E+21	1,184747E+20	1,184640E+20	1,642186E+22	2,369388E+20	1,665880E+22
-2431	8,210761E+21	8,211393E+21	1,185224E+20	1,184855E+20	1,642215E+22	2,370078E+20	1,665916E+22
-2430	8,211326E+21	8,211060E+21	1,184637E+20	1,185119E+20	1,642239E+22	2,369756E+20	1,665936E+22
-2429	8,211333E+21	8,211453E+21	1,184739E+20	1,184519E+20	1,642279E+22	2,369258E+20	1,665971E+22
-2428	8,211532E+21	8,211839E+21	1,185044E+20	1,185065E+20	1,642337E+22	2,370110E+20	1,666038E+22
-2427	8,212204E+21	8,211516E+21	1,184422E+20	1,184805E+20	1,642372E+22	2,369227E+20	1,666064E+22
-2426	8,211854E+21	8,212137E+21	1,184852E+20	1,184451E+20	1,642399E+22	2,369303E+20	1,666092E+22
-2425	8,212006E+21	8,212095E+21	1,184840E+20	1,185108E+20	1,642410E+22	2,369948E+20	1,666110E+22
-2424	8,212163E+21	8,211769E+21	1,184444E+20	1,184600E+20	1,642393E+22	2,369044E+20	1,666084E+22
-2423	8,211552E+21	8,212102E+21	1,185122E+20	1,184717E+20	1,642365E+22	2,369839E+20	1,666064E+22
-2422	8,211711E+21	8,211442E+21	1,184685E+20	1,185116E+20	1,642315E+22	2,369801E+20	1,666013E+22
-2421	8,211421E+21	8,211193E+21	1,184717E+20	1,184591E+20	1,642261E+22	2,369308E+20	1,665954E+22
-2420	8,210876E+21	8,211261E+21	1,185255E+20	1,185054E+20	1,642214E+22	2,370309E+20	1,665917E+22
-2419	8,211065E+21	8,210442E+21	1,184607E+20	1,185152E+20	1,642151E+22	2,369759E+20	1,665848E+22
-2418	8,210430E+21	8,210571E+21	1,185019E+20	1,184726E+20	1,642100E+22	2,369745E+20	1,665798E+22
-2417	8,210253E+21	8,210472E+21	1,185165E+20	1,185356E+20	1,642073E+22	2,370521E+20	1,665778E+22
-2416	8,210553E+21	8,209970E+21	1,184736E+20	1,184995E+20	1,642052E+22	2,369730E+20	1,665750E+22
-2415	8,210007E+21	8,210475E+21	1,185320E+20	1,184778E+20	1,642048E+22	2,370098E+20	1,665749E+22
-2414	8,210259E+21	8,210208E+21	1,185009E+20	1,185345E+20	1,642047E+22	2,370354E+20	1,665750E+22
-2413	8,210413E+21	8,210201E+21	1,184777E+20	1,184766E+20	1,642061E+22	2,369543E+20	1,665757E+22

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 ° Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
-2412	8,210203E+21	8,210820E+21	1,185263E+20	1,185001E+20	1,642102E+22	2,370263E+20	1,665805E+22
-2411	8,210948E+21	8,210491E+21	1,184672E+20	1,185237E+20	1,642144E+22	2,369909E+20	1,665843E+22
-2410	8,211002E+21	8,210955E+21	1,184775E+20	1,184532E+20	1,642196E+22	2,369307E+20	1,665889E+22
-2409	8,211087E+21	8,211404E+21	1,185147E+20	1,185098E+20	1,642249E+22	2,370244E+20	1,665952E+22
-2408	8,211672E+21	8,211146E+21	1,184534E+20	1,184834E+20	1,642282E+22	2,369368E+20	1,665976E+22
-2407	8,211246E+21	8,211690E+21	1,184985E+20	1,184539E+20	1,642294E+22	2,369525E+20	1,665989E+22
-2406	8,211311E+21	8,211468E+21	1,184948E+20	1,185214E+20	1,642278E+22	2,370162E+20	1,665980E+22
-2405	8,211492E+21	8,211077E+21	1,184514E+20	1,184727E+20	1,642257E+22	2,369241E+20	1,665949E+22
-2404	8,210921E+21	8,211382E+21	1,185227E+20	1,184835E+20	1,642230E+22	2,370062E+20	1,665931E+22
-2403	8,211129E+21	8,210704E+21	1,184767E+20	1,185243E+20	1,642183E+22	2,370010E+20	1,665883E+22
-2402	8,210785E+21	8,210504E+21	1,184774E+20	1,184683E+20	1,642129E+22	2,369457E+20	1,665823E+22
-2401	8,210139E+21	8,210596E+21	1,185347E+20	1,185178E+20	1,642074E+22	2,370526E+20	1,665779E+22
-2400	8,210376E+21	8,209859E+21	1,184734E+20	1,185243E+20	1,642024E+22	2,369977E+20	1,665723E+22
-2399	8,209813E+21	8,209981E+21	1,185169E+20	1,184799E+20	1,641979E+22	2,369968E+20	1,665679E+22
-2398	8,209608E+21	8,209810E+21	1,185299E+20	1,185404E+20	1,641942E+22	2,370703E+20	1,665649E+22
-2397	8,209918E+21	8,209356E+21	1,184810E+20	1,185076E+20	1,641927E+22	2,369886E+20	1,665626E+22
-2396	8,209378E+21	8,209894E+21	1,185380E+20	1,184898E+20	1,641927E+22	2,370278E+20	1,665630E+22
-2395	8,209727E+21	8,209617E+21	1,185037E+20	1,185492E+20	1,641934E+22	2,370528E+20	1,665640E+22
-2394	8,209950E+21	8,209660E+21	1,184783E+20	1,184846E+20	1,641961E+22	2,369629E+20	1,665657E+22
-2393	8,209751E+21	8,210334E+21	1,185335E+20	1,185072E+20	1,642009E+22	2,370407E+20	1,665713E+22
-2392	8,210552E+21	8,210102E+21	1,184802E+20	1,185243E+20	1,642065E+22	2,370045E+20	1,665766E+22
-2391	8,210563E+21	8,210559E+21	1,184916E+20	1,184562E+20	1,642112E+22	2,369478E+20	1,665807E+22
-2390	8,210481E+21	8,210897E+21	1,185253E+20	1,185165E+20	1,642138E+22	2,370418E+20	1,665842E+22
-2389	8,211017E+21	8,210573E+21	1,184584E+20	1,184963E+20	1,642159E+22	2,369547E+20	1,665855E+22
-2388	8,210614E+21	8,211057E+21	1,185059E+20	1,184695E+20	1,642167E+22	2,369754E+20	1,665865E+22
-2387	8,210773E+21	8,210777E+21	1,185010E+20	1,185339E+20	1,642155E+22	2,370350E+20	1,665859E+22
-2386	8,210952E+21	8,210399E+21	1,184576E+20	1,184784E+20	1,642135E+22	2,369360E+20	1,665829E+22
-2385	8,210282E+21	8,210741E+21	1,185327E+20	1,184918E+20	1,642102E+22	2,370245E+20	1,665805E+22
-2384	8,210449E+21	8,210125E+21	1,184888E+20	1,185318E+20	1,642057E+22	2,370206E+20	1,665759E+22
-2383	8,210088E+21	8,209887E+21	1,184907E+20	1,184797E+20	1,641998E+22	2,369704E+20	1,665695E+22
-2382	8,209403E+21	8,209891E+21	1,185450E+20	1,185286E+20	1,641929E+22	2,370736E+20	1,665637E+22
-2381	8,209698E+21	8,209162E+21	1,184828E+20	1,185355E+20	1,641886E+22	2,370184E+20	1,665588E+22
-2380	8,209195E+21	8,209311E+21	1,185287E+20	1,184903E+20	1,641851E+22	2,370190E+20	1,665553E+22
-2379	8,209034E+21	8,209157E+21	1,185380E+20	1,185501E+20	1,641819E+22	2,370881E+20	1,665528E+22
-2378	8,209305E+21	8,208758E+21	1,184850E+20	1,185155E+20	1,641806E+22	2,370005E+20	1,665506E+22
-2377	8,208746E+21	8,209324E+21	1,185440E+20	1,185006E+20	1,641807E+22	2,370446E+20	1,665512E+22
-2376	8,209192E+21	8,209140E+21	1,185143E+20	1,185547E+20	1,641833E+22	2,370689E+20	1,665540E+22
-2375	8,209513E+21	8,209204E+21	1,184910E+20	1,184882E+20	1,641872E+22	2,369792E+20	1,665570E+22
-2374	8,209271E+21	8,209823E+21	1,185441E+20	1,185098E+20	1,641909E+22	2,370539E+20	1,665615E+22
-2373	8,210035E+21	8,209630E+21	1,184873E+20	1,185311E+20	1,641966E+22	2,370184E+20	1,665668E+22
-2372	8,210015E+21	8,210065E+21	1,184972E+20	1,184699E+20	1,642008E+22	2,369672E+20	1,665705E+22
-2371	8,209955E+21	8,210329E+21	1,185280E+20	1,185307E+20	1,642028E+22	2,370587E+20	1,665734E+22
-2370	8,210498E+21	8,209989E+21	1,184597E+20	1,185064E+20	1,642049E+22	2,369661E+20	1,665745E+22
-2369	8,210069E+21	8,210442E+21	1,185145E+20	1,184786E+20	1,642051E+22	2,369932E+20	1,665750E+22
-2368	8,210224E+21	8,210223E+21	1,185157E+20	1,185365E+20	1,642045E+22	2,370522E+20	1,665750E+22
-2367	8,210349E+21	8,209820E+21	1,184732E+20	1,184851E+20	1,642017E+22	2,369582E+20	1,665713E+22
-2366	8,209518E+21	8,210046E+21	1,185433E+20	1,185016E+20	1,641956E+22	2,370449E+20	1,665661E+22
-2365	8,209685E+21	8,209415E+21	1,184967E+20	1,185463E+20	1,641910E+22	2,370429E+20	1,665614E+22
-2364	8,209403E+21	8,209161E+21	1,185009E+20	1,184957E+20	1,641856E+22	2,369965E+20	1,665556E+22

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 ° Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
-2363	8,208817E+21	8,209161E+21	1,185530E+20	1,185387E+20	1,641798E+22	2,370917E+20	1,665507E+22
-2362	8,209117E+21	8,208502E+21	1,184904E+20	1,185409E+20	1,641762E+22	2,370314E+20	1,665465E+22
-2361	8,208535E+21	8,208714E+21	1,185381E+20	1,184987E+20	1,641725E+22	2,370368E+20	1,665429E+22
-2360	8,208370E+21	8,208647E+21	1,185491E+20	1,185562E+20	1,641702E+22	2,371052E+20	1,665412E+22
-2359	8,208689E+21	8,208227E+21	1,184959E+20	1,185253E+20	1,641692E+22	2,370212E+20	1,665394E+22
-2358	8,208139E+21	8,208720E+21	1,185511E+20	1,185092E+20	1,641686E+22	2,370603E+20	1,665392E+22
-2357	8,208692E+21	8,208575E+21	1,185222E+20	1,185629E+20	1,641727E+22	2,370851E+20	1,665435E+22
-2356	8,209081E+21	8,208679E+21	1,185003E+20	1,184976E+20	1,641776E+22	2,369978E+20	1,665476E+22
-2355	8,208849E+21	8,209311E+21	1,185488E+20	1,185189E+20	1,641816E+22	2,370677E+20	1,665523E+22
-2354	8,209525E+21	8,209139E+21	1,184893E+20	1,185387E+20	1,641866E+22	2,370281E+20	1,665569E+22
-2353	8,209453E+21	8,209555E+21	1,185023E+20	1,184817E+20	1,641901E+22	2,369840E+20	1,665599E+22
-2352	8,209429E+21	8,209842E+21	1,185393E+20	1,185346E+20	1,641927E+22	2,370739E+20	1,665634E+22
-2351	8,209981E+21	8,209457E+21	1,184741E+20	1,185099E+20	1,641944E+22	2,369840E+20	1,665642E+22
-2350	8,209454E+21	8,209805E+21	1,185267E+20	1,184826E+20	1,641926E+22	2,370093E+20	1,665627E+22
-2349	8,209547E+21	8,209584E+21	1,185257E+20	1,185449E+20	1,641913E+22	2,370706E+20	1,665620E+22
-2348	8,209648E+21	8,209152E+21	1,184829E+20	1,185012E+20	1,641880E+22	2,369841E+20	1,665578E+22
-2347	8,208865E+21	8,209320E+21	1,185481E+20	1,185169E+20	1,641819E+22	2,370650E+20	1,665525E+22
-2346	8,209046E+21	8,208716E+21	1,185017E+20	1,185573E+20	1,641776E+22	2,370590E+20	1,665482E+22
-2345	8,208772E+21	8,208491E+21	1,185118E+20	1,185067E+20	1,641726E+22	2,370186E+20	1,665428E+22
-2344	8,208197E+21	8,208577E+21	1,185683E+20	1,185412E+20	1,641677E+22	2,371096E+20	1,665388E+22
-2343	8,208445E+21	8,207928E+21	1,185058E+20	1,185480E+20	1,641637E+22	2,370538E+20	1,665343E+22
-2342	8,207753E+21	8,208035E+21	1,185476E+20	1,185086E+20	1,641579E+22	2,370561E+20	1,665284E+22
-2341	8,207658E+21	8,207979E+21	1,185564E+20	1,185684E+20	1,641564E+22	2,371248E+20	1,665276E+22
-2340	8,208123E+21	8,207594E+21	1,185047E+20	1,185391E+20	1,641572E+22	2,370438E+20	1,665276E+22
-2339	8,207720E+21	8,208115E+21	1,185554E+20	1,185171E+20	1,641584E+22	2,370725E+20	1,665291E+22
-2338	8,208296E+21	8,208083E+21	1,185267E+20	1,185671E+20	1,641638E+22	2,370938E+20	1,665347E+22
-2337	8,208615E+21	8,208253E+21	1,185059E+20	1,185051E+20	1,641687E+22	2,370110E+20	1,665388E+22
-2336	8,208349E+21	8,208940E+21	1,185578E+20	1,185222E+20	1,641729E+22	2,370801E+20	1,665437E+22
-2335	8,209007E+21	8,208720E+21	1,184993E+20	1,185451E+20	1,641773E+22	2,370445E+20	1,665477E+22
-2334	8,208851E+21	8,208987E+21	1,185113E+20	1,184886E+20	1,641784E+22	2,369998E+20	1,665484E+22
-2333	8,208857E+21	8,209246E+21	1,185506E+20	1,185408E+20	1,641810E+22	2,370914E+20	1,665519E+22
-2332	8,209417E+21	8,208835E+21	1,184868E+20	1,185210E+20	1,641825E+22	2,370078E+20	1,665526E+22
-2331	8,208864E+21	8,209128E+21	1,185323E+20	1,184949E+20	1,641799E+22	2,370272E+20	1,665502E+22
-2330	8,208898E+21	8,208910E+21	1,185290E+20	1,185572E+20	1,641781E+22	2,370862E+20	1,665489E+22
-2329	8,208981E+21	8,208481E+21	1,184897E+20	1,185169E+20	1,641746E+22	2,370066E+20	1,665447E+22
-2328	8,208256E+21	8,208714E+21	1,185607E+20	1,185228E+20	1,641697E+22	2,370835E+20	1,665405E+22
-2327	8,208438E+21	8,208113E+21	1,185179E+20	1,185622E+20	1,641655E+22	2,370801E+20	1,665363E+22
-2326	8,208035E+21	8,207812E+21	1,185258E+20	1,185134E+20	1,641585E+22	2,370392E+20	1,665289E+22
-2325	8,207423E+21	8,207909E+21	1,185791E+20	1,185504E+20	1,641533E+22	2,371295E+20	1,665246E+22
-2324	8,207698E+21	8,207238E+21	1,185158E+20	1,185648E+20	1,641494E+22	2,370806E+20	1,665202E+22
-2323	8,207134E+21	8,207309E+21	1,185500E+20	1,185230E+20	1,641444E+22	2,370730E+20	1,665152E+22
-2322	8,207136E+21	8,207326E+21	1,185599E+20	1,185771E+20	1,641446E+22	2,371370E+20	1,665160E+22
-2321	8,207668E+21	8,207056E+21	1,185137E+20	1,185467E+20	1,641472E+22	2,370604E+20	1,665178E+22
-2320	8,207316E+21	8,207708E+21	1,185674E+20	1,185170E+20	1,641502E+22	2,370843E+20	1,665211E+22
-2319	8,207799E+21	8,207711E+21	1,185395E+20	1,185701E+20	1,641551E+22	2,371096E+20	1,665262E+22
-2318	8,207973E+21	8,207769E+21	1,185140E+20	1,185125E+20	1,641574E+22	2,370265E+20	1,665277E+22
-2317	8,207731E+21	8,208405E+21	1,185663E+20	1,185302E+20	1,641614E+22	2,370965E+20	1,665323E+22
-2316	8,208447E+21	8,208146E+21	1,185099E+20	1,185559E+20	1,641659E+22	2,370658E+20	1,665366E+22
-2315	8,208370E+21	8,208345E+21	1,185169E+20	1,184971E+20	1,641672E+22	2,370140E+20	1,665373E+22

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 ° Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
-2314	8,208346E+21	8,208637E+21	1,185556E+20	1,185481E+20	1,641698E+22	2,371037E+20	1,665409E+22
-2313	8,208835E+21	8,208270E+21	1,184930E+20	1,185343E+20	1,641710E+22	2,370273E+20	1,665413E+22
-2312	8,208287E+21	8,208588E+21	1,185405E+20	1,185041E+20	1,641687E+22	2,370447E+20	1,665392E+22
-2311	8,208296E+21	8,208350E+21	1,185394E+20	1,185664E+20	1,641665E+22	2,371059E+20	1,665375E+22
-2310	8,208283E+21	8,207810E+21	1,185016E+20	1,185266E+20	1,641609E+22	2,370281E+20	1,665312E+22
-2309	8,207571E+21	8,208030E+21	1,185758E+20	1,185292E+20	1,641560E+22	2,371050E+20	1,665271E+22
-2308	8,207725E+21	8,207425E+21	1,185339E+20	1,185741E+20	1,641515E+22	2,371079E+20	1,665226E+22
-2307	8,207294E+21	8,207056E+21	1,185337E+20	1,185267E+20	1,641435E+22	2,370604E+20	1,665141E+22
-2306	8,206694E+21	8,207163E+21	1,185829E+20	1,185631E+20	1,641386E+22	2,371460E+20	1,665100E+22
-2305	8,207049E+21	8,206548E+21	1,185226E+20	1,185790E+20	1,641360E+22	2,371016E+20	1,665070E+22
-2304	8,206635E+21	8,206739E+21	1,185599E+20	1,185265E+20	1,641337E+22	2,370864E+20	1,665046E+22
-2303	8,206693E+21	8,206855E+21	1,185728E+20	1,185786E+20	1,641355E+22	2,371514E+20	1,665070E+22
-2302	8,207095E+21	8,206578E+21	1,185253E+20	1,185501E+20	1,641367E+22	2,370755E+20	1,665075E+22
-2301	8,206712E+21	8,207257E+21	1,185767E+20	1,185227E+20	1,641397E+22	2,370994E+20	1,665107E+22
-2300	8,207195E+21	8,207218E+21	1,185488E+20	1,185829E+20	1,641441E+22	2,371317E+20	1,665154E+22
-2299	8,207425E+21	8,207174E+21	1,185155E+20	1,185254E+20	1,641460E+22	2,370409E+20	1,665164E+22
-2298	8,207247E+21	8,207799E+21	1,185688E+20	1,185397E+20	1,641505E+22	2,371085E+20	1,665215E+22
-2297	8,207991E+21	8,207587E+21	1,185171E+20	1,185659E+20	1,641558E+22	2,370831E+20	1,665266E+22
-2296	8,207938E+21	8,207854E+21	1,185266E+20	1,185019E+20	1,641579E+22	2,370285E+20	1,665282E+22
-2295	8,207814E+21	8,208151E+21	1,185657E+20	1,185550E+20	1,641596E+22	2,371207E+20	1,665309E+22
-2294	8,208138E+21	8,207675E+21	1,185027E+20	1,185450E+20	1,641581E+22	2,370477E+20	1,665286E+22
-2293	8,207611E+21	8,207956E+21	1,185523E+20	1,185133E+20	1,641557E+22	2,370656E+20	1,665263E+22
-2292	8,207633E+21	8,207689E+21	1,185545E+20	1,185767E+20	1,641532E+22	2,371312E+20	1,665245E+22
-2291	8,207639E+21	8,207078E+21	1,185118E+20	1,185366E+20	1,641472E+22	2,370484E+20	1,665176E+22
-2290	8,206876E+21	8,207298E+21	1,185839E+20	1,185381E+20	1,641417E+22	2,371220E+20	1,665130E+22
-2289	8,206971E+21	8,206740E+21	1,185423E+20	1,185879E+20	1,641371E+22	2,371302E+20	1,665084E+22
-2288	8,206627E+21	8,206402E+21	1,185423E+20	1,185369E+20	1,641303E+22	2,370792E+20	1,665011E+22
-2287	8,206073E+21	8,206538E+21	1,185921E+20	1,185709E+20	1,641261E+22	2,371630E+20	1,664977E+22
-2286	8,206401E+21	8,205917E+21	1,185348E+20	1,185866E+20	1,641232E+22	2,371214E+20	1,664944E+22
-2285	8,206075E+21	8,206172E+21	1,185732E+20	1,185307E+20	1,641225E+22	2,371039E+20	1,664935E+22
-2284	8,206119E+21	8,206341E+21	1,185863E+20	1,185882E+20	1,641246E+22	2,371745E+20	1,664963E+22
-2283	8,206494E+21	8,206016E+21	1,185296E+20	1,185621E+20	1,641251E+22	2,370917E+20	1,664960E+22
-2282	8,206133E+21	8,206668E+21	1,185774E+20	1,185348E+20	1,641280E+22	2,371122E+20	1,664991E+22
-2281	8,206669E+21	8,206673E+21	1,185528E+20	1,185947E+20	1,641334E+22	2,371475E+20	1,665049E+22
-2280	8,207032E+21	8,206680E+21	1,185227E+20	1,185295E+20	1,641371E+22	2,370523E+20	1,665076E+22
-2279	8,206862E+21	8,207342E+21	1,185787E+20	1,185420E+20	1,641420E+22	2,371207E+20	1,665132E+22
-2278	8,207432E+21	8,207098E+21	1,185280E+20	1,185717E+20	1,641453E+22	2,370997E+20	1,665163E+22
-2277	8,207341E+21	8,207352E+21	1,185367E+20	1,185097E+20	1,641469E+22	2,370464E+20	1,665174E+22
-2276	8,207191E+21	8,207594E+21	1,185763E+20	1,185683E+20	1,641479E+22	2,371445E+20	1,665193E+22
-2275	8,207505E+21	8,207003E+21	1,185088E+20	1,185576E+20	1,641451E+22	2,370664E+20	1,665157E+22
-2274	8,207002E+21	8,207247E+21	1,185601E+20	1,185237E+20	1,641425E+22	2,370838E+20	1,665133E+22
-2273	8,207003E+21	8,207013E+21	1,185659E+20	1,185863E+20	1,641402E+22	2,371523E+20	1,665117E+22
-2272	8,206992E+21	8,206437E+21	1,185242E+20	1,185450E+20	1,641343E+22	2,370692E+20	1,665050E+22
-2271	8,206163E+21	8,206645E+21	1,185938E+20	1,185476E+20	1,641281E+22	2,371415E+20	1,664995E+22
-2270	8,206150E+21	8,206008E+21	1,185525E+20	1,186002E+20	1,641216E+22	2,371527E+20	1,664931E+22
-2269	8,205917E+21	8,205697E+21	1,185541E+20	1,185458E+20	1,641161E+22	2,370998E+20	1,664871E+22
-2268	8,205461E+21	8,205883E+21	1,186052E+20	1,185806E+20	1,641134E+22	2,371858E+20	1,664853E+22
-2267	8,205825E+21	8,205274E+21	1,185437E+20	1,185956E+20	1,641110E+22	2,371393E+20	1,664824E+22
-2266	8,205507E+21	8,205586E+21	1,185775E+20	1,185407E+20	1,641109E+22	2,371182E+20	1,664821E+22

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 $\odot$ Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
-2265	8,205536E+21	8,205822E+21	1,185908E+20	1,186003E+20	1,641136E+22	2,371911E+20	1,664855E+22
-2264	8,205999E+21	8,205531E+21	1,185342E+20	1,185710E+20	1,641153E+22	2,371052E+20	1,664863E+22
-2263	8,205675E+21	8,206182E+21	1,185831E+20	1,185402E+20	1,641186E+22	2,371233E+20	1,664898E+22
-2262	8,206137E+21	8,206157E+21	1,185640E+20	1,185989E+20	1,641229E+22	2,371630E+20	1,664946E+22
-2261	8,206551E+21	8,206194E+21	1,185366E+20	1,185318E+20	1,641274E+22	2,370684E+20	1,664981E+22
-2260	8,206322E+21	8,206858E+21	1,185919E+20	1,185509E+20	1,641318E+22	2,371427E+20	1,665032E+22
-2259	8,206822E+21	8,206522E+21	1,185345E+20	1,185835E+20	1,641334E+22	2,371180E+20	1,665046E+22
-2258	8,206745E+21	8,206699E+21	1,185401E+20	1,185229E+20	1,641344E+22	2,370630E+20	1,665051E+22
-2257	8,206597E+21	8,206969E+21	1,185830E+20	1,185789E+20	1,641357E+22	2,371619E+20	1,665073E+22
-2256	8,206989E+21	8,206405E+21	1,185186E+20	1,185643E+20	1,641339E+22	2,370829E+20	1,665048E+22
-2255	8,206427E+21	8,206642E+21	1,185719E+20	1,185290E+20	1,641307E+22	2,371009E+20	1,665017E+22
-2254	8,206218E+21	8,206369E+21	1,185785E+20	1,185949E+20	1,641259E+22	2,371733E+20	1,664976E+22
-2253	8,206209E+21	8,205759E+21	1,185369E+20	1,185561E+20	1,641197E+22	2,370930E+20	1,664906E+22
-2252	8,205413E+21	8,205921E+21	1,186041E+20	1,185630E+20	1,641133E+22	2,371671E+20	1,664850E+22
-2251	8,205456E+21	8,205232E+21	1,185593E+20	1,186139E+20	1,641069E+22	2,371732E+20	1,664786E+22
-2250	8,205337E+21	8,204952E+21	1,185607E+20	1,185571E+20	1,641029E+22	2,371178E+20	1,664741E+22
-2249	8,204914E+21	8,205274E+21	1,186137E+20	1,185895E+20	1,641019E+22	2,372033E+20	1,664739E+22
-2248	8,205297E+21	8,204767E+21	1,185532E+20	1,186036E+20	1,641006E+22	2,371568E+20	1,664722E+22
-2247	8,204939E+21	8,205091E+21	1,185843E+20	1,185481E+20	1,641003E+22	2,371324E+20	1,664716E+22
-2246	8,204868E+21	8,205281E+21	1,185999E+20	1,186074E+20	1,641015E+22	2,372073E+20	1,664736E+22
-2245	8,205430E+21	8,205008E+21	1,185460E+20	1,185747E+20	1,641044E+22	2,371207E+20	1,664756E+22
-2244	8,205192E+21	8,205662E+21	1,185953E+20	1,185465E+20	1,641085E+22	2,371417E+20	1,664800E+22
-2243	8,205630E+21	8,205599E+21	1,185729E+20	1,186053E+20	1,641123E+22	2,371781E+20	1,664841E+22
-2242	8,206034E+21	8,205644E+21	1,185406E+20	1,185424E+20	1,641168E+22	2,370830E+20	1,664876E+22
-2241	8,205794E+21	8,206335E+21	1,185948E+20	1,185637E+20	1,641213E+22	2,371585E+20	1,664929E+22
-2240	8,206333E+21	8,206002E+21	1,185392E+20	1,185941E+20	1,641233E+22	2,371332E+20	1,664947E+22
-2239	8,206253E+21	8,206153E+21	1,185462E+20	1,185311E+20	1,641241E+22	2,370773E+20	1,664948E+22
-2238	8,205970E+21	8,206362E+21	1,185959E+20	1,185840E+20	1,641233E+22	2,371798E+20	1,664951E+22
-2237	8,206336E+21	8,205801E+21	1,185350E+20	1,185696E+20	1,641214E+22	2,371046E+20	1,664924E+22
-2236	8,205698E+21	8,205984E+21	1,185864E+20	1,185419E+20	1,641168E+22	2,371283E+20	1,664881E+22
-2235	8,205409E+21	8,205589E+21	1,185864E+20	1,186092E+20	1,641100E+22	2,371956E+20	1,664819E+22
-2234	8,205480E+21	8,204932E+21	1,185424E+20	1,185722E+20	1,641041E+22	2,371146E+20	1,664753E+22
-2233	8,204778E+21	8,205173E+21	1,186102E+20	1,185745E+20	1,640995E+22	2,371847E+20	1,664714E+22
-2232	8,204942E+21	8,204594E+21	1,185700E+20	1,186209E+20	1,640954E+22	2,371909E+20	1,664673E+22
-2231	8,204803E+21	8,204397E+21	1,185712E+20	1,185621E+20	1,640920E+22	2,371332E+20	1,664633E+22
-2230	8,204205E+21	8,204744E+21	1,186255E+20	1,185950E+20	1,640895E+22	2,372205E+20	1,664617E+22
-2229	8,204612E+21	8,204253E+21	1,185664E+20	1,186105E+20	1,640886E+22	2,371769E+20	1,664604E+22
-2228	8,204290E+21	8,204530E+21	1,185949E+20	1,185590E+20	1,640882E+22	2,371539E+20	1,664597E+22
-2227	8,204255E+21	8,204651E+21	1,186075E+20	1,186157E+20	1,640891E+22	2,372232E+20	1,664613E+22
-2226	8,204944E+21	8,204370E+21	1,185522E+20	1,185838E+20	1,640931E+22	2,371360E+20	1,664645E+22
-2225	8,204739E+21	8,205123E+21	1,186004E+20	1,185554E+20	1,640986E+22	2,371558E+20	1,664702E+22
-2224	8,205203E+21	8,205138E+21	1,185785E+20	1,186151E+20	1,641034E+22	2,371936E+20	1,664753E+22
-2223	8,205566E+21	8,205167E+21	1,185439E+20	1,185515E+20	1,641073E+22	2,370954E+20	1,664783E+22
-2222	8,205203E+21	8,205813E+21	1,186027E+20	1,185705E+20	1,641102E+22	2,371732E+20	1,664819E+22
-2221	8,205780E+21	8,205485E+21	1,185527E+20	1,185968E+20	1,641126E+22	2,371495E+20	1,664841E+22
-2220	8,205683E+21	8,205587E+21	1,185609E+20	1,185391E+20	1,641127E+22	2,371001E+20	1,664837E+22
-2219	8,205285E+21	8,205703E+21	1,186071E+20	1,185919E+20	1,641099E+22	2,371991E+20	1,664819E+22
-2218	8,205624E+21	8,205076E+21	1,185417E+20	1,185844E+20	1,641070E+22	2,371262E+20	1,664783E+22
-2217	8,204999E+21	8,205255E+21	1,185909E+20	1,185576E+20	1,641025E+22	2,371484E+20	1,664740E+22

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 $\odot$ Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
-2216	8,204796E+21	8,204877E+21	1,185925E+20	1,186219E+20	1,640967E+22	2,372144E+20	1,664689E+22
-2215	8,204905E+21	8,204254E+21	1,185508E+20	1,185808E+20	1,640916E+22	2,371317E+20	1,664629E+22
-2214	8,204124E+21	8,204527E+21	1,186240E+20	1,185792E+20	1,640865E+22	2,372032E+20	1,664585E+22
-2213	8,204273E+21	8,204039E+21	1,185886E+20	1,186250E+20	1,640831E+22	2,372137E+20	1,664553E+22
-2212	8,204083E+21	8,203835E+21	1,185860E+20	1,185745E+20	1,640792E+22	2,371605E+20	1,664508E+22
-2211	8,203430E+21	8,204060E+21	1,186335E+20	1,186059E+20	1,640749E+22	2,372394E+20	1,664473E+22
-2210	8,203943E+21	8,203533E+21	1,185712E+20	1,186237E+20	1,640748E+22	2,371950E+20	1,664467E+22
-2209	8,203763E+21	8,203881E+21	1,185982E+20	1,185686E+20	1,640764E+22	2,371668E+20	1,664481E+22
-2208	8,203857E+21	8,204097E+21	1,186144E+20	1,186222E+20	1,640795E+22	2,372366E+20	1,664519E+22
-2207	8,204541E+21	8,203916E+21	1,185578E+20	1,185892E+20	1,640846E+22	2,371470E+20	1,664560E+22
-2206	8,204207E+21	8,204687E+21	1,186072E+20	1,185619E+20	1,640889E+22	2,371691E+20	1,664606E+22
-2205	8,204675E+21	8,204724E+21	1,185896E+20	1,186206E+20	1,640940E+22	2,372102E+20	1,664661E+22
-2204	8,205032E+21	8,204696E+21	1,185538E+20	1,185620E+20	1,640973E+22	2,371159E+20	1,664684E+22
-2203	8,204611E+21	8,205209E+21	1,186124E+20	1,185765E+20	1,640982E+22	2,371890E+20	1,664701E+22
-2202	8,205214E+21	8,204825E+21	1,185624E+20	1,186054E+20	1,641004E+22	2,371678E+20	1,664721E+22
-2201	8,205074E+21	8,204949E+21	1,185694E+20	1,185506E+20	1,641002E+22	2,371201E+20	1,664714E+22
-2200	8,204656E+21	8,205057E+21	1,186153E+20	1,186046E+20	1,640971E+22	2,372199E+20	1,664693E+22
-2199	8,204965E+21	8,204392E+21	1,185479E+20	1,185968E+20	1,640936E+22	2,371447E+20	1,664650E+22
-2198	8,204275E+21	8,204544E+21	1,186003E+20	1,185666E+20	1,640882E+22	2,371669E+20	1,664599E+22
-2197	8,204150E+21	8,204236E+21	1,186085E+20	1,186260E+20	1,640839E+22	2,372345E+20	1,664562E+22
-2196	8,204252E+21	8,203631E+21	1,185681E+20	1,185898E+20	1,640788E+22	2,371579E+20	1,664504E+22
-2195	8,203364E+21	8,203856E+21	1,186365E+20	1,185871E+20	1,640722E+22	2,372236E+20	1,664444E+22
-2194	8,203535E+21	8,203332E+21	1,185967E+20	1,186396E+20	1,640687E+22	2,372362E+20	1,664410E+22
-2193	8,203384E+21	8,203150E+21	1,185900E+20	1,185900E+20	1,640653E+22	2,371800E+20	1,664371E+22
-2192	8,202865E+21	8,203409E+21	1,186371E+20	1,186178E+20	1,640627E+22	2,372550E+20	1,664353E+22
-2191	8,203464E+21	8,202931E+21	1,185763E+20	1,186305E+20	1,640639E+22	2,372069E+20	1,664360E+22
-2190	8,203262E+21	8,203344E+21	1,186074E+20	1,185718E+20	1,640661E+22	2,371792E+20	1,664378E+22
-2189	8,203376E+21	8,203683E+21	1,186290E+20	1,186246E+20	1,640706E+22	2,372536E+20	1,664431E+22
-2188	8,204000E+21	8,203509E+21	1,185698E+20	1,185992E+20	1,640751E+22	2,371691E+20	1,664468E+22
-2187	8,203601E+21	8,204151E+21	1,186144E+20	1,185704E+20	1,640775E+22	2,371848E+20	1,664494E+22
-2186	8,204133E+21	8,204126E+21	1,185957E+20	1,186303E+20	1,640826E+22	2,372260E+20	1,664548E+22
-2185	8,204532E+21	8,204120E+21	1,185593E+20	1,185710E+20	1,640865E+22	2,371303E+20	1,664578E+22
-2184	8,204141E+21	8,204638E+21	1,186208E+20	1,185842E+20	1,640878E+22	2,372050E+20	1,664598E+22
-2183	8,204651E+21	8,204269E+21	1,185690E+20	1,186135E+20	1,640892E+22	2,371825E+20	1,664610E+22
-2182	8,204380E+21	8,204343E+21	1,185780E+20	1,185613E+20	1,640872E+22	2,371393E+20	1,664586E+22
-2181	8,203974E+21	8,204446E+21	1,186283E+20	1,186128E+20	1,640842E+22	2,372411E+20	1,664566E+22
-2180	8,204288E+21	8,203751E+21	1,185610E+20	1,186100E+20	1,640804E+22	2,371711E+20	1,664521E+22
-2179	8,203574E+21	8,203785E+21	1,186123E+20	1,185748E+20	1,640736E+22	2,371871E+20	1,664455E+22
-2178	8,203481E+21	8,203479E+21	1,186200E+20	1,186365E+20	1,640696E+22	2,372565E+20	1,664422E+22
-2177	8,203553E+21	8,202952E+21	1,185771E+20	1,186044E+20	1,640651E+22	2,371815E+20	1,664369E+22
-2176	8,202679E+21	8,203172E+21	1,186435E+20	1,186013E+20	1,640585E+22	2,372448E+20	1,664310E+22
-2175	8,202861E+21	8,202655E+21	1,186019E+20	1,186503E+20	1,640552E+22	2,372522E+20	1,664277E+22
-2174	8,202716E+21	8,202488E+21	1,185985E+20	1,185968E+20	1,640520E+22	2,371953E+20	1,664240E+22
-2173	8,202316E+21	8,202850E+21	1,186518E+20	1,186186E+20	1,640517E+22	2,372704E+20	1,664244E+22
-2172	8,202935E+21	8,202451E+21	1,185915E+20	1,186368E+20	1,640539E+22	2,372282E+20	1,664261E+22
-2171	8,202664E+21	8,202819E+21	1,186166E+20	1,185778E+20	1,640548E+22	2,371943E+20	1,664268E+22
-2170	8,202822E+21	8,203142E+21	1,186349E+20	1,186365E+20	1,640596E+22	2,372715E+20	1,664324E+22
-2169	8,203469E+21	8,202996E+21	1,185727E+20	1,186123E+20	1,640646E+22	2,371850E+20	1,664365E+22
-2168	8,203154E+21	8,203617E+21	1,186180E+20	1,185808E+20	1,640677E+22	2,371988E+20	1,664397E+22

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 $\odot$ Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
-2167	8,203687E+21	8,203591E+21	1,186014E+20	1,186351E+20	1,640728E+22	2,372365E+20	1,664451E+22
-2166	8,203982E+21	8,203586E+21	1,185695E+20	1,185765E+20	1,640757E+22	2,371460E+20	1,664471E+22
-2165	8,203553E+21	8,204142E+21	1,186356E+20	1,185901E+20	1,640770E+22	2,372257E+20	1,664492E+22
-2164	8,203970E+21	8,203711E+21	1,185817E+20	1,186266E+20	1,640768E+22	2,372083E+20	1,664489E+22
-2163	8,203638E+21	8,203615E+21	1,185869E+20	1,185725E+20	1,640725E+22	2,371594E+20	1,664441E+22
-2162	8,203330E+21	8,203667E+21	1,186357E+20	1,186244E+20	1,640700E+22	2,372601E+20	1,664426E+22
-2161	8,203668E+21	8,203035E+21	1,185700E+20	1,186213E+20	1,640670E+22	2,371912E+20	1,664389E+22
-2160	8,202989E+21	8,203109E+21	1,186218E+20	1,185859E+20	1,640610E+22	2,372077E+20	1,664331E+22
-2159	8,202818E+21	8,202843E+21	1,186274E+20	1,186455E+20	1,640566E+22	2,372730E+20	1,664293E+22
-2158	8,202790E+21	8,202309E+21	1,185867E+20	1,186161E+20	1,640510E+22	2,372029E+20	1,664230E+22
-2157	8,201974E+21	8,202556E+21	1,186564E+20	1,186086E+20	1,640453E+22	2,372650E+20	1,664180E+22
-2156	8,202181E+21	8,202042E+21	1,186151E+20	1,186599E+20	1,640422E+22	2,372750E+20	1,664150E+22
-2155	8,202061E+21	8,201793E+21	1,186102E+20	1,186022E+20	1,640385E+22	2,372125E+20	1,664107E+22
-2154	8,201760E+21	8,202194E+21	1,186612E+20	1,186275E+20	1,640395E+22	2,372887E+20	1,664124E+22
-2153	8,202371E+21	8,201916E+21	1,185989E+20	1,186500E+20	1,640429E+22	2,372488E+20	1,664154E+22
-2152	8,202163E+21	8,202283E+21	1,186196E+20	1,185918E+20	1,640445E+22	2,372114E+20	1,664166E+22
-2151	8,202338E+21	8,202620E+21	1,186365E+20	1,186451E+20	1,640496E+22	2,372816E+20	1,664224E+22
-2150	8,202966E+21	8,202493E+21	1,185787E+20	1,186178E+20	1,640546E+22	2,371964E+20	1,664266E+22
-2149	8,202694E+21	8,203158E+21	1,186316E+20	1,185813E+20	1,640585E+22	2,372129E+20	1,664306E+22
-2148	8,203139E+21	8,203152E+21	1,186157E+20	1,186405E+20	1,640629E+22	2,372562E+20	1,664355E+22
-2147	8,203313E+21	8,202996E+21	1,185796E+20	1,185847E+20	1,640631E+22	2,371643E+20	1,664347E+22
-2146	8,202909E+21	8,203460E+21	1,186421E+20	1,186039E+20	1,640637E+22	2,372459E+20	1,664361E+22
-2145	8,203335E+21	8,203046E+21	1,185868E+20	1,186423E+20	1,640638E+22	2,372291E+20	1,664361E+22
-2144	8,203091E+21	8,202906E+21	1,185927E+20	1,185855E+20	1,640600E+22	2,371782E+20	1,664318E+22
-2143	8,202780E+21	8,202988E+21	1,186428E+20	1,186300E+20	1,640577E+22	2,372729E+20	1,664304E+22
-2142	8,203003E+21	8,202411E+21	1,185832E+20	1,186288E+20	1,640541E+22	2,372119E+20	1,664263E+22
-2141	8,202267E+21	8,202530E+21	1,186392E+20	1,185935E+20	1,640480E+22	2,372327E+20	1,664203E+22
-2140	8,202010E+21	8,202229E+21	1,186422E+20	1,186574E+20	1,640424E+22	2,372996E+20	1,664154E+22
-2139	8,201953E+21	8,201530E+21	1,185983E+20	1,186270E+20	1,640348E+22	2,372252E+20	1,664071E+22
-2138	8,201287E+21	8,201748E+21	1,186647E+20	1,186190E+20	1,640303E+22	2,372837E+20	1,664032E+22
-2137	8,201565E+21	8,201346E+21	1,186240E+20	1,186707E+20	1,640291E+22	2,372947E+20	1,664021E+22
-2136	8,201542E+21	8,201169E+21	1,186163E+20	1,186137E+20	1,640271E+22	2,372300E+20	1,663994E+22
-2135	8,201249E+21	8,201657E+21	1,186634E+20	1,186365E+20	1,640291E+22	2,372999E+20	1,664021E+22
-2134	8,201811E+21	8,201441E+21	1,186051E+20	1,186599E+20	1,640325E+22	2,372650E+20	1,664052E+22
-2133	8,201680E+21	8,201862E+21	1,186291E+20	1,185975E+20	1,640354E+22	2,372266E+20	1,664077E+22
-2132	8,201838E+21	8,202186E+21	1,186480E+20	1,186493E+20	1,640402E+22	2,372973E+20	1,664132E+22
-2131	8,202400E+21	8,201932E+21	1,185901E+20	1,186204E+20	1,640433E+22	2,372105E+20	1,664154E+22
-2130	8,202162E+21	8,202559E+21	1,186407E+20	1,185898E+20	1,640472E+22	2,372305E+20	1,664195E+22
-2129	8,202519E+21	8,202587E+21	1,186235E+20	1,186540E+20	1,640511E+22	2,372775E+20	1,664238E+22
-2128	8,202741E+21	8,202354E+21	1,185838E+20	1,186005E+20	1,640510E+22	2,371843E+20	1,664228E+22
-2127	8,202368E+21	8,202794E+21	1,186440E+20	1,186134E+20	1,640516E+22	2,372574E+20	1,664242E+22
-2126	8,202760E+21	8,202421E+21	1,185958E+20	1,186491E+20	1,640518E+22	2,372449E+20	1,664243E+22
-2125	8,202540E+21	8,202347E+21	1,186085E+20	1,185895E+20	1,640489E+22	2,371980E+20	1,664209E+22
-2124	8,202096E+21	8,202451E+21	1,186584E+20	1,186366E+20	1,640455E+22	2,372950E+20	1,664184E+22
-2123	8,202171E+21	8,201725E+21	1,185964E+20	1,186398E+20	1,640390E+22	2,372362E+20	1,664113E+22
-2122	8,201482E+21	8,201743E+21	1,186485E+20	1,186094E+20	1,640322E+22	2,372579E+20	1,664048E+22
-2121	8,201238E+21	8,201466E+21	1,186496E+20	1,186733E+20	1,640270E+22	2,373229E+20	1,664003E+22
-2120	8,201325E+21	8,200732E+21	1,186048E+20	1,186414E+20	1,640206E+22	2,372462E+20	1,663930E+22
-2119	8,200742E+21	8,201021E+21	1,186689E+20	1,186260E+20	1,640176E+22	2,372948E+20	1,663906E+22

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 ° Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
-2118	8,200988E+21	8,200770E+21	1,186340E+20	1,186793E+20	1,640176E+22	2,373133E+20	1,663907E+22
-2117	8,200985E+21	8,200701E+21	1,186292E+20	1,186205E+20	1,640169E+22	2,372497E+20	1,663894E+22
-2116	8,200655E+21	8,201214E+21	1,186742E+20	1,186436E+20	1,640187E+22	2,373178E+20	1,663919E+22
-2115	8,201189E+21	8,200875E+21	1,186154E+20	1,186647E+20	1,640206E+22	2,372801E+20	1,663934E+22
-2114	8,201158E+21	8,201258E+21	1,186374E+20	1,186031E+20	1,640242E+22	2,372405E+20	1,663966E+22
-2113	8,201299E+21	8,201659E+21	1,186575E+20	1,186560E+20	1,640296E+22	2,373135E+20	1,664027E+22
-2112	8,201887E+21	8,201374E+21	1,185960E+20	1,186311E+20	1,640326E+22	2,372271E+20	1,664049E+22
-2111	8,201638E+21	8,201990E+21	1,186418E+20	1,185998E+20	1,640363E+22	2,372416E+20	1,664087E+22
-2110	8,201949E+21	8,202039E+21	1,186295E+20	1,186652E+20	1,640399E+22	2,372947E+20	1,664128E+22
-2109	8,202223E+21	8,201833E+21	1,185943E+20	1,186083E+20	1,640406E+22	2,372027E+20	1,664126E+22
-2108	8,201817E+21	8,202261E+21	1,186562E+20	1,186186E+20	1,640408E+22	2,372748E+20	1,664135E+22
-2107	8,202096E+21	8,201766E+21	1,186105E+20	1,186542E+20	1,640386E+22	2,372646E+20	1,664113E+22
-2106	8,201854E+21	8,201653E+21	1,186210E+20	1,186022E+20	1,640351E+22	2,372232E+20	1,664073E+22
-2105	8,201294E+21	8,201764E+21	1,186688E+20	1,186524E+20	1,640306E+22	2,373212E+20	1,664038E+22
-2104	8,201419E+21	8,200929E+21	1,186030E+20	1,186584E+20	1,640235E+22	2,372614E+20	1,663961E+22
-2103	8,200815E+21	8,200921E+21	1,186514E+20	1,186205E+20	1,640174E+22	2,372720E+20	1,663901E+22
-2102	8,200589E+21	8,200736E+21	1,186593E+20	1,186802E+20	1,640133E+22	2,373395E+20	1,663866E+22
-2101	8,200759E+21	8,200144E+21	1,186202E+20	1,186457E+20	1,640090E+22	2,372659E+20	1,663817E+22
-2100	8,200131E+21	8,200516E+21	1,186812E+20	1,186309E+20	1,640065E+22	2,373120E+20	1,663796E+22
-2099	8,200280E+21	8,200197E+21	1,186466E+20	1,186872E+20	1,640048E+22	2,373338E+20	1,663781E+22
-2098	8,200370E+21	8,200108E+21	1,186368E+20	1,186326E+20	1,640048E+22	2,372694E+20	1,663775E+22
-2097	8,200050E+21	8,200659E+21	1,186814E+20	1,186534E+20	1,640071E+22	2,373348E+20	1,663804E+22
-2096	8,200689E+21	8,200269E+21	1,186217E+20	1,186737E+20	1,640096E+22	2,372954E+20	1,663825E+22
-2095	8,200706E+21	8,200667E+21	1,186406E+20	1,186083E+20	1,640137E+22	2,372489E+20	1,663862E+22
-2094	8,200763E+21	8,201162E+21	1,186658E+20	1,186641E+20	1,640193E+22	2,373299E+20	1,663926E+22
-2093	8,201361E+21	8,200926E+21	1,186065E+20	1,186405E+20	1,640229E+22	2,372471E+20	1,663953E+22
-2092	8,201090E+21	8,201501E+21	1,186494E+20	1,186088E+20	1,640259E+22	2,372582E+20	1,663985E+22
-2091	8,201346E+21	8,201423E+21	1,186400E+20	1,186715E+20	1,640277E+22	2,373115E+20	1,664008E+22
-2090	8,201684E+21	8,201182E+21	1,186044E+20	1,186163E+20	1,640287E+22	2,372207E+20	1,664009E+22
-2089	8,201194E+21	8,201661E+21	1,186680E+20	1,186273E+20	1,640285E+22	2,372954E+20	1,664015E+22
-2088	8,201436E+21	8,201097E+21	1,186193E+20	1,186676E+20	1,640253E+22	2,372870E+20	1,663982E+22
-2087	8,201160E+21	8,200933E+21	1,186254E+20	1,186161E+20	1,640209E+22	2,372415E+20	1,663933E+22
-2086	8,200560E+21	8,201065E+21	1,186770E+20	1,186653E+20	1,640162E+22	2,373423E+20	1,663897E+22
-2085	8,200756E+21	8,200252E+21	1,186162E+20	1,186673E+20	1,640101E+22	2,372835E+20	1,663829E+22
-2084	8,200166E+21	8,200255E+21	1,186644E+20	1,186246E+20	1,640042E+22	2,372890E+20	1,663771E+22
-2083	8,199882E+21	8,200023E+21	1,186752E+20	1,186843E+20	1,639991E+22	2,373595E+20	1,663726E+22
-2082	8,200067E+21	8,199481E+21	1,186337E+20	1,186566E+20	1,639955E+22	2,372902E+20	1,663684E+22
-2081	8,199398E+21	8,199922E+21	1,186910E+20	1,186445E+20	1,639932E+22	2,373355E+20	1,663666E+22
-2080	8,199643E+21	8,199533E+21	1,186533E+20	1,187018E+20	1,639918E+22	2,373551E+20	1,663653E+22
-2079	8,199831E+21	8,199457E+21	1,186384E+20	1,186410E+20	1,639929E+22	2,372794E+20	1,663657E+22
-2078	8,199537E+21	8,200109E+21	1,186885E+20	1,186583E+20	1,639965E+22	2,373468E+20	1,663699E+22
-2077	8,200217E+21	8,199822E+21	1,186330E+20	1,186776E+20	1,640004E+22	2,373106E+20	1,663735E+22
-2076	8,200189E+21	8,200246E+21	1,186485E+20	1,186138E+20	1,640043E+22	2,372623E+20	1,663770E+22
-2075	8,200158E+21	8,200626E+21	1,186759E+20	1,186726E+20	1,640078E+22	2,373485E+20	1,663813E+22
-2074	8,200821E+21	8,200362E+21	1,186142E+20	1,186528E+20	1,640118E+22	2,372669E+20	1,663845E+22
-2073	8,200543E+21	8,200945E+21	1,186570E+20	1,186196E+20	1,640149E+22	2,372767E+20	1,663876E+22
-2072	8,200845E+21	8,200784E+21	1,186480E+20	1,186808E+20	1,640163E+22	2,373288E+20	1,663896E+22
-2071	8,201166E+21	8,200543E+21	1,186097E+20	1,186250E+20	1,640171E+22	2,372347E+20	1,663894E+22
-2070	8,200530E+21	8,201071E+21	1,186788E+20	1,186372E+20	1,640160E+22	2,373160E+20	1,663892E+22

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 ° Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
-2069	8,200738E+21	8,200514E+21	1,186327E+20	1,186784E+20	1,640125E+22	2,373111E+20	1,663856E+22
-2068	8,200445E+21	8,200270E+21	1,186367E+20	1,186251E+20	1,640071E+22	2,372618E+20	1,663798E+22
-2067	8,199785E+21	8,200276E+21	1,186913E+20	1,186710E+20	1,640006E+22	2,373623E+20	1,663742E+22
-2066	8,200062E+21	8,199490E+21	1,186300E+20	1,186759E+20	1,639955E+22	2,373060E+20	1,663686E+22
-2065	8,199445E+21	8,199573E+21	1,186763E+20	1,186351E+20	1,639902E+22	2,373114E+20	1,663633E+22
-2064	8,199188E+21	8,199322E+21	1,186832E+20	1,186989E+20	1,639851E+22	2,373821E+20	1,663589E+22
-2063	8,199422E+21	8,198801E+21	1,186366E+20	1,186713E+20	1,639822E+22	2,373079E+20	1,663553E+22
-2062	8,198770E+21	8,199323E+21	1,186965E+20	1,186563E+20	1,639809E+22	2,373528E+20	1,663545E+22
-2061	8,199115E+21	8,199006E+21	1,186639E+20	1,187086E+20	1,639812E+22	2,373725E+20	1,663549E+22
-2060	8,199329E+21	8,198947E+21	1,186478E+20	1,186434E+20	1,639828E+22	2,372912E+20	1,663557E+22
-2059	8,198948E+21	8,199548E+21	1,187013E+20	1,186618E+20	1,639850E+22	2,373631E+20	1,663586E+22
-2058	8,199628E+21	8,199298E+21	1,186436E+20	1,186877E+20	1,639893E+22	2,373313E+20	1,663626E+22
-2057	8,199583E+21	8,199728E+21	1,186560E+20	1,186268E+20	1,639931E+22	2,372829E+20	1,663659E+22
-2056	8,199644E+21	8,200007E+21	1,186815E+20	1,186851E+20	1,639965E+22	2,373666E+20	1,663702E+22
-2055	8,200367E+21	8,199748E+21	1,186173E+20	1,186599E+20	1,640012E+22	2,372772E+20	1,663739E+22
-2054	8,200062E+21	8,200418E+21	1,186660E+20	1,186247E+20	1,640048E+22	2,372906E+20	1,663777E+22
-2053	8,200320E+21	8,200312E+21	1,186615E+20	1,186847E+20	1,640063E+22	2,373462E+20	1,663798E+22
-2052	8,200512E+21	8,200038E+21	1,186203E+20	1,186323E+20	1,640055E+22	2,372526E+20	1,663780E+22
-2051	8,199749E+21	8,200400E+21	1,186919E+20	1,186474E+20	1,640015E+22	2,373393E+20	1,663749E+22
-2050	8,199977E+21	8,199788E+21	1,186441E+20	1,186914E+20	1,639977E+22	2,373354E+20	1,663710E+22
-2049	8,199699E+21	8,199521E+21	1,186481E+20	1,186380E+20	1,639922E+22	2,372861E+20	1,663651E+22
-2048	8,199127E+21	8,199442E+21	1,187009E+20	1,186824E+20	1,639857E+22	2,373832E+20	1,663595E+22
-2047	8,199419E+21	8,198723E+21	1,186367E+20	1,186883E+20	1,639814E+22	2,373250E+20	1,663547E+22
-2046	8,198754E+21	8,198928E+21	1,186844E+20	1,186491E+20	1,639768E+22	2,373335E+20	1,663502E+22
-2045	8,198541E+21	8,198741E+21	1,186935E+20	1,187111E+20	1,639728E+22	2,374046E+20	1,663469E+22
-2044	8,198804E+21	8,198230E+21	1,186453E+20	1,186790E+20	1,639703E+22	2,373242E+20	1,663436E+22
-2043	8,198127E+21	8,198680E+21	1,187089E+20	1,186595E+20	1,639681E+22	2,373683E+20	1,663417E+22
-2042	8,198525E+21	8,198427E+21	1,186771E+20	1,187127E+20	1,639695E+22	2,373897E+20	1,663434E+22
-2041	8,198710E+21	8,198425E+21	1,186584E+20	1,186517E+20	1,639713E+22	2,373101E+20	1,663444E+22
-2040	8,198375E+21	8,198954E+21	1,187074E+20	1,186743E+20	1,639733E+22	2,373817E+20	1,663471E+22
-2039	8,199123E+21	8,198722E+21	1,186453E+20	1,187012E+20	1,639785E+22	2,373465E+20	1,663519E+22
-2038	8,199108E+21	8,199213E+21	1,186599E+20	1,186373E+20	1,639832E+22	2,372971E+20	1,663562E+22
-2037	8,199236E+21	8,199544E+21	1,186907E+20	1,186899E+20	1,639878E+22	2,373807E+20	1,663616E+22
-2036	8,199922E+21	8,199283E+21	1,186269E+20	1,186613E+20	1,639920E+22	2,372882E+20	1,663649E+22
-2035	8,199430E+21	8,199857E+21	1,186805E+20	1,186296E+20	1,639929E+22	2,373101E+20	1,663660E+22
-2034	8,199596E+21	8,199742E+21	1,186744E+20	1,186951E+20	1,639934E+22	2,373696E+20	1,663671E+22
-2033	8,199735E+21	8,199382E+21	1,186309E+20	1,186488E+20	1,639912E+22	2,372797E+20	1,663640E+22
-2032	8,199048E+21	8,199573E+21	1,186991E+20	1,186626E+20	1,639862E+22	2,373617E+20	1,663598E+22
-2031	8,199347E+21	8,198965E+21	1,186487E+20	1,187030E+20	1,639831E+22	2,373517E+20	1,663566E+22
-2030	8,199076E+21	8,198797E+21	1,186566E+20	1,186479E+20	1,639787E+22	2,373045E+20	1,663518E+22
-2029	8,198518E+21	8,198826E+21	1,187117E+20	1,186909E+20	1,639734E+22	2,374026E+20	1,663475E+22
-2028	8,198749E+21	8,198146E+21	1,186468E+20	1,186975E+20	1,639689E+22	2,373443E+20	1,663424E+22
-2027	8,198002E+21	8,198272E+21	1,186975E+20	1,186594E+20	1,639627E+22	2,373570E+20	1,663363E+22
-2026	8,197826E+21	8,198114E+21	1,187063E+20	1,187196E+20	1,639594E+22	2,374259E+20	1,663337E+22
-2025	8,198116E+21	8,197605E+21	1,186582E+20	1,186882E+20	1,639572E+22	2,373463E+20	1,663307E+22
-2024	8,197531E+21	8,197964E+21	1,187184E+20	1,186673E+20	1,639550E+22	2,373857E+20	1,663288E+22
-2023	8,197936E+21	8,197783E+21	1,186829E+20	1,187222E+20	1,639572E+22	2,374051E+20	1,663312E+22
-2022	8,198124E+21	8,197887E+21	1,186641E+20	1,186640E+20	1,639601E+22	2,373280E+20	1,663334E+22
-2021	8,197898E+21	8,198452E+21	1,187139E+20	1,186848E+20	1,639635E+22	2,373987E+20	1,663375E+22

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 ° Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
-2020	8,198669E+21	8,198249E+21	1,186521E+20	1,187057E+20	1,639692E+22	2,373577E+20	1,663428E+22
-2019	8,198610E+21	8,198686E+21	1,186706E+20	1,186402E+20	1,639730E+22	2,373108E+20	1,663461E+22
-2018	8,198704E+21	8,199063E+21	1,187032E+20	1,186924E+20	1,639777E+22	2,373956E+20	1,663516E+22
-2017	8,199279E+21	8,198794E+21	1,186378E+20	1,186711E+20	1,639807E+22	2,373089E+20	1,663538E+22
-2016	8,198774E+21	8,199187E+21	1,186877E+20	1,186444E+20	1,639796E+22	2,373321E+20	1,663529E+22
-2015	8,198940E+21	8,199028E+21	1,186775E+20	1,187105E+20	1,639797E+22	2,373880E+20	1,663536E+22
-2014	8,199103E+21	8,198688E+21	1,186367E+20	1,186633E+20	1,639779E+22	2,373000E+20	1,663509E+22
-2013	8,198511E+21	8,198887E+21	1,187081E+20	1,186712E+20	1,639740E+22	2,373793E+20	1,663478E+22
-2012	8,198777E+21	8,198323E+21	1,186596E+20	1,187075E+20	1,639710E+22	2,373671E+20	1,663447E+22
-2011	8,198353E+21	8,198127E+21	1,186720E+20	1,186561E+20	1,639648E+22	2,373281E+20	1,663381E+22
-2010	8,197734E+21	8,198205E+21	1,187258E+20	1,187007E+20	1,639594E+22	2,374266E+20	1,663337E+22
-2009	8,197944E+21	8,197493E+21	1,186608E+20	1,187123E+20	1,639544E+22	2,373731E+20	1,663281E+22
-2008	8,197284E+21	8,197481E+21	1,187077E+20	1,186715E+20	1,639477E+22	2,373792E+20	1,663214E+22
-2007	8,197187E+21	8,197367E+21	1,187130E+20	1,187278E+20	1,639455E+22	2,374408E+20	1,663200E+22
-2006	8,197501E+21	8,196962E+21	1,186664E+20	1,186968E+20	1,639446E+22	2,373632E+20	1,663183E+22
-2005	8,196981E+21	8,197406E+21	1,187252E+20	1,186760E+20	1,639439E+22	2,374012E+20	1,663179E+22
-2004	8,197399E+21	8,197281E+21	1,186886E+20	1,187304E+20	1,639468E+22	2,374190E+20	1,663210E+22
-2003	8,197554E+21	8,197345E+21	1,186726E+20	1,186731E+20	1,639490E+22	2,373457E+20	1,663224E+22
-2002	8,197385E+21	8,197977E+21	1,187231E+20	1,186905E+20	1,639536E+22	2,374136E+20	1,663278E+22
-2001	8,198161E+21	8,197771E+21	1,186638E+20	1,187122E+20	1,639593E+22	2,373760E+20	1,663331E+22
-2000	8,198109E+21	8,198082E+21	1,186791E+20	1,186482E+20	1,639619E+22	2,373274E+20	1,663352E+22
-1999	8,198126E+21	8,198478E+21	1,187083E+20	1,187024E+20	1,639660E+22	2,374107E+20	1,663401E+22
-1998	8,198636E+21	8,198216E+21	1,186433E+20	1,186857E+20	1,639685E+22	2,373289E+20	1,663418E+22
-1997	8,198214E+21	8,198555E+21	1,186943E+20	1,186572E+20	1,639677E+22	2,373516E+20	1,663412E+22
-1996	8,198380E+21	8,198389E+21	1,186857E+20	1,187156E+20	1,639677E+22	2,374013E+20	1,663417E+22
-1995	8,198472E+21	8,198000E+21	1,186512E+20	1,186682E+20	1,639647E+22	2,373194E+20	1,663379E+22
-1994	8,197838E+21	8,198270E+21	1,187228E+20	1,186750E+20	1,639611E+22	2,373978E+20	1,663351E+22
-1993	8,198000E+21	8,197719E+21	1,186747E+20	1,187193E+20	1,639572E+22	2,373940E+20	1,663311E+22
-1992	8,197584E+21	8,197368E+21	1,186824E+20	1,186728E+20	1,639495E+22	2,373552E+20	1,663231E+22
-1991	8,196981E+21	8,197435E+21	1,187315E+20	1,187151E+20	1,639442E+22	2,374465E+20	1,663186E+22
-1990	8,197236E+21	8,196776E+21	1,186690E+20	1,187262E+20	1,639401E+22	2,373952E+20	1,663141E+22
-1989	8,196719E+21	8,196768E+21	1,187167E+20	1,186801E+20	1,639349E+22	2,373968E+20	1,663088E+22
-1988	8,196599E+21	8,196735E+21	1,187222E+20	1,187311E+20	1,639333E+22	2,374533E+20	1,663079E+22
-1987	8,196821E+21	8,196359E+21	1,186783E+20	1,187057E+20	1,639318E+22	2,373840E+20	1,663056E+22
-1986	8,196336E+21	8,196876E+21	1,187344E+20	1,186847E+20	1,639321E+22	2,374191E+20	1,663063E+22
-1985	8,196800E+21	8,196765E+21	1,186997E+20	1,187421E+20	1,639357E+22	2,374418E+20	1,663101E+22
-1984	8,197064E+21	8,196722E+21	1,186798E+20	1,186817E+20	1,639379E+22	2,373615E+20	1,663115E+22
-1983	8,196932E+21	8,197405E+21	1,187278E+20	1,186953E+20	1,639434E+22	2,374231E+20	1,663176E+22
-1982	8,197660E+21	8,197290E+21	1,186708E+20	1,187190E+20	1,639495E+22	2,373898E+20	1,663234E+22
-1981	8,197617E+21	8,197588E+21	1,186848E+20	1,186583E+20	1,639521E+22	2,373431E+20	1,663255E+22
-1980	8,197567E+21	8,197968E+21	1,187144E+20	1,187097E+20	1,639553E+22	2,374242E+20	1,663296E+22
-1979	8,197991E+21	8,197618E+21	1,186538E+20	1,186960E+20	1,639561E+22	2,373498E+20	1,663296E+22
-1978	8,197598E+21	8,197959E+21	1,187060E+20	1,186633E+20	1,639556E+22	2,373693E+20	1,663293E+22
-1977	8,197752E+21	8,197757E+21	1,187010E+20	1,187234E+20	1,639551E+22	2,374244E+20	1,663293E+22
-1976	8,197810E+21	8,197246E+21	1,186637E+20	1,186788E+20	1,639506E+22	2,373426E+20	1,663240E+22
-1975	8,197112E+21	8,197547E+21	1,187298E+20	1,186885E+20	1,639466E+22	2,374183E+20	1,663208E+22
-1974	8,197232E+21	8,197015E+21	1,186831E+20	1,187365E+20	1,639425E+22	2,374195E+20	1,663167E+22
-1973	8,196916E+21	8,196627E+21	1,186905E+20	1,186885E+20	1,639354E+22	2,373790E+20	1,663092E+22
-1972	8,196342E+21	8,196728E+21	1,187394E+20	1,187202E+20	1,639307E+22	2,374596E+20	1,663053E+22

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 ° Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
-1971	8,196541E+21	8,196064E+21	1,186832E+20	1,187319E+20	1,639260E+22	2,374151E+20	1,663002E+22
-1970	8,196027E+21	8,196161E+21	1,187295E+20	1,186838E+20	1,639219E+22	2,374133E+20	1,662960E+22
-1969	8,195888E+21	8,196161E+21	1,187357E+20	1,187414E+20	1,639205E+22	2,374771E+20	1,662953E+22
-1968	8,196170E+21	8,195688E+21	1,186869E+20	1,187194E+20	1,639186E+22	2,374064E+20	1,662926E+22
-1967	8,195779E+21	8,196257E+21	1,187368E+20	1,186965E+20	1,639204E+22	2,374334E+20	1,662947E+22
-1966	8,196305E+21	8,196230E+21	1,187062E+20	1,187520E+20	1,639254E+22	2,374582E+20	1,662999E+22
-1965	8,196684E+21	8,196205E+21	1,186864E+20	1,186882E+20	1,639289E+22	2,373747E+20	1,663026E+22
-1964	8,196475E+21	8,196942E+21	1,187353E+20	1,186960E+20	1,639342E+22	2,374312E+20	1,663085E+22
-1963	8,197027E+21	8,196803E+21	1,186823E+20	1,187263E+20	1,639383E+22	2,374086E+20	1,663124E+22
-1962	8,196966E+21	8,197084E+21	1,186954E+20	1,186668E+20	1,639405E+22	2,373622E+20	1,663141E+22
-1961	8,196917E+21	8,197394E+21	1,187277E+20	1,187207E+20	1,639431E+22	2,374484E+20	1,663176E+22
-1960	8,197398E+21	8,196894E+21	1,186640E+20	1,187065E+20	1,639429E+22	2,373704E+20	1,663166E+22
-1959	8,197024E+21	8,197241E+21	1,187118E+20	1,186718E+20	1,639426E+22	2,373837E+20	1,663165E+22
-1958	8,197112E+21	8,197120E+21	1,187091E+20	1,187348E+20	1,639423E+22	2,374439E+20	1,663168E+22
-1957	8,197201E+21	8,196588E+21	1,186703E+20	1,186944E+20	1,639379E+22	2,373647E+20	1,663115E+22
-1956	8,196441E+21	8,196886E+21	1,187368E+20	1,186979E+20	1,639333E+22	2,374347E+20	1,663076E+22
-1955	8,196476E+21	8,196327E+21	1,186958E+20	1,187478E+20	1,639280E+22	2,374436E+20	1,663025E+22
-1954	8,196199E+21	8,195961E+21	1,187051E+20	1,186949E+20	1,639216E+22	2,374000E+20	1,662956E+22
-1953	8,195625E+21	8,196048E+21	1,187564E+20	1,187268E+20	1,639167E+22	2,374832E+20	1,662916E+22
-1952	8,195809E+21	8,195299E+21	1,186962E+20	1,187424E+20	1,639111E+22	2,374386E+20	1,662855E+22
-1951	8,195309E+21	8,195442E+21	1,187342E+20	1,186969E+20	1,639075E+22	2,374311E+20	1,662818E+22
-1950	8,195229E+21	8,195520E+21	1,187421E+20	1,187569E+20	1,639075E+22	2,374989E+20	1,662825E+22
-1949	8,195686E+21	8,195076E+21	1,186926E+20	1,187321E+20	1,639076E+22	2,374247E+20	1,662819E+22
-1948	8,195347E+21	8,195729E+21	1,187424E+20	1,186979E+20	1,639108E+22	2,374403E+20	1,662852E+22
-1947	8,195786E+21	8,195749E+21	1,187188E+20	1,187545E+20	1,639154E+22	2,374733E+20	1,662901E+22
-1946	8,196113E+21	8,195802E+21	1,186974E+20	1,186911E+20	1,639191E+22	2,373885E+20	1,662930E+22
-1945	8,195845E+21	8,196488E+21	1,187473E+20	1,187058E+20	1,639233E+22	2,374531E+20	1,662979E+22
-1944	8,196381E+21	8,196171E+21	1,186904E+20	1,187394E+20	1,639255E+22	2,374299E+20	1,662998E+22
-1943	8,196390E+21	8,196422E+21	1,186982E+20	1,186798E+20	1,639281E+22	2,373780E+20	1,663019E+22
-1942	8,196392E+21	8,196745E+21	1,187349E+20	1,187318E+20	1,639314E+22	2,374667E+20	1,663060E+22
-1941	8,196941E+21	8,196241E+21	1,186718E+20	1,187166E+20	1,639318E+22	2,373884E+20	1,663057E+22
-1940	8,196476E+21	8,196649E+21	1,187189E+20	1,186773E+20	1,639313E+22	2,373962E+20	1,663052E+22
-1939	8,196379E+21	8,196516E+21	1,187215E+20	1,187452E+20	1,639290E+22	2,374667E+20	1,663036E+22
-1938	8,196441E+21	8,195985E+21	1,186839E+20	1,187046E+20	1,639243E+22	2,373885E+20	1,662981E+22
-1937	8,195684E+21	8,196209E+21	1,187536E+20	1,187078E+20	1,639189E+22	2,374614E+20	1,662935E+22
-1936	8,195720E+21	8,195512E+21	1,187105E+20	1,187560E+20	1,639123E+22	2,374666E+20	1,662870E+22
-1935	8,195471E+21	8,195168E+21	1,187143E+20	1,187041E+20	1,639064E+22	2,374184E+20	1,662806E+22
-1934	8,194881E+21	8,195329E+21	1,187652E+20	1,187393E+20	1,639021E+22	2,375045E+20	1,662771E+22
-1933	8,195166E+21	8,194604E+21	1,187026E+20	1,187591E+20	1,638977E+22	2,374617E+20	1,662723E+22
-1932	8,194721E+21	8,194813E+21	1,187376E+20	1,187064E+20	1,638953E+22	2,374440E+20	1,662698E+22
-1931	8,194632E+21	8,194950E+21	1,187519E+20	1,187664E+20	1,638958E+22	2,375182E+20	1,662710E+22
-1930	8,195158E+21	8,194598E+21	1,187051E+20	1,187353E+20	1,638976E+22	2,374404E+20	1,662720E+22
-1929	8,194811E+21	8,195256E+21	1,187574E+20	1,187016E+20	1,639007E+22	2,374590E+20	1,662753E+22
-1928	8,195169E+21	8,195187E+21	1,187301E+20	1,187620E+20	1,639036E+22	2,374921E+20	1,662785E+22
-1927	8,195476E+21	8,195209E+21	1,187010E+20	1,187036E+20	1,639068E+22	2,374045E+20	1,662809E+22
-1926	8,195239E+21	8,195885E+21	1,187526E+20	1,187208E+20	1,639112E+22	2,374734E+20	1,662860E+22
-1925	8,195930E+21	8,195542E+21	1,186948E+20	1,187526E+20	1,639147E+22	2,374473E+20	1,662892E+22
-1924	8,195969E+21	8,195828E+21	1,187027E+20	1,186825E+20	1,639180E+22	2,373853E+20	1,662918E+22
-1923	8,195856E+21	8,196202E+21	1,187466E+20	1,187361E+20	1,639206E+22	2,374827E+20	1,662954E+22

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 ° Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
-1922	8,196318E+21	8,195767E+21	1,186850E+20	1,187213E+20	1,639208E+22	2,374064E+20	1,662949E+22
-1921	8,195768E+21	8,196104E+21	1,187340E+20	1,186884E+20	1,639187E+22	2,374224E+20	1,662929E+22
-1920	8,195600E+21	8,195798E+21	1,187337E+20	1,187579E+20	1,639140E+22	2,374915E+20	1,662889E+22
-1919	8,195689E+21	8,195211E+21	1,186915E+20	1,187193E+20	1,639090E+22	2,374108E+20	1,662831E+22
-1918	8,194973E+21	8,195421E+21	1,187643E+20	1,187205E+20	1,639039E+22	2,374848E+20	1,662788E+22
-1917	8,195084E+21	8,194717E+21	1,187196E+20	1,187689E+20	1,638980E+22	2,374884E+20	1,662729E+22
-1916	8,194797E+21	8,194443E+21	1,187207E+20	1,187128E+20	1,638924E+22	2,374335E+20	1,662667E+22
-1915	8,194131E+21	8,194653E+21	1,187748E+20	1,187522E+20	1,638878E+22	2,375271E+20	1,662631E+22
-1914	8,194480E+21	8,194024E+21	1,187149E+20	1,187691E+20	1,638850E+22	2,374840E+20	1,662599E+22
-1913	8,194127E+21	8,194246E+21	1,187512E+20	1,187146E+20	1,638837E+22	2,374658E+20	1,662584E+22
-1912	8,194040E+21	8,194314E+21	1,187647E+20	1,187707E+20	1,638835E+22	2,375354E+20	1,662589E+22
-1911	8,194572E+21	8,194020E+21	1,187122E+20	1,187418E+20	1,638859E+22	2,374540E+20	1,662605E+22
-1910	8,194208E+21	8,194704E+21	1,187639E+20	1,187122E+20	1,638891E+22	2,374761E+20	1,662639E+22
-1909	8,194620E+21	8,194606E+21	1,187343E+20	1,187756E+20	1,638923E+22	2,375098E+20	1,662674E+22
-1908	8,194972E+21	8,194651E+21	1,187024E+20	1,187119E+20	1,638962E+22	2,374143E+20	1,662704E+22
-1907	8,194726E+21	8,195340E+21	1,187608E+20	1,187292E+20	1,639007E+22	2,374900E+20	1,662756E+22
-1906	8,195449E+21	8,195070E+21	1,187082E+20	1,187549E+20	1,639052E+22	2,374632E+20	1,662798E+22
-1905	8,195450E+21	8,195334E+21	1,187182E+20	1,186873E+20	1,639078E+22	2,374055E+20	1,662819E+22
-1904	8,195171E+21	8,195593E+21	1,187588E+20	1,187442E+20	1,639076E+22	2,375030E+20	1,662827E+22
-1903	8,195575E+21	8,195105E+21	1,186919E+20	1,187362E+20	1,639068E+22	2,374280E+20	1,662811E+22
-1902	8,195033E+21	8,195374E+21	1,187431E+20	1,187059E+20	1,639041E+22	2,374490E+20	1,662786E+22
-1901	8,194959E+21	8,195017E+21	1,187413E+20	1,187719E+20	1,638998E+22	2,375132E+20	1,662749E+22
-1900	8,195064E+21	8,194450E+21	1,186987E+20	1,187263E+20	1,638951E+22	2,374250E+20	1,662694E+22
-1899	8,194262E+21	8,194705E+21	1,187755E+20	1,187293E+20	1,638897E+22	2,375047E+20	1,662647E+22
-1898	8,194346E+21	8,194100E+21	1,187326E+20	1,187772E+20	1,638845E+22	2,375098E+20	1,662596E+22
-1897	8,194071E+21	8,193809E+21	1,187344E+20	1,187247E+20	1,638788E+22	2,374591E+20	1,662534E+22
-1896	8,193407E+21	8,193946E+21	1,187853E+20	1,187632E+20	1,638735E+22	2,375486E+20	1,662490E+22
-1895	8,193837E+21	8,193348E+21	1,187236E+20	1,187800E+20	1,638719E+22	2,375036E+20	1,662469E+22
-1894	8,193542E+21	8,193608E+21	1,187616E+20	1,187240E+20	1,638715E+22	2,374856E+20	1,662464E+22
-1893	8,193518E+21	8,193706E+21	1,187721E+20	1,187793E+20	1,638722E+22	2,375515E+20	1,662478E+22
-1892	8,193998E+21	8,193464E+21	1,187157E+20	1,187483E+20	1,638746E+22	2,374640E+20	1,662493E+22
-1891	8,193583E+21	8,194157E+21	1,187705E+20	1,187232E+20	1,638774E+22	2,374937E+20	1,662523E+22
-1890	8,194062E+21	8,194122E+21	1,187450E+20	1,187820E+20	1,638818E+22	2,375270E+20	1,662571E+22
-1889	8,194489E+21	8,194148E+21	1,187151E+20	1,187173E+20	1,638864E+22	2,374324E+20	1,662607E+22
-1888	8,194205E+21	8,194755E+21	1,187720E+20	1,187332E+20	1,638896E+22	2,375052E+20	1,662647E+22
-1887	8,194879E+21	8,194510E+21	1,187161E+20	1,187628E+20	1,638939E+22	2,374789E+20	1,662687E+22
-1886	8,194822E+21	8,194754E+21	1,187255E+20	1,187022E+20	1,638958E+22	2,374277E+20	1,662700E+22
-1885	8,194559E+21	8,194933E+21	1,187632E+20	1,187598E+20	1,638949E+22	2,375231E+20	1,662702E+22
-1884	8,194952E+21	8,194426E+21	1,186950E+20	1,187480E+20	1,638938E+22	2,374429E+20	1,662682E+22
-1883	8,194379E+21	8,194669E+21	1,187535E+20	1,187174E+20	1,638905E+22	2,374709E+20	1,662652E+22
-1882	8,194303E+21	8,194372E+21	1,187569E+20	1,187759E+20	1,638868E+22	2,375329E+20	1,662621E+22
-1881	8,194376E+21	8,193792E+21	1,187159E+20	1,187342E+20	1,638817E+22	2,374501E+20	1,662562E+22
-1880	8,193445E+21	8,193942E+21	1,187878E+20	1,187391E+20	1,638739E+22	2,375268E+20	1,662491E+22
-1879	8,193538E+21	8,193347E+21	1,187419E+20	1,187918E+20	1,638688E+22	2,375337E+20	1,662442E+22
-1878	8,193361E+21	8,193062E+21	1,187445E+20	1,187405E+20	1,638642E+22	2,374850E+20	1,662391E+22
-1877	8,192821E+21	8,193215E+21	1,187929E+20	1,187730E+20	1,638604E+22	2,375659E+20	1,662360E+22
-1876	8,193280E+21	8,192717E+21	1,187307E+20	1,187839E+20	1,638600E+22	2,375147E+20	1,662351E+22
-1875	8,192917E+21	8,193050E+21	1,187710E+20	1,187310E+20	1,638597E+22	2,375021E+20	1,662347E+22
-1874	8,192869E+21	8,193241E+21	1,187834E+20	1,187845E+20	1,638611E+22	2,375679E+20	1,662368E+22

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 ° Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
-1873	8,193387E+21	8,192963E+21	1,187265E+20	1,187581E+20	1,638635E+22	2,374846E+20	1,662383E+22
-1872	8,192976E+21	8,193545E+21	1,187777E+20	1,187326E+20	1,638652E+22	2,375102E+20	1,662403E+22
-1871	8,193545E+21	8,193531E+21	1,187524E+20	1,187912E+20	1,638708E+22	2,375436E+20	1,662462E+22
-1870	8,194024E+21	8,193568E+21	1,187242E+20	1,187273E+20	1,638759E+22	2,374515E+20	1,662504E+22
-1869	8,193744E+21	8,194177E+21	1,187774E+20	1,187430E+20	1,638792E+22	2,375204E+20	1,662544E+22
-1868	8,194317E+21	8,193958E+21	1,187190E+20	1,187718E+20	1,638827E+22	2,374909E+20	1,662577E+22
-1867	8,194177E+21	8,194167E+21	1,187326E+20	1,187165E+20	1,638834E+22	2,374491E+20	1,662579E+22
-1866	8,193928E+21	8,194368E+21	1,187758E+20	1,187663E+20	1,638830E+22	2,375421E+20	1,662584E+22
-1865	8,194331E+21	8,193799E+21	1,187109E+20	1,187537E+20	1,638813E+22	2,374645E+20	1,662559E+22
-1864	8,193670E+21	8,193926E+21	1,187679E+20	1,187224E+20	1,638760E+22	2,374903E+20	1,662509E+22
-1863	8,193543E+21	8,193636E+21	1,187684E+20	1,187848E+20	1,638718E+22	2,375532E+20	1,662473E+22
-1862	8,193583E+21	8,193042E+21	1,187272E+20	1,187505E+20	1,638663E+22	2,374778E+20	1,662410E+22
-1861	8,192738E+21	8,193164E+21	1,187925E+20	1,187554E+20	1,638590E+22	2,375480E+20	1,662345E+22
-1860	8,192878E+21	8,192622E+21	1,187467E+20	1,188036E+20	1,638550E+22	2,375503E+20	1,662305E+22
-1859	8,192728E+21	8,192393E+21	1,187548E+20	1,187517E+20	1,638512E+22	2,375066E+20	1,662263E+22
-1858	8,192225E+21	8,192656E+21	1,188074E+20	1,187748E+20	1,638488E+22	2,375823E+20	1,662246E+22
-1857	8,192642E+21	8,192179E+21	1,187457E+20	1,187898E+20	1,638482E+22	2,375355E+20	1,662236E+22
-1856	8,192174E+21	8,192414E+21	1,187804E+20	1,187403E+20	1,638459E+22	2,375207E+20	1,662211E+22
-1855	8,192177E+21	8,192600E+21	1,187906E+20	1,187969E+20	1,638478E+22	2,375875E+20	1,662236E+22
-1854	8,192816E+21	8,192333E+21	1,187346E+20	1,187722E+20	1,638515E+22	2,375067E+20	1,662266E+22
-1853	8,192560E+21	8,192917E+21	1,187812E+20	1,187416E+20	1,638548E+22	2,375228E+20	1,662300E+22
-1852	8,193135E+21	8,192998E+21	1,187569E+20	1,187954E+20	1,638613E+22	2,375522E+20	1,662368E+22
-1851	8,193524E+21	8,193098E+21	1,187312E+20	1,187358E+20	1,638662E+22	2,374669E+20	1,662409E+22
-1850	8,193181E+21	8,193753E+21	1,187884E+20	1,187473E+20	1,638693E+22	2,375357E+20	1,662447E+22
-1849	8,193716E+21	8,193470E+21	1,187315E+20	1,187795E+20	1,638719E+22	2,375111E+20	1,662470E+22
-1848	8,193484E+21	8,193507E+21	1,187442E+20	1,187252E+20	1,638699E+22	2,374694E+20	1,662446E+22
-1847	8,193237E+21	8,193667E+21	1,187888E+20	1,187737E+20	1,638690E+22	2,375625E+20	1,662447E+22
-1846	8,193649E+21	8,193063E+21	1,187250E+20	1,187658E+20	1,638671E+22	2,374908E+20	1,662420E+22
-1845	8,192981E+21	8,193137E+21	1,187750E+20	1,187353E+20	1,638612E+22	2,375103E+20	1,662363E+22
-1844	8,192803E+21	8,192879E+21	1,187729E+20	1,187978E+20	1,638568E+22	2,375707E+20	1,662325E+22
-1843	8,192844E+21	8,192307E+21	1,187357E+20	1,187675E+20	1,638515E+22	2,375032E+20	1,662265E+22
-1842	8,192077E+21	8,192517E+21	1,188050E+20	1,187625E+20	1,638459E+22	2,375675E+20	1,662216E+22
-1841	8,192257E+21	8,192006E+21	1,187629E+20	1,188090E+20	1,638426E+22	2,375719E+20	1,662184E+22
-1840	8,192009E+21	8,191721E+21	1,187685E+20	1,187576E+20	1,638373E+22	2,375261E+20	1,662126E+22
-1839	8,191479E+21	8,192020E+21	1,188178E+20	1,187829E+20	1,638350E+22	2,376007E+20	1,662110E+22
-1838	8,191917E+21	8,191528E+21	1,187552E+20	1,188053E+20	1,638344E+22	2,375605E+20	1,662101E+22
-1837	8,191580E+21	8,191719E+21	1,187823E+20	1,187545E+20	1,638330E+22	2,375368E+20	1,662084E+22
-1836	8,191679E+21	8,191977E+21	1,187931E+20	1,188063E+20	1,638366E+22	2,375995E+20	1,662126E+22
-1835	8,192373E+21	8,191802E+21	1,187427E+20	1,187809E+20	1,638418E+22	2,375236E+20	1,662170E+22
-1834	8,192160E+21	8,192503E+21	1,187929E+20	1,187424E+20	1,638466E+22	2,375353E+20	1,662220E+22
-1833	8,192635E+21	8,192600E+21	1,187704E+20	1,187985E+20	1,638523E+22	2,375689E+20	1,662280E+22
-1832	8,192847E+21	8,192570E+21	1,187410E+20	1,187441E+20	1,638542E+22	2,374851E+20	1,662290E+22
-1831	8,192499E+21	8,193150E+21	1,187983E+20	1,187569E+20	1,638565E+22	2,375552E+20	1,662320E+22
-1830	8,193051E+21	8,192801E+21	1,187435E+20	1,187917E+20	1,638585E+22	2,375352E+20	1,662339E+22
-1829	8,192898E+21	8,192760E+21	1,187512E+20	1,187358E+20	1,638566E+22	2,374870E+20	1,662315E+22
-1828	8,192622E+21	8,192947E+21	1,187951E+20	1,187819E+20	1,638557E+22	2,375771E+20	1,662315E+22
-1827	8,192952E+21	8,192390E+21	1,187332E+20	1,187803E+20	1,638534E+22	2,375136E+20	1,662286E+22
-1826	8,192299E+21	8,192504E+21	1,187845E+20	1,187457E+20	1,638480E+22	2,375303E+20	1,662233E+22
-1825	8,192121E+21	8,192235E+21	1,187845E+20	1,188085E+20	1,638436E+22	2,375930E+20	1,662195E+22

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 $\odot$ Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
-1824	8,192097E+21	8,191581E+21	1,187484E+20	1,187784E+20	1,638368E+22	2,375268E+20	1,662120E+22
-1823	8,191369E+21	8,191801E+21	1,188195E+20	1,187693E+20	1,638317E+22	2,375888E+20	1,662076E+22
-1822	8,191540E+21	8,191309E+21	1,187791E+20	1,188199E+20	1,638285E+22	2,375990E+20	1,662045E+22
-1821	8,191292E+21	8,190988E+21	1,187758E+20	1,187703E+20	1,638228E+22	2,375461E+20	1,661983E+22
-1820	8,190767E+21	8,191313E+21	1,188214E+20	1,187951E+20	1,638208E+22	2,376165E+20	1,661970E+22
-1819	8,191277E+21	8,190880E+21	1,187619E+20	1,188199E+20	1,638216E+22	2,375818E+20	1,661974E+22
-1818	8,191094E+21	8,191176E+21	1,187917E+20	1,187581E+20	1,638227E+22	2,375498E+20	1,661982E+22
-1817	8,191256E+21	8,191512E+21	1,188067E+20	1,188075E+20	1,638277E+22	2,376142E+20	1,662038E+22
-1816	8,191821E+21	8,191313E+21	1,187552E+20	1,187834E+20	1,638313E+22	2,375385E+20	1,662067E+22
-1815	8,191541E+21	8,192029E+21	1,188033E+20	1,187480E+20	1,638357E+22	2,375513E+20	1,662112E+22
-1814	8,191986E+21	8,192073E+21	1,187806E+20	1,188117E+20	1,638406E+22	2,375922E+20	1,662165E+22
-1813	8,192244E+21	8,191917E+21	1,187436E+20	1,187587E+20	1,638416E+22	2,375023E+20	1,662166E+22
-1812	8,191931E+21	8,192475E+21	1,188019E+20	1,187681E+20	1,638441E+22	2,375700E+20	1,662198E+22
-1811	8,192495E+21	8,192150E+21	1,187521E+20	1,188031E+20	1,638465E+22	2,375552E+20	1,662220E+22
-1810	8,192358E+21	8,192163E+21	1,187626E+20	1,187417E+20	1,638452E+22	2,375043E+20	1,662203E+22
-1809	8,191991E+21	8,192354E+21	1,188072E+20	1,187898E+20	1,638434E+22	2,375970E+20	1,662194E+22
-1808	8,192156E+21	8,191694E+21	1,187448E+20	1,187929E+20	1,638385E+22	2,375377E+20	1,662139E+22
-1807	8,191537E+21	8,191784E+21	1,187968E+20	1,187571E+20	1,638332E+22	2,375539E+20	1,662088E+22
-1806	8,191397E+21	8,191504E+21	1,187996E+20	1,188205E+20	1,638290E+22	2,376201E+20	1,662052E+22
-1805	8,191423E+21	8,190805E+21	1,187588E+20	1,187891E+20	1,638223E+22	2,375479E+20	1,661978E+22
-1804	8,190669E+21	8,191069E+21	1,188273E+20	1,187781E+20	1,638174E+22	2,376054E+20	1,661934E+22
-1803	8,190785E+21	8,190642E+21	1,187880E+20	1,188332E+20	1,638143E+22	2,376212E+20	1,661905E+22
-1802	8,190627E+21	8,190372E+21	1,187845E+20	1,187801E+20	1,638100E+22	2,375646E+20	1,661856E+22
-1801	8,190170E+21	8,190715E+21	1,188310E+20	1,188028E+20	1,638088E+22	2,376338E+20	1,661852E+22
-1800	8,190651E+21	8,190271E+21	1,187738E+20	1,188274E+20	1,638092E+22	2,376012E+20	1,661852E+22
-1799	8,190570E+21	8,190619E+21	1,188035E+20	1,187623E+20	1,638119E+22	2,375658E+20	1,661875E+22
-1798	8,190708E+21	8,190992E+21	1,188198E+20	1,188162E+20	1,638170E+22	2,376361E+20	1,661934E+22
-1797	8,191236E+21	8,190749E+21	1,187594E+20	1,187952E+20	1,638198E+22	2,375546E+20	1,661954E+22
-1796	8,190947E+21	8,191428E+21	1,188048E+20	1,187609E+20	1,638238E+22	2,375657E+20	1,661994E+22
-1795	8,191402E+21	8,191486E+21	1,187858E+20	1,188247E+20	1,638289E+22	2,376105E+20	1,662050E+22
-1794	8,191768E+21	8,191358E+21	1,187520E+20	1,187646E+20	1,638313E+22	2,375166E+20	1,662064E+22
-1793	8,191451E+21	8,191918E+21	1,188138E+20	1,187714E+20	1,638337E+22	2,375853E+20	1,662095E+22
-1792	8,191831E+21	8,191550E+21	1,187650E+20	1,188097E+20	1,638338E+22	2,375746E+20	1,662095E+22
-1791	8,191647E+21	8,191539E+21	1,187746E+20	1,187506E+20	1,638319E+22	2,375251E+20	1,662071E+22
-1790	8,191250E+21	8,191679E+21	1,188195E+20	1,188043E+20	1,638293E+22	2,376237E+20	1,662055E+22
-1789	8,191438E+21	8,190929E+21	1,187521E+20	1,188081E+20	1,638237E+22	2,375603E+20	1,661993E+22
-1788	8,190856E+21	8,191011E+21	1,188051E+20	1,187695E+20	1,638187E+22	2,375746E+20	1,661944E+22
-1787	8,190715E+21	8,190786E+21	1,188117E+20	1,188313E+20	1,638150E+22	2,376430E+20	1,661914E+22
-1786	8,190749E+21	8,190145E+21	1,187722E+20	1,187969E+20	1,638089E+22	2,375691E+20	1,661846E+22
-1785	8,189937E+21	8,190415E+21	1,188387E+20	1,187866E+20	1,638035E+22	2,376253E+20	1,661798E+22
-1784	8,189954E+21	8,189918E+21	1,187992E+20	1,188449E+20	1,637987E+22	2,376441E+20	1,661752E+22
-1783	8,189911E+21	8,189672E+21	1,187956E+20	1,187889E+20	1,637958E+22	2,375846E+20	1,661717E+22
-1782	8,189576E+21	8,190072E+21	1,188431E+20	1,188127E+20	1,637965E+22	2,376559E+20	1,661730E+22
-1781	8,190126E+21	8,189644E+21	1,187818E+20	1,188358E+20	1,637977E+22	2,376176E+20	1,661739E+22
-1780	8,190046E+21	8,190061E+21	1,188071E+20	1,187712E+20	1,638011E+22	2,375784E+20	1,661769E+22
-1779	8,190147E+21	8,190497E+21	1,188245E+20	1,188277E+20	1,638064E+22	2,376522E+20	1,661830E+22
-1778	8,190730E+21	8,190271E+21	1,187642E+20	1,188039E+20	1,638100E+22	2,375681E+20	1,661857E+22
-1777	8,190460E+21	8,190921E+21	1,188119E+20	1,187676E+20	1,638138E+22	2,375794E+20	1,661896E+22
-1776	8,190807E+21	8,190915E+21	1,187976E+20	1,188302E+20	1,638172E+22	2,376279E+20	1,661935E+22

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 $\odot$ Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
-1775	8,191206E+21	8,190785E+21	1,187663E+20	1,187687E+20	1,638199E+22	2,375351E+20	1,661953E+22
-1774	8,190829E+21	8,191322E+21	1,188279E+20	1,187817E+20	1,638215E+22	2,376097E+20	1,661976E+22
-1773	8,191131E+21	8,190862E+21	1,187723E+20	1,188237E+20	1,638199E+22	2,375960E+20	1,661959E+22
-1772	8,190955E+21	8,190794E+21	1,187792E+20	1,187667E+20	1,638175E+22	2,375459E+20	1,661929E+22
-1771	8,190568E+21	8,190961E+21	1,188271E+20	1,188176E+20	1,638153E+22	2,376447E+20	1,661917E+22
-1770	8,190843E+21	8,190259E+21	1,187637E+20	1,188163E+20	1,638110E+22	2,375800E+20	1,661868E+22
-1769	8,190226E+21	8,190344E+21	1,188190E+20	1,187749E+20	1,638057E+22	2,375939E+20	1,661816E+22
-1768	8,189871E+21	8,190098E+21	1,188262E+20	1,188389E+20	1,637997E+22	2,376651E+20	1,661763E+22
-1767	8,189916E+21	8,189442E+21	1,187853E+20	1,188078E+20	1,637936E+22	2,375931E+20	1,661695E+22
-1766	8,189155E+21	8,189668E+21	1,188494E+20	1,188018E+20	1,637882E+22	2,376511E+20	1,661647E+22
-1765	8,189262E+21	8,189142E+21	1,188055E+20	1,188590E+20	1,637840E+22	2,376645E+20	1,661607E+22
-1764	8,189357E+21	8,188950E+21	1,188011E+20	1,188000E+20	1,637831E+22	2,376011E+20	1,661591E+22
-1763	8,189073E+21	8,189484E+21	1,188510E+20	1,188211E+20	1,637856E+22	2,376720E+20	1,661623E+22
-1762	8,189646E+21	8,189175E+21	1,187910E+20	1,188420E+20	1,637882E+22	2,376330E+20	1,661645E+22
-1761	8,189506E+21	8,189598E+21	1,188143E+20	1,187779E+20	1,637910E+22	2,375922E+20	1,661670E+22
-1760	8,189473E+21	8,189968E+21	1,188344E+20	1,188349E+20	1,637944E+22	2,376692E+20	1,661711E+22
-1759	8,190128E+21	8,189722E+21	1,187758E+20	1,188087E+20	1,637985E+22	2,375845E+20	1,661743E+22
-1758	8,189916E+21	8,190338E+21	1,188251E+20	1,187751E+20	1,638025E+22	2,376003E+20	1,661785E+22
-1757	8,190239E+21	8,190281E+21	1,188071E+20	1,188379E+20	1,638052E+22	2,376451E+20	1,661816E+22
-1756	8,190606E+21	8,190149E+21	1,187717E+20	1,187808E+20	1,638076E+22	2,375525E+20	1,661831E+22
-1755	8,190200E+21	8,190706E+21	1,188325E+20	1,187964E+20	1,638091E+22	2,376289E+20	1,661853E+22
-1754	8,190544E+21	8,190244E+21	1,187789E+20	1,188357E+20	1,638079E+22	2,376147E+20	1,661840E+22
-1753	8,190364E+21	8,190155E+21	1,187879E+20	1,187766E+20	1,638052E+22	2,375645E+20	1,661808E+22
-1752	8,189853E+21	8,190269E+21	1,188413E+20	1,188238E+20	1,638012E+22	2,376651E+20	1,661779E+22
-1751	8,190111E+21	8,189572E+21	1,187815E+20	1,188221E+20	1,637968E+22	2,376036E+20	1,661729E+22
-1750	8,189431E+21	8,189628E+21	1,188349E+20	1,187878E+20	1,637906E+22	2,376227E+20	1,661668E+22
-1749	8,189016E+21	8,189283E+21	1,188347E+20	1,188535E+20	1,637830E+22	2,376882E+20	1,661599E+22
-1748	8,189149E+21	8,188602E+21	1,187907E+20	1,188247E+20	1,637775E+22	2,376155E+20	1,661537E+22
-1747	8,188513E+21	8,188914E+21	1,188546E+20	1,188142E+20	1,637743E+22	2,376688E+20	1,661510E+22
-1746	8,188770E+21	8,188515E+21	1,188154E+20	1,188657E+20	1,637729E+22	2,376812E+20	1,661497E+22
-1745	8,188874E+21	8,188425E+21	1,188111E+20	1,188035E+20	1,637730E+22	2,376146E+20	1,661491E+22
-1744	8,188414E+21	8,188989E+21	1,188623E+20	1,188252E+20	1,637740E+22	2,376876E+20	1,661509E+22
-1743	8,188986E+21	8,188696E+21	1,188034E+20	1,188480E+20	1,637768E+22	2,376514E+20	1,661533E+22
-1742	8,188874E+21	8,189055E+21	1,188243E+20	1,187898E+20	1,637793E+22	2,376141E+20	1,661554E+22
-1741	8,188858E+21	8,189334E+21	1,188412E+20	1,188448E+20	1,637819E+22	2,376860E+20	1,661588E+22
-1740	8,189615E+21	8,189067E+21	1,187816E+20	1,188195E+20	1,637868E+22	2,376011E+20	1,661628E+22
-1739	8,189424E+21	8,189737E+21	1,188312E+20	1,187851E+20	1,637916E+22	2,376163E+20	1,661678E+22
-1738	8,189748E+21	8,189744E+21	1,188146E+20	1,188477E+20	1,637949E+22	2,376624E+20	1,661715E+22
-1737	8,190052E+21	8,189581E+21	1,187777E+20	1,187908E+20	1,637963E+22	2,375686E+20	1,661720E+22
-1736	8,189494E+21	8,190077E+21	1,188425E+20	1,188050E+20	1,637957E+22	2,376475E+20	1,661722E+22
-1735	8,189878E+21	8,189621E+21	1,187937E+20	1,188411E+20	1,637950E+22	2,376347E+20	1,661713E+22
-1734	8,189696E+21	8,189481E+21	1,188047E+20	1,187864E+20	1,637918E+22	2,375911E+20	1,661677E+22
-1733	8,189086E+21	8,189521E+21	1,188538E+20	1,188323E+20	1,637861E+22	2,376861E+20	1,661629E+22
-1732	8,189320E+21	8,188785E+21	1,187900E+20	1,188369E+20	1,637810E+22	2,376269E+20	1,661573E+22
-1731	8,188653E+21	8,188839E+21	1,188407E+20	1,188036E+20	1,637749E+22	2,376443E+20	1,661514E+22
-1730	8,188348E+21	8,188536E+21	1,188417E+20	1,188664E+20	1,637688E+22	2,377081E+20	1,661459E+22
-1729	8,188545E+21	8,187908E+21	1,187995E+20	1,188337E+20	1,637645E+22	2,376332E+20	1,661409E+22
-1728	8,187861E+21	8,188271E+21	1,188675E+20	1,188189E+20	1,637613E+22	2,376864E+20	1,661382E+22
-1727	8,188143E+21	8,187974E+21	1,188331E+20	1,188693E+20	1,637612E+22	2,377024E+20	1,661382E+22

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 $\odot$ Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
-1726	8,188198E+21	8,187895E+21	1,188251E+20	1,188149E+20	1,637609E+22	2,376400E+20	1,661373E+22
-1725	8,187685E+21	8,188356E+21	1,188695E+20	1,188363E+20	1,637604E+22	2,377058E+20	1,661375E+22
-1724	8,188343E+21	8,188019E+21	1,188076E+20	1,188615E+20	1,637636E+22	2,376691E+20	1,661403E+22
-1723	8,188351E+21	8,188420E+21	1,188279E+20	1,188004E+20	1,637677E+22	2,376283E+20	1,661440E+22
-1722	8,188450E+21	8,188767E+21	1,188491E+20	1,188510E+20	1,637722E+22	2,377001E+20	1,661492E+22
-1721	8,189170E+21	8,188571E+21	1,187891E+20	1,188245E+20	1,637774E+22	2,376136E+20	1,661535E+22
-1720	8,188826E+21	8,189234E+21	1,188394E+20	1,187920E+20	1,637806E+22	2,376314E+20	1,661569E+22
-1719	8,189129E+21	8,189235E+21	1,188268E+20	1,188543E+20	1,637836E+22	2,376812E+20	1,661604E+22
-1718	8,189421E+21	8,189010E+21	1,187893E+20	1,188037E+20	1,637843E+22	2,375930E+20	1,661602E+22
-1717	8,188817E+21	8,189378E+21	1,188529E+20	1,188136E+20	1,637820E+22	2,376666E+20	1,661586E+22
-1716	8,189224E+21	8,188874E+21	1,188043E+20	1,188517E+20	1,637810E+22	2,376561E+20	1,661575E+22
-1715	8,189008E+21	8,188755E+21	1,188148E+20	1,187992E+20	1,637776E+22	2,376140E+20	1,661538E+22
-1714	8,188374E+21	8,188802E+21	1,188632E+20	1,188452E+20	1,637718E+22	2,377084E+20	1,661488E+22
-1713	8,188577E+21	8,188040E+21	1,187976E+20	1,188502E+20	1,637662E+22	2,376478E+20	1,661426E+22
-1712	8,187863E+21	8,188067E+21	1,188503E+20	1,188138E+20	1,637593E+22	2,376641E+20	1,661359E+22
-1711	8,187663E+21	8,187847E+21	1,188574E+20	1,188715E+20	1,637551E+22	2,377289E+20	1,661324E+22
-1710	8,187899E+21	8,187271E+21	1,188164E+20	1,188432E+20	1,637517E+22	2,376596E+20	1,661283E+22
-1709	8,187146E+21	8,187617E+21	1,188787E+20	1,188267E+20	1,637476E+22	2,377054E+20	1,661247E+22
-1708	8,187448E+21	8,187322E+21	1,188406E+20	1,188833E+20	1,637477E+22	2,377239E+20	1,661249E+22
-1707	8,187539E+21	8,187258E+21	1,188287E+20	1,188295E+20	1,637480E+22	2,376582E+20	1,661245E+22
-1706	8,187145E+21	8,187746E+21	1,188737E+20	1,188474E+20	1,637489E+22	2,377211E+20	1,661261E+22
-1705	8,187870E+21	8,187440E+21	1,188131E+20	1,188677E+20	1,637531E+22	2,376808E+20	1,661299E+22
-1704	8,187828E+21	8,187865E+21	1,188378E+20	1,188034E+20	1,637569E+22	2,376412E+20	1,661333E+22
-1703	8,187935E+21	8,188310E+21	1,188646E+20	1,188534E+20	1,637624E+22	2,377180E+20	1,661396E+22
-1702	8,188577E+21	8,188100E+21	1,188025E+20	1,188352E+20	1,637668E+22	2,376377E+20	1,661431E+22
-1701	8,188148E+21	8,188622E+21	1,188474E+20	1,188025E+20	1,637677E+22	2,376499E+20	1,661442E+22
-1700	8,188501E+21	8,188554E+21	1,188338E+20	1,188663E+20	1,637706E+22	2,377002E+20	1,661476E+22
-1699	8,188827E+21	8,188333E+21	1,187964E+20	1,188150E+20	1,637716E+22	2,376115E+20	1,661477E+22
-1698	8,188258E+21	8,188713E+21	1,188634E+20	1,188222E+20	1,637697E+22	2,376856E+20	1,661466E+22
-1697	8,188563E+21	8,188225E+21	1,188136E+20	1,188598E+20	1,637679E+22	2,376734E+20	1,661446E+22
-1696	8,188198E+21	8,188062E+21	1,188255E+20	1,188105E+20	1,637626E+22	2,376360E+20	1,661390E+22
-1695	8,187591E+21	8,188101E+21	1,188770E+20	1,188548E+20	1,637569E+22	2,377318E+20	1,661342E+22
-1694	8,187821E+21	8,187321E+21	1,188114E+20	1,188654E+20	1,637514E+22	2,376768E+20	1,661282E+22
-1693	8,187129E+21	8,187270E+21	1,188610E+20	1,188240E+20	1,637440E+22	2,376851E+20	1,661208E+22
-1692	8,187008E+21	8,187081E+21	1,188685E+20	1,188825E+20	1,637409E+22	2,377510E+20	1,661184E+22
-1691	8,187239E+21	8,186612E+21	1,188258E+20	1,188564E+20	1,637385E+22	2,376822E+20	1,661153E+22
-1690	8,186507E+21	8,186982E+21	1,188859E+20	1,188389E+20	1,637349E+22	2,377247E+20	1,661121E+22
-1689	8,186795E+21	8,186700E+21	1,188466E+20	1,188926E+20	1,637349E+22	2,377392E+20	1,661123E+22
-1688	8,186884E+21	8,186640E+21	1,188364E+20	1,188364E+20	1,637352E+22	2,376727E+20	1,661120E+22
-1687	8,186604E+21	8,187200E+21	1,188878E+20	1,188488E+20	1,637380E+22	2,377366E+20	1,661154E+22
-1686	8,187345E+21	8,186953E+21	1,188282E+20	1,188742E+20	1,637430E+22	2,377024E+20	1,661200E+22
-1685	8,187234E+21	8,187317E+21	1,188468E+20	1,188098E+20	1,637455E+22	2,376566E+20	1,661221E+22
-1684	8,187353E+21	8,187730E+21	1,188709E+20	1,188659E+20	1,637508E+22	2,377368E+20	1,661282E+22
-1683	8,187999E+21	8,187527E+21	1,188062E+20	1,188497E+20	1,637553E+22	2,376559E+20	1,661318E+22
-1682	8,187636E+21	8,188019E+21	1,188522E+20	1,188149E+20	1,637565E+22	2,376671E+20	1,661332E+22
-1681	8,187974E+21	8,187945E+21	1,188409E+20	1,188727E+20	1,637592E+22	2,377137E+20	1,661363E+22
-1680	8,188190E+21	8,187703E+21	1,188082E+20	1,188222E+20	1,637589E+22	2,376304E+20	1,661352E+22
-1679	8,187569E+21	8,188110E+21	1,188803E+20	1,188287E+20	1,637568E+22	2,377090E+20	1,661339E+22
-1678	8,187774E+21	8,187571E+21	1,188280E+20	1,188747E+20	1,637534E+22	2,377027E+20	1,661305E+22

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 ° Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
-1677	8,187354E+21	8,187239E+21	1,188353E+20	1,188242E+20	1,637459E+22	2,376595E+20	1,661225E+22
-1676	8,186863E+21	8,187245E+21	1,188852E+20	1,188687E+20	1,637411E+22	2,377539E+20	1,661186E+22
-1675	8,187155E+21	8,186541E+21	1,188216E+20	1,188774E+20	1,637370E+22	2,376991E+20	1,661140E+22
-1674	8,186528E+21	8,186566E+21	1,188716E+20	1,188339E+20	1,637309E+22	2,377055E+20	1,661080E+22
-1673	8,186350E+21	8,186452E+21	1,188772E+20	1,188899E+20	1,637280E+22	2,377671E+20	1,661057E+22
-1672	8,186469E+21	8,185991E+21	1,188360E+20	1,188662E+20	1,637246E+22	2,377022E+20	1,661016E+22
-1671	8,185802E+21	8,186399E+21	1,188987E+20	1,188453E+20	1,637220E+22	2,377440E+20	1,660995E+22
-1670	8,186125E+21	8,186119E+21	1,188597E+20	1,189021E+20	1,637224E+22	2,377618E+20	1,661001E+22
-1669	8,186243E+21	8,185971E+21	1,188467E+20	1,188423E+20	1,637221E+22	2,376890E+20	1,660990E+22
-1668	8,186075E+21	8,186553E+21	1,188970E+20	1,188579E+20	1,637263E+22	2,377549E+20	1,661038E+22
-1667	8,186794E+21	8,186405E+21	1,188355E+20	1,188869E+20	1,637320E+22	2,377224E+20	1,661092E+22
-1666	8,186725E+21	8,186764E+21	1,188503E+20	1,188239E+20	1,637349E+22	2,376742E+20	1,661116E+22
-1665	8,186831E+21	8,187167E+21	1,188734E+20	1,188753E+20	1,637400E+22	2,377487E+20	1,661175E+22
-1664	8,187427E+21	8,186962E+21	1,188131E+20	1,188569E+20	1,637439E+22	2,376700E+20	1,661206E+22
-1663	8,187103E+21	8,187484E+21	1,188671E+20	1,188176E+20	1,637459E+22	2,376848E+20	1,661227E+22
-1662	8,187343E+21	8,187415E+21	1,188571E+20	1,188796E+20	1,637476E+22	2,377367E+20	1,661249E+22
-1661	8,187426E+21	8,187030E+21	1,188199E+20	1,188325E+20	1,637446E+22	2,376523E+20	1,661211E+22
-1660	8,186821E+21	8,187332E+21	1,188887E+20	1,188439E+20	1,637415E+22	2,377326E+20	1,661189E+22
-1659	8,187033E+21	8,186803E+21	1,188349E+20	1,188916E+20	1,637384E+22	2,377265E+20	1,661156E+22
-1658	8,186725E+21	8,186443E+21	1,188422E+20	1,188384E+20	1,637317E+22	2,376806E+20	1,661085E+22
-1657	8,186245E+21	8,186499E+21	1,188932E+20	1,188752E+20	1,637274E+22	2,377684E+20	1,661051E+22
-1656	8,186457E+21	8,185879E+21	1,188355E+20	1,188853E+20	1,637234E+22	2,377207E+20	1,661006E+22
-1655	8,185801E+21	8,185976E+21	1,188891E+20	1,188409E+20	1,637178E+22	2,377300E+20	1,660951E+22
-1654	8,185543E+21	8,185853E+21	1,188921E+20	1,189016E+20	1,637140E+22	2,377937E+20	1,660919E+22
-1653	8,185647E+21	8,185242E+21	1,188462E+20	1,188773E+20	1,637089E+22	2,377235E+20	1,660861E+22
-1652	8,185137E+21	8,185617E+21	1,189059E+20	1,188563E+20	1,637075E+22	2,377622E+20	1,660852E+22
-1651	8,185541E+21	8,185446E+21	1,188679E+20	1,189125E+20	1,637099E+22	2,377804E+20	1,660877E+22
-1650	8,185761E+21	8,185366E+21	1,188524E+20	1,188527E+20	1,637113E+22	2,377051E+20	1,660883E+22
-1649	8,185581E+21	8,186028E+21	1,188998E+20	1,188662E+20	1,637161E+22	2,377659E+20	1,660938E+22
-1648	8,186228E+21	8,185917E+21	1,188419E+20	1,188967E+20	1,637215E+22	2,377386E+20	1,660988E+22
-1647	8,186209E+21	8,186305E+21	1,188603E+20	1,188306E+20	1,637251E+22	2,376909E+20	1,661020E+22
-1646	8,186284E+21	8,186689E+21	1,188854E+20	1,188817E+20	1,637297E+22	2,377671E+20	1,661074E+22
-1645	8,186805E+21	8,186339E+21	1,188251E+20	1,188615E+20	1,637314E+22	2,376866E+20	1,661083E+22
-1644	8,186504E+21	8,186806E+21	1,188789E+20	1,188274E+20	1,637331E+22	2,377062E+20	1,661102E+22
-1643	8,186632E+21	8,186756E+21	1,188674E+20	1,188928E+20	1,637339E+22	2,377602E+20	1,661115E+22
-1642	8,186729E+21	8,186288E+21	1,188269E+20	1,188490E+20	1,637302E+22	2,376758E+20	1,661069E+22
-1641	8,186153E+21	8,186558E+21	1,188924E+20	1,188550E+20	1,637271E+22	2,377475E+20	1,661046E+22
-1640	8,186339E+21	8,186064E+21	1,188453E+20	1,189003E+20	1,637240E+22	2,377456E+20	1,661015E+22
-1639	8,186088E+21	8,185795E+21	1,188593E+20	1,188434E+20	1,637188E+22	2,377027E+20	1,660959E+22
-1638	8,185519E+21	8,185904E+21	1,189099E+20	1,188821E+20	1,637142E+22	2,377919E+20	1,660921E+22
-1637	8,185595E+21	8,185173E+21	1,188493E+20	1,188961E+20	1,637077E+22	2,377454E+20	1,660851E+22
-1636	8,185002E+21	8,185196E+21	1,188984E+20	1,188568E+20	1,637020E+22	2,377552E+20	1,660795E+22
-1635	8,184771E+21	8,185103E+21	1,188991E+20	1,189170E+20	1,636987E+22	2,378161E+20	1,660769E+22
-1634	8,185035E+21	8,184481E+21	1,188516E+20	1,188914E+20	1,636952E+22	2,377431E+20	1,660726E+22
-1633	8,184627E+21	8,184919E+21	1,189096E+20	1,188628E+20	1,636955E+22	2,377724E+20	1,660732E+22
-1632	8,185003E+21	8,184891E+21	1,188779E+20	1,189198E+20	1,636989E+22	2,377977E+20	1,660769E+22
-1631	8,185237E+21	8,184925E+21	1,188648E+20	1,188590E+20	1,637016E+22	2,377238E+20	1,660789E+22
-1630	8,185001E+21	8,185595E+21	1,189104E+20	1,188744E+20	1,637060E+22	2,377848E+20	1,660838E+22
-1629	8,185598E+21	8,185350E+21	1,188515E+20	1,189033E+20	1,637095E+22	2,377548E+20	1,660870E+22

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 ° Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
-1628	8,185671E+21	8,185669E+21	1,188691E+20	1,188382E+20	1,637134E+22	2,377074E+20	1,660905E+22
-1627	8,185705E+21	8,186104E+21	1,188963E+20	1,188886E+20	1,637181E+22	2,377849E+20	1,660959E+22
-1626	8,186235E+21	8,185712E+21	1,188327E+20	1,188724E+20	1,637195E+22	2,377051E+20	1,660965E+22
-1625	8,185876E+21	8,186146E+21	1,188827E+20	1,188377E+20	1,637202E+22	2,377204E+20	1,660974E+22
-1624	8,185933E+21	8,186102E+21	1,188749E+20	1,189053E+20	1,637203E+22	2,377803E+20	1,660982E+22
-1623	8,186086E+21	8,185651E+21	1,188389E+20	1,188589E+20	1,637174E+22	2,376979E+20	1,660943E+22
-1622	8,185494E+21	8,185916E+21	1,189051E+20	1,188630E+20	1,637141E+22	2,377681E+20	1,660918E+22
-1621	8,185605E+21	8,185320E+21	1,188604E+20	1,189075E+20	1,637092E+22	2,377678E+20	1,660869E+22
-1620	8,185362E+21	8,185032E+21	1,188730E+20	1,188567E+20	1,637039E+22	2,377297E+20	1,660812E+22
-1619	8,184688E+21	8,185182E+21	1,189208E+20	1,188973E+20	1,636987E+22	2,378181E+20	1,660769E+22
-1618	8,184817E+21	8,184368E+21	1,188564E+20	1,189144E+20	1,636918E+22	2,377708E+20	1,660696E+22
-1617	8,184308E+21	8,184379E+21	1,189016E+20	1,188679E+20	1,636869E+22	2,377696E+20	1,660646E+22
-1616	8,184117E+21	8,184383E+21	1,189085E+20	1,189242E+20	1,636850E+22	2,378327E+20	1,660633E+22
-1615	8,184482E+21	8,183908E+21	1,188667E+20	1,188951E+20	1,636839E+22	2,377619E+20	1,660615E+22
-1614	8,184052E+21	8,184443E+21	1,189217E+20	1,188675E+20	1,636849E+22	2,377892E+20	1,660628E+22
-1613	8,184330E+21	8,184347E+21	1,188902E+20	1,189270E+20	1,636868E+22	2,378172E+20	1,660649E+22
-1612	8,184646E+21	8,184348E+21	1,188729E+20	1,188705E+20	1,636899E+22	2,377434E+20	1,660674E+22
-1611	8,184403E+21	8,185036E+21	1,189178E+20	1,188840E+20	1,636944E+22	2,378018E+20	1,660724E+22
-1610	8,185071E+21	8,184731E+21	1,188581E+20	1,189125E+20	1,636980E+22	2,377705E+20	1,660757E+22
-1609	8,185178E+21	8,185044E+21	1,188735E+20	1,188446E+20	1,637022E+22	2,377181E+20	1,660794E+22
-1608	8,185104E+21	8,185539E+21	1,189062E+20	1,188970E+20	1,637064E+22	2,378032E+20	1,660845E+22
-1607	8,185609E+21	8,185182E+21	1,188451E+20	1,188827E+20	1,637079E+22	2,377277E+20	1,660852E+22
-1606	8,185216E+21	8,185552E+21	1,188919E+20	1,188488E+20	1,637077E+22	2,377407E+20	1,660851E+22
-1605	8,185213E+21	8,185365E+21	1,188860E+20	1,189141E+20	1,637058E+22	2,378001E+20	1,660838E+22
-1604	8,185453E+21	8,184888E+21	1,188504E+20	1,188694E+20	1,637034E+22	2,377199E+20	1,660806E+22
-1603	8,184798E+21	8,185217E+21	1,189178E+20	1,188727E+20	1,637002E+22	2,377905E+20	1,660781E+22
-1602	8,184889E+21	8,184593E+21	1,188707E+20	1,189213E+20	1,636948E+22	2,377920E+20	1,660727E+22
-1601	8,184615E+21	8,184276E+21	1,188788E+20	1,188708E+20	1,636889E+22	2,377496E+20	1,660664E+22
-1600	8,183901E+21	8,184453E+21	1,189295E+20	1,189101E+20	1,636835E+22	2,378396E+20	1,660619E+22
-1599	8,184119E+21	8,183687E+21	1,188694E+20	1,189241E+20	1,636781E+22	2,377935E+20	1,660560E+22
-1598	8,183655E+21	8,183720E+21	1,189136E+20	1,188732E+20	1,636738E+22	2,377868E+20	1,660516E+22
-1597	8,183439E+21	8,183690E+21	1,189238E+20	1,189286E+20	1,636713E+22	2,378524E+20	1,660498E+22
-1596	8,183850E+21	8,183272E+21	1,188802E+20	1,189049E+20	1,636712E+22	2,377851E+20	1,660491E+22
-1595	8,183366E+21	8,183881E+21	1,189311E+20	1,188799E+20	1,636725E+22	2,378109E+20	1,660506E+22
-1594	8,183729E+21	8,183717E+21	1,188960E+20	1,189414E+20	1,636745E+22	2,378374E+20	1,660528E+22
-1593	8,184118E+21	8,183707E+21	1,188739E+20	1,188793E+20	1,636782E+22	2,377533E+20	1,660558E+22
-1592	8,183881E+21	8,184476E+21	1,189251E+20	1,188894E+20	1,636836E+22	2,378145E+20	1,660617E+22
-1591	8,184574E+21	8,184257E+21	1,188706E+20	1,189160E+20	1,636883E+22	2,377866E+20	1,660662E+22
-1590	8,184602E+21	8,184573E+21	1,188833E+20	1,188509E+20	1,636917E+22	2,377341E+20	1,660691E+22
-1589	8,184410E+21	8,184929E+21	1,189177E+20	1,189064E+20	1,636934E+22	2,378241E+20	1,660716E+22
-1588	8,184965E+21	8,184509E+21	1,188542E+20	1,188968E+20	1,636947E+22	2,377509E+20	1,660722E+22
-1587	8,184561E+21	8,184879E+21	1,189003E+20	1,188616E+20	1,636944E+22	2,377619E+20	1,660720E+22
-1586	8,184617E+21	8,184615E+21	1,188947E+20	1,189253E+20	1,636923E+22	2,378200E+20	1,660705E+22
-1585	8,184849E+21	8,184152E+21	1,188580E+20	1,188792E+20	1,636900E+22	2,377372E+20	1,660674E+22
-1584	8,184065E+21	8,184553E+21	1,189302E+20	1,188832E+20	1,636862E+22	2,378134E+20	1,660643E+22
-1583	8,184111E+21	8,183957E+21	1,188861E+20	1,189326E+20	1,636807E+22	2,378187E+20	1,660589E+22
-1582	8,183823E+21	8,183579E+21	1,188912E+20	1,188817E+20	1,636740E+22	2,377728E+20	1,660517E+22
-1581	8,183073E+21	8,183633E+21	1,189438E+20	1,189170E+20	1,636671E+22	2,378608E+20	1,660457E+22
-1580	8,183408E+21	8,182901E+21	1,188839E+20	1,189329E+20	1,636631E+22	2,378168E+20	1,660413E+22

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 $\odot$ Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
-1579	8,182953E+21	8,183030E+21	1,189253E+20	1,188823E+20	1,636598E+22	2,378076E+20	1,660379E+22
-1578	8,182775E+21	8,183008E+21	1,189322E+20	1,189417E+20	1,636578E+22	2,378739E+20	1,660366E+22
-1577	8,183235E+21	8,182635E+21	1,188828E+20	1,189184E+20	1,636587E+22	2,378012E+20	1,660367E+22
-1576	8,182770E+21	8,183314E+21	1,189358E+20	1,188912E+20	1,636608E+22	2,378269E+20	1,660391E+22
-1575	8,183217E+21	8,183223E+21	1,189060E+20	1,189480E+20	1,636644E+22	2,378540E+20	1,660429E+22
-1574	8,183626E+21	8,183215E+21	1,188829E+20	1,188825E+20	1,636684E+22	2,377654E+20	1,660461E+22
-1573	8,183290E+21	8,183901E+21	1,189385E+20	1,188931E+20	1,636719E+22	2,378316E+20	1,660502E+22
-1572	8,183962E+21	8,183697E+21	1,188823E+20	1,189262E+20	1,636766E+22	2,378085E+20	1,660547E+22
-1571	8,183929E+21	8,183989E+21	1,188918E+20	1,188648E+20	1,636792E+22	2,377566E+20	1,660567E+22
-1570	8,183804E+21	8,184222E+21	1,189240E+20	1,189209E+20	1,636803E+22	2,378449E+20	1,660587E+22
-1569	8,184415E+21	8,183791E+21	1,188581E+20	1,189069E+20	1,636821E+22	2,377650E+20	1,660597E+22
-1568	8,183988E+21	8,184236E+21	1,189101E+20	1,188690E+20	1,636822E+22	2,377791E+20	1,660600E+22
-1567	8,184013E+21	8,184055E+21	1,189098E+20	1,189310E+20	1,636807E+22	2,378408E+20	1,660591E+22
-1566	8,184120E+21	8,183575E+21	1,188708E+20	1,188881E+20	1,636769E+22	2,377589E+20	1,660545E+22
-1565	8,183203E+21	8,183821E+21	1,189450E+20	1,188943E+20	1,636702E+22	2,378392E+20	1,660486E+22
-1564	8,183284E+21	8,183167E+21	1,188990E+20	1,189461E+20	1,636645E+22	2,378451E+20	1,660430E+22
-1563	8,183009E+21	8,182780E+21	1,189029E+20	1,188950E+20	1,636579E+22	2,377979E+20	1,660359E+22
-1562	8,182387E+21	8,182770E+21	1,189530E+20	1,189291E+20	1,636516E+22	2,378821E+20	1,660304E+22
-1561	8,182770E+21	8,182122E+21	1,188909E+20	1,189447E+20	1,636489E+22	2,378356E+20	1,660273E+22
-1560	8,182290E+21	8,182400E+21	1,189328E+20	1,188951E+20	1,636469E+22	2,378278E+20	1,660252E+22
-1559	8,182161E+21	8,182465E+21	1,189425E+20	1,189530E+20	1,636463E+22	2,378954E+20	1,660252E+22
-1558	8,182641E+21	8,182103E+21	1,188908E+20	1,189258E+20	1,636474E+22	2,378166E+20	1,660256E+22
-1557	8,182152E+21	8,182702E+21	1,189475E+20	1,188946E+20	1,636485E+22	2,378420E+20	1,660270E+22
-1556	8,182648E+21	8,182652E+21	1,189193E+20	1,189515E+20	1,636530E+22	2,378708E+20	1,660317E+22
-1555	8,183007E+21	8,182689E+21	1,188940E+20	1,188901E+20	1,636570E+22	2,377840E+20	1,660348E+22
-1554	8,182689E+21	8,183280E+21	1,189458E+20	1,189057E+20	1,636597E+22	2,378515E+20	1,660382E+22
-1553	8,183385E+21	8,183063E+21	1,188852E+20	1,189402E+20	1,636645E+22	2,378254E+20	1,660427E+22
-1552	8,183368E+21	8,183391E+21	1,188963E+20	1,188774E+20	1,636676E+22	2,377738E+20	1,660453E+22
-1551	8,183299E+21	8,183667E+21	1,189340E+20	1,189281E+20	1,636697E+22	2,378622E+20	1,660483E+22
-1550	8,183878E+21	8,183235E+21	1,188694E+20	1,189112E+20	1,636711E+22	2,377806E+20	1,660489E+22
-1549	8,183283E+21	8,183581E+21	1,189270E+20	1,188752E+20	1,636686E+22	2,378022E+20	1,660467E+22
-1548	8,183213E+21	8,183398E+21	1,189254E+20	1,189419E+20	1,636661E+22	2,378673E+20	1,660448E+22
-1547	8,183251E+21	8,182839E+21	1,188832E+20	1,189054E+20	1,636609E+22	2,377886E+20	1,660388E+22
-1546	8,182403E+21	8,182915E+21	1,189533E+20	1,189106E+20	1,636532E+22	2,378639E+20	1,660318E+22
-1545	8,182572E+21	8,182283E+21	1,189042E+20	1,189588E+20	1,636486E+22	2,378630E+20	1,660272E+22
-1544	8,182345E+21	8,182008E+21	1,189116E+20	1,189050E+20	1,636435E+22	2,378166E+20	1,660217E+22
-1543	8,181768E+21	8,182141E+21	1,189646E+20	1,189369E+20	1,636391E+22	2,379015E+20	1,660181E+22
-1542	8,182113E+21	8,181565E+21	1,189015E+20	1,189533E+20	1,636368E+22	2,378548E+20	1,660153E+22
-1541	8,181564E+21	8,181773E+21	1,189450E+20	1,189046E+20	1,636334E+22	2,378496E+20	1,660119E+22
-1540	8,181492E+21	8,181872E+21	1,189544E+20	1,189612E+20	1,636336E+22	2,379156E+20	1,660128E+22
-1539	8,181989E+21	8,181516E+21	1,189016E+20	1,189347E+20	1,636351E+22	2,378363E+20	1,660134E+22
-1538	8,181591E+21	8,182018E+21	1,189561E+20	1,189027E+20	1,636361E+22	2,378589E+20	1,660147E+22
-1537	8,182088E+21	8,182027E+21	1,189251E+20	1,189609E+20	1,636411E+22	2,378860E+20	1,660200E+22
-1536	8,182414E+21	8,182141E+21	1,188996E+20	1,189029E+20	1,636455E+22	2,378025E+20	1,660236E+22
-1535	8,182167E+21	8,182750E+21	1,189530E+20	1,189179E+20	1,636492E+22	2,378709E+20	1,660279E+22
-1534	8,182867E+21	8,182525E+21	1,188927E+20	1,189471E+20	1,636539E+22	2,378397E+20	1,660323E+22
-1533	8,182798E+21	8,182773E+21	1,189084E+20	1,188824E+20	1,636557E+22	2,377908E+20	1,660336E+22
-1532	8,182705E+21	8,183080E+21	1,189483E+20	1,189316E+20	1,636578E+22	2,378799E+20	1,660366E+22
-1531	8,183147E+21	8,182649E+21	1,188827E+20	1,189215E+20	1,636580E+22	2,378042E+20	1,660360E+22

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 $\odot$ Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
-1530	8,182528E+21	8,182830E+21	1,189366E+20	1,188914E+20	1,636536E+22	2,378279E+20	1,660319E+22
-1529	8,182446E+21	8,182594E+21	1,189304E+20	1,189580E+20	1,636504E+22	2,378884E+20	1,660293E+22
-1528	8,182508E+21	8,182054E+21	1,188901E+20	1,189214E+20	1,636456E+22	2,378115E+20	1,660237E+22
-1527	8,181774E+21	8,182153E+21	1,189633E+20	1,189202E+20	1,636393E+22	2,378835E+20	1,660181E+22
-1526	8,181941E+21	8,181579E+21	1,189161E+20	1,189639E+20	1,636352E+22	2,378800E+20	1,660140E+22
-1525	8,181603E+21	8,181305E+21	1,189278E+20	1,189125E+20	1,636291E+22	2,378403E+20	1,660075E+22
-1524	8,180991E+21	8,181512E+21	1,189791E+20	1,189462E+20	1,636250E+22	2,379252E+20	1,660043E+22
-1523	8,181315E+21	8,180935E+21	1,189150E+20	1,189676E+20	1,636225E+22	2,378826E+20	1,660013E+22
-1522	8,180874E+21	8,181013E+21	1,189536E+20	1,189171E+20	1,636189E+22	2,378707E+20	1,659976E+22
-1521	8,180884E+21	8,181157E+21	1,189601E+20	1,189693E+20	1,636204E+22	2,379294E+20	1,659997E+22
-1520	8,181412E+21	8,180909E+21	1,189087E+20	1,189429E+20	1,636232E+22	2,378516E+20	1,660017E+22
-1519	8,181068E+21	8,181489E+21	1,189636E+20	1,189110E+20	1,636256E+22	2,378746E+20	1,660043E+22
-1518	8,181544E+21	8,181540E+21	1,189318E+20	1,189689E+20	1,636308E+22	2,379008E+20	1,660099E+22
-1517	8,181818E+21	8,181572E+21	1,189093E+20	1,189122E+20	1,636339E+22	2,378214E+20	1,660121E+22
-1516	8,181607E+21	8,182213E+21	1,189631E+20	1,189247E+20	1,636382E+22	2,378878E+20	1,660171E+22
-1515	8,182297E+21	8,181973E+21	1,189045E+20	1,189551E+20	1,636427E+22	2,378596E+20	1,660213E+22
-1514	8,182235E+21	8,182080E+21	1,189184E+20	1,188920E+20	1,636432E+22	2,378104E+20	1,660213E+22
-1513	8,182059E+21	8,182415E+21	1,189551E+20	1,189423E+20	1,636447E+22	2,378974E+20	1,660237E+22
-1512	8,182416E+21	8,181991E+21	1,188900E+20	1,189372E+20	1,636441E+22	2,378272E+20	1,660223E+22
-1511	8,181851E+21	8,182114E+21	1,189455E+20	1,189059E+20	1,636396E+22	2,378514E+20	1,660182E+22
-1510	8,181769E+21	8,181865E+21	1,189396E+20	1,189652E+20	1,636363E+22	2,379048E+20	1,660154E+22
-1509	8,181780E+21	8,181269E+21	1,189055E+20	1,189279E+20	1,636305E+22	2,378334E+20	1,660088E+22
-1508	8,181049E+21	8,181453E+21	1,189785E+20	1,189248E+20	1,636250E+22	2,379033E+20	1,660041E+22
-1507	8,181136E+21	8,180925E+21	1,189317E+20	1,189758E+20	1,636206E+22	2,379074E+20	1,659997E+22
-1506	8,180824E+21	8,180534E+21	1,189381E+20	1,189291E+20	1,636136E+22	2,378672E+20	1,659923E+22
-1505	8,180256E+21	8,180759E+21	1,189838E+20	1,189608E+20	1,636102E+22	2,379446E+20	1,659896E+22
-1504	8,180633E+21	8,180250E+21	1,189216E+20	1,189816E+20	1,636088E+22	2,379032E+20	1,659879E+22
-1503	8,180339E+21	8,180358E+21	1,189615E+20	1,189260E+20	1,636070E+22	2,378875E+20	1,659858E+22
-1502	8,180341E+21	8,180571E+21	1,189694E+20	1,189718E+20	1,636091E+22	2,379412E+20	1,659885E+22
-1501	8,180767E+21	8,180337E+21	1,189214E+20	1,189502E+20	1,636110E+22	2,378716E+20	1,659898E+22
-1500	8,180440E+21	8,180960E+21	1,189737E+20	1,189193E+20	1,636140E+22	2,378929E+20	1,659929E+22
-1499	8,180911E+21	8,180996E+21	1,189432E+20	1,189808E+20	1,636191E+22	2,379240E+20	1,659983E+22
-1498	8,181282E+21	8,180904E+21	1,189164E+20	1,189224E+20	1,636219E+22	2,378388E+20	1,660002E+22
-1497	8,181108E+21	8,181574E+21	1,189684E+20	1,189308E+20	1,636268E+22	2,378992E+20	1,660058E+22
-1496	8,181738E+21	8,181418E+21	1,189127E+20	1,189626E+20	1,636316E+22	2,378753E+20	1,660103E+22
-1495	8,181665E+21	8,181519E+21	1,189269E+20	1,189031E+20	1,636318E+22	2,378299E+20	1,660101E+22
-1494	8,181390E+21	8,181822E+21	1,189637E+20	1,189503E+20	1,636321E+22	2,379140E+20	1,660113E+22
-1493	8,181650E+21	8,181293E+21	1,189027E+20	1,189489E+20	1,636294E+22	2,378516E+20	1,660079E+22
-1492	8,181115E+21	8,181400E+21	1,189584E+20	1,189139E+20	1,636252E+22	2,378723E+20	1,660039E+22
-1491	8,181026E+21	8,181128E+21	1,189553E+20	1,189747E+20	1,636215E+22	2,379300E+20	1,660008E+22
-1490	8,181054E+21	8,180426E+21	1,189187E+20	1,189402E+20	1,636148E+22	2,378589E+20	1,659934E+22
-1489	8,180290E+21	8,180673E+21	1,189857E+20	1,189390E+20	1,636096E+22	2,379246E+20	1,659889E+22
-1488	8,180352E+21	8,180208E+21	1,189400E+20	1,189939E+20	1,636056E+22	2,379340E+20	1,659849E+22
-1487	8,180154E+21	8,179809E+21	1,189461E+20	1,189452E+20	1,635996E+22	2,378913E+20	1,659785E+22
-1486	8,179629E+21	8,180083E+21	1,189915E+20	1,189656E+20	1,635971E+22	2,379572E+20	1,659767E+22
-1485	8,179970E+21	8,179572E+21	1,189360E+20	1,189857E+20	1,635954E+22	2,379216E+20	1,659746E+22
-1484	8,179682E+21	8,179783E+21	1,189748E+20	1,189281E+20	1,635946E+22	2,379029E+20	1,659737E+22
-1483	8,179651E+21	8,180036E+21	1,189830E+20	1,189812E+20	1,635969E+22	2,379642E+20	1,659765E+22
-1482	8,180126E+21	8,179682E+21	1,189298E+20	1,189638E+20	1,635981E+22	2,378936E+20	1,659770E+22

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 ° Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
-1481	8,179885E+21	8,180335E+21	1,189754E+20	1,189318E+20	1,636022E+22	2,379073E+20	1,659813E+22
-1480	8,180407E+21	8,180436E+21	1,189487E+20	1,189917E+20	1,636084E+22	2,379404E+20	1,659878E+22
-1479	8,180876E+21	8,180350E+21	1,189231E+20	1,189303E+20	1,636123E+22	2,378534E+20	1,659908E+22
-1478	8,180620E+21	8,181062E+21	1,189771E+20	1,189324E+20	1,636168E+22	2,379095E+20	1,659959E+22
-1477	8,181048E+21	8,180866E+21	1,189261E+20	1,189703E+20	1,636191E+22	2,378964E+20	1,659981E+22
-1476	8,180924E+21	8,180935E+21	1,189396E+20	1,189134E+20	1,636186E+22	2,378530E+20	1,659971E+22
-1475	8,180623E+21	8,181143E+21	1,189778E+20	1,189636E+20	1,636177E+22	2,379415E+20	1,659971E+22
-1474	8,180936E+21	8,180446E+21	1,189136E+20	1,189620E+20	1,636138E+22	2,378755E+20	1,659926E+22
-1473	8,180450E+21	8,180570E+21	1,189646E+20	1,189246E+20	1,636102E+22	2,378893E+20	1,659891E+22
-1472	8,180319E+21	8,180395E+21	1,189642E+20	1,189871E+20	1,636071E+22	2,379513E+20	1,659866E+22
-1471	8,180387E+21	8,179723E+21	1,189275E+20	1,189563E+20	1,636011E+22	2,378838E+20	1,659799E+22
-1470	8,179582E+21	8,179987E+21	1,189938E+20	1,189482E+20	1,635957E+22	2,379420E+20	1,659751E+22
-1469	8,179569E+21	8,179508E+21	1,189542E+20	1,190047E+20	1,635908E+22	2,379589E+20	1,659704E+22
-1468	8,179429E+21	8,179147E+21	1,189606E+20	1,189512E+20	1,635858E+22	2,379118E+20	1,659649E+22
-1467	8,178909E+21	8,179415E+21	1,190081E+20	1,189716E+20	1,635832E+22	2,379797E+20	1,659630E+22
-1466	8,179262E+21	8,178835E+21	1,189487E+20	1,189952E+20	1,635810E+22	2,379439E+20	1,659604E+22
-1465	8,178999E+21	8,179097E+21	1,189795E+20	1,189401E+20	1,635810E+22	2,379196E+20	1,659602E+22
-1464	8,179006E+21	8,179418E+21	1,189893E+20	1,189965E+20	1,635842E+22	2,379858E+20	1,659641E+22
-1463	8,179643E+21	8,179083E+21	1,189352E+20	1,189771E+20	1,635873E+22	2,379123E+20	1,659664E+22
-1462	8,179446E+21	8,179792E+21	1,189806E+20	1,189342E+20	1,635924E+22	2,379148E+20	1,659715E+22
-1461	8,179878E+21	8,179922E+21	1,189616E+20	1,189943E+20	1,635980E+22	2,379559E+20	1,659776E+22
-1460	8,180280E+21	8,179896E+21	1,189354E+20	1,189337E+20	1,636018E+22	2,378691E+20	1,659804E+22
-1459	8,179922E+21	8,180551E+21	1,189910E+20	1,189429E+20	1,636047E+22	2,379338E+20	1,659841E+22
-1458	8,180318E+21	8,180160E+21	1,189356E+20	1,189850E+20	1,636048E+22	2,379205E+20	1,659840E+22
-1457	8,180244E+21	8,180176E+21	1,189435E+20	1,189289E+20	1,636042E+22	2,378725E+20	1,659829E+22
-1456	8,179985E+21	8,180393E+21	1,189854E+20	1,189772E+20	1,636038E+22	2,379625E+20	1,659834E+22
-1455	8,180385E+21	8,179693E+21	1,189229E+20	1,189740E+20	1,636008E+22	2,378970E+20	1,659798E+22
-1454	8,179833E+21	8,179888E+21	1,189735E+20	1,189306E+20	1,635972E+22	2,379041E+20	1,659763E+22
-1453	8,179531E+21	8,179723E+21	1,189786E+20	1,189976E+20	1,635925E+22	2,379762E+20	1,659723E+22
-1452	8,179562E+21	8,179071E+21	1,189428E+20	1,189671E+20	1,635863E+22	2,379099E+20	1,659654E+22
-1451	8,178772E+21	8,179285E+21	1,190102E+20	1,189593E+20	1,635806E+22	2,379695E+20	1,659603E+22
-1450	8,178796E+21	8,178677E+21	1,189685E+20	1,190137E+20	1,635747E+22	2,379821E+20	1,659546E+22
-1449	8,178713E+21	8,178360E+21	1,189689E+20	1,189602E+20	1,635707E+22	2,379291E+20	1,659500E+22
-1448	8,178197E+21	8,178721E+21	1,190164E+20	1,189833E+20	1,635692E+22	2,379997E+20	1,659492E+22
-1447	8,178645E+21	8,178181E+21	1,189549E+20	1,190111E+20	1,635683E+22	2,379660E+20	1,659479E+22
-1446	8,178441E+21	8,178502E+21	1,189821E+20	1,189492E+20	1,635694E+22	2,379313E+20	1,659487E+22
-1445	8,178435E+21	8,178861E+21	1,189986E+20	1,190059E+20	1,635730E+22	2,380045E+20	1,659530E+22
-1444	8,179126E+21	8,178609E+21	1,189469E+20	1,189807E+20	1,635773E+22	2,379276E+20	1,659566E+22
-1443	8,178916E+21	8,179301E+21	1,189952E+20	1,189390E+20	1,635822E+22	2,379341E+20	1,659615E+22
-1442	8,179254E+21	8,179326E+21	1,189736E+20	1,190021E+20	1,635858E+22	2,379757E+20	1,659656E+22
-1441	8,179609E+21	8,179268E+21	1,189399E+20	1,189477E+20	1,635888E+22	2,378876E+20	1,659676E+22
-1440	8,179239E+21	8,179884E+21	1,189976E+20	1,189596E+20	1,635912E+22	2,379572E+20	1,659708E+22
-1439	8,179757E+21	8,179448E+21	1,189417E+20	1,190000E+20	1,635921E+22	2,379417E+20	1,659715E+22
-1438	8,179714E+21	8,179470E+21	1,189501E+20	1,189330E+20	1,635918E+22	2,378831E+20	1,659707E+22
-1437	8,179339E+21	8,179727E+21	1,189997E+20	1,189817E+20	1,635907E+22	2,379814E+20	1,659705E+22
-1436	8,179663E+21	8,179115E+21	1,189388E+20	1,189796E+20	1,635878E+22	2,379185E+20	1,659670E+22
-1435	8,179024E+21	8,179254E+21	1,189905E+20	1,189426E+20	1,635828E+22	2,379331E+20	1,659621E+22
-1434	8,178675E+21	8,178937E+21	1,189919E+20	1,190116E+20	1,635761E+22	2,380034E+20	1,659562E+22
-1433	8,178761E+21	8,178254E+21	1,189507E+20	1,189829E+20	1,635702E+22	2,379336E+20	1,659495E+22

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 ° Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
-1432	8,178022E+21	8,178475E+21	1,190202E+20	1,189724E+20	1,635650E+22	2,379926E+20	1,659449E+22
-1431	8,178154E+21	8,177887E+21	1,189778E+20	1,190260E+20	1,635604E+22	2,380038E+20	1,659404E+22
-1430	8,178057E+21	8,177655E+21	1,189751E+20	1,189677E+20	1,635571E+22	2,379428E+20	1,659366E+22
-1429	8,177476E+21	8,178076E+21	1,190265E+20	1,189953E+20	1,635555E+22	2,380218E+20	1,659357E+22
-1428	8,177986E+21	8,177628E+21	1,189670E+20	1,190209E+20	1,635561E+22	2,379878E+20	1,659360E+22
-1427	8,177867E+21	8,177953E+21	1,189943E+20	1,189578E+20	1,635582E+22	2,379521E+20	1,659377E+22
-1426	8,177882E+21	8,178236E+21	1,190100E+20	1,190111E+20	1,635612E+22	2,380211E+20	1,659414E+22
-1425	8,178576E+21	8,178036E+21	1,189532E+20	1,189872E+20	1,635661E+22	2,379404E+20	1,659455E+22
-1424	8,178318E+21	8,178756E+21	1,190024E+20	1,189500E+20	1,635707E+22	2,379525E+20	1,659503E+22
-1423	8,178675E+21	8,178733E+21	1,189796E+20	1,190157E+20	1,635741E+22	2,379953E+20	1,659540E+22
-1422	8,179037E+21	8,178661E+21	1,189434E+20	1,189569E+20	1,635770E+22	2,379003E+20	1,659560E+22
-1421	8,178635E+21	8,179249E+21	1,190075E+20	1,189692E+20	1,635788E+22	2,379767E+20	1,659586E+22
-1420	8,179158E+21	8,178861E+21	1,189562E+20	1,190042E+20	1,635802E+22	2,379603E+20	1,659598E+22
-1419	8,179087E+21	8,178859E+21	1,189666E+20	1,189398E+20	1,635795E+22	2,379064E+20	1,659585E+22
-1418	8,178578E+21	8,179007E+21	1,190132E+20	1,189913E+20	1,635759E+22	2,380045E+20	1,659559E+22
-1417	8,178843E+21	8,178370E+21	1,189472E+20	1,189963E+20	1,635721E+22	2,379435E+20	1,659516E+22
-1416	8,178213E+21	8,178459E+21	1,190005E+20	1,189618E+20	1,635667E+22	2,379623E+20	1,659463E+22
-1415	8,177969E+21	8,178103E+21	1,190001E+20	1,190268E+20	1,635607E+22	2,380269E+20	1,659410E+22
-1414	8,178096E+21	8,177458E+21	1,189581E+20	1,189901E+20	1,635555E+22	2,379483E+20	1,659350E+22
-1413	8,177293E+21	8,177734E+21	1,190321E+20	1,189802E+20	1,635503E+22	2,380123E+20	1,659304E+22
-1412	8,177403E+21	8,177273E+21	1,189917E+20	1,190332E+20	1,635468E+22	2,380249E+20	1,659270E+22
-1411	8,177334E+21	8,177038E+21	1,189885E+20	1,189794E+20	1,635437E+22	2,379679E+20	1,659234E+22
-1410	8,176777E+21	8,177382E+21	1,190364E+20	1,190067E+20	1,635416E+22	2,380431E+20	1,659220E+22
-1409	8,177383E+21	8,176984E+21	1,189741E+20	1,190323E+20	1,635437E+22	2,380064E+20	1,659237E+22
-1408	8,177325E+21	8,177343E+21	1,190033E+20	1,189671E+20	1,635467E+22	2,379704E+20	1,659264E+22
-1407	8,177399E+21	8,177655E+21	1,190179E+20	1,190188E+20	1,635505E+22	2,380367E+20	1,659309E+22
-1406	8,178020E+21	8,177494E+21	1,189578E+20	1,189922E+20	1,635551E+22	2,379500E+20	1,659346E+22
-1405	8,177654E+21	8,178192E+21	1,190115E+20	1,189609E+20	1,635585E+22	2,379723E+20	1,659382E+22
-1404	8,178033E+21	8,178202E+21	1,189915E+20	1,190234E+20	1,635623E+22	2,380149E+20	1,659425E+22
-1403	8,178447E+21	8,178064E+21	1,189569E+20	1,189648E+20	1,635651E+22	2,379217E+20	1,659443E+22
-1402	8,178018E+21	8,178544E+21	1,190194E+20	1,189754E+20	1,635656E+22	2,379948E+20	1,659456E+22
-1401	8,178510E+21	8,178185E+21	1,189651E+20	1,190138E+20	1,635669E+22	2,379788E+20	1,659467E+22
-1400	8,178369E+21	8,178179E+21	1,189756E+20	1,189558E+20	1,635655E+22	2,379314E+20	1,659448E+22
-1399	8,177881E+21	8,178270E+21	1,190193E+20	1,190081E+20	1,635615E+22	2,380274E+20	1,659418E+22
-1398	8,178137E+21	8,177621E+21	1,189520E+20	1,190092E+20	1,635576E+22	2,379612E+20	1,659372E+22
-1397	8,177480E+21	8,177697E+21	1,190121E+20	1,189744E+20	1,635518E+22	2,379865E+20	1,659316E+22
-1396	8,177250E+21	8,177408E+21	1,190161E+20	1,190315E+20	1,635466E+22	2,380476E+20	1,659271E+22
-1395	8,177367E+21	8,176761E+21	1,189757E+20	1,189982E+20	1,635413E+22	2,379739E+20	1,659210E+22
-1394	8,176478E+21	8,176961E+21	1,190443E+20	1,189905E+20	1,635344E+22	2,380348E+20	1,659147E+22
-1393	8,176614E+21	8,176533E+21	1,190005E+20	1,190485E+20	1,635315E+22	2,380489E+20	1,659120E+22
-1392	8,176649E+21	8,176324E+21	1,189973E+20	1,189955E+20	1,635297E+22	2,379928E+20	1,659097E+22
-1391	8,176245E+21	8,176687E+21	1,190430E+20	1,190165E+20	1,635293E+22	2,380595E+20	1,659099E+22
-1390	8,176878E+21	8,176391E+21	1,189807E+20	1,190348E+20	1,635327E+22	2,380155E+20	1,659128E+22
-1389	8,176748E+21	8,176816E+21	1,190128E+20	1,189730E+20	1,635356E+22	2,379858E+20	1,659155E+22
-1388	8,176754E+21	8,177207E+21	1,190300E+20	1,190230E+20	1,635396E+22	2,380531E+20	1,659201E+22
-1387	8,177376E+21	8,176989E+21	1,189689E+20	1,190025E+20	1,635437E+22	2,379714E+20	1,659234E+22
-1386	8,177004E+21	8,177531E+21	1,190195E+20	1,189717E+20	1,635454E+22	2,379913E+20	1,659253E+22
-1385	8,177446E+21	8,177536E+21	1,189989E+20	1,190344E+20	1,635498E+22	2,380333E+20	1,659302E+22
-1384	8,177902E+21	8,177391E+21	1,189664E+20	1,189766E+20	1,635529E+22	2,379429E+20	1,659324E+22

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 ° Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
-1383	8,177486E+21	8,177862E+21	1,190260E+20	1,189864E+20	1,635535E+22	2,380124E+20	1,659336E+22
-1382	8,177871E+21	8,177543E+21	1,189701E+20	1,190236E+20	1,635541E+22	2,379937E+20	1,659341E+22
-1381	8,177630E+21	8,177502E+21	1,189854E+20	1,189717E+20	1,635513E+22	2,379570E+20	1,659309E+22
-1380	8,177137E+21	8,177618E+21	1,190334E+20	1,190161E+20	1,635475E+22	2,380496E+20	1,659280E+22
-1379	8,177418E+21	8,176911E+21	1,189688E+20	1,190171E+20	1,635433E+22	2,379859E+20	1,659231E+22
-1378	8,176698E+21	8,176874E+21	1,190275E+20	1,189806E+20	1,635357E+22	2,380081E+20	1,659158E+22
-1377	8,176442E+21	8,176627E+21	1,190284E+20	1,190408E+20	1,635307E+22	2,380692E+20	1,659114E+22
-1376	8,176541E+21	8,175991E+21	1,189878E+20	1,190143E+20	1,635253E+22	2,380021E+20	1,659053E+22
-1375	8,175765E+21	8,176182E+21	1,190496E+20	1,190065E+20	1,635195E+22	2,380561E+20	1,659000E+22
-1374	8,175975E+21	8,175824E+21	1,190053E+20	1,190596E+20	1,635180E+22	2,380649E+20	1,658986E+22
-1373	8,176036E+21	8,175683E+21	1,190069E+20	1,190057E+20	1,635172E+22	2,380127E+20	1,658973E+22
-1372	8,175681E+21	8,176167E+21	1,190565E+20	1,190176E+20	1,635185E+22	2,380741E+20	1,658992E+22
-1371	8,176282E+21	8,175888E+21	1,189951E+20	1,190395E+20	1,635217E+22	2,380346E+20	1,659020E+22
-1370	8,176036E+21	8,176208E+21	1,190224E+20	1,189820E+20	1,635224E+22	2,380044E+20	1,659025E+22
-1369	8,176063E+21	8,176578E+21	1,190374E+20	1,190361E+20	1,635264E+22	2,380735E+20	1,659071E+22
-1368	8,176766E+21	8,176331E+21	1,189767E+20	1,190177E+20	1,635310E+22	2,379945E+20	1,659109E+22
-1367	8,176543E+21	8,176845E+21	1,190232E+20	1,189824E+20	1,635339E+22	2,380056E+20	1,659139E+22
-1366	8,176982E+21	8,176922E+21	1,190040E+20	1,190390E+20	1,635390E+22	2,380429E+20	1,659195E+22
-1365	8,177330E+21	8,176837E+21	1,189754E+20	1,189857E+20	1,635417E+22	2,379612E+20	1,659213E+22
-1364	8,176833E+21	8,177356E+21	1,190386E+20	1,189923E+20	1,635419E+22	2,380308E+20	1,659222E+22
-1363	8,177167E+21	8,176964E+21	1,189841E+20	1,190337E+20	1,635413E+22	2,380178E+20	1,659215E+22
-1362	8,176846E+21	8,176755E+21	1,189983E+20	1,189836E+20	1,635360E+22	2,379819E+20	1,659158E+22
-1361	8,176363E+21	8,176835E+21	1,190464E+20	1,190259E+20	1,635320E+22	2,380723E+20	1,659127E+22
-1360	8,176661E+21	8,176103E+21	1,189837E+20	1,190303E+20	1,635276E+22	2,380140E+20	1,659078E+22
-1359	8,175972E+21	8,176024E+21	1,190358E+20	1,189933E+20	1,635200E+22	2,380292E+20	1,659002E+22
-1358	8,175665E+21	8,175838E+21	1,190342E+20	1,190531E+20	1,635150E+22	2,380874E+20	1,658959E+22
-1357	8,175777E+21	8,175246E+21	1,189969E+20	1,190315E+20	1,635102E+22	2,380284E+20	1,658905E+22
-1356	8,175094E+21	8,175534E+21	1,190612E+20	1,190140E+20	1,635063E+22	2,380752E+20	1,658870E+22
-1355	8,175374E+21	8,175223E+21	1,190204E+20	1,190653E+20	1,635060E+22	2,380856E+20	1,658868E+22
-1354	8,175372E+21	8,175037E+21	1,190196E+20	1,190107E+20	1,635041E+22	2,380303E+20	1,658844E+22
-1353	8,174987E+21	8,175571E+21	1,190664E+20	1,190244E+20	1,635056E+22	2,380909E+20	1,658865E+22
-1352	8,175579E+21	8,175280E+21	1,190045E+20	1,190535E+20	1,635086E+22	2,380581E+20	1,658892E+22
-1351	8,175446E+21	8,175529E+21	1,190246E+20	1,189963E+20	1,635098E+22	2,380210E+20	1,658900E+22
-1350	8,175544E+21	8,175945E+21	1,190404E+20	1,190458E+20	1,635149E+22	2,380862E+20	1,658958E+22
-1349	8,176278E+21	8,175753E+21	1,189853E+20	1,190274E+20	1,635203E+22	2,380127E+20	1,659004E+22
-1348	8,176079E+21	8,176359E+21	1,190355E+20	1,189842E+20	1,635244E+22	2,380197E+20	1,659046E+22
-1347	8,176422E+21	8,176445E+21	1,190184E+20	1,190436E+20	1,635287E+22	2,380620E+20	1,659093E+22
-1346	8,176580E+21	8,176224E+21	1,189872E+20	1,189962E+20	1,635280E+22	2,379835E+20	1,659079E+22
-1345	8,176060E+21	8,176672E+21	1,190502E+20	1,190046E+20	1,635273E+22	2,380547E+20	1,659079E+22
-1344	8,176402E+21	8,176201E+21	1,189978E+20	1,190478E+20	1,635260E+22	2,380456E+20	1,659065E+22
-1343	8,176165E+21	8,175912E+21	1,190073E+20	1,189958E+20	1,635208E+22	2,380032E+20	1,659008E+22
-1342	8,175667E+21	8,176024E+21	1,190542E+20	1,190341E+20	1,635169E+22	2,380883E+20	1,658978E+22
-1341	8,175876E+21	8,175350E+21	1,189940E+20	1,190446E+20	1,635123E+22	2,380386E+20	1,658926E+22
-1340	8,175212E+21	8,175343E+21	1,190460E+20	1,190039E+20	1,635056E+22	2,380499E+20	1,658861E+22
-1339	8,174946E+21	8,175160E+21	1,190464E+20	1,190645E+20	1,635011E+22	2,381108E+20	1,658822E+22
-1338	8,175025E+21	8,174514E+21	1,190095E+20	1,190426E+20	1,634954E+22	2,380521E+20	1,658759E+22
-1337	8,174415E+21	8,174840E+21	1,190740E+20	1,190209E+20	1,634926E+22	2,380949E+20	1,658735E+22
-1336	8,174702E+21	8,174560E+21	1,190356E+20	1,190750E+20	1,634926E+22	2,381106E+20	1,658737E+22
-1335	8,174717E+21	8,174359E+21	1,190261E+20	1,190222E+20	1,634908E+22	2,380483E+20	1,658712E+22

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 ° Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
-1334	8,174315E+21	8,174917E+21	1,190699E+20	1,190358E+20	1,634923E+22	2,381057E+20	1,658734E+22
-1333	8,174941E+21	8,174664E+21	1,190111E+20	1,190682E+20	1,634960E+22	2,380793E+20	1,658768E+22
-1332	8,174946E+21	8,174984E+21	1,190332E+20	1,190015E+20	1,634993E+22	2,380347E+20	1,658797E+22
-1331	8,175100E+21	8,175438E+21	1,190536E+20	1,190485E+20	1,635054E+22	2,381021E+20	1,658864E+22
-1330	8,175706E+21	8,175211E+21	1,189981E+20	1,190315E+20	1,635092E+22	2,380296E+20	1,658895E+22
-1329	8,175429E+21	8,175824E+21	1,190468E+20	1,189913E+20	1,635125E+22	2,380381E+20	1,658929E+22
-1328	8,175707E+21	8,175853E+21	1,190302E+20	1,190577E+20	1,635156E+22	2,380879E+20	1,658965E+22
-1327	8,175906E+21	8,175491E+21	1,189920E+20	1,190126E+20	1,635140E+22	2,380046E+20	1,658940E+22
-1326	8,175390E+21	8,175909E+21	1,190557E+20	1,190168E+20	1,635130E+22	2,380725E+20	1,658937E+22
-1325	8,175731E+21	8,175456E+21	1,190078E+20	1,190604E+20	1,635119E+22	2,380682E+20	1,658926E+22
-1324	8,175516E+21	8,175211E+21	1,190204E+20	1,190026E+20	1,635073E+22	2,380230E+20	1,658875E+22
-1323	8,174944E+21	8,175339E+21	1,190678E+20	1,190427E+20	1,635028E+22	2,381105E+20	1,658839E+22
-1322	8,175013E+21	8,174584E+21	1,190072E+20	1,190583E+20	1,634960E+22	2,380654E+20	1,658766E+22
-1321	8,174402E+21	8,174572E+21	1,190581E+20	1,190166E+20	1,634897E+22	2,380747E+20	1,658705E+22
-1320	8,174201E+21	8,174403E+21	1,190611E+20	1,190771E+20	1,634860E+22	2,381383E+20	1,658674E+22
-1319	8,174368E+21	8,173739E+21	1,190193E+20	1,190529E+20	1,634811E+22	2,380722E+20	1,658618E+22
-1318	8,173750E+21	8,174142E+21	1,190815E+20	1,190279E+20	1,634789E+22	2,381095E+20	1,658600E+22
-1317	8,173978E+21	8,173938E+21	1,190449E+20	1,190867E+20	1,634792E+22	2,381316E+20	1,658605E+22
-1316	8,174058E+21	8,173788E+21	1,190345E+20	1,190312E+20	1,634785E+22	2,380657E+20	1,658591E+22
-1315	8,173728E+21	8,174348E+21	1,190792E+20	1,190447E+20	1,634808E+22	2,381239E+20	1,658620E+22
-1314	8,174323E+21	8,174059E+21	1,190222E+20	1,190769E+20	1,634838E+22	2,380991E+20	1,658648E+22
-1313	8,174426E+21	8,174412E+21	1,190443E+20	1,190069E+20	1,634884E+22	2,380511E+20	1,658689E+22
-1312	8,174554E+21	8,174879E+21	1,190672E+20	1,190570E+20	1,634943E+22	2,381243E+20	1,658756E+22
-1311	8,175104E+21	8,174604E+21	1,190040E+20	1,190433E+20	1,634971E+22	2,380473E+20	1,658776E+22
-1310	8,174786E+21	8,175176E+21	1,190503E+20	1,190051E+20	1,634996E+22	2,380553E+20	1,658802E+22
-1309	8,175030E+21	8,175189E+21	1,190374E+20	1,190721E+20	1,635022E+22	2,381095E+20	1,658833E+22
-1308	8,175315E+21	8,174847E+21	1,190017E+20	1,190208E+20	1,635016E+22	2,380225E+20	1,658818E+22
-1307	8,174805E+21	8,175245E+21	1,190693E+20	1,190216E+20	1,635005E+22	2,380909E+20	1,658814E+22
-1306	8,174965E+21	8,174748E+21	1,190224E+20	1,190678E+20	1,634971E+22	2,380902E+20	1,658780E+22
-1305	8,174712E+21	8,174494E+21	1,190336E+20	1,190126E+20	1,634921E+22	2,380461E+20	1,658725E+22
-1304	8,174121E+21	8,174581E+21	1,190810E+20	1,190582E+20	1,634870E+22	2,381392E+20	1,658684E+22
-1303	8,174251E+21	8,173764E+21	1,190152E+20	1,190751E+20	1,634802E+22	2,380903E+20	1,658611E+22
-1302	8,173703E+21	8,173775E+21	1,190656E+20	1,190296E+20	1,634748E+22	2,380952E+20	1,658557E+22
-1301	8,173518E+21	8,173684E+21	1,190727E+20	1,190880E+20	1,634720E+22	2,381607E+20	1,658536E+22
-1300	8,173718E+21	8,173108E+21	1,190318E+20	1,190600E+20	1,634683E+22	2,380918E+20	1,658492E+22
-1299	8,173053E+21	8,173528E+21	1,190925E+20	1,190359E+20	1,634658E+22	2,381284E+20	1,658471E+22
-1298	8,173175E+21	8,173266E+21	1,190560E+20	1,190985E+20	1,634644E+22	2,381545E+20	1,658460E+22
-1297	8,173370E+21	8,173120E+21	1,190447E+20	1,190406E+20	1,634649E+22	2,380854E+20	1,658458E+22
-1296	8,173156E+21	8,173711E+21	1,190913E+20	1,190550E+20	1,634687E+22	2,381462E+20	1,658501E+22
-1295	8,173828E+21	8,173420E+21	1,190300E+20	1,190851E+20	1,634725E+22	2,381152E+20	1,658536E+22
-1294	8,173904E+21	8,173832E+21	1,190486E+20	1,190149E+20	1,634774E+22	2,380635E+20	1,658580E+22
-1293	8,173959E+21	8,174357E+21	1,190729E+20	1,190685E+20	1,634832E+22	2,381414E+20	1,658646E+22
-1292	8,174532E+21	8,174080E+21	1,190102E+20	1,190527E+20	1,634861E+22	2,380629E+20	1,658668E+22
-1291	8,174214E+21	8,174600E+21	1,190595E+20	1,190136E+20	1,634881E+22	2,380731E+20	1,658689E+22
-1290	8,174337E+21	8,174533E+21	1,190508E+20	1,190792E+20	1,634887E+22	2,381300E+20	1,658700E+22
-1289	8,174644E+21	8,174163E+21	1,190172E+20	1,190268E+20	1,634881E+22	2,380440E+20	1,658685E+22
-1288	8,174082E+21	8,174533E+21	1,190852E+20	1,190327E+20	1,634861E+22	2,381178E+20	1,658673E+22
-1287	8,174173E+21	8,173955E+21	1,190312E+20	1,190830E+20	1,634813E+22	2,381142E+20	1,658624E+22
-1286	8,173927E+21	8,173668E+21	1,190395E+20	1,190299E+20	1,634759E+22	2,380695E+20	1,658566E+22

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 ° Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
-1285	8,173367E+21	8,173790E+21	1,190890E+20	1,190736E+20	1,634716E+22	2,381626E+20	1,658532E+22
-1284	8,173602E+21	8,173048E+21	1,190272E+20	1,190844E+20	1,634665E+22	2,381116E+20	1,658476E+22
-1283	8,173062E+21	8,173096E+21	1,190794E+20	1,190356E+20	1,634616E+22	2,381150E+20	1,658427E+22
-1282	8,172691E+21	8,173007E+21	1,190875E+20	1,190949E+20	1,634570E+22	2,381824E+20	1,658388E+22
-1281	8,172905E+21	8,172442E+21	1,190447E+20	1,190700E+20	1,634535E+22	2,381147E+20	1,658346E+22
-1280	8,172297E+21	8,172814E+21	1,191035E+20	1,190500E+20	1,634511E+22	2,381535E+20	1,658327E+22
-1279	8,172510E+21	8,172522E+21	1,190622E+20	1,191121E+20	1,634503E+22	2,381743E+20	1,658321E+22
-1278	8,172845E+21	8,172431E+21	1,190489E+20	1,190514E+20	1,634528E+22	2,381004E+20	1,658338E+22
-1277	8,172679E+21	8,173125E+21	1,190984E+20	1,190633E+20	1,634580E+22	2,381618E+20	1,658397E+22
-1276	8,173363E+21	8,172953E+21	1,190390E+20	1,190908E+20	1,634632E+22	2,381298E+20	1,658445E+22
-1275	8,173366E+21	8,173360E+21	1,190564E+20	1,190222E+20	1,634673E+22	2,380786E+20	1,658480E+22
-1274	8,173248E+21	8,173797E+21	1,190836E+20	1,190768E+20	1,634705E+22	2,381605E+20	1,658521E+22
-1273	8,173870E+21	8,173474E+21	1,190221E+20	1,190597E+20	1,634734E+22	2,380819E+20	1,658543E+22
-1272	8,173587E+21	8,173926E+21	1,190739E+20	1,190232E+20	1,634751E+22	2,380971E+20	1,658561E+22
-1271	8,173686E+21	8,173796E+21	1,190613E+20	1,190882E+20	1,634748E+22	2,381495E+20	1,658563E+22
-1270	8,173952E+21	8,173423E+21	1,190241E+20	1,190399E+20	1,634737E+22	2,380640E+20	1,658544E+22
-1269	8,173343E+21	8,173808E+21	1,190910E+20	1,190488E+20	1,634715E+22	2,381397E+20	1,658529E+22
-1268	8,173489E+21	8,173248E+21	1,190388E+20	1,190973E+20	1,634674E+22	2,381361E+20	1,658487E+22
-1267	8,173265E+21	8,172955E+21	1,190493E+20	1,190419E+20	1,634622E+22	2,380913E+20	1,658431E+22
-1266	8,172604E+21	8,173055E+21	1,191034E+20	1,190813E+20	1,634566E+22	2,381847E+20	1,658384E+22
-1265	8,172855E+21	8,172331E+21	1,190453E+20	1,190904E+20	1,634519E+22	2,381357E+20	1,658332E+22
-1264	8,172262E+21	8,172373E+21	1,190963E+20	1,190473E+20	1,634464E+22	2,381436E+20	1,658278E+22
-1263	8,171847E+21	8,172210E+21	1,190965E+20	1,191085E+20	1,634406E+22	2,382050E+20	1,658226E+22
-1262	8,172133E+21	8,171627E+21	1,190501E+20	1,190862E+20	1,634376E+22	2,381363E+20	1,658190E+22
-1261	8,171660E+21	8,172081E+21	1,191080E+20	1,190628E+20	1,634374E+22	2,381709E+20	1,658191E+22
-1260	8,172040E+21	8,171914E+21	1,190715E+20	1,191184E+20	1,634395E+22	2,381899E+20	1,658214E+22
-1259	8,172393E+21	8,171921E+21	1,190587E+20	1,190539E+20	1,634431E+22	2,381126E+20	1,658243E+22
-1258	8,172046E+21	8,172644E+21	1,191102E+20	1,190668E+20	1,634469E+22	2,381770E+20	1,658287E+22
-1257	8,172698E+21	8,172472E+21	1,190514E+20	1,190965E+20	1,634517E+22	2,381479E+20	1,658332E+22
-1256	8,172705E+21	8,172793E+21	1,190674E+20	1,190352E+20	1,634550E+22	2,381026E+20	1,658360E+22
-1255	8,172587E+21	8,173114E+21	1,190910E+20	1,190882E+20	1,634570E+22	2,381792E+20	1,658388E+22
-1254	8,173278E+21	8,172753E+21	1,190284E+20	1,190720E+20	1,634603E+22	2,381004E+20	1,658413E+22
-1253	8,173012E+21	8,173226E+21	1,190811E+20	1,190348E+20	1,634624E+22	2,381159E+20	1,658435E+22
-1252	8,173098E+21	8,173154E+21	1,190700E+20	1,190989E+20	1,634625E+22	2,381689E+20	1,658442E+22
-1251	8,173297E+21	8,172764E+21	1,190322E+20	1,190521E+20	1,634606E+22	2,380843E+20	1,658415E+22
-1250	8,172545E+21	8,173088E+21	1,191023E+20	1,190596E+20	1,634563E+22	2,381619E+20	1,658380E+22
-1249	8,172744E+21	8,172544E+21	1,190547E+20	1,191050E+20	1,634529E+22	2,381597E+20	1,658345E+22
-1248	8,172543E+21	8,172211E+21	1,190674E+20	1,190527E+20	1,634475E+22	2,381201E+20	1,658287E+22
-1247	8,171802E+21	8,172261E+21	1,191167E+20	1,190892E+20	1,634406E+22	2,382059E+20	1,658227E+22
-1246	8,172036E+21	8,171538E+21	1,190544E+20	1,191044E+20	1,634357E+22	2,381588E+20	1,658173E+22
-1245	8,171460E+21	8,171584E+21	1,191023E+20	1,190627E+20	1,634304E+22	2,381651E+20	1,658121E+22
-1244	8,171170E+21	8,171479E+21	1,191035E+20	1,191213E+20	1,634265E+22	2,382248E+20	1,658087E+22
-1243	8,171550E+21	8,170962E+21	1,190581E+20	1,190954E+20	1,634251E+22	2,381535E+20	1,658066E+22
-1242	8,171047E+21	8,171463E+21	1,191195E+20	1,190677E+20	1,634251E+22	2,381871E+20	1,658070E+22
-1241	8,171471E+21	8,171396E+21	1,190878E+20	1,191214E+20	1,634287E+22	2,382093E+20	1,658108E+22
-1240	8,171767E+21	8,171411E+21	1,190721E+20	1,190643E+20	1,634318E+22	2,381365E+20	1,658131E+22
-1239	8,171346E+21	8,172029E+21	1,191173E+20	1,190779E+20	1,634337E+22	2,381952E+20	1,658157E+22
-1238	8,172047E+21	8,171794E+21	1,190555E+20	1,191107E+20	1,634384E+22	2,381662E+20	1,658201E+22
-1237	8,172135E+21	8,172117E+21	1,190714E+20	1,190480E+20	1,634425E+22	2,381194E+20	1,658237E+22

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 ° Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
-1236	8,172115E+21	8,172489E+21	1,190994E+20	1,190962E+20	1,634460E+22	2,381955E+20	1,658280E+22
-1235	8,172760E+21	8,172173E+21	1,190374E+20	1,190782E+20	1,634493E+22	2,381156E+20	1,658305E+22
-1234	8,172320E+21	8,172629E+21	1,190913E+20	1,190428E+20	1,634495E+22	2,381341E+20	1,658308E+22
-1233	8,172379E+21	8,172537E+21	1,190841E+20	1,191065E+20	1,634492E+22	2,381905E+20	1,658311E+22
-1232	8,172559E+21	8,172085E+21	1,190466E+20	1,190664E+20	1,634464E+22	2,381130E+20	1,658276E+22
-1231	8,171783E+21	8,172298E+21	1,191137E+20	1,190702E+20	1,634408E+22	2,381839E+20	1,658226E+22
-1230	8,172008E+21	8,171721E+21	1,190666E+20	1,191168E+20	1,634373E+22	2,381833E+20	1,658191E+22
-1229	8,171790E+21	8,171427E+21	1,190786E+20	1,190661E+20	1,634322E+22	2,381447E+20	1,658136E+22
-1228	8,171045E+21	8,171512E+21	1,191268E+20	1,191016E+20	1,634256E+22	2,382285E+20	1,658079E+22
-1227	8,171252E+21	8,170783E+21	1,190630E+20	1,191175E+20	1,634203E+22	2,381804E+20	1,658022E+22
-1226	8,170649E+21	8,170810E+21	1,191118E+20	1,190733E+20	1,634146E+22	2,381851E+20	1,657964E+22
-1225	8,170491E+21	8,170790E+21	1,191185E+20	1,191269E+20	1,634128E+22	2,382454E+20	1,657953E+22
-1224	8,170940E+21	8,170341E+21	1,190743E+20	1,191044E+20	1,634128E+22	2,381787E+20	1,657946E+22
-1223	8,170395E+21	8,170836E+21	1,191293E+20	1,190747E+20	1,634123E+22	2,382040E+20	1,657944E+22
-1222	8,170819E+21	8,170788E+21	1,190946E+20	1,191341E+20	1,634161E+22	2,382288E+20	1,657984E+22
-1221	8,171135E+21	8,170807E+21	1,190750E+20	1,190791E+20	1,634194E+22	2,381541E+20	1,658010E+22
-1220	8,170811E+21	8,171434E+21	1,191214E+20	1,190896E+20	1,634224E+22	2,382111E+20	1,658046E+22
-1219	8,171551E+21	8,171215E+21	1,190614E+20	1,191179E+20	1,634277E+22	2,381793E+20	1,658095E+22
-1218	8,171572E+21	8,171521E+21	1,190825E+20	1,190522E+20	1,634309E+22	2,381347E+20	1,658123E+22
-1217	8,171540E+21	8,171956E+21	1,191164E+20	1,190989E+20	1,634350E+22	2,382154E+20	1,658171E+22
-1216	8,172090E+21	8,171609E+21	1,190527E+20	1,190901E+20	1,634370E+22	2,381427E+20	1,658184E+22
-1215	8,171546E+21	8,171913E+21	1,191005E+20	1,190551E+20	1,634346E+22	2,381556E+20	1,658161E+22
-1214	8,171650E+21	8,171761E+21	1,190916E+20	1,191212E+20	1,634341E+22	2,382128E+20	1,658162E+22
-1213	8,171874E+21	8,171308E+21	1,190549E+20	1,190803E+20	1,634318E+22	2,381353E+20	1,658132E+22
-1212	8,171148E+21	8,171552E+21	1,191253E+20	1,190797E+20	1,634270E+22	2,382050E+20	1,658091E+22
-1211	8,171289E+21	8,171013E+21	1,190778E+20	1,191248E+20	1,634230E+22	2,382026E+20	1,658050E+22
-1210	8,170914E+21	8,170690E+21	1,190906E+20	1,190774E+20	1,634160E+22	2,381680E+20	1,657977E+22
-1209	8,170208E+21	8,170779E+21	1,191411E+20	1,191116E+20	1,634099E+22	2,382526E+20	1,657924E+22
-1208	8,170467E+21	8,170039E+21	1,190770E+20	1,191333E+20	1,634051E+22	2,382103E+20	1,657872E+22
-1207	8,169922E+21	8,170012E+21	1,191210E+20	1,190840E+20	1,633993E+22	2,382049E+20	1,657814E+22
-1206	8,169879E+21	8,170040E+21	1,191283E+20	1,191381E+20	1,633992E+22	2,382663E+20	1,657819E+22
-1205	8,170334E+21	8,169707E+21	1,190828E+20	1,191165E+20	1,634004E+22	2,381992E+20	1,657824E+22
-1204	8,169812E+21	8,170256E+21	1,191357E+20	1,190862E+20	1,634007E+22	2,382220E+20	1,657829E+22
-1203	8,170202E+21	8,170216E+21	1,191008E+20	1,191431E+20	1,634042E+22	2,382438E+20	1,657866E+22
-1202	8,170485E+21	8,170216E+21	1,190830E+20	1,190865E+20	1,634070E+22	2,381694E+20	1,657887E+22
-1201	8,170254E+21	8,170873E+21	1,191365E+20	1,190914E+20	1,634113E+22	2,382279E+20	1,657935E+22
-1200	8,170978E+21	8,170679E+21	1,190780E+20	1,191243E+20	1,634166E+22	2,382023E+20	1,657986E+22
-1199	8,170920E+21	8,170903E+21	1,190925E+20	1,190592E+20	1,634182E+22	2,381517E+20	1,657997E+22
-1198	8,170872E+21	8,171287E+21	1,191240E+20	1,191123E+20	1,634216E+22	2,382363E+20	1,658040E+22
-1197	8,171410E+21	8,170935E+21	1,190579E+20	1,191065E+20	1,634234E+22	2,381645E+20	1,658051E+22
-1196	8,170941E+21	8,171215E+21	1,191066E+20	1,190698E+20	1,634216E+22	2,381765E+20	1,658033E+22
-1195	8,171031E+21	8,171064E+21	1,191001E+20	1,191295E+20	1,634209E+22	2,382296E+20	1,658032E+22
-1194	8,171155E+21	8,170596E+21	1,190683E+20	1,190891E+20	1,634175E+22	2,381574E+20	1,657991E+22
-1193	8,170385E+21	8,170870E+21	1,191435E+20	1,190865E+20	1,634126E+22	2,382300E+20	1,657949E+22
-1192	8,170425E+21	8,170300E+21	1,190938E+20	1,191398E+20	1,634073E+22	2,382337E+20	1,657896E+22
-1191	8,170013E+21	8,169818E+21	1,191006E+20	1,190921E+20	1,633983E+22	2,381927E+20	1,657802E+22
-1190	8,169440E+21	8,169887E+21	1,191490E+20	1,191268E+20	1,633933E+22	2,382757E+20	1,657760E+22
-1189	8,169800E+21	8,169249E+21	1,190863E+20	1,191467E+20	1,633905E+22	2,382329E+20	1,657728E+22
-1188	8,169363E+21	8,169326E+21	1,191301E+20	1,190935E+20	1,633869E+22	2,382236E+20	1,657691E+22

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 ° Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
-1187	8,169281E+21	8,169462E+21	1,191368E+20	1,191444E+20	1,633874E+22	2,382812E+20	1,657702E+22
-1186	8,169618E+21	8,169146E+21	1,190927E+20	1,191245E+20	1,633876E+22	2,382172E+20	1,657698E+22
-1185	8,169141E+21	8,169719E+21	1,191488E+20	1,190918E+20	1,633886E+22	2,382406E+20	1,657710E+22
-1184	8,169552E+21	8,169664E+21	1,191140E+20	1,191525E+20	1,633922E+22	2,382665E+20	1,657748E+22
-1183	8,169839E+21	8,169547E+21	1,190926E+20	1,190933E+20	1,633939E+22	2,381858E+20	1,657757E+22
-1182	8,169706E+21	8,170200E+21	1,191456E+20	1,191016E+20	1,633991E+22	2,382472E+20	1,657815E+22
-1181	8,170397E+21	8,170074E+21	1,190857E+20	1,191375E+20	1,634047E+22	2,382232E+20	1,657869E+22
-1180	8,170355E+21	8,170284E+21	1,190969E+20	1,190742E+20	1,634064E+22	2,381712E+20	1,657881E+22
-1179	8,170276E+21	8,170648E+21	1,191280E+20	1,191232E+20	1,634092E+22	2,382512E+20	1,657918E+22
-1178	8,170746E+21	8,170276E+21	1,190665E+20	1,191160E+20	1,634102E+22	2,381825E+20	1,657920E+22
-1177	8,170317E+21	8,170583E+21	1,191234E+20	1,190747E+20	1,634090E+22	2,381981E+20	1,657910E+22
-1176	8,170312E+21	8,170434E+21	1,191183E+20	1,191374E+20	1,634075E+22	2,382557E+20	1,657900E+22
-1175	8,170300E+21	8,169836E+21	1,190816E+20	1,191000E+20	1,634014E+22	2,381816E+20	1,657832E+22
-1174	8,169548E+21	8,170017E+21	1,191529E+20	1,191027E+20	1,633957E+22	2,382556E+20	1,657782E+22
-1173	8,169602E+21	8,169457E+21	1,191015E+20	1,191577E+20	1,633906E+22	2,382592E+20	1,657732E+22
-1172	8,169334E+21	8,168985E+21	1,191075E+20	1,191076E+20	1,633832E+22	2,382152E+20	1,657653E+22
-1171	8,168813E+21	8,169129E+21	1,191573E+20	1,191337E+20	1,633794E+22	2,382910E+20	1,657623E+22
-1170	8,169121E+21	8,168596E+21	1,191008E+20	1,191537E+20	1,633772E+22	2,382545E+20	1,657597E+22
-1169	8,168678E+21	8,168767E+21	1,191474E+20	1,190986E+20	1,633744E+22	2,382461E+20	1,657569E+22
-1168	8,168503E+21	8,168904E+21	1,191521E+20	1,191547E+20	1,633741E+22	2,383067E+20	1,657571E+22
-1167	8,168819E+21	8,168445E+21	1,191016E+20	1,191353E+20	1,633726E+22	2,382369E+20	1,657550E+22
-1166	8,168495E+21	8,168962E+21	1,191554E+20	1,191035E+20	1,633746E+22	2,382588E+20	1,657572E+22
-1165	8,168974E+21	8,168995E+21	1,191218E+20	1,191630E+20	1,633797E+22	2,382848E+20	1,657625E+22
-1164	8,169362E+21	8,168932E+21	1,190984E+20	1,191035E+20	1,633829E+22	2,382019E+20	1,657650E+22
-1163	8,169191E+21	8,169645E+21	1,191494E+20	1,191099E+20	1,633884E+22	2,382593E+20	1,657710E+22
-1162	8,169781E+21	8,169537E+21	1,190930E+20	1,191480E+20	1,633932E+22	2,382410E+20	1,657756E+22
-1161	8,169770E+21	8,169751E+21	1,191083E+20	1,190823E+20	1,633952E+22	2,381906E+20	1,657771E+22
-1160	8,169649E+21	8,170089E+21	1,191412E+20	1,191315E+20	1,633974E+22	2,382727E+20	1,657801E+22
-1159	8,170046E+21	8,169567E+21	1,190791E+20	1,191232E+20	1,633961E+22	2,382023E+20	1,657781E+22
-1158	8,169634E+21	8,169812E+21	1,191366E+20	1,190863E+20	1,633945E+22	2,382229E+20	1,657767E+22
-1157	8,169516E+21	8,169692E+21	1,191294E+20	1,191520E+20	1,633921E+22	2,382814E+20	1,657749E+22
-1156	8,169518E+21	8,169023E+21	1,190896E+20	1,191183E+20	1,633854E+22	2,382079E+20	1,657675E+22
-1155	8,168802E+21	8,169178E+21	1,191579E+20	1,191154E+20	1,633798E+22	2,382733E+20	1,657625E+22
-1154	8,168856E+21	8,168659E+21	1,191128E+20	1,191676E+20	1,633751E+22	2,382804E+20	1,657579E+22
-1153	8,168668E+21	8,168299E+21	1,191253E+20	1,191123E+20	1,633697E+22	2,382376E+20	1,657520E+22
-1152	8,168099E+21	8,168523E+21	1,191741E+20	1,191402E+20	1,633662E+22	2,383142E+20	1,657494E+22
-1151	8,168281E+21	8,167909E+21	1,191142E+20	1,191634E+20	1,633619E+22	2,382776E+20	1,657447E+22
-1150	8,167904E+21	8,168029E+21	1,191558E+20	1,191139E+20	1,633593E+22	2,382697E+20	1,657420E+22
-1149	8,167764E+21	8,168194E+21	1,191583E+20	1,191695E+20	1,633596E+22	2,383278E+20	1,657429E+22
-1148	8,168235E+21	8,167727E+21	1,191057E+20	1,191491E+20	1,633596E+22	2,382548E+20	1,657422E+22
-1147	8,168011E+21	8,168292E+21	1,191590E+20	1,191100E+20	1,633630E+22	2,382689E+20	1,657457E+22
-1146	8,168445E+21	8,168435E+21	1,191319E+20	1,191697E+20	1,633688E+22	2,383017E+20	1,657518E+22
-1145	8,168827E+21	8,168472E+21	1,191115E+20	1,191094E+20	1,633730E+22	2,382209E+20	1,657552E+22
-1144	8,168574E+21	8,169165E+21	1,191609E+20	1,191192E+20	1,633774E+22	2,382801E+20	1,657602E+22
-1143	8,169086E+21	8,168903E+21	1,191032E+20	1,191563E+20	1,633799E+22	2,382594E+20	1,657625E+22
-1142	8,169163E+21	8,169038E+21	1,191179E+20	1,190931E+20	1,633820E+22	2,382110E+20	1,657641E+22
-1141	8,168994E+21	8,169411E+21	1,191529E+20	1,191402E+20	1,633841E+22	2,382931E+20	1,657670E+22
-1140	8,169395E+21	8,168860E+21	1,190885E+20	1,191354E+20	1,633825E+22	2,382239E+20	1,657648E+22
-1139	8,168912E+21	8,169068E+21	1,191435E+20	1,190972E+20	1,633798E+22	2,382407E+20	1,657622E+22

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 $\odot$ Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
-1138	8,168702E+21	8,168947E+21	1,191395E+20	1,191648E+20	1,633765E+22	2,383043E+20	1,657595E+22
-1137	8,168769E+21	8,168294E+21	1,191036E+20	1,191292E+20	1,633706E+22	2,382328E+20	1,657530E+22
-1136	8,168056E+21	8,168454E+21	1,191713E+20	1,191248E+20	1,633651E+22	2,382961E+20	1,657481E+22
-1135	8,168077E+21	8,167866E+21	1,191277E+20	1,191760E+20	1,633594E+22	2,383037E+20	1,657425E+22
-1134	8,167945E+21	8,167514E+21	1,191389E+20	1,191254E+20	1,633546E+22	2,382643E+20	1,657372E+22
-1133	8,167290E+21	8,167814E+21	1,191846E+20	1,191541E+20	1,633510E+22	2,383387E+20	1,657344E+22
-1132	8,167535E+21	8,167152E+21	1,191209E+20	1,191806E+20	1,633469E+22	2,383015E+20	1,657299E+22
-1131	8,167236E+21	8,167264E+21	1,191585E+20	1,191248E+20	1,633450E+22	2,382834E+20	1,657278E+22
-1130	8,167135E+21	8,167519E+21	1,191672E+20	1,191767E+20	1,633465E+22	2,383439E+20	1,657300E+22
-1129	8,167708E+21	8,167181E+21	1,191202E+20	1,191522E+20	1,633489E+22	2,382724E+20	1,657316E+22
-1128	8,167459E+21	8,167824E+21	1,191711E+20	1,191145E+20	1,633528E+22	2,382856E+20	1,657357E+22
-1127	8,167782E+21	8,167884E+21	1,191436E+20	1,191771E+20	1,633567E+22	2,383208E+20	1,657399E+22
-1126	8,168221E+21	8,167862E+21	1,191194E+20	1,191221E+20	1,633608E+22	2,382416E+20	1,657432E+22
-1125	8,167947E+21	8,168564E+21	1,191681E+20	1,191309E+20	1,633651E+22	2,382990E+20	1,657481E+22
-1124	8,168521E+21	8,168239E+21	1,191099E+20	1,191675E+20	1,633676E+22	2,382773E+20	1,657504E+22
-1123	8,168613E+21	8,168356E+21	1,191243E+20	1,191013E+20	1,633697E+22	2,382256E+20	1,657519E+22
-1122	8,168320E+21	8,168765E+21	1,191651E+20	1,191488E+20	1,633708E+22	2,383138E+20	1,657540E+22
-1121	8,168658E+21	8,168238E+21	1,191034E+20	1,191458E+20	1,633690E+22	2,382492E+20	1,657515E+22
-1120	8,168133E+21	8,168371E+21	1,191545E+20	1,191099E+20	1,633650E+22	2,382644E+20	1,657477E+22
-1119	8,167869E+21	8,168097E+21	1,191513E+20	1,191756E+20	1,633597E+22	2,383269E+20	1,657429E+22
-1118	8,168051E+21	8,167436E+21	1,191159E+20	1,191419E+20	1,633549E+22	2,382579E+20	1,657374E+22
-1117	8,167320E+21	8,167687E+21	1,191838E+20	1,191353E+20	1,633501E+22	2,383191E+20	1,657333E+22
-1116	8,167349E+21	8,167114E+21	1,191384E+20	1,191898E+20	1,633446E+22	2,383282E+20	1,657279E+22
-1115	8,167196E+21	8,166773E+21	1,191452E+20	1,191386E+20	1,633397E+22	2,382838E+20	1,657225E+22
-1114	8,166503E+21	8,167107E+21	1,191933E+20	1,191658E+20	1,633361E+22	2,383591E+20	1,657197E+22
-1113	8,166841E+21	8,166508E+21	1,191339E+20	1,191892E+20	1,633335E+22	2,383230E+20	1,657167E+22
-1112	8,166600E+21	8,166637E+21	1,191699E+20	1,191302E+20	1,633324E+22	2,383001E+20	1,657154E+22
-1111	8,166480E+21	8,166847E+21	1,191819E+20	1,191811E+20	1,633333E+22	2,383630E+20	1,657169E+22
-1110	8,167111E+21	8,166564E+21	1,191328E+20	1,191624E+20	1,633368E+22	2,382952E+20	1,657197E+22
-1109	8,166799E+21	8,167266E+21	1,191796E+20	1,191272E+20	1,633406E+22	2,383068E+20	1,657237E+22
-1108	8,167187E+21	8,167256E+21	1,191491E+20	1,191924E+20	1,633444E+22	2,383415E+20	1,657278E+22
-1107	8,167680E+21	8,167199E+21	1,191214E+20	1,191320E+20	1,633488E+22	2,382534E+20	1,657313E+22
-1106	8,167381E+21	8,167956E+21	1,191771E+20	1,191369E+20	1,633534E+22	2,383140E+20	1,657365E+22
-1105	8,167961E+21	8,167701E+21	1,191244E+20	1,191712E+20	1,633566E+22	2,382955E+20	1,657396E+22
-1104	8,167943E+21	8,167800E+21	1,191367E+20	1,191086E+20	1,633574E+22	2,382453E+20	1,657399E+22
-1103	8,167508E+21	8,168062E+21	1,191780E+20	1,191593E+20	1,633557E+22	2,383372E+20	1,657391E+22
-1102	8,167901E+21	8,167454E+21	1,191140E+20	1,191618E+20	1,633535E+22	2,382758E+20	1,657363E+22
-1101	8,167373E+21	8,167586E+21	1,191633E+20	1,191244E+20	1,633496E+22	2,382877E+20	1,657325E+22
-1100	8,167201E+21	8,167265E+21	1,191601E+20	1,191887E+20	1,633447E+22	2,383489E+20	1,657281E+22
-1099	8,167401E+21	8,166640E+21	1,191247E+20	1,191525E+20	1,633404E+22	2,382772E+20	1,657232E+22
-1098	8,166565E+21	8,166994E+21	1,191966E+20	1,191457E+20	1,633356E+22	2,383423E+20	1,657190E+22
-1097	8,166555E+21	8,166477E+21	1,191546E+20	1,192005E+20	1,633303E+22	2,383551E+20	1,657139E+22
-1096	8,166388E+21	8,166090E+21	1,191575E+20	1,191497E+20	1,633248E+22	2,383071E+20	1,657079E+22
-1095	8,165682E+21	8,166307E+21	1,192063E+20	1,191737E+20	1,633199E+22	2,383799E+20	1,657037E+22
-1094	8,166157E+21	8,165740E+21	1,191470E+20	1,191986E+20	1,633190E+22	2,383456E+20	1,657024E+22
-1093	8,165945E+21	8,165975E+21	1,191803E+20	1,191391E+20	1,633192E+22	2,383194E+20	1,657024E+22
-1092	8,165876E+21	8,166201E+21	1,191900E+20	1,191936E+20	1,633208E+22	2,383836E+20	1,657046E+22
-1091	8,166531E+21	8,165961E+21	1,191361E+20	1,191749E+20	1,633249E+22	2,383109E+20	1,657080E+22
-1090	8,166218E+21	8,166704E+21	1,191847E+20	1,191382E+20	1,633292E+22	2,383229E+20	1,657124E+22

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 $\odot$ Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
-1089	8,166650E+21	8,166750E+21	1,191598E+20	1,191987E+20	1,633340E+22	2,383585E+20	1,657176E+22
-1088	8,167147E+21	8,166677E+21	1,191309E+20	1,191367E+20	1,633382E+22	2,382677E+20	1,657209E+22
-1087	8,166737E+21	8,167317E+21	1,191917E+20	1,191416E+20	1,633405E+22	2,383333E+20	1,657239E+22
-1086	8,167275E+21	8,167059E+21	1,191378E+20	1,191819E+20	1,633433E+22	2,383196E+20	1,657265E+22
-1085	8,167172E+21	8,167122E+21	1,191469E+20	1,191237E+20	1,633429E+22	2,382706E+20	1,657256E+22
-1084	8,166790E+21	8,167248E+21	1,191854E+20	1,191756E+20	1,633404E+22	2,383611E+20	1,657240E+22
-1083	8,167241E+21	8,166631E+21	1,191195E+20	1,191743E+20	1,633387E+22	2,382938E+20	1,657217E+22
-1082	8,166708E+21	8,166839E+21	1,191740E+20	1,191334E+20	1,633355E+22	2,383074E+20	1,657185E+22
-1081	8,166524E+21	8,166628E+21	1,191768E+20	1,191948E+20	1,633315E+22	2,383716E+20	1,657152E+22
-1080	8,166619E+21	8,166013E+21	1,191391E+20	1,191619E+20	1,633263E+22	2,383011E+20	1,657093E+22
-1079	8,165654E+21	8,166230E+21	1,192118E+20	1,191568E+20	1,633188E+22	2,383686E+20	1,657025E+22
-1078	8,165703E+21	8,165678E+21	1,191677E+20	1,192148E+20	1,633138E+22	2,383824E+20	1,656976E+22
-1077	8,165571E+21	8,165301E+21	1,191680E+20	1,191636E+20	1,633087E+22	2,383316E+20	1,656920E+22
-1076	8,165022E+21	8,165476E+21	1,192148E+20	1,191861E+20	1,633050E+22	2,384009E+20	1,656890E+22
-1075	8,165572E+21	8,164998E+21	1,191540E+20	1,192093E+20	1,633057E+22	2,383633E+20	1,656893E+22
-1074	8,165331E+21	8,165380E+21	1,191877E+20	1,191499E+20	1,633071E+22	2,383376E+20	1,656905E+22
-1073	8,165298E+21	8,165696E+21	1,192004E+20	1,192036E+20	1,633099E+22	2,384040E+20	1,656940E+22
-1072	8,165948E+21	8,165444E+21	1,191439E+20	1,191823E+20	1,633139E+22	2,383262E+20	1,656972E+22
-1071	8,165595E+21	8,166091E+21	1,191960E+20	1,191429E+20	1,633169E+22	2,383389E+20	1,657002E+22
-1070	8,166074E+21	8,166154E+21	1,191734E+20	1,192031E+20	1,633223E+22	2,383765E+20	1,657060E+22
-1069	8,166495E+21	8,166106E+21	1,191425E+20	1,191451E+20	1,633260E+22	2,382876E+20	1,657089E+22
-1068	8,166082E+21	8,166640E+21	1,192003E+20	1,191551E+20	1,633272E+22	2,383554E+20	1,657108E+22
-1067	8,166607E+21	8,166346E+21	1,191421E+20	1,191969E+20	1,633295E+22	2,383389E+20	1,657129E+22
-1066	8,166507E+21	8,166420E+21	1,191527E+20	1,191379E+20	1,633293E+22	2,382907E+20	1,657122E+22
-1065	8,166181E+21	8,166586E+21	1,191965E+20	1,191846E+20	1,633277E+22	2,383811E+20	1,657115E+22
-1064	8,166608E+21	8,165977E+21	1,191322E+20	1,191810E+20	1,633258E+22	2,383132E+20	1,657090E+22
-1063	8,165939E+21	8,166104E+21	1,191916E+20	1,191416E+20	1,633204E+22	2,383331E+20	1,657038E+22
-1062	8,165681E+21	8,165908E+21	1,191932E+20	1,192069E+20	1,633159E+22	2,384001E+20	1,656999E+22
-1061	8,165706E+21	8,165247E+21	1,191520E+20	1,191802E+20	1,633095E+22	2,383322E+20	1,656928E+22
-1060	8,164829E+21	8,165309E+21	1,192205E+20	1,191736E+20	1,633014E+22	2,383941E+20	1,656853E+22
-1059	8,164974E+21	8,164792E+21	1,191737E+20	1,192273E+20	1,632977E+22	2,384010E+20	1,656817E+22
-1058	8,164913E+21	8,164533E+21	1,191766E+20	1,191728E+20	1,632945E+22	2,383494E+20	1,656780E+22
-1057	8,164418E+21	8,164862E+21	1,192270E+20	1,191926E+20	1,632928E+22	2,384196E+20	1,656770E+22
-1056	8,164939E+21	8,164476E+21	1,191648E+20	1,192168E+20	1,632942E+22	2,383816E+20	1,656780E+22
-1055	8,164637E+21	8,164781E+21	1,191991E+20	1,191585E+20	1,632942E+22	2,383576E+20	1,656778E+22
-1054	8,164660E+21	8,165118E+21	1,192118E+20	1,192117E+20	1,632978E+22	2,384234E+20	1,656820E+22
-1053	8,165311E+21	8,164872E+21	1,191539E+20	1,191910E+20	1,633018E+22	2,383448E+20	1,656853E+22
-1052	8,165035E+21	8,165404E+21	1,192049E+20	1,191519E+20	1,633044E+22	2,383568E+20	1,656880E+22
-1051	8,165492E+21	8,165508E+21	1,191802E+20	1,192125E+20	1,633100E+22	2,383928E+20	1,656939E+22
-1050	8,165844E+21	8,165506E+21	1,191494E+20	1,191584E+20	1,633135E+22	2,383078E+20	1,656966E+22
-1049	8,165463E+21	8,166033E+21	1,192093E+20	1,191682E+20	1,633150E+22	2,383776E+20	1,656987E+22
-1048	8,165984E+21	8,165704E+21	1,191505E+20	1,192064E+20	1,633169E+22	2,383568E+20	1,657004E+22
-1047	8,165831E+21	8,165683E+21	1,191657E+20	1,191455E+20	1,633151E+22	2,383112E+20	1,656983E+22
-1046	8,165509E+21	8,165892E+21	1,192116E+20	1,191906E+20	1,633140E+22	2,384022E+20	1,656980E+22
-1045	8,165812E+21	8,165309E+21	1,191472E+20	1,191926E+20	1,633112E+22	2,383398E+20	1,656946E+22
-1044	8,165125E+21	8,165302E+21	1,192032E+20	1,191584E+20	1,633043E+22	2,383616E+20	1,656879E+22
-1043	8,164858E+21	8,165065E+21	1,192001E+20	1,192228E+20	1,632992E+22	2,384228E+20	1,656835E+22
-1042	8,164902E+21	8,164426E+21	1,191599E+20	1,191959E+20	1,632933E+22	2,383558E+20	1,656768E+22
-1041	8,164157E+21	8,164533E+21	1,192305E+20	1,191834E+20	1,632869E+22	2,384139E+20	1,656710E+22

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 ° Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
-1040	8,164330E+21	8,164080E+21	1,191857E+20	1,192325E+20	1,632841E+22	2,384181E+20	1,656683E+22
-1039	8,164195E+21	8,163842E+21	1,191919E+20	1,191796E+20	1,632804E+22	2,383715E+20	1,656641E+22
-1038	8,163697E+21	8,164262E+21	1,192408E+20	1,192015E+20	1,632796E+22	2,384423E+20	1,656640E+22
-1037	8,164187E+21	8,163887E+21	1,191770E+20	1,192305E+20	1,632807E+22	2,384075E+20	1,656648E+22
-1036	8,163998E+21	8,164064E+21	1,192062E+20	1,191714E+20	1,632806E+22	2,383776E+20	1,656644E+22
-1035	8,164089E+21	8,164432E+21	1,192167E+20	1,192197E+20	1,632852E+22	2,384365E+20	1,656696E+22
-1034	8,164752E+21	8,164274E+21	1,191604E+20	1,191988E+20	1,632903E+22	2,383592E+20	1,656739E+22
-1033	8,164503E+21	8,164862E+21	1,192136E+20	1,191602E+20	1,632936E+22	2,383738E+20	1,656774E+22
-1032	8,164889E+21	8,164982E+21	1,191883E+20	1,192210E+20	1,632987E+22	2,384093E+20	1,656828E+22
-1031	8,165166E+21	8,164868E+21	1,191600E+20	1,191696E+20	1,633003E+22	2,383296E+20	1,656836E+22
-1030	8,164822E+21	8,165395E+21	1,192199E+20	1,191777E+20	1,633022E+22	2,383976E+20	1,656861E+22
-1029	8,165325E+21	8,165054E+21	1,191629E+20	1,192170E+20	1,633038E+22	2,383799E+20	1,656876E+22
-1028	8,165202E+21	8,164894E+21	1,191775E+20	1,191570E+20	1,633010E+22	2,383345E+20	1,656843E+22
-1027	8,164795E+21	8,165143E+21	1,192208E+20	1,192015E+20	1,632994E+22	2,384223E+20	1,656836E+22
-1026	8,165004E+21	8,164581E+21	1,191567E+20	1,192086E+20	1,632958E+22	2,383653E+20	1,656795E+22
-1025	8,164347E+21	8,164523E+21	1,192143E+20	1,191735E+20	1,632887E+22	2,383878E+20	1,656726E+22
-1024	8,164086E+21	8,164282E+21	1,192103E+20	1,192310E+20	1,632837E+22	2,384413E+20	1,656681E+22
-1023	8,164112E+21	8,163591E+21	1,191757E+20	1,192032E+20	1,632770E+22	2,383789E+20	1,656608E+22
-1022	8,163414E+21	8,163795E+21	1,192458E+20	1,191882E+20	1,632721E+22	2,384340E+20	1,656564E+22
-1021	8,163539E+21	8,163425E+21	1,192013E+20	1,192436E+20	1,632696E+22	2,384449E+20	1,656541E+22
-1020	8,163448E+21	8,163099E+21	1,192017E+20	1,191951E+20	1,632655E+22	2,383968E+20	1,656494E+22
-1019	8,163008E+21	8,163552E+21	1,192449E+20	1,192152E+20	1,632656E+22	2,384601E+20	1,656502E+22
-1018	8,163546E+21	8,163244E+21	1,191823E+20	1,192436E+20	1,632679E+22	2,384259E+20	1,656522E+22
-1017	8,163487E+21	8,163454E+21	1,192133E+20	1,191802E+20	1,632694E+22	2,383935E+20	1,656533E+22
-1016	8,163569E+21	8,163874E+21	1,192257E+20	1,192226E+20	1,632744E+22	2,384484E+20	1,656589E+22
-1015	8,164111E+21	8,163701E+21	1,191732E+20	1,192060E+20	1,632781E+22	2,383792E+20	1,656619E+22
-1014	8,163854E+21	8,164308E+21	1,192245E+20	1,191696E+20	1,632816E+22	2,383942E+20	1,656656E+22
-1013	8,164205E+21	8,164383E+21	1,192003E+20	1,192339E+20	1,632859E+22	2,384342E+20	1,656702E+22
-1012	8,164563E+21	8,164124E+21	1,191683E+20	1,191820E+20	1,632869E+22	2,383503E+20	1,656704E+22
-1011	8,164254E+21	8,164667E+21	1,192262E+20	1,191855E+20	1,632892E+22	2,384117E+20	1,656733E+22
-1010	8,164685E+21	8,164401E+21	1,191727E+20	1,192256E+20	1,632909E+22	2,383983E+20	1,656748E+22
-1009	8,164544E+21	8,164258E+21	1,191883E+20	1,191692E+20	1,632880E+22	2,383576E+20	1,656716E+22
-1008	8,164032E+21	8,164474E+21	1,192311E+20	1,192103E+20	1,632851E+22	2,384415E+20	1,656695E+22
-1007	8,164142E+21	8,163804E+21	1,191709E+20	1,192212E+20	1,632795E+22	2,383921E+20	1,656634E+22
-1006	8,163536E+21	8,163736E+21	1,192281E+20	1,191829E+20	1,632727E+22	2,384110E+20	1,656568E+22
-1005	8,163280E+21	8,163489E+21	1,192258E+20	1,192415E+20	1,632677E+22	2,384673E+20	1,656524E+22
-1004	8,163369E+21	8,162720E+21	1,191888E+20	1,192162E+20	1,632609E+22	2,384050E+20	1,656449E+22
-1003	8,162673E+21	8,163012E+21	1,192525E+20	1,192018E+20	1,632569E+22	2,384543E+20	1,656414E+22
-1002	8,162783E+21	8,162731E+21	1,192091E+20	1,192610E+20	1,632551E+22	2,384702E+20	1,656398E+22
-1001	8,162812E+21	8,162415E+21	1,192088E+20	1,192106E+20	1,632523E+22	2,384193E+20	1,656365E+22
-1000	8,162415E+21	8,162914E+21	1,192517E+20	1,192200E+20	1,632533E+22	2,384716E+20	1,656380E+22
-999	8,162918E+21	8,162610E+21	1,191955E+20	1,192475E+20	1,632553E+22	2,384430E+20	1,656397E+22
-998	8,162869E+21	8,162905E+21	1,192266E+20	1,191824E+20	1,632577E+22	2,384090E+20	1,656418E+22
-997	8,162886E+21	8,163356E+21	1,192401E+20	1,192317E+20	1,632624E+22	2,384718E+20	1,656471E+22
-996	8,163455E+21	8,163033E+21	1,191825E+20	1,192195E+20	1,632649E+22	2,384021E+20	1,656489E+22
-995	8,163251E+21	8,163632E+21	1,192277E+20	1,191825E+20	1,632688E+22	2,384101E+20	1,656529E+22
-994	8,163633E+21	8,163749E+21	1,192061E+20	1,192458E+20	1,632738E+22	2,384519E+20	1,656583E+22
-993	8,164071E+21	8,163485E+21	1,191765E+20	1,191914E+20	1,632756E+22	2,383680E+20	1,656592E+22
-992	8,163682E+21	8,164067E+21	1,192366E+20	1,191886E+20	1,632775E+22	2,384252E+20	1,656617E+22

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 ° Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
-991	8,163913E+21	8,163765E+21	1,191883E+20	1,192342E+20	1,632768E+22	2,384225E+20	1,656610E+22
-990	8,163706E+21	8,163586E+21	1,192033E+20	1,191814E+20	1,632729E+22	2,383847E+20	1,656568E+22
-989	8,163158E+21	8,163710E+21	1,192462E+20	1,192252E+20	1,632687E+22	2,384714E+20	1,656534E+22
-988	8,163336E+21	8,162869E+21	1,191824E+20	1,192360E+20	1,632621E+22	2,384185E+20	1,656462E+22
-987	8,162808E+21	8,162832E+21	1,192347E+20	1,191943E+20	1,632564E+22	2,384291E+20	1,656407E+22
-986	8,162541E+21	8,162702E+21	1,192351E+20	1,192539E+20	1,632524E+22	2,384890E+20	1,656373E+22
-985	8,162682E+21	8,162008E+21	1,191984E+20	1,192317E+20	1,632469E+22	2,384301E+20	1,656312E+22
-984	8,161974E+21	8,162350E+21	1,192599E+20	1,192111E+20	1,632432E+22	2,384710E+20	1,656279E+22
-983	8,162032E+21	8,162063E+21	1,192225E+20	1,192716E+20	1,632410E+22	2,384941E+20	1,656259E+22
-982	8,162133E+21	8,161804E+21	1,192218E+20	1,192168E+20	1,632394E+22	2,384386E+20	1,656238E+22
-981	8,161746E+21	8,162297E+21	1,192673E+20	1,192255E+20	1,632404E+22	2,384928E+20	1,656254E+22
-980	8,162262E+21	8,161916E+21	1,192082E+20	1,192559E+20	1,632418E+22	2,384640E+20	1,656264E+22
-979	8,162224E+21	8,162248E+21	1,192315E+20	1,191938E+20	1,632447E+22	2,384253E+20	1,656290E+22
-978	8,162229E+21	8,162733E+21	1,192468E+20	1,192468E+20	1,632496E+22	2,384936E+20	1,656346E+22
-977	8,162930E+21	8,162409E+21	1,191882E+20	1,192340E+20	1,632534E+22	2,384222E+20	1,656376E+22
-976	8,162766E+21	8,163030E+21	1,192329E+20	1,191867E+20	1,632580E+22	2,384196E+20	1,656422E+22
-975	8,163050E+21	8,163158E+21	1,192197E+20	1,192496E+20	1,632621E+22	2,384693E+20	1,656468E+22
-974	8,163421E+21	8,162950E+21	1,191907E+20	1,191962E+20	1,632637E+22	2,383869E+20	1,656476E+22
-973	8,162901E+21	8,163477E+21	1,192525E+20	1,192000E+20	1,632638E+22	2,384525E+20	1,656483E+22
-972	8,163089E+21	8,162977E+21	1,191997E+20	1,192501E+20	1,632607E+22	2,384498E+20	1,656452E+22
-971	8,162924E+21	8,162735E+21	1,192089E+20	1,191984E+20	1,632566E+22	2,384073E+20	1,656407E+22
-970	8,162413E+21	8,162865E+21	1,192543E+20	1,192400E+20	1,632528E+22	2,384943E+20	1,656377E+22
-969	8,162701E+21	8,162038E+21	1,191925E+20	1,192497E+20	1,632474E+22	2,384422E+20	1,656318E+22
-968	8,162143E+21	8,162085E+21	1,192439E+20	1,192008E+20	1,632423E+22	2,384447E+20	1,656267E+22
-967	8,161737E+21	8,162005E+21	1,192501E+20	1,192647E+20	1,632374E+22	2,385148E+20	1,656226E+22
-966	8,161861E+21	8,161361E+21	1,192144E+20	1,192423E+20	1,632322E+22	2,384568E+20	1,656168E+22
-965	8,161174E+21	8,161674E+21	1,192761E+20	1,192219E+20	1,632285E+22	2,384980E+20	1,656135E+22
-964	8,161293E+21	8,161266E+21	1,192365E+20	1,192800E+20	1,632256E+22	2,385165E+20	1,656108E+22
-963	8,161449E+21	8,161057E+21	1,192297E+20	1,192245E+20	1,632251E+22	2,384542E+20	1,656096E+22
-962	8,161066E+21	8,161642E+21	1,192755E+20	1,192361E+20	1,632271E+22	2,385116E+20	1,656122E+22
-961	8,161655E+21	8,161293E+21	1,192147E+20	1,192707E+20	1,632295E+22	2,384854E+20	1,656143E+22
-960	8,161658E+21	8,161658E+21	1,192343E+20	1,192027E+20	1,632332E+22	2,384370E+20	1,656175E+22
-959	8,161643E+21	8,162152E+21	1,192564E+20	1,192567E+20	1,632380E+22	2,385131E+20	1,656231E+22
-958	8,162381E+21	8,161891E+21	1,192001E+20	1,192390E+20	1,632427E+22	2,384391E+20	1,656271E+22
-957	8,162195E+21	8,162487E+21	1,192479E+20	1,191931E+20	1,632468E+22	2,384411E+20	1,656312E+22
-956	8,162385E+21	8,162495E+21	1,192328E+20	1,192583E+20	1,632488E+22	2,384911E+20	1,656337E+22
-955	8,162688E+21	8,162257E+21	1,191971E+20	1,192114E+20	1,632495E+22	2,384085E+20	1,656335E+22
-954	8,162127E+21	8,162726E+21	1,192606E+20	1,192181E+20	1,632485E+22	2,384787E+20	1,656333E+22
-953	8,162409E+21	8,162172E+21	1,192072E+20	1,192668E+20	1,632458E+22	2,384740E+20	1,656305E+22
-952	8,162285E+21	8,161936E+21	1,192161E+20	1,192051E+20	1,632422E+22	2,384212E+20	1,656264E+22
-951	8,161689E+21	8,162105E+21	1,192694E+20	1,192462E+20	1,632379E+22	2,385156E+20	1,656231E+22
-950	8,161928E+21	8,161394E+21	1,192100E+20	1,192565E+20	1,632332E+22	2,384665E+20	1,656179E+22
-949	8,161306E+21	8,161416E+21	1,192615E+20	1,192129E+20	1,632272E+22	2,384745E+20	1,656120E+22
-948	8,160873E+21	8,161206E+21	1,192641E+20	1,192785E+20	1,632208E+22	2,385426E+20	1,656062E+22
-947	8,161073E+21	8,160559E+21	1,192218E+20	1,192577E+20	1,632163E+22	2,384795E+20	1,656011E+22
-946	8,160438E+21	8,160889E+21	1,192848E+20	1,192344E+20	1,632133E+22	2,385192E+20	1,655985E+22
-945	8,160675E+21	8,160523E+21	1,192453E+20	1,192915E+20	1,632120E+22	2,385368E+20	1,655974E+22
-944	8,160836E+21	8,160398E+21	1,192353E+20	1,192309E+20	1,632123E+22	2,384662E+20	1,655970E+22
-943	8,160378E+21	8,161030E+21	1,192858E+20	1,192476E+20	1,632141E+22	2,385333E+20	1,655994E+22

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 ° Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
-942	8,161011E+21	8,160755E+21	1,192267E+20	1,192807E+20	1,632177E+22	2,385073E+20	1,656027E+22
-941	8,161079E+21	8,161094E+21	1,192459E+20	1,192122E+20	1,632217E+22	2,384581E+20	1,656063E+22
-940	8,161084E+21	8,161494E+21	1,192675E+20	1,192629E+20	1,632258E+22	2,385304E+20	1,656111E+22
-939	8,161814E+21	8,161271E+21	1,192070E+20	1,192461E+20	1,632309E+22	2,384530E+20	1,656154E+22
-938	8,161547E+21	8,161886E+21	1,192569E+20	1,192047E+20	1,632343E+22	2,384616E+20	1,656189E+22
-937	8,161730E+21	8,161847E+21	1,192406E+20	1,192728E+20	1,632358E+22	2,385134E+20	1,656209E+22
-936	8,162015E+21	8,161568E+21	1,192023E+20	1,192223E+20	1,632358E+22	2,384246E+20	1,656201E+22
-935	8,161412E+21	8,161994E+21	1,192723E+20	1,192295E+20	1,632341E+22	2,385018E+20	1,656191E+22
-934	8,161700E+21	8,161480E+21	1,192231E+20	1,192727E+20	1,632318E+22	2,384958E+20	1,656168E+22
-933	8,161561E+21	8,161224E+21	1,192344E+20	1,192131E+20	1,632279E+22	2,384475E+20	1,656123E+22
-932	8,160871E+21	8,161300E+21	1,192844E+20	1,192563E+20	1,632217E+22	2,385407E+20	1,656071E+22
-931	8,161056E+21	8,160598E+21	1,192201E+20	1,192735E+20	1,632165E+22	2,384936E+20	1,656015E+22
-930	8,160454E+21	8,160599E+21	1,192714E+20	1,192326E+20	1,632105E+22	2,385040E+20	1,655956E+22
-929	8,160152E+21	8,160367E+21	1,192723E+20	1,192939E+20	1,632052E+22	2,385662E+20	1,655909E+22
-928	8,160413E+21	8,159779E+21	1,192285E+20	1,192643E+20	1,632019E+22	2,384929E+20	1,655868E+22
-927	8,159741E+21	8,160179E+21	1,192966E+20	1,192411E+20	1,631992E+22	2,385377E+20	1,655846E+22
-926	8,159955E+21	8,159952E+21	1,192595E+20	1,192974E+20	1,631991E+22	2,385569E+20	1,655846E+22
-925	8,160137E+21	8,159827E+21	1,192483E+20	1,192419E+20	1,631996E+22	2,384902E+20	1,655845E+22
-924	8,159711E+21	8,160355E+21	1,192953E+20	1,192590E+20	1,632007E+22	2,385543E+20	1,655862E+22
-923	8,160431E+21	8,160121E+21	1,192329E+20	1,192923E+20	1,632055E+22	2,385252E+20	1,655908E+22
-922	8,160550E+21	8,160476E+21	1,192536E+20	1,192224E+20	1,632103E+22	2,384760E+20	1,655950E+22
-921	8,160600E+21	8,160889E+21	1,192754E+20	1,192712E+20	1,632149E+22	2,385466E+20	1,656004E+22
-920	8,161240E+21	8,160707E+21	1,192121E+20	1,192521E+20	1,632195E+22	2,384642E+20	1,656041E+22
-919	8,160834E+21	8,161280E+21	1,192680E+20	1,192170E+20	1,632211E+22	2,384850E+20	1,656060E+22
-918	8,160998E+21	8,161249E+21	1,192545E+20	1,192820E+20	1,632225E+22	2,385365E+20	1,656078E+22
-917	8,161319E+21	8,160874E+21	1,192175E+20	1,192323E+20	1,632219E+22	2,384498E+20	1,656064E+22
-916	8,160690E+21	8,161167E+21	1,192858E+20	1,192370E+20	1,632186E+22	2,385228E+20	1,656038E+22
-915	8,160966E+21	8,160694E+21	1,192333E+20	1,192836E+20	1,632166E+22	2,385169E+20	1,656018E+22
-914	8,160762E+21	8,160450E+21	1,192448E+20	1,192296E+20	1,632121E+22	2,384744E+20	1,655969E+22
-913	8,160104E+21	8,160506E+21	1,192916E+20	1,192739E+20	1,632061E+22	2,385654E+20	1,655918E+22
-912	8,160305E+21	8,159815E+21	1,192259E+20	1,192868E+20	1,632012E+22	2,385127E+20	1,655863E+22
-911	8,159689E+21	8,159823E+21	1,192832E+20	1,192453E+20	1,631951E+22	2,385285E+20	1,655804E+22
-910	8,159420E+21	8,159680E+21	1,192882E+20	1,192984E+20	1,631910E+22	2,385866E+20	1,655769E+22
-909	8,159693E+21	8,159097E+21	1,192457E+20	1,192716E+20	1,631879E+22	2,385173E+20	1,655731E+22
-908	8,158962E+21	8,159432E+21	1,193089E+20	1,192503E+20	1,631839E+22	2,385592E+20	1,655695E+22
-907	8,159202E+21	8,159245E+21	1,192680E+20	1,193120E+20	1,631845E+22	2,385800E+20	1,655703E+22
-906	8,159468E+21	8,159138E+21	1,192561E+20	1,192575E+20	1,631861E+22	2,385136E+20	1,655712E+22
-905	8,159203E+21	8,159680E+21	1,193008E+20	1,192700E+20	1,631888E+22	2,385707E+20	1,655745E+22
-904	8,159948E+21	8,159534E+21	1,192386E+20	1,192951E+20	1,631948E+22	2,385337E+20	1,655802E+22
-903	8,159984E+21	8,159945E+21	1,192639E+20	1,192287E+20	1,631993E+22	2,384926E+20	1,655842E+22
-902	8,159938E+21	8,160424E+21	1,192893E+20	1,192752E+20	1,632036E+22	2,385645E+20	1,655893E+22
-901	8,160533E+21	8,160159E+21	1,192253E+20	1,192627E+20	1,632069E+22	2,384880E+20	1,655918E+22
-900	8,160105E+21	8,160539E+21	1,192781E+20	1,192292E+20	1,632064E+22	2,385073E+20	1,655915E+22
-899	8,160301E+21	8,160482E+21	1,192629E+20	1,192944E+20	1,632078E+22	2,385573E+20	1,655934E+22
-898	8,160657E+21	8,160094E+21	1,192277E+20	1,192460E+20	1,632075E+22	2,384737E+20	1,655922E+22
-897	8,160072E+21	8,160379E+21	1,192934E+20	1,192495E+20	1,632045E+22	2,385429E+20	1,655899E+22
-896	8,160257E+21	8,159968E+21	1,192398E+20	1,192944E+20	1,632023E+22	2,385343E+20	1,655876E+22
-895	8,159960E+21	8,159714E+21	1,192565E+20	1,192463E+20	1,631967E+22	2,385028E+20	1,655818E+22
-894	8,159298E+21	8,159809E+21	1,193064E+20	1,192827E+20	1,631911E+22	2,385891E+20	1,655770E+22

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 ° Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
-893	8,159539E+21	8,159078E+21	1,192431E+20	1,192957E+20	1,631862E+22	2,385387E+20	1,655716E+22
-892	8,158893E+21	8,158982E+21	1,192986E+20	1,192517E+20	1,631787E+22	2,385502E+20	1,655642E+22
-891	8,158617E+21	8,158906E+21	1,193004E+20	1,193071E+20	1,631752E+22	2,386075E+20	1,655613E+22
-890	8,158886E+21	8,158355E+21	1,192568E+20	1,192872E+20	1,631724E+22	2,385440E+20	1,655579E+22
-889	8,158284E+21	8,158685E+21	1,193133E+20	1,192663E+20	1,631697E+22	2,385796E+20	1,655555E+22
-888	8,158611E+21	8,158577E+21	1,192718E+20	1,193232E+20	1,631719E+22	2,385950E+20	1,655578E+22
-887	8,158905E+21	8,158534E+21	1,192648E+20	1,192675E+20	1,631744E+22	2,385323E+20	1,655597E+22
-886	8,158676E+21	8,159190E+21	1,193142E+20	1,192708E+20	1,631787E+22	2,385850E+20	1,655645E+22
-885	8,159378E+21	8,159043E+21	1,192534E+20	1,192989E+20	1,631842E+22	2,385524E+20	1,655697E+22
-884	8,159265E+21	8,159325E+21	1,192751E+20	1,192377E+20	1,631859E+22	2,385128E+20	1,655710E+22
-883	8,159200E+21	8,159765E+21	1,192976E+20	1,192891E+20	1,631897E+22	2,385867E+20	1,655755E+22
-882	8,159838E+21	8,159428E+21	1,192338E+20	1,192793E+20	1,631927E+22	2,385131E+20	1,655778E+22
-881	8,159548E+21	8,159754E+21	1,192828E+20	1,192418E+20	1,631930E+22	2,385246E+20	1,655783E+22
-880	8,159746E+21	8,159760E+21	1,192691E+20	1,193000E+20	1,631951E+22	2,385691E+20	1,655808E+22
-879	8,159990E+21	8,159434E+21	1,192391E+20	1,192561E+20	1,631942E+22	2,384953E+20	1,655792E+22
-878	8,159323E+21	8,159789E+21	1,193078E+20	1,192564E+20	1,631911E+22	2,385642E+20	1,655768E+22
-877	8,159460E+21	8,159311E+21	1,192558E+20	1,193058E+20	1,631877E+22	2,385616E+20	1,655733E+22
-876	8,159102E+21	8,158900E+21	1,192710E+20	1,192595E+20	1,631800E+22	2,385305E+20	1,655653E+22
-875	8,158469E+21	8,158976E+21	1,193193E+20	1,192934E+20	1,631745E+22	2,386127E+20	1,655606E+22
-874	8,158735E+21	8,158234E+21	1,192577E+20	1,193090E+20	1,631697E+22	2,385667E+20	1,655553E+22
-873	8,158159E+21	8,158129E+21	1,193066E+20	1,192648E+20	1,631629E+22	2,385714E+20	1,655486E+22
-872	8,157859E+21	8,158138E+21	1,193064E+20	1,193191E+20	1,631600E+22	2,386255E+20	1,655462E+22
-871	8,158145E+21	8,157650E+21	1,192662E+20	1,193041E+20	1,631579E+22	2,385703E+20	1,655436E+22
-870	8,157650E+21	8,158073E+21	1,193243E+20	1,192734E+20	1,631572E+22	2,385977E+20	1,655432E+22
-869	8,158047E+21	8,158007E+21	1,192864E+20	1,193283E+20	1,631605E+22	2,386146E+20	1,655467E+22
-868	8,158292E+21	8,157913E+21	1,192768E+20	1,192716E+20	1,631621E+22	2,385484E+20	1,655475E+22
-867	8,158012E+21	8,158610E+21	1,193243E+20	1,192768E+20	1,631662E+22	2,386011E+20	1,655522E+22
-866	8,158663E+21	8,158448E+21	1,192631E+20	1,193122E+20	1,631711E+22	2,385753E+20	1,655569E+22
-865	8,158645E+21	8,158631E+21	1,192783E+20	1,192531E+20	1,631728E+22	2,385314E+20	1,655581E+22
-864	8,158622E+21	8,159084E+21	1,193014E+20	1,192998E+20	1,631771E+22	2,386012E+20	1,655631E+22
-863	8,159270E+21	8,158776E+21	1,192431E+20	1,192907E+20	1,631805E+22	2,385338E+20	1,655658E+22
-862	8,158995E+21	8,159169E+21	1,192958E+20	1,192451E+20	1,631816E+22	2,385409E+20	1,655671E+22
-861	8,159108E+21	8,159182E+21	1,192847E+20	1,193059E+20	1,631829E+22	2,385907E+20	1,655688E+22
-860	8,159168E+21	8,158729E+21	1,192530E+20	1,192682E+20	1,631790E+22	2,385212E+20	1,655642E+22
-859	8,158467E+21	8,159025E+21	1,193205E+20	1,192706E+20	1,631749E+22	2,385911E+20	1,655608E+22
-858	8,158614E+21	8,158480E+21	1,192699E+20	1,193221E+20	1,631709E+22	2,385920E+20	1,655569E+22
-857	8,158362E+21	8,157997E+21	1,192803E+20	1,192737E+20	1,631636E+22	2,385540E+20	1,655491E+22
-856	8,157738E+21	8,158131E+21	1,193273E+20	1,193021E+20	1,631587E+22	2,386294E+20	1,655450E+22
-855	8,157935E+21	8,157466E+21	1,192693E+20	1,193226E+20	1,631540E+22	2,385919E+20	1,655399E+22
-854	8,157386E+21	8,157456E+21	1,193177E+20	1,192742E+20	1,631484E+22	2,385919E+20	1,655343E+22
-853	8,157151E+21	8,157473E+21	1,193191E+20	1,193298E+20	1,631462E+22	2,386490E+20	1,655327E+22
-852	8,157416E+21	8,156937E+21	1,192786E+20	1,193145E+20	1,631435E+22	2,385930E+20	1,655295E+22
-851	8,157010E+21	8,157415E+21	1,193354E+20	1,192803E+20	1,631442E+22	2,386157E+20	1,655304E+22
-850	8,157421E+21	8,157375E+21	1,193004E+20	1,193369E+20	1,631480E+22	2,386373E+20	1,655343E+22
-849	8,157685E+21	8,157267E+21	1,192829E+20	1,192822E+20	1,631495E+22	2,385651E+20	1,655352E+22
-848	8,157362E+21	8,157985E+21	1,193285E+20	1,192875E+20	1,631535E+22	2,386160E+20	1,655396E+22
-847	8,157993E+21	8,157827E+21	1,192707E+20	1,193269E+20	1,631582E+22	2,385976E+20	1,655442E+22
-846	8,158079E+21	8,158047E+21	1,192879E+20	1,192595E+20	1,631613E+22	2,385475E+20	1,655467E+22
-845	8,158099E+21	8,158494E+21	1,193155E+20	1,193039E+20	1,631659E+22	2,386194E+20	1,655521E+22

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 ° Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
-844	8,158619E+21	8,158132E+21	1,192575E+20	1,192962E+20	1,631675E+22	2,385536E+20	1,655530E+22
-843	8,158270E+21	8,158533E+21	1,193081E+20	1,192540E+20	1,631680E+22	2,385621E+20	1,655537E+22
-842	8,158299E+21	8,158492E+21	1,192976E+20	1,193216E+20	1,631679E+22	2,386192E+20	1,655541E+22
-841	8,158410E+21	8,157918E+21	1,192593E+20	1,192872E+20	1,631633E+22	2,385466E+20	1,655487E+22
-840	8,157722E+21	8,158196E+21	1,193273E+20	1,192842E+20	1,631592E+22	2,386115E+20	1,655453E+22
-839	8,157868E+21	8,157679E+21	1,192816E+20	1,193355E+20	1,631555E+22	2,386171E+20	1,655416E+22
-838	8,157653E+21	8,157249E+21	1,192948E+20	1,192803E+20	1,631490E+22	2,385751E+20	1,655348E+22
-837	8,156971E+21	8,157409E+21	1,193424E+20	1,193099E+20	1,631438E+22	2,386524E+20	1,655303E+22
-836	8,157052E+21	8,156687E+21	1,192833E+20	1,193362E+20	1,631374E+22	2,386195E+20	1,655236E+22
-835	8,156578E+21	8,156683E+21	1,193288E+20	1,192870E+20	1,631326E+22	2,386158E+20	1,655188E+22
-834	8,156427E+21	8,156733E+21	1,193326E+20	1,193428E+20	1,631316E+22	2,386753E+20	1,655183E+22
-833	8,156815E+21	8,156200E+21	1,192869E+20	1,193242E+20	1,631302E+22	2,386112E+20	1,655163E+22
-832	8,156409E+21	8,156767E+21	1,193419E+20	1,192861E+20	1,631318E+22	2,386280E+20	1,655180E+22
-831	8,156745E+21	8,156809E+21	1,193098E+20	1,193473E+20	1,631355E+22	2,386571E+20	1,655221E+22
-830	8,157036E+21	8,156735E+21	1,192914E+20	1,192906E+20	1,631377E+22	2,385820E+20	1,655235E+22
-829	8,156765E+21	8,157417E+21	1,193385E+20	1,192969E+20	1,631418E+22	2,386354E+20	1,655282E+22
-828	8,157345E+21	8,157187E+21	1,192819E+20	1,193367E+20	1,631453E+22	2,386186E+20	1,655315E+22
-827	8,157504E+21	8,157408E+21	1,192987E+20	1,192667E+20	1,631491E+22	2,385654E+20	1,655348E+22
-826	8,157495E+21	8,157854E+21	1,193291E+20	1,193141E+20	1,631535E+22	2,386432E+20	1,655399E+22
-825	8,157967E+21	8,157444E+21	1,192645E+20	1,193100E+20	1,631541E+22	2,385745E+20	1,655399E+22
-824	8,157560E+21	8,157818E+21	1,193135E+20	1,192696E+20	1,631538E+22	2,385832E+20	1,655396E+22
-823	8,157541E+21	8,157751E+21	1,193072E+20	1,193375E+20	1,631529E+22	2,386447E+20	1,655394E+22
-822	8,157714E+21	8,157193E+21	1,192714E+20	1,192967E+20	1,631491E+22	2,385682E+20	1,655348E+22
-821	8,157045E+21	8,157445E+21	1,193425E+20	1,192897E+20	1,631449E+22	2,386323E+20	1,655312E+22
-820	8,157015E+21	8,156886E+21	1,192981E+20	1,193426E+20	1,631390E+22	2,386407E+20	1,655254E+22
-819	8,156777E+21	8,156476E+21	1,193088E+20	1,192905E+20	1,631325E+22	2,385993E+20	1,655185E+22
-818	8,156101E+21	8,156611E+21	1,193562E+20	1,193255E+20	1,631271E+22	2,386817E+20	1,655139E+22
-817	8,156283E+21	8,155854E+21	1,192916E+20	1,193533E+20	1,631214E+22	2,386449E+20	1,655078E+22
-816	8,155903E+21	8,155908E+21	1,193351E+20	1,192996E+20	1,631181E+22	2,386347E+20	1,655045E+22
-815	8,155781E+21	8,156046E+21	1,193432E+20	1,193530E+20	1,631183E+22	2,386962E+20	1,655052E+22
-814	8,156211E+21	8,155622E+21	1,192985E+20	1,193297E+20	1,631183E+22	2,386282E+20	1,655046E+22
-813	8,155761E+21	8,156203E+21	1,193530E+20	1,192929E+20	1,631196E+22	2,386458E+20	1,655061E+22
-812	8,155961E+21	8,156177E+21	1,193213E+20	1,193584E+20	1,631214E+22	2,386797E+20	1,655082E+22
-811	8,156349E+21	8,156077E+21	1,193008E+20	1,193014E+20	1,631243E+22	2,386022E+20	1,655103E+22
-810	8,156171E+21	8,156746E+21	1,193501E+20	1,193088E+20	1,631292E+22	2,386589E+20	1,655158E+22
-809	8,156832E+21	8,156500E+21	1,192894E+20	1,193466E+20	1,631333E+22	2,386360E+20	1,655197E+22
-808	8,156960E+21	8,156774E+21	1,193041E+20	1,192753E+20	1,631373E+22	2,385794E+20	1,655231E+22
-807	8,156847E+21	8,157274E+21	1,193370E+20	1,193258E+20	1,631412E+22	2,386628E+20	1,655278E+22
-806	8,157314E+21	8,156857E+21	1,192734E+20	1,193201E+20	1,631417E+22	2,385935E+20	1,655276E+22
-805	8,156886E+21	8,157160E+21	1,193256E+20	1,192795E+20	1,631405E+22	2,386051E+20	1,655265E+22
-804	8,156744E+21	8,157011E+21	1,193220E+20	1,193461E+20	1,631375E+22	2,386681E+20	1,655242E+22
-803	8,156948E+21	8,156412E+21	1,192876E+20	1,193046E+20	1,631336E+22	2,385922E+20	1,655195E+22
-802	8,156241E+21	8,156639E+21	1,193591E+20	1,193015E+20	1,631288E+22	2,386607E+20	1,655154E+22
-801	8,156175E+21	8,156031E+21	1,193078E+20	1,193585E+20	1,631221E+22	2,386662E+20	1,655087E+22
-800	8,155952E+21	8,155618E+21	1,193151E+20	1,193082E+20	1,631157E+22	2,386233E+20	1,655019E+22
-799	8,155331E+21	8,155808E+21	1,193641E+20	1,193418E+20	1,631114E+22	2,387059E+20	1,654984E+22
-798	8,155637E+21	8,155147E+21	1,193032E+20	1,193627E+20	1,631078E+22	2,386658E+20	1,654945E+22
-797	8,155296E+21	8,155255E+21	1,193481E+20	1,193046E+20	1,631055E+22	2,386528E+20	1,654920E+22
-796	8,155010E+21	8,155408E+21	1,193577E+20	1,193584E+20	1,631042E+22	2,387161E+20	1,654913E+22

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 ° Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
-795	8,155435E+21	8,155003E+21	1,193103E+20	1,193385E+20	1,631044E+22	2,386488E+20	1,654909E+22
-794	8,155027E+21	8,155531E+21	1,193635E+20	1,193072E+20	1,631056E+22	2,386708E+20	1,654923E+22
-793	8,155318E+21	8,155456E+21	1,193271E+20	1,193726E+20	1,631077E+22	2,386997E+20	1,654947E+22
-792	8,155825E+21	8,155396E+21	1,193049E+20	1,193127E+20	1,631122E+22	2,386176E+20	1,654984E+22
-791	8,155685E+21	8,156130E+21	1,193579E+20	1,193175E+20	1,631182E+22	2,386754E+20	1,655049E+22
-790	8,156332E+21	8,155986E+21	1,193000E+20	1,193517E+20	1,631232E+22	2,386517E+20	1,655097E+22
-789	8,156372E+21	8,156244E+21	1,193140E+20	1,192830E+20	1,631262E+22	2,385971E+20	1,655121E+22
-788	8,156052E+21	8,156638E+21	1,193497E+20	1,193351E+20	1,631269E+22	2,386849E+20	1,655137E+22
-787	8,156545E+21	8,156164E+21	1,192866E+20	1,193295E+20	1,631271E+22	2,386161E+20	1,655132E+22
-786	8,156151E+21	8,156383E+21	1,193417E+20	1,192913E+20	1,631253E+22	2,386330E+20	1,655117E+22
-785	8,155995E+21	8,156169E+21	1,193336E+20	1,193564E+20	1,631216E+22	2,386900E+20	1,655085E+22
-784	8,156169E+21	8,155585E+21	1,192961E+20	1,193184E+20	1,631175E+22	2,386145E+20	1,655037E+22
-783	8,155418E+21	8,155834E+21	1,193662E+20	1,193181E+20	1,631125E+22	2,386844E+20	1,654994E+22
-782	8,155423E+21	8,155271E+21	1,193166E+20	1,193734E+20	1,631069E+22	2,386900E+20	1,654938E+22
-781	8,155258E+21	8,154872E+21	1,193254E+20	1,193205E+20	1,631013E+22	2,386459E+20	1,654878E+22
-780	8,154559E+21	8,155066E+21	1,193780E+20	1,193496E+20	1,630962E+22	2,387276E+20	1,654835E+22
-779	8,154914E+21	8,154452E+21	1,193199E+20	1,193688E+20	1,630937E+22	2,386887E+20	1,654806E+22
-778	8,154543E+21	8,154570E+21	1,193639E+20	1,193156E+20	1,630911E+22	2,386795E+20	1,654779E+22
-777	8,154225E+21	8,154675E+21	1,193663E+20	1,193716E+20	1,630890E+22	2,387379E+20	1,654764E+22
-776	8,154709E+21	8,154252E+21	1,193153E+20	1,193540E+20	1,630896E+22	2,386692E+20	1,654763E+22
-775	8,154413E+21	8,154829E+21	1,193683E+20	1,193203E+20	1,630924E+22	2,386885E+20	1,654793E+22
-774	8,154858E+21	8,154855E+21	1,193362E+20	1,193787E+20	1,630971E+22	2,387150E+20	1,654843E+22
-773	8,155369E+21	8,154864E+21	1,193152E+20	1,193149E+20	1,631023E+22	2,386300E+20	1,654886E+22
-772	8,155034E+21	8,155618E+21	1,193703E+20	1,193213E+20	1,631065E+22	2,386916E+20	1,654934E+22
-771	8,155628E+21	8,155457E+21	1,193130E+20	1,193582E+20	1,631108E+22	2,386712E+20	1,654976E+22
-770	8,155647E+21	8,155611E+21	1,193265E+20	1,192979E+20	1,631126E+22	2,386244E+20	1,654988E+22
-769	8,155325E+21	8,155882E+21	1,193581E+20	1,193484E+20	1,631121E+22	2,387064E+20	1,654991E+22
-768	8,155863E+21	8,155363E+21	1,192938E+20	1,193434E+20	1,631123E+22	2,386372E+20	1,654986E+22
-767	8,155481E+21	8,155587E+21	1,193504E+20	1,193043E+20	1,631107E+22	2,386547E+20	1,654972E+22
-766	8,155313E+21	8,155432E+21	1,193439E+20	1,193673E+20	1,631074E+22	2,387112E+20	1,654946E+22
-765	8,155424E+21	8,154845E+21	1,193064E+20	1,193312E+20	1,631027E+22	2,386376E+20	1,654891E+22
-764	8,154550E+21	8,155044E+21	1,193781E+20	1,193307E+20	1,630959E+22	2,387088E+20	1,654830E+22
-763	8,154627E+21	8,154507E+21	1,193324E+20	1,193830E+20	1,630913E+22	2,387154E+20	1,654785E+22
-762	8,154517E+21	8,154105E+21	1,193430E+20	1,193323E+20	1,630862E+22	2,386753E+20	1,654730E+22
-761	8,153786E+21	8,154280E+21	1,193909E+20	1,193570E+20	1,630807E+22	2,387479E+20	1,654681E+22
-760	8,154129E+21	8,153706E+21	1,193295E+20	1,193809E+20	1,630783E+22	2,387103E+20	1,654654E+22
-759	8,153766E+21	8,153833E+21	1,193706E+20	1,193295E+20	1,630760E+22	2,387001E+20	1,654630E+22
-758	8,153552E+21	8,153990E+21	1,193742E+20	1,193831E+20	1,630754E+22	2,387572E+20	1,654630E+22
-757	8,154136E+21	8,153620E+21	1,193231E+20	1,193628E+20	1,630776E+22	2,386859E+20	1,654644E+22
-756	8,153809E+21	8,154214E+21	1,193790E+20	1,193254E+20	1,630802E+22	2,387043E+20	1,654673E+22
-755	8,154297E+21	8,154321E+21	1,193516E+20	1,193819E+20	1,630862E+22	2,387335E+20	1,654735E+22
-754	8,154751E+21	8,154331E+21	1,193288E+20	1,193253E+20	1,630908E+22	2,386541E+20	1,654774E+22
-753	8,154321E+21	8,154977E+21	1,193780E+20	1,193333E+20	1,630930E+22	2,387113E+20	1,654801E+22
-752	8,154931E+21	8,154747E+21	1,193181E+20	1,193736E+20	1,630968E+22	2,386917E+20	1,654837E+22
-751	8,155000E+21	8,154867E+21	1,193320E+20	1,193129E+20	1,630987E+22	2,386449E+20	1,654851E+22
-750	8,154759E+21	8,155173E+21	1,193678E+20	1,193573E+20	1,630993E+22	2,387251E+20	1,654866E+22
-749	8,155252E+21	8,154681E+21	1,193045E+20	1,193504E+20	1,630993E+22	2,386549E+20	1,654859E+22
-748	8,154682E+21	8,154885E+21	1,193624E+20	1,193129E+20	1,630957E+22	2,386753E+20	1,654824E+22
-747	8,154494E+21	8,154724E+21	1,193587E+20	1,193767E+20	1,630922E+22	2,387354E+20	1,654795E+22

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 ° Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
-746	8,154606E+21	8,154087E+21	1,193219E+20	1,193477E+20	1,630869E+22	2,386696E+20	1,654736E+22
-745	8,153750E+21	8,154208E+21	1,193894E+20	1,193432E+20	1,630796E+22	2,387326E+20	1,654669E+22
-744	8,153882E+21	8,153669E+21	1,193445E+20	1,193954E+20	1,630755E+22	2,387399E+20	1,654629E+22
-743	8,153769E+21	8,153320E+21	1,193546E+20	1,193450E+20	1,630709E+22	2,386996E+20	1,654579E+22
-742	8,153050E+21	8,153560E+21	1,194011E+20	1,193677E+20	1,630661E+22	2,387688E+20	1,654538E+22
-741	8,153357E+21	8,152991E+21	1,193384E+20	1,193924E+20	1,630635E+22	2,387308E+20	1,654508E+22
-740	8,152964E+21	8,153100E+21	1,193795E+20	1,193401E+20	1,630606E+22	2,387196E+20	1,654478E+22
-739	8,152898E+21	8,153322E+21	1,193882E+20	1,193893E+20	1,630622E+22	2,387776E+20	1,654500E+22
-738	8,153558E+21	8,153009E+21	1,193383E+20	1,193719E+20	1,630657E+22	2,387102E+20	1,654528E+22
-737	8,153210E+21	8,153593E+21	1,193880E+20	1,193323E+20	1,630680E+22	2,387203E+20	1,654552E+22
-736	8,153669E+21	8,153721E+21	1,193583E+20	1,193939E+20	1,630739E+22	2,387522E+20	1,654614E+22
-735	8,154105E+21	8,153718E+21	1,193324E+20	1,193404E+20	1,630782E+22	2,386728E+20	1,654650E+22
-734	8,153743E+21	8,154349E+21	1,193836E+20	1,193455E+20	1,630809E+22	2,387290E+20	1,654682E+22
-733	8,154359E+21	8,154113E+21	1,193255E+20	1,193816E+20	1,630847E+22	2,387071E+20	1,654718E+22
-732	8,154344E+21	8,154192E+21	1,193443E+20	1,193193E+20	1,630854E+22	2,386636E+20	1,654720E+22
-731	8,154087E+21	8,154528E+21	1,193858E+20	1,193616E+20	1,630861E+22	2,387473E+20	1,654736E+22
-730	8,154484E+21	8,154014E+21	1,193215E+20	1,193640E+20	1,630850E+22	2,386855E+20	1,654718E+22
-729	8,153825E+21	8,154075E+21	1,193729E+20	1,193270E+20	1,630790E+22	2,386999E+20	1,654660E+22
-728	8,153682E+21	8,153870E+21	1,193678E+20	1,193931E+20	1,630755E+22	2,387609E+20	1,654631E+22
-727	8,153854E+21	8,153240E+21	1,193318E+20	1,193630E+20	1,630709E+22	2,386948E+20	1,654579E+22
-726	8,153061E+21	8,153415E+21	1,194018E+20	1,193525E+20	1,630648E+22	2,387543E+20	1,654523E+22
-725	8,153138E+21	8,152945E+21	1,193568E+20	1,194027E+20	1,630608E+22	2,387595E+20	1,654484E+22
-724	8,152878E+21	8,152587E+21	1,193671E+20	1,193553E+20	1,630546E+22	2,387224E+20	1,654419E+22
-723	8,152206E+21	8,152842E+21	1,194152E+20	1,193773E+20	1,630505E+22	2,387924E+20	1,654384E+22
-722	8,152586E+21	8,152273E+21	1,193520E+20	1,194081E+20	1,630486E+22	2,387601E+20	1,654362E+22
-721	8,152274E+21	8,152333E+21	1,193871E+20	1,193508E+20	1,630461E+22	2,387378E+20	1,654334E+22
-720	8,152338E+21	8,152610E+21	1,193969E+20	1,194003E+20	1,630495E+22	2,387971E+20	1,654374E+22
-719	8,153004E+21	8,152398E+21	1,193462E+20	1,193828E+20	1,630540E+22	2,387290E+20	1,654413E+22
-718	8,152663E+21	8,153042E+21	1,193946E+20	1,193428E+20	1,630570E+22	2,387373E+20	1,654444E+22
-717	8,153060E+21	8,153163E+21	1,193649E+20	1,194028E+20	1,630622E+22	2,387677E+20	1,654499E+22
-716	8,153418E+21	8,153106E+21	1,193408E+20	1,193495E+20	1,630652E+22	2,386903E+20	1,654521E+22
-715	8,153130E+21	8,153739E+21	1,193989E+20	1,193499E+20	1,630687E+22	2,387487E+20	1,654562E+22
-714	8,153719E+21	8,153501E+21	1,193428E+20	1,193896E+20	1,630722E+22	2,387325E+20	1,654595E+22
-713	8,153623E+21	8,153487E+21	1,193558E+20	1,193277E+20	1,630711E+22	2,386836E+20	1,654579E+22
-712	8,153337E+21	8,153768E+21	1,193952E+20	1,193756E+20	1,630711E+22	2,387708E+20	1,654588E+22
-711	8,153700E+21	8,153238E+21	1,193292E+20	1,193818E+20	1,630694E+22	2,387110E+20	1,654565E+22
-710	8,153133E+21	8,153289E+21	1,193801E+20	1,193432E+20	1,630642E+22	2,387233E+20	1,654515E+22
-709	8,152985E+21	8,153099E+21	1,193772E+20	1,194029E+20	1,630608E+22	2,387801E+20	1,654486E+22
-708	8,153072E+21	8,152476E+21	1,193460E+20	1,193726E+20	1,630555E+22	2,387187E+20	1,654427E+22
-707	8,152268E+21	8,152697E+21	1,194204E+20	1,193591E+20	1,630496E+22	2,387794E+20	1,654374E+22
-706	8,152253E+21	8,152222E+21	1,193739E+20	1,194170E+20	1,630448E+22	2,387908E+20	1,654327E+22
-705	8,151972E+21	8,151730E+21	1,193768E+20	1,193701E+20	1,630370E+22	2,387469E+20	1,654245E+22
-704	8,151444E+21	8,151967E+21	1,194226E+20	1,193930E+20	1,630341E+22	2,388155E+20	1,654223E+22
-703	8,151944E+21	8,151500E+21	1,193606E+20	1,194215E+20	1,630344E+22	2,387820E+20	1,654223E+22
-702	8,151766E+21	8,151671E+21	1,193950E+20	1,193591E+20	1,630344E+22	2,387541E+20	1,654219E+22
-701	8,151787E+21	8,152062E+21	1,194053E+20	1,194050E+20	1,630385E+22	2,388104E+20	1,654266E+22
-700	8,152313E+21	8,151876E+21	1,193558E+20	1,193902E+20	1,630419E+22	2,387461E+20	1,654293E+22
-699	8,151994E+21	8,152516E+21	1,194078E+20	1,193490E+20	1,630451E+22	2,387569E+20	1,654327E+22
-698	8,152389E+21	8,152604E+21	1,193789E+20	1,194134E+20	1,630499E+22	2,387923E+20	1,654379E+22

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 ° Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
-697	8,152741E+21	8,152404E+21	1,193508E+20	1,193579E+20	1,630515E+22	2,387087E+20	1,654385E+22
-696	8,152524E+21	8,153002E+21	1,194093E+20	1,193610E+20	1,630553E+22	2,387703E+20	1,654430E+22
-695	8,153066E+21	8,152803E+21	1,193519E+20	1,194033E+20	1,630587E+22	2,387552E+20	1,654462E+22
-694	8,152962E+21	8,152771E+21	1,193622E+20	1,193432E+20	1,630573E+22	2,387055E+20	1,654444E+22
-693	8,152634E+21	8,153038E+21	1,194008E+20	1,193881E+20	1,630567E+22	2,387889E+20	1,654446E+22
-692	8,152935E+21	8,152485E+21	1,193395E+20	1,193938E+20	1,630542E+22	2,387333E+20	1,654415E+22
-691	8,152424E+21	8,152570E+21	1,193980E+20	1,193499E+20	1,630499E+22	2,387479E+20	1,654374E+22
-690	8,152213E+21	8,152402E+21	1,193967E+20	1,194114E+20	1,630461E+22	2,388081E+20	1,654342E+22
-689	8,152178E+21	8,151674E+21	1,193601E+20	1,193835E+20	1,630385E+22	2,387436E+20	1,654260E+22
-688	8,151394E+21	8,151833E+21	1,194305E+20	1,193749E+20	1,630323E+22	2,388054E+20	1,654203E+22
-687	8,151402E+21	8,151370E+21	1,193819E+20	1,194346E+20	1,630277E+22	2,388165E+20	1,654159E+22
-686	8,151288E+21	8,150910E+21	1,193831E+20	1,193853E+20	1,630220E+22	2,387685E+20	1,654097E+22
-685	8,150848E+21	8,151235E+21	1,194298E+20	1,194004E+20	1,630208E+22	2,388302E+20	1,654091E+22
-684	8,151313E+21	8,150875E+21	1,193739E+20	1,194282E+20	1,630219E+22	2,388021E+20	1,654099E+22
-683	8,151148E+21	8,151155E+21	1,194109E+20	1,193636E+20	1,630230E+22	2,387745E+20	1,654108E+22
-682	8,151072E+21	8,151553E+21	1,194203E+20	1,194148E+20	1,630262E+22	2,388350E+20	1,654146E+22
-681	8,151549E+21	8,151216E+21	1,193644E+20	1,194010E+20	1,630276E+22	2,387653E+20	1,654153E+22
-680	8,151355E+21	8,151769E+21	1,194149E+20	1,193617E+20	1,630312E+22	2,387767E+20	1,654190E+22
-679	8,151776E+21	8,151903E+21	1,193874E+20	1,194242E+20	1,630368E+22	2,388116E+20	1,654249E+22
-678	8,152217E+21	8,151736E+21	1,193575E+20	1,193686E+20	1,630395E+22	2,387261E+20	1,654268E+22
-677	8,151940E+21	8,152367E+21	1,194149E+20	1,193696E+20	1,630431E+22	2,387845E+20	1,654309E+22
-676	8,152350E+21	8,152174E+21	1,193609E+20	1,194148E+20	1,630452E+22	2,387757E+20	1,654330E+22
-675	8,152276E+21	8,152137E+21	1,193754E+20	1,193530E+20	1,630441E+22	2,387284E+20	1,654314E+22
-674	8,151911E+21	8,152380E+21	1,194154E+20	1,193985E+20	1,630429E+22	2,388139E+20	1,654310E+22
-673	8,152153E+21	8,151695E+21	1,193533E+20	1,194029E+20	1,630385E+22	2,387562E+20	1,654261E+22
-672	8,151672E+21	8,151724E+21	1,194126E+20	1,193626E+20	1,630340E+22	2,387752E+20	1,654217E+22
-671	8,151356E+21	8,151599E+21	1,194093E+20	1,194255E+20	1,630295E+22	2,388348E+20	1,654179E+22
-670	8,151343E+21	8,150826E+21	1,193690E+20	1,194017E+20	1,630217E+22	2,387707E+20	1,654094E+22
-669	8,150595E+21	8,150968E+21	1,194361E+20	1,193880E+20	1,630156E+22	2,388242E+20	1,654039E+22
-668	8,150627E+21	8,150562E+21	1,193929E+20	1,194458E+20	1,630119E+22	2,388387E+20	1,654003E+22
-667	8,150635E+21	8,150227E+21	1,193997E+20	1,193904E+20	1,630086E+22	2,387901E+20	1,653965E+22
-666	8,150187E+21	8,150655E+21	1,194463E+20	1,194065E+20	1,630084E+22	2,388529E+20	1,653970E+22
-665	8,150545E+21	8,150237E+21	1,193870E+20	1,194362E+20	1,630078E+22	2,388232E+20	1,653960E+22
-664	8,150421E+21	8,150471E+21	1,194191E+20	1,193776E+20	1,630089E+22	2,387967E+20	1,653969E+22
-663	8,150362E+21	8,150879E+21	1,194264E+20	1,194288E+20	1,630124E+22	2,388551E+20	1,654010E+22
-662	8,150967E+21	8,150517E+21	1,193680E+20	1,194144E+20	1,630148E+22	2,387824E+20	1,654027E+22
-661	8,150850E+21	8,151095E+21	1,194190E+20	1,193689E+20	1,630194E+22	2,387879E+20	1,654073E+22
-660	8,151212E+21	8,151303E+21	1,193984E+20	1,194310E+20	1,630251E+22	2,388293E+20	1,654134E+22
-659	8,151627E+21	8,151213E+21	1,193719E+20	1,193749E+20	1,630284E+22	2,387468E+20	1,654159E+22
-658	8,151254E+21	8,151813E+21	1,194278E+20	1,193804E+20	1,630307E+22	2,388082E+20	1,654187E+22
-657	8,151571E+21	8,151453E+21	1,193719E+20	1,194257E+20	1,630302E+22	2,387975E+20	1,654182E+22
-656	8,151584E+21	8,151335E+21	1,193862E+20	1,193668E+20	1,630292E+22	2,387530E+20	1,654167E+22
-655	8,151180E+21	8,151605E+21	1,194278E+20	1,194086E+20	1,630279E+22	2,388364E+20	1,654162E+22
-654	8,151433E+21	8,150911E+21	1,193642E+20	1,194157E+20	1,630234E+22	2,387798E+20	1,654112E+22
-653	8,150880E+21	8,150926E+21	1,194210E+20	1,193742E+20	1,630181E+22	2,387953E+20	1,654060E+22
-652	8,150464E+21	8,150802E+21	1,194202E+20	1,194391E+20	1,630127E+22	2,388593E+20	1,654013E+22
-651	8,150538E+21	8,150061E+21	1,193835E+20	1,194139E+20	1,630060E+22	2,387974E+20	1,653940E+22
-650	8,149835E+21	8,150223E+21	1,194493E+20	1,193985E+20	1,630006E+22	2,388478E+20	1,653891E+22
-649	8,149868E+21	8,149773E+21	1,194075E+20	1,194544E+20	1,629964E+22	2,388619E+20	1,653850E+22

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 $\odot$ Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
-648	8,149966E+21	8,149467E+21	1,194127E+20	1,194021E+20	1,629943E+22	2,388148E+20	1,653825E+22
-647	8,149432E+21	8,149983E+21	1,194565E+20	1,194183E+20	1,629942E+22	2,388748E+20	1,653829E+22
-646	8,149842E+21	8,149544E+21	1,193928E+20	1,194520E+20	1,629939E+22	2,388448E+20	1,653823E+22
-645	8,149780E+21	8,149755E+21	1,194217E+20	1,193884E+20	1,629954E+22	2,388101E+20	1,653835E+22
-644	8,149735E+21	8,150225E+21	1,194351E+20	1,194364E+20	1,629996E+22	2,388715E+20	1,653883E+22
-643	8,150433E+21	8,149966E+21	1,193826E+20	1,194174E+20	1,630040E+22	2,388000E+20	1,653920E+22
-642	8,150277E+21	8,150589E+21	1,194323E+20	1,193736E+20	1,630087E+22	2,388059E+20	1,653967E+22
-641	8,150504E+21	8,150701E+21	1,194109E+20	1,194385E+20	1,630121E+22	2,388495E+20	1,654005E+22
-640	8,150948E+21	8,150531E+21	1,193813E+20	1,193888E+20	1,630148E+22	2,387701E+20	1,654025E+22
-639	8,150541E+21	8,151121E+21	1,194360E+20	1,193937E+20	1,630166E+22	2,388298E+20	1,654049E+22
-638	8,150926E+21	8,150703E+21	1,193792E+20	1,194393E+20	1,630163E+22	2,388185E+20	1,654045E+22
-637	8,150945E+21	8,150565E+21	1,193941E+20	1,193773E+20	1,630151E+22	2,387714E+20	1,654028E+22
-636	8,150425E+21	8,150877E+21	1,194411E+20	1,194185E+20	1,630130E+22	2,388596E+20	1,654016E+22
-635	8,150619E+21	8,150219E+21	1,193807E+20	1,194266E+20	1,630084E+22	2,388074E+20	1,653965E+22
-634	8,150022E+21	8,150171E+21	1,194342E+20	1,193879E+20	1,630019E+22	2,388220E+20	1,653901E+22
-633	8,149571E+21	8,149898E+21	1,194330E+20	1,194509E+20	1,629947E+22	2,388838E+20	1,653835E+22
-632	8,149778E+21	8,149162E+21	1,193966E+20	1,194274E+20	1,629894E+22	2,388239E+20	1,653776E+22
-631	8,149103E+21	8,149438E+21	1,194609E+20	1,194088E+20	1,629854E+22	2,388696E+20	1,653741E+22
-630	8,149177E+21	8,149037E+21	1,194179E+20	1,194670E+20	1,629821E+22	2,388848E+20	1,653710E+22
-629	8,149255E+21	8,148780E+21	1,194186E+20	1,194136E+20	1,629803E+22	2,388322E+20	1,653687E+22
-628	8,148683E+21	8,149333E+21	1,194648E+20	1,194287E+20	1,629802E+22	2,388936E+20	1,653691E+22
-627	8,149174E+21	8,148953E+21	1,194052E+20	1,194595E+20	1,629813E+22	2,388647E+20	1,653699E+22
-626	8,149168E+21	8,149169E+21	1,194326E+20	1,193945E+20	1,629834E+22	2,388271E+20	1,653716E+22
-625	8,149095E+21	8,149563E+21	1,194492E+20	1,194413E+20	1,629866E+22	2,388906E+20	1,653755E+22
-624	8,149843E+21	8,149332E+21	1,193952E+20	1,194278E+20	1,629918E+22	2,388230E+20	1,653800E+22
-623	8,149606E+21	8,149989E+21	1,194406E+20	1,193867E+20	1,629960E+22	2,388273E+20	1,653842E+22
-622	8,149864E+21	8,150022E+21	1,194165E+20	1,194548E+20	1,629989E+22	2,388713E+20	1,653876E+22
-621	8,150343E+21	8,149808E+21	1,193840E+20	1,194016E+20	1,630015E+22	2,387857E+20	1,653894E+22
-620	8,149903E+21	8,150431E+21	1,194458E+20	1,194025E+20	1,630033E+22	2,388483E+20	1,653918E+22
-619	8,150291E+21	8,150085E+21	1,193956E+20	1,194444E+20	1,630038E+22	2,388400E+20	1,653922E+22
-618	8,150203E+21	8,149927E+21	1,194095E+20	1,193856E+20	1,630013E+22	2,387951E+20	1,653893E+22
-617	8,149516E+21	8,150095E+21	1,194562E+20	1,194292E+20	1,629961E+22	2,388854E+20	1,653850E+22
-616	8,149762E+21	8,149350E+21	1,193931E+20	1,194435E+20	1,629911E+22	2,388366E+20	1,653795E+22
-615	8,149172E+21	8,149298E+21	1,194435E+20	1,194029E+20	1,629847E+22	2,388464E+20	1,653732E+22
-614	8,148847E+21	8,149016E+21	1,194418E+20	1,194650E+20	1,629786E+22	2,389068E+20	1,653677E+22
-613	8,149113E+21	8,148346E+21	1,194058E+20	1,194380E+20	1,629746E+22	2,388438E+20	1,653630E+22
-612	8,148366E+21	8,148748E+21	1,194735E+20	1,194180E+20	1,629711E+22	2,388915E+20	1,653601E+22
-611	8,148415E+21	8,148442E+21	1,194342E+20	1,194762E+20	1,629686E+22	2,389104E+20	1,653577E+22
-610	8,148471E+21	8,148149E+21	1,194304E+20	1,194242E+20	1,629662E+22	2,388546E+20	1,653547E+22
-609	8,147887E+21	8,148581E+21	1,194770E+20	1,194369E+20	1,629647E+22	2,389139E+20	1,653538E+22
-608	8,148516E+21	8,148212E+21	1,194174E+20	1,194690E+20	1,629673E+22	2,388864E+20	1,653561E+22
-607	8,148536E+21	8,148512E+21	1,194424E+20	1,194029E+20	1,629705E+22	2,388453E+20	1,653589E+22
-606	8,148514E+21	8,148915E+21	1,194571E+20	1,194538E+20	1,629743E+22	2,389109E+20	1,653634E+22
-605	8,149251E+21	8,148712E+21	1,193987E+20	1,194408E+20	1,629796E+22	2,388395E+20	1,653680E+22
-604	8,148989E+21	8,149392E+21	1,194461E+20	1,193993E+20	1,629838E+22	2,388455E+20	1,653723E+22
-603	8,149281E+21	8,149468E+21	1,194281E+20	1,194625E+20	1,629875E+22	2,388905E+20	1,653764E+22
-602	8,149748E+21	8,149228E+21	1,193955E+20	1,194084E+20	1,629898E+22	2,388038E+20	1,653778E+22
-601	8,149194E+21	8,149716E+21	1,194624E+20	1,194079E+20	1,629891E+22	2,388703E+20	1,653778E+22
-600	8,149522E+21	8,149353E+21	1,194115E+20	1,194551E+20	1,629887E+22	2,388666E+20	1,653774E+22

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 ° Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
-599	8,149331E+21	8,149163E+21	1,194213E+20	1,194015E+20	1,629849E+22	2,388228E+20	1,653732E+22
-598	8,148696E+21	8,149193E+21	1,194645E+20	1,194471E+20	1,629789E+22	2,389116E+20	1,653680E+22
-597	8,149009E+21	8,148448E+21	1,193995E+20	1,194583E+20	1,629746E+22	2,388578E+20	1,653631E+22
-596	8,148454E+21	8,148484E+21	1,194539E+20	1,194133E+20	1,629694E+22	2,388672E+20	1,653580E+22
-595	8,148154E+21	8,148343E+21	1,194586E+20	1,194711E+20	1,629650E+22	2,389298E+20	1,653543E+22
-594	8,148343E+21	8,147726E+21	1,194208E+20	1,194467E+20	1,629607E+22	2,388675E+20	1,653494E+22
-593	8,147472E+21	8,148015E+21	1,194882E+20	1,194281E+20	1,629549E+22	2,389163E+20	1,653440E+22
-592	8,147589E+21	8,147680E+21	1,194471E+20	1,194898E+20	1,629527E+22	2,389369E+20	1,653421E+22
-591	8,147687E+21	8,147400E+21	1,194393E+20	1,194378E+20	1,629509E+22	2,388770E+20	1,653396E+22
-590	8,147261E+21	8,147789E+21	1,194841E+20	1,194497E+20	1,629505E+22	2,389338E+20	1,653398E+22
-589	8,147969E+21	8,147506E+21	1,194234E+20	1,194799E+20	1,629547E+22	2,389033E+20	1,653438E+22
-588	8,147960E+21	8,147930E+21	1,194493E+20	1,194134E+20	1,629589E+22	2,388627E+20	1,653475E+22
-587	8,147946E+21	8,148417E+21	1,194683E+20	1,194635E+20	1,629636E+22	2,389318E+20	1,653529E+22
-586	8,148651E+21	8,148178E+21	1,194080E+20	1,194488E+20	1,629683E+22	2,388569E+20	1,653569E+22
-585	8,148318E+21	8,148731E+21	1,194589E+20	1,194054E+20	1,629705E+22	2,388643E+20	1,653591E+22
-584	8,148648E+21	8,148801E+21	1,194428E+20	1,194682E+20	1,629745E+22	2,389110E+20	1,653636E+22
-583	8,149019E+21	8,148566E+21	1,194087E+20	1,194174E+20	1,629759E+22	2,388262E+20	1,653641E+22
-582	8,148444E+21	8,148955E+21	1,194729E+20	1,194220E+20	1,629740E+22	2,388949E+20	1,653629E+22
-581	8,148738E+21	8,148552E+21	1,194178E+20	1,194709E+20	1,629729E+22	2,388887E+20	1,653618E+22
-580	8,148544E+21	8,148356E+21	1,194288E+20	1,194172E+20	1,629690E+22	2,388460E+20	1,653575E+22
-579	8,147985E+21	8,148438E+21	1,194766E+20	1,194577E+20	1,629642E+22	2,389343E+20	1,653536E+22
-578	8,148301E+21	8,147718E+21	1,194132E+20	1,194669E+20	1,629602E+22	2,388801E+20	1,653490E+22
-577	8,147654E+21	8,147700E+21	1,194716E+20	1,194219E+20	1,629535E+22	2,388935E+20	1,653425E+22
-576	8,147317E+21	8,147600E+21	1,194754E+20	1,194828E+20	1,629492E+22	2,389582E+20	1,653388E+22
-575	8,147431E+21	8,146973E+21	1,194334E+20	1,194638E+20	1,629440E+22	2,388973E+20	1,653330E+22
-574	8,146665E+21	8,147133E+21	1,194956E+20	1,194454E+20	1,629380E+22	2,389410E+20	1,653274E+22
-573	8,146884E+21	8,146835E+21	1,194522E+20	1,195026E+20	1,629372E+22	2,389549E+20	1,653267E+22
-572	8,147068E+21	8,146674E+21	1,194466E+20	1,194471E+20	1,629374E+22	2,388937E+20	1,653264E+22
-571	8,146713E+21	8,147213E+21	1,194966E+20	1,194553E+20	1,629393E+22	2,389519E+20	1,653288E+22
-570	8,147374E+21	8,147019E+21	1,194350E+20	1,194863E+20	1,629439E+22	2,389213E+20	1,653331E+22
-569	8,147283E+21	8,147343E+21	1,194609E+20	1,194213E+20	1,629463E+22	2,388822E+20	1,653351E+22
-568	8,147297E+21	8,147817E+21	1,194800E+20	1,194719E+20	1,629511E+22	2,389519E+20	1,653407E+22
-567	8,147984E+21	8,147576E+21	1,194176E+20	1,194587E+20	1,629556E+22	2,388763E+20	1,653444E+22
-566	8,147722E+21	8,148000E+21	1,194682E+20	1,194165E+20	1,629572E+22	2,388847E+20	1,653461E+22
-565	8,148013E+21	8,148094E+21	1,194510E+20	1,194784E+20	1,629611E+22	2,389293E+20	1,653504E+22
-564	8,148299E+21	8,147891E+21	1,194172E+20	1,194317E+20	1,629619E+22	2,388489E+20	1,653504E+22
-563	8,147722E+21	8,148262E+21	1,194838E+20	1,194361E+20	1,629598E+22	2,389199E+20	1,653490E+22
-562	8,148002E+21	8,147814E+21	1,194276E+20	1,194827E+20	1,629582E+22	2,389103E+20	1,653473E+22
-561	8,147768E+21	8,147512E+21	1,194425E+20	1,194270E+20	1,629528E+22	2,388695E+20	1,653415E+22
-560	8,147248E+21	8,147647E+21	1,194923E+20	1,194652E+20	1,629489E+22	2,389576E+20	1,653385E+22
-559	8,147473E+21	8,146986E+21	1,194290E+20	1,194791E+20	1,629446E+22	2,389081E+20	1,653337E+22
-558	8,146817E+21	8,146874E+21	1,194833E+20	1,194389E+20	1,629369E+22	2,389222E+20	1,653261E+22
-557	8,146479E+21	8,146769E+21	1,194825E+20	1,194987E+20	1,629325E+22	2,389812E+20	1,653223E+22
-556	8,146628E+21	8,146172E+21	1,194408E+20	1,194794E+20	1,629280E+22	2,389202E+20	1,653172E+22
-555	8,146003E+21	8,146396E+21	1,195059E+20	1,194546E+20	1,629240E+22	2,389605E+20	1,653136E+22
-554	8,146268E+21	8,146161E+21	1,194646E+20	1,195070E+20	1,629243E+22	2,389716E+20	1,653140E+22
-553	8,146383E+21	8,146011E+21	1,194622E+20	1,194521E+20	1,629239E+22	2,389143E+20	1,653131E+22
-552	8,146037E+21	8,146634E+21	1,195103E+20	1,194635E+20	1,629267E+22	2,389738E+20	1,653165E+22
-551	8,146638E+21	8,146440E+21	1,194467E+20	1,194995E+20	1,629308E+22	2,389462E+20	1,653202E+22

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 ° Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
-550	8,146644E+21	8,146627E+21	1,194672E+20	1,194355E+20	1,629327E+22	2,389027E+20	1,653217E+22
-549	8,146717E+21	8,147115E+21	1,194848E+20	1,194811E+20	1,629383E+22	2,389660E+20	1,653280E+22
-548	8,147397E+21	8,146937E+21	1,194245E+20	1,194673E+20	1,629433E+22	2,388917E+20	1,653323E+22
-547	8,147142E+21	8,147408E+21	1,194791E+20	1,194252E+20	1,629455E+22	2,389043E+20	1,653345E+22
-546	8,147325E+21	8,147500E+21	1,194610E+20	1,194872E+20	1,629482E+22	2,389483E+20	1,653377E+22
-545	8,147509E+21	8,147163E+21	1,194296E+20	1,194442E+20	1,629467E+22	2,388738E+20	1,653355E+22
-544	8,146978E+21	8,147505E+21	1,194954E+20	1,194475E+20	1,629448E+22	2,389429E+20	1,653343E+22
-543	8,147239E+21	8,147054E+21	1,194405E+20	1,194953E+20	1,629429E+22	2,389359E+20	1,653323E+22
-542	8,147070E+21	8,146645E+21	1,194546E+20	1,194408E+20	1,629371E+22	2,388954E+20	1,653261E+22
-541	8,146501E+21	8,146842E+21	1,195021E+20	1,194770E+20	1,629334E+22	2,389791E+20	1,653232E+22
-540	8,146641E+21	8,146238E+21	1,194396E+20	1,194954E+20	1,629288E+22	2,389350E+20	1,653181E+22
-539	8,146017E+21	8,146102E+21	1,194957E+20	1,194537E+20	1,629212E+22	2,389494E+20	1,653107E+22
-538	8,145683E+21	8,145998E+21	1,194936E+20	1,195072E+20	1,629168E+22	2,390007E+20	1,653068E+22
-537	8,145837E+21	8,145349E+21	1,194559E+20	1,194867E+20	1,629119E+22	2,389426E+20	1,653013E+22
-536	8,145288E+21	8,145660E+21	1,195206E+20	1,194590E+20	1,629095E+22	2,389795E+20	1,652993E+22
-535	8,145520E+21	8,145533E+21	1,194795E+20	1,195171E+20	1,629105E+22	2,389965E+20	1,653005E+22
-534	8,145689E+21	8,145309E+21	1,194708E+20	1,194667E+20	1,629100E+22	2,389375E+20	1,652994E+22
-533	8,145388E+21	8,145958E+21	1,195138E+20	1,194770E+20	1,629135E+22	2,389908E+20	1,653034E+22
-532	8,146025E+21	8,145819E+21	1,194510E+20	1,195125E+20	1,629184E+22	2,389636E+20	1,653081E+22
-531	8,146136E+21	8,146027E+21	1,194742E+20	1,194450E+20	1,629216E+22	2,389192E+20	1,653108E+22
-530	8,146183E+21	8,146544E+21	1,194945E+20	1,194845E+20	1,629273E+22	2,389791E+20	1,653171E+22
-529	8,146720E+21	8,146317E+21	1,194383E+20	1,194744E+20	1,629304E+22	2,389127E+20	1,653195E+22
-528	8,146426E+21	8,146779E+21	1,194920E+20	1,194353E+20	1,629321E+22	2,389273E+20	1,653213E+22
-527	8,146541E+21	8,146810E+21	1,194739E+20	1,195018E+20	1,629335E+22	2,389757E+20	1,653233E+22
-526	8,146797E+21	8,146310E+21	1,194387E+20	1,194597E+20	1,629311E+22	2,388984E+20	1,653201E+22
-525	8,146317E+21	8,146675E+21	1,195022E+20	1,194584E+20	1,629299E+22	2,389606E+20	1,653195E+22
-524	8,146533E+21	8,146308E+21	1,194516E+20	1,195056E+20	1,629284E+22	2,389571E+20	1,653180E+22
-523	8,146353E+21	8,145949E+21	1,194683E+20	1,194531E+20	1,629230E+22	2,389214E+20	1,653122E+22
-522	8,145678E+21	8,146134E+21	1,195145E+20	1,194854E+20	1,629181E+22	2,389999E+20	1,653081E+22
-521	8,145709E+21	8,145423E+21	1,194555E+20	1,195075E+20	1,629113E+22	2,389630E+20	1,653010E+22
-520	8,145161E+21	8,145289E+21	1,195096E+20	1,194638E+20	1,629045E+22	2,389734E+20	1,652942E+22
-519	8,144851E+21	8,145194E+21	1,195084E+20	1,195181E+20	1,629005E+22	2,390265E+20	1,652907E+22
-518	8,145110E+21	8,144488E+21	1,194680E+20	1,194998E+20	1,628960E+22	2,389678E+20	1,652857E+22
-517	8,144605E+21	8,144908E+21	1,195264E+20	1,194717E+20	1,628951E+22	2,389981E+20	1,652851E+22
-516	8,144822E+21	8,144882E+21	1,194865E+20	1,195332E+20	1,628970E+22	2,390197E+20	1,652872E+22
-515	8,145096E+21	8,144682E+21	1,194773E+20	1,194813E+20	1,628978E+22	2,389586E+20	1,652874E+22
-514	8,144825E+21	8,145354E+21	1,195202E+20	1,194819E+20	1,629018E+22	2,390020E+20	1,652918E+22
-513	8,145412E+21	8,145199E+21	1,194639E+20	1,195160E+20	1,629061E+22	2,389800E+20	1,652959E+22
-512	8,145527E+21	8,145463E+21	1,194879E+20	1,194479E+20	1,629099E+22	2,389358E+20	1,652993E+22
-511	8,145465E+21	8,145994E+21	1,195096E+20	1,194937E+20	1,629146E+22	2,390034E+20	1,653046E+22
-510	8,146002E+21	8,145605E+21	1,194482E+20	1,194896E+20	1,629161E+22	2,389377E+20	1,653054E+22
-509	8,145746E+21	8,146026E+21	1,194959E+20	1,194502E+20	1,629177E+22	2,389461E+20	1,653072E+22
-508	8,145885E+21	8,146083E+21	1,194804E+20	1,195156E+20	1,629197E+22	2,389960E+20	1,653096E+22
-507	8,146223E+21	8,145584E+21	1,194488E+20	1,194710E+20	1,629181E+22	2,389197E+20	1,653073E+22
-506	8,145669E+21	8,145989E+21	1,195144E+20	1,194626E+20	1,629166E+22	2,389770E+20	1,653063E+22
-505	8,145701E+21	8,145599E+21	1,194690E+20	1,195149E+20	1,629130E+22	2,389838E+20	1,653028E+22
-504	8,145449E+21	8,145213E+21	1,194849E+20	1,194661E+20	1,629066E+22	2,389510E+20	1,652961E+22
-503	8,144729E+21	8,145324E+21	1,195298E+20	1,195011E+20	1,629005E+22	2,390309E+20	1,652908E+22
-502	8,144856E+21	8,144454E+21	1,194669E+20	1,195236E+20	1,628931E+22	2,389905E+20	1,652830E+22

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 ° Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
-501	8,144414E+21	8,144363E+21	1,195159E+20	1,194756E+20	1,628878E+22	2,389915E+20	1,652777E+22
-500	8,144134E+21	8,144405E+21	1,195176E+20	1,195299E+20	1,628854E+22	2,390475E+20	1,652759E+22
-499	8,144454E+21	8,143810E+21	1,194778E+20	1,195138E+20	1,628826E+22	2,389916E+20	1,652726E+22
-498	8,143943E+21	8,144294E+21	1,195334E+20	1,194799E+20	1,628824E+22	2,390133E+20	1,652725E+22
-497	8,144110E+21	8,144252E+21	1,194992E+20	1,195429E+20	1,628836E+22	2,390421E+20	1,652740E+22
-496	8,144447E+21	8,144100E+21	1,194894E+20	1,194872E+20	1,628855E+22	2,389766E+20	1,652752E+22
-495	8,144176E+21	8,144764E+21	1,195347E+20	1,194879E+20	1,628894E+22	2,390227E+20	1,652796E+22
-494	8,144770E+21	8,144510E+21	1,194762E+20	1,195246E+20	1,628928E+22	2,390008E+20	1,652828E+22
-493	8,144876E+21	8,144798E+21	1,194939E+20	1,194601E+20	1,628967E+22	2,389539E+20	1,652863E+22
-492	8,144768E+21	8,145332E+21	1,195175E+20	1,195095E+20	1,629010E+22	2,390270E+20	1,652913E+22
-491	8,145392E+21	8,144918E+21	1,194557E+20	1,195056E+20	1,629031E+22	2,389613E+20	1,652927E+22
-490	8,145170E+21	8,145329E+21	1,195022E+20	1,194566E+20	1,629050E+22	2,389588E+20	1,652946E+22
-489	8,145206E+21	8,145376E+21	1,194951E+20	1,195209E+20	1,629058E+22	2,390160E+20	1,652960E+22
-488	8,145494E+21	8,144946E+21	1,194649E+20	1,194773E+20	1,629044E+22	2,389422E+20	1,652938E+22
-487	8,144809E+21	8,145316E+21	1,195318E+20	1,194748E+20	1,629013E+22	2,390066E+20	1,652913E+22
-486	8,144795E+21	8,144745E+21	1,194820E+20	1,195317E+20	1,628954E+22	2,390137E+20	1,652855E+22
-485	8,144595E+21	8,144309E+21	1,194916E+20	1,194843E+20	1,628890E+22	2,389759E+20	1,652788E+22
-484	8,143921E+21	8,144434E+21	1,195378E+20	1,195167E+20	1,628836E+22	2,390544E+20	1,652741E+22
-483	8,144183E+21	8,143605E+21	1,194772E+20	1,195376E+20	1,628779E+22	2,390148E+20	1,652680E+22
-482	8,143754E+21	8,143609E+21	1,195248E+20	1,194814E+20	1,628736E+22	2,390062E+20	1,652637E+22
-481	8,143363E+21	8,143723E+21	1,195328E+20	1,195395E+20	1,628709E+22	2,390723E+20	1,652616E+22
-480	8,143679E+21	8,143200E+21	1,194931E+20	1,195240E+20	1,628688E+22	2,390171E+20	1,652590E+22
-479	8,143181E+21	8,143661E+21	1,195477E+20	1,194912E+20	1,628684E+22	2,390389E+20	1,652588E+22
-478	8,143421E+21	8,143504E+21	1,195112E+20	1,195524E+20	1,628693E+22	2,390637E+20	1,652599E+22
-477	8,143822E+21	8,143393E+21	1,194959E+20	1,194953E+20	1,628722E+22	2,389912E+20	1,652621E+22
-476	8,143540E+21	8,144133E+21	1,195433E+20	1,194981E+20	1,628767E+22	2,390414E+20	1,652671E+22
-475	8,144167E+21	8,143900E+21	1,194840E+20	1,195384E+20	1,628807E+22	2,390224E+20	1,652709E+22
-474	8,144263E+21	8,144180E+21	1,194983E+20	1,194690E+20	1,628844E+22	2,389673E+20	1,652741E+22
-473	8,144114E+21	8,144685E+21	1,195280E+20	1,195203E+20	1,628880E+22	2,390484E+20	1,652785E+22
-472	8,144762E+21	8,144306E+21	1,194684E+20	1,195127E+20	1,628907E+22	2,389811E+20	1,652805E+22
-471	8,144514E+21	8,144690E+21	1,195178E+20	1,194652E+20	1,628920E+22	2,389830E+20	1,652819E+22
-470	8,144481E+21	8,144622E+21	1,195094E+20	1,195310E+20	1,628910E+22	2,390404E+20	1,652814E+22
-469	8,144695E+21	8,144178E+21	1,194734E+20	1,194936E+20	1,628887E+22	2,389670E+20	1,652784E+22
-468	8,143953E+21	8,144497E+21	1,195417E+20	1,194936E+20	1,628845E+22	2,390352E+20	1,652749E+22
-467	8,144017E+21	8,143875E+21	1,194912E+20	1,195492E+20	1,628789E+22	2,390404E+20	1,652693E+22
-466	8,143869E+21	8,143447E+21	1,194998E+20	1,194920E+20	1,628732E+22	2,389919E+20	1,652631E+22
-465	8,143147E+21	8,143612E+21	1,195533E+20	1,195233E+20	1,628676E+22	2,390766E+20	1,652584E+22
-464	8,143388E+21	8,142923E+21	1,194954E+20	1,195443E+20	1,628631E+22	2,390397E+20	1,652535E+22
-463	8,142918E+21	8,142948E+21	1,195415E+20	1,194934E+20	1,628587E+22	2,390349E+20	1,652490E+22
-462	8,142532E+21	8,142949E+21	1,195459E+20	1,195534E+20	1,628548E+22	2,390993E+20	1,652458E+22
-461	8,142938E+21	8,142447E+21	1,194995E+20	1,195391E+20	1,628538E+22	2,390386E+20	1,652442E+22
-460	8,142501E+21	8,142928E+21	1,195553E+20	1,195031E+20	1,628543E+22	2,390585E+20	1,652449E+22
-459	8,142844E+21	8,142815E+21	1,195202E+20	1,195628E+20	1,628566E+22	2,390830E+20	1,652474E+22
-458	8,143247E+21	8,142770E+21	1,195016E+20	1,195006E+20	1,628602E+22	2,390022E+20	1,652502E+22
-457	8,142855E+21	8,143523E+21	1,195545E+20	1,195088E+20	1,628638E+22	2,390634E+20	1,652544E+22
-456	8,143487E+21	8,143343E+21	1,194964E+20	1,195490E+20	1,628683E+22	2,390454E+20	1,652588E+22
-455	8,143629E+21	8,143563E+21	1,195101E+20	1,194802E+20	1,628719E+22	2,389903E+20	1,652618E+22
-454	8,143499E+21	8,143948E+21	1,195393E+20	1,195285E+20	1,628745E+22	2,390678E+20	1,652652E+22
-453	8,144148E+21	8,143608E+21	1,194764E+20	1,195215E+20	1,628776E+22	2,389979E+20	1,652675E+22

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 $\odot$ Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
-452	8,143806E+21	8,144013E+21	1,195285E+20	1,194779E+20	1,628782E+22	2,390063E+20	1,652682E+22
-451	8,143745E+21	8,143914E+21	1,195194E+20	1,195462E+20	1,628766E+22	2,390656E+20	1,652672E+22
-450	8,143926E+21	8,143414E+21	1,194805E+20	1,195057E+20	1,628734E+22	2,389862E+20	1,652633E+22
-449	8,143135E+21	8,143679E+21	1,195547E+20	1,195061E+20	1,628681E+22	2,390607E+20	1,652587E+22
-448	8,143222E+21	8,143106E+21	1,195072E+20	1,195571E+20	1,628633E+22	2,390643E+20	1,652539E+22
-447	8,143086E+21	8,142668E+21	1,195177E+20	1,195017E+20	1,628575E+22	2,390194E+20	1,652477E+22
-446	8,142324E+21	8,142772E+21	1,195681E+20	1,195345E+20	1,628510E+22	2,391026E+20	1,652420E+22
-445	8,142545E+21	8,142134E+21	1,195059E+20	1,195613E+20	1,628468E+22	2,390671E+20	1,652375E+22
-444	8,142098E+21	8,142163E+21	1,195508E+20	1,195123E+20	1,628426E+22	2,390631E+20	1,652332E+22
-443	8,141852E+21	8,142157E+21	1,195537E+20	1,195683E+20	1,628401E+22	2,391220E+20	1,652313E+22
-442	8,142313E+21	8,141712E+21	1,195054E+20	1,195444E+20	1,628403E+22	2,390497E+20	1,652308E+22
-441	8,141847E+21	8,142260E+21	1,195668E+20	1,195088E+20	1,628411E+22	2,390756E+20	1,652318E+22
-440	8,142155E+21	8,142276E+21	1,195346E+20	1,195675E+20	1,628443E+22	2,391021E+20	1,652353E+22
-439	8,142545E+21	8,142218E+21	1,195146E+20	1,195113E+20	1,628476E+22	2,390259E+20	1,652379E+22
-438	8,142179E+21	8,142834E+21	1,195644E+20	1,195210E+20	1,628501E+22	2,390854E+20	1,652410E+22
-437	8,142879E+21	8,142667E+21	1,195027E+20	1,195617E+20	1,628555E+22	2,390643E+20	1,652461E+22
-436	8,143056E+21	8,142888E+21	1,195178E+20	1,194917E+20	1,628594E+22	2,390096E+20	1,652495E+22
-435	8,142965E+21	8,143276E+21	1,195482E+20	1,195378E+20	1,628624E+22	2,390860E+20	1,652533E+22
-434	8,143514E+21	8,142975E+21	1,194836E+20	1,195281E+20	1,628649E+22	2,390117E+20	1,652550E+22
-433	8,143012E+21	8,143331E+21	1,195420E+20	1,194914E+20	1,628634E+22	2,390334E+20	1,652538E+22
-432	8,142898E+21	8,143227E+21	1,195349E+20	1,195572E+20	1,628612E+22	2,390921E+20	1,652522E+22
-431	8,143110E+21	8,142628E+21	1,194963E+20	1,195190E+20	1,628574E+22	2,390152E+20	1,652475E+22
-430	8,142331E+21	8,142752E+21	1,195685E+20	1,195160E+20	1,628508E+22	2,390845E+20	1,652417E+22
-429	8,142440E+21	8,142244E+21	1,195184E+20	1,195690E+20	1,628468E+22	2,390874E+20	1,652377E+22
-428	8,142265E+21	8,141850E+21	1,195291E+20	1,195175E+20	1,628412E+22	2,390466E+20	1,652316E+22
-427	8,141543E+21	8,141973E+21	1,195764E+20	1,195512E+20	1,628352E+22	2,391277E+20	1,652264E+22
-426	8,141797E+21	8,141372E+21	1,195121E+20	1,195738E+20	1,628317E+22	2,390859E+20	1,652226E+22
-425	8,141346E+21	8,141415E+21	1,195619E+20	1,195242E+20	1,628276E+22	2,390861E+20	1,652185E+22
-424	8,141143E+21	8,141516E+21	1,195687E+20	1,195721E+20	1,628266E+22	2,391408E+20	1,652180E+22
-423	8,141635E+21	8,141080E+21	1,195213E+20	1,195507E+20	1,628272E+22	2,390720E+20	1,652179E+22
-422	8,141123E+21	8,141552E+21	1,195789E+20	1,195172E+20	1,628267E+22	2,390961E+20	1,652177E+22
-421	8,141440E+21	8,141608E+21	1,195431E+20	1,195816E+20	1,628305E+22	2,391247E+20	1,652217E+22
-420	8,141879E+21	8,141537E+21	1,195218E+20	1,195273E+20	1,628342E+22	2,390491E+20	1,652247E+22
-419	8,141660E+21	8,142143E+21	1,195695E+20	1,195335E+20	1,628380E+22	2,391030E+20	1,652291E+22
-418	8,142380E+21	8,142037E+21	1,195082E+20	1,195655E+20	1,628442E+22	2,390737E+20	1,652349E+22
-417	8,142459E+21	8,142297E+21	1,195293E+20	1,194989E+20	1,628476E+22	2,390282E+20	1,652378E+22
-416	8,142251E+21	8,142756E+21	1,195633E+20	1,195428E+20	1,628501E+22	2,391060E+20	1,652411E+22
-415	8,142724E+21	8,142358E+21	1,194981E+20	1,195405E+20	1,628508E+22	2,390386E+20	1,652412E+22
-414	8,142192E+21	8,142507E+21	1,195540E+20	1,195060E+20	1,628470E+22	2,390601E+20	1,652376E+22
-413	8,142110E+21	8,142370E+21	1,195445E+20	1,195712E+20	1,628448E+22	2,391157E+20	1,652360E+22
-412	8,142350E+21	8,141757E+21	1,195078E+20	1,195339E+20	1,628411E+22	2,390417E+20	1,652315E+22
-411	8,141650E+21	8,141881E+21	1,195770E+20	1,195291E+20	1,628353E+22	2,391061E+20	1,652264E+22
-410	8,141683E+21	8,141457E+21	1,195266E+20	1,195796E+20	1,628314E+22	2,391061E+20	1,652225E+22
-409	8,141426E+21	8,141092E+21	1,195418E+20	1,195339E+20	1,628252E+22	2,390757E+20	1,652159E+22
-408	8,140716E+21	8,141271E+21	1,195914E+20	1,195602E+20	1,628199E+22	2,391515E+20	1,652114E+22
-407	8,141024E+21	8,140648E+21	1,195286E+20	1,195830E+20	1,628167E+22	2,391116E+20	1,652078E+22
-406	8,140579E+21	8,140603E+21	1,195764E+20	1,195305E+20	1,628118E+22	2,391069E+20	1,652029E+22
-405	8,140384E+21	8,140780E+21	1,195805E+20	1,195800E+20	1,628116E+22	2,391605E+20	1,652032E+22
-404	8,140863E+21	8,140387E+21	1,195318E+20	1,195648E+20	1,628125E+22	2,390966E+20	1,652035E+22

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 ° Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
-403	8,140470E+21	8,140838E+21	1,195833E+20	1,195327E+20	1,628131E+22	2,391160E+20	1,652042E+22
-402	8,140860E+21	8,140950E+21	1,195467E+20	1,195924E+20	1,628181E+22	2,391391E+20	1,652095E+22
-401	8,141316E+21	8,140924E+21	1,195298E+20	1,195381E+20	1,628224E+22	2,390679E+20	1,652131E+22
-400	8,141115E+21	8,141623E+21	1,195823E+20	1,195359E+20	1,628274E+22	2,391182E+20	1,652186E+22
-399	8,141787E+21	8,141511E+21	1,195231E+20	1,195708E+20	1,628330E+22	2,390939E+20	1,652239E+22
-398	8,141717E+21	8,141632E+21	1,195421E+20	1,195095E+20	1,628335E+22	2,390515E+20	1,652240E+22
-397	8,141457E+21	8,142044E+21	1,195736E+20	1,195576E+20	1,628350E+22	2,391311E+20	1,652263E+22
-396	8,141937E+21	8,141550E+21	1,195083E+20	1,195581E+20	1,628349E+22	2,390664E+20	1,652255E+22
-395	8,141524E+21	8,141621E+21	1,195606E+20	1,195201E+20	1,628315E+22	2,390807E+20	1,652223E+22
-394	8,141457E+21	8,141546E+21	1,195517E+20	1,195779E+20	1,628300E+22	2,391296E+20	1,652213E+22
-393	8,141602E+21	8,141000E+21	1,195210E+20	1,195448E+20	1,628260E+22	2,390658E+20	1,652167E+22
-392	8,140831E+21	8,141229E+21	1,195922E+20	1,195367E+20	1,628206E+22	2,391289E+20	1,652119E+22
-391	8,140840E+21	8,140764E+21	1,195433E+20	1,195920E+20	1,628160E+22	2,391353E+20	1,652074E+22
-390	8,140551E+21	8,140259E+21	1,195564E+20	1,195476E+20	1,628081E+22	2,391040E+20	1,651991E+22
-389	8,139897E+21	8,140449E+21	1,196032E+20	1,195710E+20	1,628035E+22	2,391742E+20	1,651952E+22
-388	8,140240E+21	8,139829E+21	1,195420E+20	1,195955E+20	1,628007E+22	2,391375E+20	1,651921E+22
-387	8,139890E+21	8,139793E+21	1,195839E+20	1,195427E+20	1,627968E+22	2,391266E+20	1,651881E+22
-386	8,139679E+21	8,140062E+21	1,195863E+20	1,195909E+20	1,627974E+22	2,391772E+20	1,651892E+22
-385	8,140151E+21	8,139723E+21	1,195407E+20	1,195811E+20	1,627987E+22	2,391219E+20	1,651900E+22
-384	8,139857E+21	8,140255E+21	1,195929E+20	1,195410E+20	1,628011E+22	2,391339E+20	1,651925E+22
-383	8,140317E+21	8,140382E+21	1,195598E+20	1,195987E+20	1,628070E+22	2,391586E+20	1,651986E+22
-382	8,140729E+21	8,140291E+21	1,195418E+20	1,195430E+20	1,628102E+22	2,390848E+20	1,652010E+22
-381	8,140468E+21	8,141021E+21	1,195936E+20	1,195418E+20	1,628149E+22	2,391355E+20	1,652062E+22
-380	8,141033E+21	8,140886E+21	1,195346E+20	1,195834E+20	1,628192E+22	2,391180E+20	1,652104E+22
-379	8,141025E+21	8,140888E+21	1,195475E+20	1,195259E+20	1,628191E+22	2,390735E+20	1,652099E+22
-378	8,140772E+21	8,141276E+21	1,195790E+20	1,195691E+20	1,628205E+22	2,391482E+20	1,652120E+22
-377	8,141244E+21	8,140797E+21	1,195189E+20	1,195712E+20	1,628204E+22	2,390900E+20	1,652113E+22
-376	8,140860E+21	8,140925E+21	1,195746E+20	1,195249E+20	1,628179E+22	2,390995E+20	1,652088E+22
-375	8,140730E+21	8,140862E+21	1,195685E+20	1,195850E+20	1,628159E+22	2,391535E+20	1,652075E+22
-374	8,140718E+21	8,140221E+21	1,195368E+20	1,195580E+20	1,628094E+22	2,390948E+20	1,652003E+22
-373	8,139921E+21	8,140415E+21	1,196055E+20	1,195521E+20	1,628034E+22	2,391576E+20	1,651949E+22
-372	8,139950E+21	8,139904E+21	1,195575E+20	1,196094E+20	1,627985E+22	2,391669E+20	1,651902E+22
-371	8,139796E+21	8,139343E+21	1,195651E+20	1,195626E+20	1,627914E+22	2,391277E+20	1,651827E+22
-370	8,139172E+21	8,139611E+21	1,196108E+20	1,195789E+20	1,627878E+22	2,391896E+20	1,651797E+22
-369	8,139466E+21	8,139091E+21	1,195533E+20	1,196081E+20	1,627856E+22	2,391614E+20	1,651772E+22
-368	8,139142E+21	8,139163E+21	1,195944E+20	1,195514E+20	1,627830E+22	2,391457E+20	1,651745E+22
-367	8,139003E+21	8,139442E+21	1,195987E+20	1,196019E+20	1,627845E+22	2,392006E+20	1,651765E+22
-366	8,139471E+21	8,139045E+21	1,195526E+20	1,195915E+20	1,627852E+22	2,391441E+20	1,651766E+22
-365	8,139261E+21	8,139624E+21	1,196031E+20	1,195481E+20	1,627889E+22	2,391512E+20	1,651804E+22
-364	8,139723E+21	8,139761E+21	1,195732E+20	1,196068E+20	1,627948E+22	2,391800E+20	1,651866E+22
-363	8,140135E+21	8,139639E+21	1,195486E+20	1,195533E+20	1,627977E+22	2,391019E+20	1,651888E+22
-362	8,139799E+21	8,140387E+21	1,195991E+20	1,195526E+20	1,628019E+22	2,391516E+20	1,651934E+22
-361	8,140300E+21	8,140222E+21	1,195436E+20	1,195989E+20	1,628052E+22	2,391424E+20	1,651966E+22
-360	8,140358E+21	8,140231E+21	1,195583E+20	1,195347E+20	1,628059E+22	2,390930E+20	1,651968E+22
-359	8,140150E+21	8,140586E+21	1,195938E+20	1,195755E+20	1,628074E+22	2,391693E+20	1,651991E+22
-358	8,140509E+21	8,140039E+21	1,195344E+20	1,195787E+20	1,628055E+22	2,391131E+20	1,651966E+22
-357	8,140067E+21	8,140191E+21	1,195878E+20	1,195350E+20	1,628026E+22	2,391228E+20	1,651938E+22
-356	8,139850E+21	8,140092E+21	1,195824E+20	1,196014E+20	1,627994E+22	2,391838E+20	1,651913E+22
-355	8,139900E+21	8,139354E+21	1,195447E+20	1,195781E+20	1,627925E+22	2,391227E+20	1,651838E+22

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 ° Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
-354	8,139134E+21	8,139550E+21	1,196123E+20	1,195664E+20	1,627868E+22	2,391788E+20	1,651786E+22
-353	8,139164E+21	8,139080E+21	1,195694E+20	1,196232E+20	1,627824E+22	2,391926E+20	1,651744E+22
-352	8,139068E+21	8,138601E+21	1,195791E+20	1,195695E+20	1,627767E+22	2,391486E+20	1,651682E+22
-351	8,138426E+21	8,138905E+21	1,196258E+20	1,195864E+20	1,627733E+22	2,392122E+20	1,651654E+22
-350	8,138620E+21	8,138349E+21	1,195677E+20	1,196209E+20	1,627697E+22	2,391887E+20	1,651616E+22
-349	8,138379E+21	8,138427E+21	1,196050E+20	1,195634E+20	1,627681E+22	2,391684E+20	1,651597E+22
-348	8,138311E+21	8,138728E+21	1,196116E+20	1,196143E+20	1,627704E+22	2,392259E+20	1,651626E+22
-347	8,138912E+21	8,138336E+21	1,195599E+20	1,196011E+20	1,627725E+22	2,391610E+20	1,651641E+22
-346	8,138696E+21	8,138990E+21	1,196095E+20	1,195532E+20	1,627769E+22	2,391626E+20	1,651685E+22
-345	8,139052E+21	8,139204E+21	1,195833E+20	1,196164E+20	1,627826E+22	2,391996E+20	1,651746E+22
-344	8,139456E+21	8,139104E+21	1,195580E+20	1,195619E+20	1,627856E+22	2,391199E+20	1,651768E+22
-343	8,139140E+21	8,139774E+21	1,196105E+20	1,195630E+20	1,627891E+22	2,391736E+20	1,651809E+22
-342	8,139573E+21	8,139510E+21	1,195557E+20	1,196101E+20	1,627908E+22	2,391658E+20	1,651825E+22
-341	8,139692E+21	8,139493E+21	1,195696E+20	1,195440E+20	1,627918E+22	2,391136E+20	1,651830E+22
-340	8,139459E+21	8,139837E+21	1,196081E+20	1,195869E+20	1,627930E+22	2,391950E+20	1,651849E+22
-339	8,139791E+21	8,139253E+21	1,195430E+20	1,195940E+20	1,627904E+22	2,391370E+20	1,651818E+22
-338	8,139283E+21	8,139402E+21	1,195947E+20	1,195516E+20	1,627869E+22	2,391463E+20	1,651783E+22
-337	8,139018E+21	8,139294E+21	1,195929E+20	1,196193E+20	1,627831E+22	2,392121E+20	1,651752E+22
-336	8,139136E+21	8,138582E+21	1,195574E+20	1,195894E+20	1,627772E+22	2,391468E+20	1,651686E+22
-335	8,138415E+21	8,138768E+21	1,196279E+20	1,195730E+20	1,627718E+22	2,392010E+20	1,651638E+22
-334	8,138306E+21	8,138271E+21	1,195869E+20	1,196298E+20	1,627658E+22	2,392167E+20	1,651579E+22
-333	8,138196E+21	8,137836E+21	1,195936E+20	1,195788E+20	1,627603E+22	2,391724E+20	1,651520E+22
-332	8,137570E+21	8,138129E+21	1,196395E+20	1,196012E+20	1,627570E+22	2,392408E+20	1,651494E+22
-331	8,137880E+21	8,137541E+21	1,195757E+20	1,196377E+20	1,627542E+22	2,392133E+20	1,651463E+22
-330	8,137749E+21	8,137694E+21	1,196094E+20	1,195754E+20	1,627544E+22	2,391848E+20	1,651463E+22
-329	8,137720E+21	8,138080E+21	1,196208E+20	1,196242E+20	1,627580E+22	2,392450E+20	1,651504E+22
-328	8,138352E+21	8,137798E+21	1,195706E+20	1,196055E+20	1,627615E+22	2,391760E+20	1,651533E+22
-327	8,138087E+21	8,138458E+21	1,196209E+20	1,195596E+20	1,627655E+22	2,391806E+20	1,651573E+22
-326	8,138269E+21	8,138583E+21	1,195957E+20	1,196274E+20	1,627685E+22	2,392230E+20	1,651608E+22
-325	8,138732E+21	8,138423E+21	1,195678E+20	1,195742E+20	1,627715E+22	2,391420E+20	1,651630E+22
-324	8,138481E+21	8,139031E+21	1,196225E+20	1,195766E+20	1,627751E+22	2,391991E+20	1,651671E+22
-323	8,138990E+21	8,138729E+21	1,195638E+20	1,196217E+20	1,627772E+22	2,391854E+20	1,651690E+22
-322	8,139080E+21	8,138762E+21	1,195758E+20	1,195539E+20	1,627784E+22	2,391297E+20	1,651697E+22
-321	8,138728E+21	8,139161E+21	1,196173E+20	1,196000E+20	1,627789E+22	2,392173E+20	1,651711E+22
-320	8,139041E+21	8,138596E+21	1,195540E+20	1,196061E+20	1,627764E+22	2,391601E+20	1,651680E+22
-319	8,138530E+21	8,138675E+21	1,196089E+20	1,195633E+20	1,627720E+22	2,391722E+20	1,651638E+22
-318	8,138150E+21	8,138492E+21	1,196095E+20	1,196288E+20	1,627664E+22	2,392383E+20	1,651588E+22
-317	8,138314E+21	8,137747E+21	1,195743E+20	1,195979E+20	1,627606E+22	2,391722E+20	1,651523E+22
-316	8,137562E+21	8,137912E+21	1,196454E+20	1,195841E+20	1,627547E+22	2,392295E+20	1,651470E+22
-315	8,137450E+21	8,137401E+21	1,195971E+20	1,196453E+20	1,627485E+22	2,392424E+20	1,651409E+22
-314	8,137368E+21	8,136988E+21	1,195996E+20	1,195960E+20	1,627436E+22	2,391957E+20	1,651355E+22
-313	8,136811E+21	8,137344E+21	1,196468E+20	1,196180E+20	1,627415E+22	2,392648E+20	1,651342E+22
-312	8,137267E+21	8,136870E+21	1,195861E+20	1,196470E+20	1,627414E+22	2,392331E+20	1,651337E+22
-311	8,137198E+21	8,137077E+21	1,196210E+20	1,195798E+20	1,627428E+22	2,392008E+20	1,651348E+22
-310	8,137015E+21	8,137483E+21	1,196349E+20	1,196283E+20	1,627450E+22	2,392633E+20	1,651376E+22
-309	8,137616E+21	8,137216E+21	1,195818E+20	1,196131E+20	1,627483E+22	2,391948E+20	1,651403E+22
-308	8,137354E+21	8,137803E+21	1,196320E+20	1,195739E+20	1,627516E+22	2,392060E+20	1,651436E+22
-307	8,137608E+21	8,137848E+21	1,196017E+20	1,196423E+20	1,627546E+22	2,392440E+20	1,651470E+22
-306	8,138156E+21	8,137700E+21	1,195719E+20	1,195868E+20	1,627586E+22	2,391587E+20	1,651502E+22

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 $\odot$ Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
-305	8,137932E+21	8,138348E+21	1,196303E+20	1,195875E+20	1,627628E+22	2,392178E+20	1,651550E+22
-304	8,138429E+21	8,138134E+21	1,195751E+20	1,196283E+20	1,627656E+22	2,392035E+20	1,651577E+22
-303	8,138434E+21	8,138159E+21	1,195880E+20	1,195631E+20	1,627659E+22	2,391511E+20	1,651574E+22
-302	8,137870E+21	8,138453E+21	1,196322E+20	1,196105E+20	1,627632E+22	2,392427E+20	1,651557E+22
-301	8,138188E+21	8,137827E+21	1,195691E+20	1,196174E+20	1,627601E+22	2,391865E+20	1,651520E+22
-300	8,137711E+21	8,137821E+21	1,196259E+20	1,195769E+20	1,627553E+22	2,392028E+20	1,651473E+22
-299	8,137335E+21	8,137577E+21	1,196217E+20	1,196399E+20	1,627491E+22	2,392616E+20	1,651417E+22
-298	8,137485E+21	8,136874E+21	1,195835E+20	1,196115E+20	1,627436E+22	2,391950E+20	1,651355E+22
-297	8,136709E+21	8,137080E+21	1,196531E+20	1,196005E+20	1,627379E+22	2,392535E+20	1,651304E+22
-296	8,136678E+21	8,136639E+21	1,196065E+20	1,196598E+20	1,627332E+22	2,392663E+20	1,651258E+22
-295	8,136689E+21	8,136261E+21	1,196095E+20	1,196079E+20	1,627295E+22	2,392174E+20	1,651217E+22
-294	8,136078E+21	8,136634E+21	1,196597E+20	1,196255E+20	1,627271E+22	2,392852E+20	1,651200E+22
-293	8,136599E+21	8,136220E+21	1,196014E+20	1,196522E+20	1,627282E+22	2,392536E+20	1,651207E+22
-292	8,136507E+21	8,136435E+21	1,196358E+20	1,195895E+20	1,627294E+22	2,392253E+20	1,651217E+22
-291	8,136279E+21	8,136796E+21	1,196434E+20	1,196405E+20	1,627307E+22	2,392839E+20	1,651236E+22
-290	8,136908E+21	8,136504E+21	1,195862E+20	1,196285E+20	1,627341E+22	2,392146E+20	1,651263E+22
-289	8,136723E+21	8,137091E+21	1,196369E+20	1,195885E+20	1,627381E+22	2,392254E+20	1,651304E+22
-288	8,137104E+21	8,137216E+21	1,196110E+20	1,196499E+20	1,627432E+22	2,392608E+20	1,651358E+22
-287	8,137659E+21	8,137106E+21	1,195835E+20	1,195901E+20	1,627477E+22	2,391735E+20	1,651394E+22
-286	8,137228E+21	8,137760E+21	1,196445E+20	1,195920E+20	1,627499E+22	2,392365E+20	1,651422E+22
-285	8,137654E+21	8,137524E+21	1,195898E+20	1,196359E+20	1,627518E+22	2,392257E+20	1,651440E+22
-284	8,137610E+21	8,137433E+21	1,196028E+20	1,195794E+20	1,627504E+22	2,391822E+20	1,651422E+22
-283	8,137052E+21	8,137611E+21	1,196416E+20	1,196255E+20	1,627466E+22	2,392671E+20	1,651393E+22
-282	8,137416E+21	8,136948E+21	1,195771E+20	1,196327E+20	1,627436E+22	2,392098E+20	1,651357E+22
-281	8,136954E+21	8,136947E+21	1,196357E+20	1,195911E+20	1,627390E+22	2,392268E+20	1,651313E+22
-280	8,136588E+21	8,136785E+21	1,196331E+20	1,196508E+20	1,627337E+22	2,392838E+20	1,651266E+22
-279	8,136695E+21	8,136101E+21	1,195949E+20	1,196245E+20	1,627280E+22	2,392194E+20	1,651201E+22
-278	8,135820E+21	8,136277E+21	1,196651E+20	1,196133E+20	1,627210E+22	2,392784E+20	1,651138E+22
-277	8,135889E+21	8,135871E+21	1,196216E+20	1,196701E+20	1,627176E+22	2,392917E+20	1,651105E+22
-276	8,135977E+21	8,135514E+21	1,196258E+20	1,196192E+20	1,627149E+22	2,392450E+20	1,651074E+22
-275	8,135376E+21	8,135886E+21	1,196710E+20	1,196324E+20	1,627126E+22	2,393034E+20	1,651057E+22
-274	8,135876E+21	8,135534E+21	1,196097E+20	1,196628E+20	1,627141E+22	2,392725E+20	1,651068E+22
-273	8,135772E+21	8,135766E+21	1,196417E+20	1,196035E+20	1,627154E+22	2,392452E+20	1,651078E+22
-272	8,135631E+21	8,136160E+21	1,196512E+20	1,196520E+20	1,627179E+22	2,393032E+20	1,651109E+22
-271	8,136344E+21	8,135891E+21	1,195943E+20	1,196376E+20	1,627224E+22	2,392318E+20	1,651147E+22
-270	8,136116E+21	8,136457E+21	1,196480E+20	1,195941E+20	1,627257E+22	2,392421E+20	1,651181E+22
-269	8,136515E+21	8,136628E+21	1,196267E+20	1,196533E+20	1,627314E+22	2,392800E+20	1,651242E+22
-268	8,137001E+21	8,136510E+21	1,195980E+20	1,196012E+20	1,627351E+22	2,391992E+20	1,651271E+22
-267	8,136464E+21	8,137049E+21	1,196533E+20	1,196053E+20	1,627351E+22	2,392586E+20	1,651277E+22
-266	8,136878E+21	8,136749E+21	1,195962E+20	1,196531E+20	1,627363E+22	2,392492E+20	1,651288E+22
-265	8,136874E+21	8,136608E+21	1,196099E+20	1,195970E+20	1,627348E+22	2,392069E+20	1,651269E+22
-264	8,136389E+21	8,136816E+21	1,196524E+20	1,196356E+20	1,627320E+22	2,392880E+20	1,651249E+22
-263	8,136723E+21	8,136182E+21	1,195896E+20	1,196402E+20	1,627290E+22	2,392297E+20	1,651213E+22
-262	8,136078E+21	8,136167E+21	1,196494E+20	1,195996E+20	1,627225E+22	2,392491E+20	1,651149E+22
-261	8,135701E+21	8,136017E+21	1,196490E+20	1,196605E+20	1,627172E+22	2,393094E+20	1,651103E+22
-260	8,135831E+21	8,135299E+21	1,196112E+20	1,196414E+20	1,627113E+22	2,392526E+20	1,651038E+22
-259	8,135011E+21	8,135425E+21	1,196754E+20	1,196265E+20	1,627044E+22	2,393018E+20	1,650974E+22
-258	8,135165E+21	8,135057E+21	1,196322E+20	1,196831E+20	1,627022E+22	2,393153E+20	1,650954E+22
-257	8,135275E+21	8,134764E+21	1,196360E+20	1,196314E+20	1,627004E+22	2,392674E+20	1,650931E+22

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 ° Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
-256	8,134697E+21	8,135230E+21	1,196808E+20	1,196417E+20	1,626993E+22	2,393225E+20	1,650925E+22
-255	8,135157E+21	8,134889E+21	1,196190E+20	1,196727E+20	1,627005E+22	2,392917E+20	1,650934E+22
-254	8,134990E+21	8,135079E+21	1,196514E+20	1,196137E+20	1,627007E+22	2,392651E+20	1,650933E+22
-253	8,134983E+21	8,135501E+21	1,196650E+20	1,196590E+20	1,627048E+22	2,393240E+20	1,650981E+22
-252	8,135750E+21	8,135252E+21	1,196093E+20	1,196471E+20	1,627100E+22	2,392565E+20	1,651026E+22
-251	8,135509E+21	8,135795E+21	1,196566E+20	1,196018E+20	1,627130E+22	2,392584E+20	1,651056E+22
-250	8,135865E+21	8,135985E+21	1,196337E+20	1,196654E+20	1,627185E+22	2,392992E+20	1,651115E+22
-249	8,136300E+21	8,135845E+21	1,196031E+20	1,196175E+20	1,627215E+22	2,392206E+20	1,651137E+22
-248	8,135814E+21	8,136366E+21	1,196608E+20	1,196186E+20	1,627218E+22	2,392793E+20	1,651146E+22
-247	8,136220E+21	8,136047E+21	1,196054E+20	1,196622E+20	1,627227E+22	2,392676E+20	1,651153E+22
-246	8,136121E+21	8,135854E+21	1,196240E+20	1,196052E+20	1,627197E+22	2,392292E+20	1,651120E+22
-245	8,135628E+21	8,136072E+21	1,196712E+20	1,196409E+20	1,627170E+22	2,393121E+20	1,651101E+22
-244	8,135871E+21	8,135425E+21	1,196079E+20	1,196545E+20	1,627130E+22	2,392624E+20	1,651056E+22
-243	8,135167E+21	8,135290E+21	1,196597E+20	1,196153E+20	1,627046E+22	2,392750E+20	1,650973E+22
-242	8,134847E+21	8,135119E+21	1,196577E+20	1,196787E+20	1,626997E+22	2,393364E+20	1,650930E+22
-241	8,135063E+21	8,134438E+21	1,196206E+20	1,196585E+20	1,626950E+22	2,392792E+20	1,650878E+22
-240	8,134348E+21	8,134648E+21	1,196869E+20	1,196357E+20	1,626900E+22	2,393226E+20	1,650832E+22
-239	8,134471E+21	8,134374E+21	1,196451E+20	1,196889E+20	1,626884E+22	2,393340E+20	1,650818E+22
-238	8,134434E+21	8,134089E+21	1,196486E+20	1,196398E+20	1,626852E+22	2,392883E+20	1,650781E+22
-237	8,133880E+21	8,134560E+21	1,196951E+20	1,196499E+20	1,626844E+22	2,393450E+20	1,650779E+22
-236	8,134403E+21	8,134211E+21	1,196322E+20	1,196878E+20	1,626861E+22	2,393200E+20	1,650793E+22
-235	8,134324E+21	8,134330E+21	1,196578E+20	1,196247E+20	1,626865E+22	2,392825E+20	1,650794E+22
-234	8,134434E+21	8,134792E+21	1,196728E+20	1,196704E+20	1,626923E+22	2,393432E+20	1,650857E+22
-233	8,135206E+21	8,134623E+21	1,196171E+20	1,196584E+20	1,626983E+22	2,392755E+20	1,650910E+22
-232	8,134954E+21	8,135219E+21	1,196639E+20	1,196124E+20	1,627017E+22	2,392763E+20	1,650945E+22
-231	8,135222E+21	8,135396E+21	1,196418E+20	1,196747E+20	1,627062E+22	2,393165E+20	1,650993E+22
-230	8,135544E+21	8,135173E+21	1,196134E+20	1,196282E+20	1,627072E+22	2,392416E+20	1,650996E+22
-229	8,135109E+21	8,135672E+21	1,196775E+20	1,196248E+20	1,627078E+22	2,393023E+20	1,651008E+22
-228	8,135482E+21	8,135331E+21	1,196240E+20	1,196717E+20	1,627081E+22	2,392957E+20	1,651011E+22
-227	8,135303E+21	8,135041E+21	1,196367E+20	1,196151E+20	1,627034E+22	2,392518E+20	1,650960E+22
-226	8,134784E+21	8,135227E+21	1,196814E+20	1,196565E+20	1,627001E+22	2,393379E+20	1,650935E+22
-225	8,135006E+21	8,134569E+21	1,196168E+20	1,196743E+20	1,626957E+22	2,392910E+20	1,650887E+22
-224	8,134422E+21	8,134453E+21	1,196677E+20	1,196324E+20	1,626887E+22	2,393001E+20	1,650817E+22
-223	8,134135E+21	8,134322E+21	1,196679E+20	1,196887E+20	1,626846E+22	2,393565E+20	1,650781E+22
-222	8,134273E+21	8,133673E+21	1,196356E+20	1,196675E+20	1,626795E+22	2,393031E+20	1,650725E+22
-221	8,133575E+21	8,133949E+21	1,197050E+20	1,196411E+20	1,626752E+22	2,393461E+20	1,650687E+22
-220	8,133612E+21	8,133685E+21	1,196624E+20	1,197016E+20	1,626730E+22	2,393639E+20	1,650666E+22
-219	8,133558E+21	8,133285E+21	1,196574E+20	1,196539E+20	1,626684E+22	2,393113E+20	1,650615E+22
-218	8,133153E+21	8,133732E+21	1,197017E+20	1,196659E+20	1,626689E+22	2,393676E+20	1,650625E+22
-217	8,133790E+21	8,133464E+21	1,196396E+20	1,197015E+20	1,626725E+22	2,393411E+20	1,650659E+22
-216	8,133855E+21	8,133688E+21	1,196647E+20	1,196326E+20	1,626754E+22	2,392974E+20	1,650684E+22
-215	8,133914E+21	8,134249E+21	1,196814E+20	1,196745E+20	1,626816E+22	2,393559E+20	1,650752E+22
-214	8,134514E+21	8,134099E+21	1,196275E+20	1,196655E+20	1,626861E+22	2,392930E+20	1,650791E+22
-213	8,134257E+21	8,134663E+21	1,196781E+20	1,196197E+20	1,626892E+22	2,392978E+20	1,650822E+22
-212	8,134494E+21	8,134784E+21	1,196569E+20	1,196864E+20	1,626928E+22	2,393434E+20	1,650862E+22
-211	8,134803E+21	8,134407E+21	1,196235E+20	1,196393E+20	1,626921E+22	2,392628E+20	1,650847E+22
-210	8,134425E+21	8,134849E+21	1,196885E+20	1,196380E+20	1,626927E+22	2,393264E+20	1,650860E+22
-209	8,134744E+21	8,134542E+21	1,196341E+20	1,196869E+20	1,626929E+22	2,393210E+20	1,650861E+22
-208	8,134566E+21	8,134245E+21	1,196449E+20	1,196313E+20	1,626881E+22	2,392762E+20	1,650809E+22

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 ° Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
-207	8,134004E+21	8,134424E+21	1,196891E+20	1,196698E+20	1,626843E+22	2,393590E+20	1,650779E+22
-206	8,134172E+21	8,133751E+21	1,196289E+20	1,196877E+20	1,626792E+22	2,393166E+20	1,650724E+22
-205	8,133658E+21	8,133675E+21	1,196860E+20	1,196399E+20	1,626733E+22	2,393259E+20	1,650666E+22
-204	8,133339E+21	8,133595E+21	1,196876E+20	1,196973E+20	1,626693E+22	2,393849E+20	1,650632E+22
-203	8,133389E+21	8,132872E+21	1,196494E+20	1,196775E+20	1,626626E+22	2,393269E+20	1,650559E+22
-202	8,132710E+21	8,133118E+21	1,197148E+20	1,196560E+20	1,626583E+22	2,393708E+20	1,650520E+22
-201	8,132776E+21	8,132873E+21	1,196704E+20	1,197184E+20	1,626565E+22	2,393888E+20	1,650504E+22
-200	8,132897E+21	8,132509E+21	1,196630E+20	1,196684E+20	1,626541E+22	2,393314E+20	1,650474E+22
-199	8,132594E+21	8,133039E+21	1,197086E+20	1,196732E+20	1,626563E+22	2,393817E+20	1,650501E+22
-198	8,133196E+21	8,132858E+21	1,196524E+20	1,197076E+20	1,626605E+22	2,393600E+20	1,650541E+22
-197	8,133268E+21	8,133177E+21	1,196802E+20	1,196364E+20	1,626645E+22	2,393166E+20	1,650576E+22
-196	8,133216E+21	8,133740E+21	1,196963E+20	1,196845E+20	1,626696E+22	2,393808E+20	1,650634E+22
-195	8,133734E+21	8,133423E+21	1,196359E+20	1,196775E+20	1,626716E+22	2,393134E+20	1,650647E+22
-194	8,133574E+21	8,133887E+21	1,196857E+20	1,196352E+20	1,626746E+22	2,393210E+20	1,650678E+22
-193	8,133823E+21	8,134021E+21	1,196661E+20	1,196991E+20	1,626784E+22	2,393652E+20	1,650721E+22
-192	8,134211E+21	8,133666E+21	1,196320E+20	1,196511E+20	1,626788E+22	2,392830E+20	1,650716E+22
-191	8,133768E+21	8,134125E+21	1,196965E+20	1,196465E+20	1,626789E+22	2,393430E+20	1,650724E+22
-190	8,133922E+21	8,133818E+21	1,196455E+20	1,196988E+20	1,626774E+22	2,393443E+20	1,650708E+22
-189	8,133777E+21	8,133520E+21	1,196596E+20	1,196424E+20	1,626730E+22	2,393020E+20	1,650660E+22
-188	8,133198E+21	8,133681E+21	1,197047E+20	1,196818E+20	1,626688E+22	2,393865E+20	1,650627E+22
-187	8,133335E+21	8,132908E+21	1,196431E+20	1,196985E+20	1,626624E+22	2,393416E+20	1,650558E+22
-186	8,132884E+21	8,132805E+21	1,197006E+20	1,196531E+20	1,626569E+22	2,393537E+20	1,650504E+22
-185	8,132482E+21	8,132786E+21	1,197003E+20	1,197107E+20	1,626527E+22	2,394110E+20	1,650468E+22
-184	8,132569E+21	8,132056E+21	1,196581E+20	1,196946E+20	1,626463E+22	2,393526E+20	1,650398E+22
-183	8,131930E+21	8,132290E+21	1,197205E+20	1,196686E+20	1,626422E+22	2,393891E+20	1,650361E+22
-182	8,132021E+21	8,132103E+21	1,196810E+20	1,197295E+20	1,626412E+22	2,394105E+20	1,650353E+22
-181	8,132283E+21	8,131856E+21	1,196781E+20	1,196732E+20	1,626414E+22	2,393513E+20	1,650349E+22
-180	8,131984E+21	8,132480E+21	1,197242E+20	1,196791E+20	1,626446E+22	2,394033E+20	1,650387E+22
-179	8,132482E+21	8,132252E+21	1,196642E+20	1,197154E+20	1,626473E+22	2,393796E+20	1,650411E+22
-178	8,132577E+21	8,132518E+21	1,196878E+20	1,196508E+20	1,626509E+22	2,393386E+20	1,650443E+22
-177	8,132513E+21	8,133071E+21	1,197027E+20	1,196989E+20	1,626558E+22	2,394016E+20	1,650499E+22
-176	8,133139E+21	8,132713E+21	1,196403E+20	1,196912E+20	1,626585E+22	2,393315E+20	1,650518E+22
-175	8,133017E+21	8,133174E+21	1,196920E+20	1,196432E+20	1,626619E+22	2,393352E+20	1,650553E+22
-174	8,133181E+21	8,133348E+21	1,196786E+20	1,197063E+20	1,626653E+22	2,393849E+20	1,650591E+22
-173	8,133520E+21	8,133041E+21	1,196483E+20	1,196579E+20	1,626656E+22	2,393062E+20	1,650587E+22
-172	8,132975E+21	8,133469E+21	1,197109E+20	1,196588E+20	1,626644E+22	2,393697E+20	1,650581E+22
-171	8,133050E+21	8,132997E+21	1,196577E+20	1,197118E+20	1,626605E+22	2,393695E+20	1,650542E+22
-170	8,132999E+21	8,132630E+21	1,196716E+20	1,196584E+20	1,626563E+22	2,393299E+20	1,650496E+22
-169	8,132406E+21	8,132836E+21	1,197176E+20	1,196931E+20	1,626524E+22	2,394107E+20	1,650465E+22
-168	8,132574E+21	8,132082E+21	1,196549E+20	1,197112E+20	1,626466E+22	2,393662E+20	1,650402E+22
-167	8,132062E+21	8,131999E+21	1,197102E+20	1,196642E+20	1,626406E+22	2,393744E+20	1,650344E+22
-166	8,131562E+21	8,131989E+21	1,197120E+20	1,197236E+20	1,626355E+22	2,394356E+20	1,650299E+22
-165	8,131745E+21	8,131298E+21	1,196726E+20	1,197063E+20	1,626304E+22	2,393788E+20	1,650242E+22
-164	8,131187E+21	8,131562E+21	1,197327E+20	1,196796E+20	1,626275E+22	2,394123E+20	1,650216E+22
-163	8,131305E+21	8,131339E+21	1,196939E+20	1,197385E+20	1,626264E+22	2,394324E+20	1,650208E+22
-162	8,131677E+21	8,131141E+21	1,196894E+20	1,196847E+20	1,626282E+22	2,393741E+20	1,650219E+22
-161	8,131305E+21	8,131853E+21	1,197336E+20	1,196899E+20	1,626316E+22	2,394235E+20	1,650258E+22
-160	8,131831E+21	8,131615E+21	1,196702E+20	1,197298E+20	1,626345E+22	2,393999E+20	1,650285E+22
-159	8,131957E+21	8,131833E+21	1,196912E+20	1,196617E+20	1,626379E+22	2,393530E+20	1,650314E+22

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 $\odot$ Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
-158	8,131859E+21	8,132404E+21	1,197125E+20	1,197069E+20	1,626426E+22	2,394194E+20	1,650368E+22
-157	8,132553E+21	8,132122E+21	1,196553E+20	1,196949E+20	1,626467E+22	2,393502E+20	1,650402E+22
-156	8,132382E+21	8,132591E+21	1,197066E+20	1,196490E+20	1,626497E+22	2,393556E+20	1,650433E+22
-155	8,132393E+21	8,132660E+21	1,196921E+20	1,197147E+20	1,626505E+22	2,394068E+20	1,650446E+22
-154	8,132753E+21	8,132271E+21	1,196590E+20	1,196738E+20	1,626502E+22	2,393328E+20	1,650436E+22
-153	8,132176E+21	8,132680E+21	1,197199E+20	1,196740E+20	1,626486E+22	2,393939E+20	1,650425E+22
-152	8,132335E+21	8,132173E+21	1,196659E+20	1,197273E+20	1,626451E+22	2,393932E+20	1,650390E+22
-151	8,132301E+21	8,131798E+21	1,196809E+20	1,196702E+20	1,626410E+22	2,393511E+20	1,650345E+22
-150	8,131600E+21	8,132058E+21	1,197318E+20	1,197030E+20	1,626366E+22	2,394347E+20	1,650309E+22
-149	8,131721E+21	8,131359E+21	1,196723E+20	1,197218E+20	1,626308E+22	2,393941E+20	1,650247E+22
-148	8,131164E+21	8,131226E+21	1,197239E+20	1,196782E+20	1,626239E+22	2,394021E+20	1,650179E+22
-147	8,130649E+21	8,131088E+21	1,197242E+20	1,197367E+20	1,626174E+22	2,394609E+20	1,650120E+22
-146	8,131001E+21	8,130411E+21	1,196846E+20	1,197208E+20	1,626141E+22	2,394054E+20	1,650082E+22
-145	8,130507E+21	8,130799E+21	1,197430E+20	1,196896E+20	1,626131E+22	2,394326E+20	1,650074E+22
-144	8,130695E+21	8,130647E+21	1,197038E+20	1,197494E+20	1,626134E+22	2,394532E+20	1,650080E+22
-143	8,131022E+21	8,130511E+21	1,196955E+20	1,196939E+20	1,626153E+22	2,393894E+20	1,650092E+22
-142	8,130587E+21	8,131250E+21	1,197421E+20	1,196991E+20	1,626184E+22	2,394413E+20	1,650128E+22
-141	8,131163E+21	8,131044E+21	1,196828E+20	1,197364E+20	1,626221E+22	2,394191E+20	1,650163E+22
-140	8,131321E+21	8,131247E+21	1,197027E+20	1,196689E+20	1,626257E+22	2,393716E+20	1,650194E+22
-139	8,131183E+21	8,131711E+21	1,197268E+20	1,197128E+20	1,626289E+22	2,394397E+20	1,650233E+22
-138	8,131913E+21	8,131424E+21	1,196685E+20	1,197063E+20	1,626334E+22	2,393747E+20	1,650271E+22
-137	8,131650E+21	8,131911E+21	1,197157E+20	1,196628E+20	1,626356E+22	2,393785E+20	1,650294E+22
-136	8,131676E+21	8,131898E+21	1,196986E+20	1,197322E+20	1,626357E+22	2,394308E+20	1,650300E+22
-135	8,132058E+21	8,131467E+21	1,196638E+20	1,196887E+20	1,626352E+22	2,393525E+20	1,650288E+22
-134	8,131453E+21	8,131899E+21	1,197308E+20	1,196848E+20	1,626335E+22	2,394156E+20	1,650277E+22
-133	8,131619E+21	8,131473E+21	1,196837E+20	1,197336E+20	1,626309E+22	2,394173E+20	1,650251E+22
-132	8,131495E+21	8,131099E+21	1,196976E+20	1,196799E+20	1,626259E+22	2,393775E+20	1,650197E+22
-131	8,130635E+21	8,131230E+21	1,197472E+20	1,197142E+20	1,626186E+22	2,394614E+20	1,650133E+22
-130	8,130818E+21	8,130466E+21	1,196853E+20	1,197394E+20	1,626128E+22	2,394247E+20	1,650071E+22
-129	8,130299E+21	8,130338E+21	1,197333E+20	1,196932E+20	1,626064E+22	2,394265E+20	1,650006E+22
-128	8,129939E+21	8,130220E+21	1,197331E+20	1,197506E+20	1,626016E+22	2,394837E+20	1,649964E+22
-127	8,130376E+21	8,129630E+21	1,196935E+20	1,197306E+20	1,626001E+22	2,394241E+20	1,649943E+22
-126	8,129823E+21	8,130145E+21	1,197548E+20	1,196973E+20	1,625997E+22	2,394521E+20	1,649942E+22
-125	8,129988E+21	8,130111E+21	1,197193E+20	1,197571E+20	1,626010E+22	2,394764E+20	1,649958E+22
-124	8,130286E+21	8,129937E+21	1,197066E+20	1,197040E+20	1,626022E+22	2,394106E+20	1,649963E+22
-123	8,129818E+21	8,130535E+21	1,197536E+20	1,197077E+20	1,626035E+22	2,394613E+20	1,649981E+22
-122	8,130517E+21	8,130320E+21	1,196945E+20	1,197463E+20	1,626084E+22	2,394408E+20	1,650028E+22
-121	8,130682E+21	8,130570E+21	1,197125E+20	1,196778E+20	1,626125E+22	2,393903E+20	1,650064E+22
-120	8,130582E+21	8,131028E+21	1,197354E+20	1,197254E+20	1,626161E+22	2,394608E+20	1,650107E+22
-119	8,131266E+21	8,130748E+21	1,196735E+20	1,197198E+20	1,626201E+22	2,393933E+20	1,650141E+22
-118	8,130953E+21	8,131233E+21	1,197225E+20	1,196766E+20	1,626219E+22	2,393991E+20	1,650158E+22
-117	8,131009E+21	8,131257E+21	1,197109E+20	1,197417E+20	1,626227E+22	2,394526E+20	1,650172E+22
-116	8,131375E+21	8,130799E+21	1,196766E+20	1,196981E+20	1,626217E+22	2,393748E+20	1,650155E+22
-115	8,130666E+21	8,131109E+21	1,197483E+20	1,196923E+20	1,626177E+22	2,394405E+20	1,650121E+22
-114	8,130791E+21	8,130670E+21	1,197013E+20	1,197451E+20	1,626146E+22	2,394464E+20	1,650091E+22
-113	8,130562E+21	8,130280E+21	1,197112E+20	1,196960E+20	1,626084E+22	2,394072E+20	1,650025E+22
-112	8,129763E+21	8,130287E+21	1,197567E+20	1,197322E+20	1,626005E+22	2,394889E+20	1,649954E+22
-111	8,130011E+21	8,129530E+21	1,196930E+20	1,197546E+20	1,625954E+22	2,394476E+20	1,649899E+22
-110	8,129558E+21	8,129505E+21	1,197430E+20	1,197038E+20	1,625906E+22	2,394468E+20	1,649851E+22

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 $\odot$ Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
-109	8,129260E+21	8,129545E+21	1,197497E+20	1,197561E+20	1,625880E+22	2,395058E+20	1,649831E+22
-108	8,129641E+21	8,129042E+21	1,197083E+20	1,197381E+20	1,625868E+22	2,394464E+20	1,649813E+22
-107	8,128977E+21	8,129466E+21	1,197687E+20	1,197062E+20	1,625844E+22	2,394749E+20	1,649792E+22
-106	8,129207E+21	8,129398E+21	1,197317E+20	1,197699E+20	1,625861E+22	2,395016E+20	1,649811E+22
-105	8,129540E+21	8,129230E+21	1,197144E+20	1,197171E+20	1,625877E+22	2,394315E+20	1,649820E+22
-104	8,129219E+21	8,129772E+21	1,197602E+20	1,197208E+20	1,625899E+22	2,394810E+20	1,649847E+22
-103	8,129971E+21	8,129621E+21	1,197005E+20	1,197570E+20	1,625959E+22	2,394576E+20	1,649905E+22
-102	8,130092E+21	8,129957E+21	1,197198E+20	1,196883E+20	1,626005E+22	2,394081E+20	1,649946E+22
-101	8,129965E+21	8,130482E+21	1,197474E+20	1,197354E+20	1,626045E+22	2,394829E+20	1,649993E+22
-100	8,130602E+21	8,130156E+21	1,196838E+20	1,197305E+20	1,626076E+22	2,394143E+20	1,650017E+22
-99	8,130214E+21	8,130495E+21	1,197359E+20	1,196856E+20	1,626071E+22	2,394215E+20	1,650013E+22
-98	8,130314E+21	8,130510E+21	1,197268E+20	1,197498E+20	1,626082E+22	2,394766E+20	1,650030E+22
-97	8,130591E+21	8,130058E+21	1,196917E+20	1,197083E+20	1,626065E+22	2,394000E+20	1,650005E+22
-96	8,129848E+21	8,130282E+21	1,197608E+20	1,197065E+20	1,626013E+22	2,394673E+20	1,649960E+22
-95	8,129925E+21	8,129814E+21	1,197094E+20	1,197609E+20	1,625974E+22	2,394703E+20	1,649921E+22
-94	8,129685E+21	8,129405E+21	1,197199E+20	1,197121E+20	1,625909E+22	2,394320E+20	1,649852E+22
-93	8,128987E+21	8,129485E+21	1,197693E+20	1,197434E+20	1,625847E+22	2,395127E+20	1,649798E+22
-92	8,129282E+21	8,128776E+21	1,197070E+20	1,197641E+20	1,625806E+22	2,394711E+20	1,649753E+22
-91	8,128776E+21	8,128721E+21	1,197596E+20	1,197119E+20	1,625750E+22	2,394714E+20	1,649697E+22
-90	8,128480E+21	8,128831E+21	1,197659E+20	1,197668E+20	1,625731E+22	2,395327E+20	1,649684E+22
-89	8,128782E+21	8,128345E+21	1,197200E+20	1,197535E+20	1,625713E+22	2,394735E+20	1,649660E+22
-88	8,128222E+21	8,128653E+21	1,197752E+20	1,197229E+20	1,625687E+22	2,394981E+20	1,649637E+22
-87	8,128540E+21	8,128608E+21	1,197365E+20	1,197823E+20	1,625715E+22	2,395188E+20	1,649667E+22
-86	8,128941E+21	8,128531E+21	1,197211E+20	1,197262E+20	1,625747E+22	2,394473E+20	1,649692E+22
-85	8,128685E+21	8,129202E+21	1,197727E+20	1,197265E+20	1,625789E+22	2,394992E+20	1,649739E+22
-84	8,129367E+21	8,129115E+21	1,197124E+20	1,197639E+20	1,625848E+22	2,394763E+20	1,649796E+22
-83	8,129379E+21	8,129338E+21	1,197319E+20	1,196972E+20	1,625872E+22	2,394291E+20	1,649815E+22
-82	8,129277E+21	8,129823E+21	1,197602E+20	1,197451E+20	1,625910E+22	2,395053E+20	1,649861E+22
-81	8,129874E+21	8,129488E+21	1,196951E+20	1,197416E+20	1,625936E+22	2,394367E+20	1,649880E+22
-80	8,129556E+21	8,129695E+21	1,197469E+20	1,196983E+20	1,625925E+22	2,394453E+20	1,649870E+22
-79	8,129596E+21	8,129721E+21	1,197372E+20	1,197604E+20	1,625932E+22	2,394977E+20	1,649882E+22
-78	8,129777E+21	8,129301E+21	1,197018E+20	1,197234E+20	1,625908E+22	2,394252E+20	1,649850E+22
-77	8,129024E+21	8,129508E+21	1,197735E+20	1,197211E+20	1,625853E+22	2,394946E+20	1,649803E+22
-76	8,129085E+21	8,128998E+21	1,197205E+20	1,197743E+20	1,625808E+22	2,394948E+20	1,649758E+22
-75	8,128838E+21	8,128496E+21	1,197340E+20	1,197233E+20	1,625733E+22	2,394573E+20	1,649679E+22
-74	8,128224E+21	8,128641E+21	1,197849E+20	1,197520E+20	1,625687E+22	2,395369E+20	1,649640E+22
-73	8,128465E+21	8,128033E+21	1,197229E+20	1,197758E+20	1,625650E+22	2,394988E+20	1,649600E+22
-72	8,127977E+21	8,127924E+21	1,197706E+20	1,197276E+20	1,625590E+22	2,394982E+20	1,649540E+22
-71	8,127679E+21	8,128054E+21	1,197728E+20	1,197813E+20	1,625573E+22	2,395541E+20	1,649529E+22
-70	8,128019E+21	8,127599E+21	1,197260E+20	1,197680E+20	1,625562E+22	2,394940E+20	1,649511E+22
-69	8,127590E+21	8,127970E+21	1,197846E+20	1,197318E+20	1,625556E+22	2,395164E+20	1,649508E+22
-68	8,127952E+21	8,127986E+21	1,197479E+20	1,197874E+20	1,625594E+22	2,395352E+20	1,649547E+22
-67	8,128293E+21	8,127891E+21	1,197358E+20	1,197313E+20	1,625618E+22	2,394672E+20	1,649565E+22
-66	8,128044E+21	8,128623E+21	1,197866E+20	1,197349E+20	1,625667E+22	2,395216E+20	1,649619E+22
-65	8,128638E+21	8,128521E+21	1,197246E+20	1,197769E+20	1,625716E+22	2,395015E+20	1,649666E+22
-64	8,128715E+21	8,128588E+21	1,197390E+20	1,197126E+20	1,625730E+22	2,394516E+20	1,649675E+22
-63	8,128652E+21	8,129073E+21	1,197657E+20	1,197559E+20	1,625772E+22	2,395215E+20	1,649725E+22
-62	8,129222E+21	8,128774E+21	1,197030E+20	1,197515E+20	1,625800E+22	2,394545E+20	1,649745E+22
-61	8,128893E+21	8,129030E+21	1,197601E+20	1,197080E+20	1,625792E+22	2,394681E+20	1,649739E+22

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 $\odot$ Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
-60	8,128814E+21	8,129051E+21	1,197494E+20	1,197699E+20	1,625786E+22	2,395194E+20	1,649738E+22
-59	8,128878E+21	8,128483E+21	1,197160E+20	1,197369E+20	1,625736E+22	2,394529E+20	1,649681E+22
-58	8,128191E+21	8,128654E+21	1,197862E+20	1,197339E+20	1,625685E+22	2,395201E+20	1,649637E+22
-57	8,128248E+21	8,128158E+21	1,197340E+20	1,197881E+20	1,625641E+22	2,395220E+20	1,649593E+22
-56	8,128102E+21	8,127583E+21	1,197461E+20	1,197379E+20	1,625569E+22	2,394840E+20	1,649517E+22
-55	8,127478E+21	8,127816E+21	1,197947E+20	1,197636E+20	1,625529E+22	2,395583E+20	1,649485E+22
-54	8,127644E+21	8,127295E+21	1,197336E+20	1,197911E+20	1,625494E+22	2,395247E+20	1,649446E+22
-53	8,127192E+21	8,127201E+21	1,197824E+20	1,197419E+20	1,625439E+22	2,395243E+20	1,649392E+22
-52	8,126906E+21	8,127331E+21	1,197833E+20	1,197899E+20	1,625424E+22	2,395733E+20	1,649381E+22
-51	8,127258E+21	8,126826E+21	1,197400E+20	1,197753E+20	1,625408E+22	2,395152E+20	1,649360E+22
-50	8,126929E+21	8,127265E+21	1,197991E+20	1,197359E+20	1,625419E+22	2,395351E+20	1,649373E+22
-49	8,127242E+21	8,127382E+21	1,197631E+20	1,197960E+20	1,625462E+22	2,395591E+20	1,649418E+22
-48	8,127624E+21	8,127208E+21	1,197445E+20	1,197452E+20	1,625483E+22	2,394897E+20	1,649432E+22
-47	8,127385E+21	8,127937E+21	1,197907E+20	1,197486E+20	1,625532E+22	2,395392E+20	1,649486E+22
-46	8,127997E+21	8,127870E+21	1,197290E+20	1,197905E+20	1,625587E+22	2,395195E+20	1,649539E+22
-45	8,128165E+21	8,127950E+21	1,197469E+20	1,197234E+20	1,625612E+22	2,394704E+20	1,649559E+22
-44	8,128058E+21	8,128448E+21	1,197765E+20	1,197603E+20	1,625651E+22	2,395368E+20	1,649604E+22
-43	8,128481E+21	8,128087E+21	1,197184E+20	1,197591E+20	1,625657E+22	2,394775E+20	1,649605E+22
-42	8,128098E+21	8,128318E+21	1,197752E+20	1,197190E+20	1,625642E+22	2,394942E+20	1,649591E+22
-41	8,127927E+21	8,128277E+21	1,197636E+20	1,197854E+20	1,625620E+22	2,395490E+20	1,649575E+22
-40	8,128070E+21	8,127539E+21	1,197262E+20	1,197545E+20	1,625561E+22	2,394807E+20	1,649509E+22
-39	8,127453E+21	8,127739E+21	1,197933E+20	1,197466E+20	1,625519E+22	2,395399E+20	1,649473E+22
-38	8,127502E+21	8,127347E+21	1,197450E+20	1,197999E+20	1,625485E+22	2,395449E+20	1,649439E+22
-37	8,127364E+21	8,126862E+21	1,197602E+20	1,197503E+20	1,625423E+22	2,395105E+20	1,649374E+22
-36	8,126652E+21	8,127125E+21	1,198070E+20	1,197720E+20	1,625378E+22	2,395790E+20	1,649336E+22
-35	8,126728E+21	8,126512E+21	1,197495E+20	1,198025E+20	1,625324E+22	2,395520E+20	1,649279E+22
-34	8,126367E+21	8,126426E+21	1,197963E+20	1,197516E+20	1,625279E+22	2,395479E+20	1,649234E+22
-33	8,126114E+21	8,126574E+21	1,197978E+20	1,198000E+20	1,625269E+22	2,395978E+20	1,649229E+22
-32	8,126572E+21	8,126009E+21	1,197513E+20	1,197875E+20	1,625258E+22	2,395389E+20	1,649212E+22
-31	8,126298E+21	8,126550E+21	1,198043E+20	1,197479E+20	1,625285E+22	2,395522E+20	1,649240E+22
-30	8,126583E+21	8,126751E+21	1,197696E+20	1,198112E+20	1,625333E+22	2,395808E+20	1,649291E+22
-29	8,127036E+21	8,126598E+21	1,197510E+20	1,197595E+20	1,625363E+22	2,395105E+20	1,649314E+22
-28	8,126815E+21	8,127327E+21	1,197973E+20	1,197545E+20	1,625414E+22	2,395518E+20	1,649369E+22
-27	8,127356E+21	8,127217E+21	1,197422E+20	1,197949E+20	1,625457E+22	2,395371E+20	1,649411E+22
-26	8,127524E+21	8,127331E+21	1,197620E+20	1,197278E+20	1,625485E+22	2,394898E+20	1,649434E+22
-25	8,127277E+21	8,127828E+21	1,197931E+20	1,197697E+20	1,625511E+22	2,395628E+20	1,649467E+22
-24	8,127670E+21	8,127300E+21	1,197298E+20	1,197751E+20	1,625497E+22	2,395049E+20	1,649447E+22
-23	8,127313E+21	8,127467E+21	1,197807E+20	1,197353E+20	1,625478E+22	2,395160E+20	1,649430E+22
-22	8,127159E+21	8,127439E+21	1,197709E+20	1,198008E+20	1,625460E+22	2,395717E+20	1,649417E+22
-21	8,127398E+21	8,126734E+21	1,197373E+20	1,197682E+20	1,625413E+22	2,395054E+20	1,649364E+22
-20	8,126748E+21	8,126986E+21	1,198058E+20	1,197526E+20	1,625373E+22	2,395584E+20	1,649329E+22
-19	8,126645E+21	8,126599E+21	1,197635E+20	1,198097E+20	1,625324E+22	2,395732E+20	1,649282E+22
-18	8,126459E+21	8,126115E+21	1,197779E+20	1,197629E+20	1,625257E+22	2,395408E+20	1,649212E+22
-17	8,125691E+21	8,126326E+21	1,198228E+20	1,197867E+20	1,625202E+22	2,396095E+20	1,649163E+22
-16	8,125881E+21	8,125568E+21	1,197604E+20	1,198184E+20	1,625145E+22	2,395788E+20	1,649103E+22
-15	8,125638E+21	8,125526E+21	1,198020E+20	1,197631E+20	1,625116E+22	2,395650E+20	1,649073E+22
-14	8,125432E+21	8,125817E+21	1,198064E+20	1,198111E+20	1,625125E+22	2,396175E+20	1,649087E+22
-13	8,125962E+21	8,125378E+21	1,197609E+20	1,198000E+20	1,625134E+22	2,395610E+20	1,649090E+22
-12	8,125673E+21	8,125977E+21	1,198108E+20	1,197553E+20	1,625165E+22	2,395661E+20	1,649122E+22

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 $\odot$ Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
-11	8,125900E+21	8,126147E+21	1,197818E+20	1,198202E+20	1,625205E+22	2,396021E+20	1,649165E+22
-10	8,126403E+21	8,126019E+21	1,197628E+20	1,197658E+20	1,625242E+22	2,395286E+20	1,649195E+22
-9	8,126159E+21	8,126730E+21	1,198119E+20	1,197612E+20	1,625289E+22	2,395731E+20	1,649246E+22
-8	8,126697E+21	8,126497E+21	1,197549E+20	1,198040E+20	1,625319E+22	2,395589E+20	1,649275E+22
-7	8,126827E+21	8,126617E+21	1,197695E+20	1,197408E+20	1,625344E+22	2,395104E+20	1,649295E+22
-6	8,126507E+21	8,127099E+21	1,198017E+20	1,197868E+20	1,625361E+22	2,395885E+20	1,649320E+22
-5	8,126958E+21	8,126530E+21	1,197384E+20	1,197932E+20	1,625349E+22	2,395317E+20	1,649302E+22
-4	8,126638E+21	8,126678E+21	1,197877E+20	1,197443E+20	1,625332E+22	2,395320E+20	1,649285E+22
-3	8,126410E+21	8,126638E+21	1,197866E+20	1,198077E+20	1,625305E+22	2,395943E+20	1,649264E+22
-2	8,126620E+21	8,126018E+21	1,197557E+20	1,197754E+20	1,625264E+22	2,395311E+20	1,649217E+22
-1	8,125849E+21	8,126267E+21	1,198246E+20	1,197644E+20	1,625212E+22	2,395890E+20	1,649171E+22
1	8,125698E+21	8,125718E+21	1,197780E+20	1,198262E+20	1,625142E+22	2,396043E+20	1,649102E+22
2	8,125573E+21	8,125207E+21	1,197849E+20	1,197811E+20	1,625078E+22	2,395661E+20	1,649035E+22
3	8,124871E+21	8,125438E+21	1,198301E+20	1,198022E+20	1,625031E+22	2,396323E+20	1,648994E+22
4	8,125206E+21	8,124748E+21	1,197703E+20	1,198318E+20	1,624995E+22	2,396021E+20	1,648956E+22
5	8,125013E+21	8,124808E+21	1,198102E+20	1,197678E+20	1,624982E+22	2,395781E+20	1,648940E+22
6	8,124713E+21	8,125171E+21	1,198216E+20	1,198193E+20	1,624988E+22	2,396409E+20	1,648953E+22
7	8,125238E+21	8,124811E+21	1,197760E+20	1,198093E+20	1,625005E+22	2,395853E+20	1,648963E+22
8	8,124944E+21	8,125373E+21	1,198244E+20	1,197664E+20	1,625032E+22	2,395908E+20	1,648991E+22
9	8,125231E+21	8,125414E+21	1,197931E+20	1,198303E+20	1,625064E+22	2,396234E+20	1,649027E+22
10	8,125789E+21	8,125309E+21	1,197688E+20	1,197750E+20	1,625110E+22	2,395438E+20	1,649064E+22
11	8,125504E+21	8,126067E+21	1,198209E+20	1,197720E+20	1,625157E+22	2,395929E+20	1,649116E+22
12	8,126038E+21	8,125858E+21	1,197639E+20	1,198183E+20	1,625190E+22	2,395822E+20	1,649148E+22
13	8,126135E+21	8,125940E+21	1,197756E+20	1,197512E+20	1,625208E+22	2,395268E+20	1,649160E+22
14	8,125762E+21	8,126361E+21	1,198141E+20	1,197988E+20	1,625212E+22	2,396128E+20	1,649174E+22
15	8,126244E+21	8,125816E+21	1,197529E+20	1,198023E+20	1,625206E+22	2,395552E+20	1,649161E+22
16	8,125890E+21	8,125943E+21	1,198044E+20	1,197543E+20	1,625183E+22	2,395588E+20	1,649139E+22
17	8,125624E+21	8,125805E+21	1,198017E+20	1,198191E+20	1,625143E+22	2,396208E+20	1,649105E+22
18	8,125771E+21	8,125193E+21	1,197657E+20	1,197922E+20	1,625096E+22	2,395579E+20	1,649052E+22
19	8,124940E+21	8,125416E+21	1,198350E+20	1,197833E+20	1,625036E+22	2,396184E+20	1,648997E+22
20	8,124876E+21	8,124838E+21	1,197881E+20	1,198440E+20	1,624971E+22	2,396321E+20	1,648935E+22
21	8,124820E+21	8,124341E+21	1,197930E+20	1,197893E+20	1,624916E+22	2,395823E+20	1,648874E+22
22	8,124105E+21	8,124622E+21	1,198453E+20	1,198086E+20	1,624873E+22	2,396540E+20	1,648838E+22
23	8,124449E+21	8,124083E+21	1,197882E+20	1,198379E+20	1,624853E+22	2,396261E+20	1,648816E+22
24	8,124224E+21	8,124190E+21	1,198258E+20	1,197785E+20	1,624841E+22	2,396043E+20	1,648802E+22
25	8,123944E+21	8,124439E+21	1,198336E+20	1,198328E+20	1,624838E+22	2,396663E+20	1,648805E+22
26	8,124546E+21	8,124100E+21	1,197814E+20	1,198237E+20	1,624865E+22	2,396050E+20	1,648825E+22
27	8,124305E+21	8,124680E+21	1,198305E+20	1,197790E+20	1,624899E+22	2,396095E+20	1,648859E+22
28	8,124679E+21	8,124753E+21	1,198015E+20	1,198410E+20	1,624943E+22	2,396425E+20	1,648907E+22
29	8,125222E+21	8,124693E+21	1,197750E+20	1,197808E+20	1,624991E+22	2,395558E+20	1,648947E+22
30	8,124806E+21	8,125433E+21	1,198340E+20	1,197825E+20	1,625024E+22	2,396165E+20	1,648986E+22
31	8,125296E+21	8,125247E+21	1,197783E+20	1,198293E+20	1,625054E+22	2,396076E+20	1,649015E+22
32	8,125409E+21	8,125238E+21	1,197887E+20	1,197640E+20	1,625065E+22	2,395527E+20	1,649020E+22
33	8,125051E+21	8,125513E+21	1,198263E+20	1,198090E+20	1,625056E+22	2,396353E+20	1,649020E+22
34	8,125545E+21	8,125017E+21	1,197624E+20	1,198132E+20	1,625056E+22	2,395756E+20	1,649014E+22
35	8,125115E+21	8,125176E+21	1,198165E+20	1,197680E+20	1,625029E+22	2,395845E+20	1,648988E+22
36	8,124814E+21	8,125039E+21	1,198135E+20	1,198346E+20	1,624985E+22	2,396482E+20	1,648950E+22
37	8,124931E+21	8,124387E+21	1,197746E+20	1,198046E+20	1,624932E+22	2,395793E+20	1,648890E+22
38	8,124056E+21	8,124556E+21	1,198491E+20	1,197958E+20	1,624861E+22	2,396449E+20	1,648826E+22

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 $\odot$ Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
39	8,124034E+21	8,124044E+21	1,198048E+20	1,198521E+20	1,624808E+22	2,396568E+20	1,648773E+22
40	8,124015E+21	8,123549E+21	1,198104E+20	1,197990E+20	1,624756E+22	2,396095E+20	1,648717E+22
41	8,123307E+21	8,123784E+21	1,198598E+20	1,198196E+20	1,624709E+22	2,396794E+20	1,648677E+22
42	8,123660E+21	8,123329E+21	1,197978E+20	1,198545E+20	1,624699E+22	2,396523E+20	1,648664E+22
43	8,123455E+21	8,123449E+21	1,198332E+20	1,197968E+20	1,624690E+22	2,396300E+20	1,648653E+22
44	8,123314E+21	8,123708E+21	1,198401E+20	1,198478E+20	1,624702E+22	2,396879E+20	1,648671E+22
45	8,123975E+21	8,123418E+21	1,197862E+20	1,198285E+20	1,624739E+22	2,396147E+20	1,648701E+22
46	8,123694E+21	8,124044E+21	1,198427E+20	1,197841E+20	1,624774E+22	2,396268E+20	1,648736E+22
47	8,124007E+21	8,124226E+21	1,198174E+20	1,198446E+20	1,624823E+22	2,396620E+20	1,648790E+22
48	8,124481E+21	8,124126E+21	1,197894E+20	1,197912E+20	1,624861E+22	2,395806E+20	1,648819E+22
49	8,124070E+21	8,124692E+21	1,198447E+20	1,197959E+20	1,624876E+22	2,396406E+20	1,648840E+22
50	8,124615E+21	8,124489E+21	1,197851E+20	1,198436E+20	1,624910E+22	2,396287E+20	1,648873E+22
51	8,124753E+21	8,124475E+21	1,197969E+20	1,197774E+20	1,624923E+22	2,395743E+20	1,648880E+22
52	8,124447E+21	8,124762E+21	1,198361E+20	1,198199E+20	1,624921E+22	2,396559E+20	1,648887E+22
53	8,124850E+21	8,124310E+21	1,197716E+20	1,198208E+20	1,624916E+22	2,395924E+20	1,648875E+22
54	8,124261E+21	8,124437E+21	1,198321E+20	1,197822E+20	1,624870E+22	2,396144E+20	1,648831E+22
55	8,123893E+21	8,124297E+21	1,198307E+20	1,198463E+20	1,624819E+22	2,396770E+20	1,648787E+22
56	8,124037E+21	8,123550E+21	1,197911E+20	1,198191E+20	1,624759E+22	2,396102E+20	1,648720E+22
57	8,123209E+21	8,123578E+21	1,198626E+20	1,198070E+20	1,624679E+22	2,396696E+20	1,648646E+22
58	8,123235E+21	8,123150E+21	1,198158E+20	1,198644E+20	1,624638E+22	2,396801E+20	1,648606E+22
59	8,123207E+21	8,122739E+21	1,198210E+20	1,198145E+20	1,624595E+22	2,396354E+20	1,648558E+22
60	8,122565E+21	8,123022E+21	1,198677E+20	1,198359E+20	1,624559E+22	2,397036E+20	1,648529E+22
61	8,122963E+21	8,122622E+21	1,198039E+20	1,198661E+20	1,624559E+22	2,396700E+20	1,648526E+22
62	8,122766E+21	8,122757E+21	1,198438E+20	1,198074E+20	1,624552E+22	2,396512E+20	1,648517E+22
63	8,122649E+21	8,123119E+21	1,198550E+20	1,198505E+20	1,624577E+22	2,397055E+20	1,648547E+22
64	8,123326E+21	8,122827E+21	1,198013E+20	1,198340E+20	1,624615E+22	2,396353E+20	1,648579E+22
65	8,122988E+21	8,123342E+21	1,198554E+20	1,197922E+20	1,624633E+22	2,396476E+20	1,648598E+22
66	8,123276E+21	8,123553E+21	1,198264E+20	1,198587E+20	1,624683E+22	2,396850E+20	1,648651E+22
67	8,123767E+21	8,123407E+21	1,197971E+20	1,198081E+20	1,624717E+22	2,396052E+20	1,648678E+22
68	8,123483E+21	8,123936E+21	1,198503E+20	1,198103E+20	1,624742E+22	2,396606E+20	1,648708E+22
69	8,124049E+21	8,123779E+21	1,197914E+20	1,198492E+20	1,624783E+22	2,396406E+20	1,648747E+22
70	8,124087E+21	8,123793E+21	1,198102E+20	1,197858E+20	1,624788E+22	2,395960E+20	1,648748E+22
71	8,123661E+21	8,124162E+21	1,198530E+20	1,198255E+20	1,624782E+22	2,396785E+20	1,648750E+22
72	8,123970E+21	8,123620E+21	1,197880E+20	1,198343E+20	1,624759E+22	2,396223E+20	1,648721E+22
73	8,123347E+21	8,123534E+21	1,198460E+20	1,197982E+20	1,624688E+22	2,396442E+20	1,648653E+22
74	8,123026E+21	8,123375E+21	1,198404E+20	1,198620E+20	1,624640E+22	2,397024E+20	1,648610E+22
75	8,123213E+21	8,122622E+21	1,198022E+20	1,198354E+20	1,624583E+22	2,396377E+20	1,648547E+22
76	8,122504E+21	8,122680E+21	1,198711E+20	1,198208E+20	1,624518E+22	2,396920E+20	1,648488E+22
77	8,122502E+21	8,122364E+21	1,198247E+20	1,198741E+20	1,624487E+22	2,396988E+20	1,648457E+22
78	8,122401E+21	8,122015E+21	1,198343E+20	1,198291E+20	1,624442E+22	2,396634E+20	1,648408E+22
79	8,121780E+21	8,122369E+21	1,198824E+20	1,198439E+20	1,624415E+22	2,397263E+20	1,648388E+22
80	8,122221E+21	8,121946E+21	1,198196E+20	1,198745E+20	1,624417E+22	2,396941E+20	1,648386E+22
81	8,122047E+21	8,121994E+21	1,198568E+20	1,198136E+20	1,624404E+22	2,396704E+20	1,648371E+22
82	8,121945E+21	8,122424E+21	1,198660E+20	1,198579E+20	1,624437E+22	2,397239E+20	1,648409E+22
83	8,122582E+21	8,122167E+21	1,198112E+20	1,198469E+20	1,624475E+22	2,396581E+20	1,648441E+22
84	8,122341E+21	8,122645E+21	1,198603E+20	1,198077E+20	1,624499E+22	2,396679E+20	1,648465E+22
85	8,122672E+21	8,122874E+21	1,198306E+20	1,198694E+20	1,624555E+22	2,397000E+20	1,648525E+22
86	8,123164E+21	8,122749E+21	1,198059E+20	1,198197E+20	1,624591E+22	2,396256E+20	1,648554E+22
87	8,122884E+21	8,123351E+21	1,198637E+20	1,198142E+20	1,624623E+22	2,396778E+20	1,648591E+22

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							
88	8,123393E+21	8,123179E+21	1,198074E+20	1,198559E+20	1,624657E+22	2,396633E+20	1,648624E+22
89	8,123294E+21	8,123052E+21	1,198245E+20	1,197982E+20	1,624635E+22	2,396227E+20	1,648597E+22
90	8,122790E+21	8,123376E+21	1,198645E+20	1,198416E+20	1,624617E+22	2,397062E+20	1,648587E+22
91	8,123087E+21	8,122741E+21	1,197990E+20	1,198538E+20	1,624583E+22	2,396528E+20	1,648548E+22
92	8,122595E+21	8,122575E+21	1,198538E+20	1,198142E+20	1,624517E+22	2,396680E+20	1,648484E+22
93	8,122308E+21	8,122485E+21	1,198490E+20	1,198693E+20	1,624479E+22	2,397183E+20	1,648451E+22
94	8,122429E+21	8,121816E+21	1,198172E+20	1,198460E+20	1,624425E+22	2,396632E+20	1,648391E+22
95	8,121659E+21	8,122006E+21	1,198873E+20	1,198276E+20	1,624366E+22	2,397149E+20	1,648338E+22
96	8,121649E+21	8,121679E+21	1,198417E+20	1,198863E+20	1,624333E+22	2,397280E+20	1,648306E+22
97	8,121541E+21	8,121198E+21	1,198482E+20	1,198422E+20	1,624274E+22	2,396905E+20	1,648243E+22
98	8,120994E+21	8,121586E+21	1,198930E+20	1,198543E+20	1,624258E+22	2,397473E+20	1,648233E+22
99	8,121480E+21	8,121180E+21	1,198314E+20	1,198859E+20	1,624266E+22	2,397173E+20	1,648238E+22
100	8,121408E+21	8,121236E+21	1,198637E+20	1,198252E+20	1,624264E+22	2,396889E+20	1,648233E+22
101	8,121286E+21	8,121755E+21	1,198720E+20	1,198678E+20	1,624304E+22	2,397399E+20	1,648278E+22
102	8,121880E+21	8,121527E+21	1,198204E+20	1,198627E+20	1,624341E+22	2,396831E+20	1,648309E+22
103	8,121710E+21	8,122053E+21	1,198700E+20	1,198167E+20	1,624376E+22	2,396867E+20	1,648345E+22
104	8,122098E+21	8,122261E+21	1,198434E+20	1,198771E+20	1,624436E+22	2,397205E+20	1,648408E+22
105	8,122539E+21	8,122049E+21	1,198183E+20	1,198262E+20	1,624459E+22	2,396445E+20	1,648423E+22
106	8,122200E+21	8,122688E+21	1,198756E+20	1,198218E+20	1,624489E+22	2,396974E+20	1,648459E+22
107	8,122582E+21	8,122493E+21	1,198200E+20	1,198696E+20	1,624508E+22	2,396896E+20	1,648476E+22
108	8,122525E+21	8,12252E+21	1,198322E+20	1,198167E+20	1,624478E+22	2,396489E+20	1,648443E+22
109	8,122025E+21	8,122538E+21	1,198719E+20	1,198538E+20	1,624456E+22	2,397257E+20	1,648429E+22
110	8,122298E+21	8,121912E+21	1,198115E+20	1,198676E+20	1,624421E+22	2,396791E+20	1,648389E+22
111	8,121847E+21	8,121804E+21	1,198686E+20	1,198198E+20	1,624365E+22	2,396884E+20	1,648334E+22
112	8,121521E+21	8,121728E+21	1,198668E+20	1,198768E+20	1,624325E+22	2,397436E+20	1,648299E+22
113	8,121523E+21	8,121003E+21	1,198338E+20	1,198594E+20	1,624253E+22	2,396932E+20	1,648222E+22
114	8,120755E+21	8,121193E+21	1,198999E+20	1,198432E+20	1,624195E+22	2,397431E+20	1,648169E+22
115	8,120773E+21	8,120840E+21	1,198550E+20	1,199037E+20	1,624161E+22	2,397587E+20	1,648137E+22
116	8,120828E+21	8,120329E+21	1,198557E+20	1,198569E+20	1,624116E+22	2,397126E+20	1,648087E+22
117	8,120324E+21	8,120801E+21	1,198997E+20	1,198609E+20	1,624112E+22	2,397605E+20	1,648089E+22
118	8,120760E+21	8,120501E+21	1,198426E+20	1,198965E+20	1,624126E+22	2,397391E+20	1,648100E+22
119	8,120693E+21	8,120656E+21	1,198745E+20	1,198325E+20	1,624135E+22	2,397070E+20	1,648106E+22
120	8,120617E+21	8,121157E+21	1,198848E+20	1,198786E+20	1,624177E+22	2,397634E+20	1,648154E+22
121	8,121205E+21	8,120843E+21	1,198318E+20	1,198741E+20	1,624205E+22	2,397059E+20	1,648175E+22
122	8,121105E+21	8,121392E+21	1,198791E+20	1,198255E+20	1,624250E+22	2,397047E+20	1,648220E+22
123	8,121482E+21	8,121604E+21	1,198561E+20	1,198864E+20	1,624309E+22	2,397425E+20	1,648283E+22
124	8,121930E+21	8,121354E+21	1,198265E+20	1,198376E+20	1,624328E+22	2,396641E+20	1,648295E+22
125	8,121491E+21	8,122009E+21	1,198838E+20	1,198325E+20	1,624350E+22	2,397163E+20	1,648322E+22
126	8,121769E+21	8,121770E+21	1,198318E+20	1,198853E+20	1,624354E+22	2,397170E+20	1,648326E+22
127	8,121733E+21	8,121508E+21	1,198455E+20	1,198270E+20	1,624324E+22	2,396725E+20	1,648291E+22
128	8,121280E+21	8,121746E+21	1,198875E+20	1,198623E+20	1,624303E+22	2,397498E+20	1,648278E+22
129	8,121470E+21	8,121042E+21	1,198281E+20	1,198767E+20	1,624251E+22	2,397048E+20	1,648222E+22
130	8,120990E+21	8,120984E+21	1,198821E+20	1,198308E+20	1,624197E+22	2,397129E+20	1,648169E+22
131	8,120602E+21	8,120912E+21	1,198810E+20	1,198934E+20	1,624151E+22	2,397744E+20	1,648129E+22
132	8,120686E+21	8,120122E+21	1,198424E+20	1,198796E+20	1,624081E+22	2,397220E+20	1,648053E+22
133	8,119977E+21	8,120345E+21	1,199064E+20	1,198569E+20	1,624032E+22	2,397633E+20	1,648008E+22
134	8,120008E+21	8,120050E+21	1,198666E+20	1,199168E+20	1,624006E+22	2,397833E+20	1,647984E+22
135	8,120126E+21	8,119639E+21	1,198688E+20	1,198628E+20	1,623976E+22	2,397316E+20	1,647950E+22
136	8,119628E+21	8,120143E+21	1,199141E+20	1,198676E+20	1,623977E+22	2,397817E+20	1,647955E+22

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 $\odot$ Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
137	8,119957E+21	8,119806E+21	1,198565E+20	1,199085E+20	1,623976E+22	2,397650E+20	1,647953E+22
138	8,119964E+21	8,119963E+21	1,198838E+20	1,198452E+20	1,623993E+22	2,397290E+20	1,647966E+22
139	8,119951E+21	8,120456E+21	1,198965E+20	1,198920E+20	1,624041E+22	2,397885E+20	1,648019E+22
140	8,120670E+21	8,120134E+21	1,198388E+20	1,198848E+20	1,624080E+22	2,397235E+20	1,648053E+22
141	8,120563E+21	8,120744E+21	1,198861E+20	1,198308E+20	1,624131E+22	2,397169E+20	1,648102E+22
142	8,120795E+21	8,121021E+21	1,198679E+20	1,198955E+20	1,624182E+22	2,397634E+20	1,648158E+22
143	8,121193E+21	8,120786E+21	1,198377E+20	1,198468E+20	1,624198E+22	2,396845E+20	1,648166E+22
144	8,120740E+21	8,121324E+21	1,198972E+20	1,198441E+20	1,624206E+22	2,397413E+20	1,648180E+22
145	8,120938E+21	8,120966E+21	1,198453E+20	1,198978E+20	1,624190E+22	2,397431E+20	1,648165E+22
146	8,120968E+21	8,120672E+21	1,198575E+20	1,198382E+20	1,624164E+22	2,396958E+20	1,648134E+22
147	8,120500E+21	8,120894E+21	1,199023E+20	1,198749E+20	1,624139E+22	2,397772E+20	1,648117E+22
148	8,120700E+21	8,120180E+21	1,198382E+20	1,198932E+20	1,624088E+22	2,397314E+20	1,648061E+22
149	8,120170E+21	8,120151E+21	1,198899E+20	1,198473E+20	1,624032E+22	2,397372E+20	1,648006E+22
150	8,119738E+21	8,120094E+21	1,198923E+20	1,199116E+20	1,623983E+22	2,398039E+20	1,647964E+22
151	8,119897E+21	8,119347E+21	1,198553E+20	1,198911E+20	1,623924E+22	2,397465E+20	1,647899E+22
152	8,119251E+21	8,119569E+21	1,199215E+20	1,198633E+20	1,623882E+22	2,397848E+20	1,647860E+22
153	8,119177E+21	8,119266E+21	1,198837E+20	1,199229E+20	1,623844E+22	2,398065E+20	1,647825E+22
154	8,119293E+21	8,118914E+21	1,198823E+20	1,198715E+20	1,623821E+22	2,397538E+20	1,647796E+22
155	8,118807E+21	8,119415E+21	1,199274E+20	1,198821E+20	1,623822E+22	2,398095E+20	1,647803E+22
156	8,119264E+21	8,119038E+21	1,198643E+20	1,199249E+20	1,623830E+22	2,397892E+20	1,647809E+22
157	8,119372E+21	8,119259E+21	1,198879E+20	1,198564E+20	1,623863E+22	2,397443E+20	1,647837E+22
158	8,119383E+21	8,119818E+21	1,199055E+20	1,199016E+20	1,623920E+22	2,398071E+20	1,647901E+22
159	8,120103E+21	8,119586E+21	1,198499E+20	1,198888E+20	1,623969E+22	2,397387E+20	1,647943E+22
160	8,119937E+21	8,120191E+21	1,198987E+20	1,198378E+20	1,624013E+22	2,397366E+20	1,647987E+22
161	8,119973E+21	8,120363E+21	1,198818E+20	1,199069E+20	1,624034E+22	2,397887E+20	1,648012E+22
162	8,120393E+21	8,120044E+21	1,198486E+20	1,198610E+20	1,624044E+22	2,397095E+20	1,648015E+22
163	8,119987E+21	8,120493E+21	1,199100E+20	1,198593E+20	1,624048E+22	2,397694E+20	1,648025E+22
164	8,120263E+21	8,120083E+21	1,198541E+20	1,199112E+20	1,624035E+22	2,397653E+20	1,648011E+22
165	8,120280E+21	8,119848E+21	1,198652E+20	1,198489E+20	1,624013E+22	2,397141E+20	1,647984E+22
166	8,119701E+21	8,120136E+21	1,199131E+20	1,198884E+20	1,623984E+22	2,398015E+20	1,647964E+22
167	8,119875E+21	8,119474E+21	1,198511E+20	1,199061E+20	1,623935E+22	2,397572E+20	1,647911E+22
168	8,119367E+21	8,119386E+21	1,199046E+20	1,198601E+20	1,623875E+22	2,397647E+20	1,647852E+22
169	8,118841E+21	8,119267E+21	1,199089E+20	1,199218E+20	1,623811E+22	2,398307E+20	1,647794E+22
170	8,119070E+21	8,118520E+21	1,198710E+20	1,199005E+20	1,623759E+22	2,397714E+20	1,647736E+22
171	8,118427E+21	8,118735E+21	1,199381E+20	1,198740E+20	1,623716E+22	2,398120E+20	1,647697E+22
172	8,118376E+21	8,118444E+21	1,198940E+20	1,199373E+20	1,623682E+22	2,398314E+20	1,647665E+22
173	8,118525E+21	8,118130E+21	1,198882E+20	1,198870E+20	1,623666E+22	2,397752E+20	1,647643E+22
174	8,118086E+21	8,118676E+21	1,199347E+20	1,198984E+20	1,623676E+22	2,398331E+20	1,647660E+22
175	8,118681E+21	8,118405E+21	1,198738E+20	1,199341E+20	1,623709E+22	2,398079E+20	1,647689E+22
176	8,118855E+21	8,118653E+21	1,198986E+20	1,198608E+20	1,623751E+22	2,397593E+20	1,647727E+22
177	8,118707E+21	8,119222E+21	1,199195E+20	1,199054E+20	1,623793E+22	2,398248E+20	1,647775E+22
178	8,119375E+21	8,119002E+21	1,198614E+20	1,198961E+20	1,623838E+22	2,397575E+20	1,647813E+22
179	8,119165E+21	8,119511E+21	1,199112E+20	1,198527E+20	1,623868E+22	2,397640E+20	1,647844E+22
180	8,119252E+21	8,119578E+21	1,198891E+20	1,199229E+20	1,623883E+22	2,398120E+20	1,647864E+22
181	8,119731E+21	8,119247E+21	1,198538E+20	1,198749E+20	1,623898E+22	2,397288E+20	1,647871E+22
182	8,119340E+21	8,119713E+21	1,199189E+20	1,198717E+20	1,623905E+22	2,397906E+20	1,647884E+22
183	8,119610E+21	8,119385E+21	1,198668E+20	1,199190E+20	1,623899E+22	2,397857E+20	1,647878E+22
184	8,119551E+21	8,119151E+21	1,198791E+20	1,198590E+20	1,623870E+22	2,397381E+20	1,647844E+22
185	8,118772E+21	8,119363E+21	1,199289E+20	1,199007E+20	1,623814E+22	2,398296E+20	1,647797E+22

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 ° Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
186	8,118963E+21	8,118651E+21	1,198668E+20	1,199196E+20	1,623761E+22	2,397864E+20	1,647740E+22
187	8,118501E+21	8,118499E+21	1,199218E+20	1,198753E+20	1,623700E+22	2,397971E+20	1,647680E+22
188	8,118023E+21	8,118336E+21	1,199214E+20	1,199332E+20	1,623636E+22	2,398545E+20	1,647621E+22
189	8,118250E+21	8,117657E+21	1,198806E+20	1,199128E+20	1,623591E+22	2,397933E+20	1,647570E+22
190	8,117591E+21	8,117929E+21	1,199460E+20	1,198891E+20	1,623552E+22	2,398351E+20	1,647536E+22
191	8,117612E+21	8,117715E+21	1,199038E+20	1,199506E+20	1,623533E+22	2,398544E+20	1,647518E+22
192	8,117871E+21	8,117440E+21	1,198973E+20	1,198981E+20	1,623531E+22	2,397954E+20	1,647511E+22
193	8,117402E+21	8,118001E+21	1,199465E+20	1,199057E+20	1,623540E+22	2,398522E+20	1,647526E+22
194	8,118060E+21	8,117788E+21	1,198875E+20	1,199390E+20	1,623585E+22	2,398265E+20	1,647567E+22
195	8,118211E+21	8,118037E+21	1,199127E+20	1,198699E+20	1,623625E+22	2,397826E+20	1,647603E+22
196	8,118004E+21	8,118554E+21	1,199282E+20	1,199170E+20	1,623656E+22	2,398452E+20	1,647640E+22
197	8,118656E+21	8,118301E+21	1,198665E+20	1,199113E+20	1,623696E+22	2,397777E+20	1,647673E+22
198	8,118481E+21	8,118760E+21	1,199174E+20	1,198688E+20	1,623724E+22	2,397862E+20	1,647703E+22
199	8,118658E+21	8,118877E+21	1,198991E+20	1,199318E+20	1,623753E+22	2,398310E+20	1,647737E+22
200	8,119151E+21	8,118562E+21	1,198660E+20	1,198805E+20	1,623771E+22	2,397465E+20	1,647746E+22
201	8,118563E+21	8,119021E+21	1,199338E+20	1,198779E+20	1,623758E+22	2,398117E+20	1,647740E+22
202	8,118765E+21	8,118694E+21	1,198824E+20	1,199287E+20	1,623746E+22	2,398111E+20	1,647727E+22
203	8,118662E+21	8,118357E+21	1,198957E+20	1,198767E+20	1,623702E+22	2,397724E+20	1,647679E+22
204	8,117907E+21	8,118467E+21	1,199397E+20	1,199164E+20	1,623637E+22	2,398561E+20	1,647623E+22
205	8,118151E+21	8,117740E+21	1,198759E+20	1,199351E+20	1,623589E+22	2,398110E+20	1,647570E+22
206	8,117700E+21	8,117596E+21	1,199325E+20	1,198894E+20	1,623530E+22	2,398219E+20	1,647512E+22
207	8,117251E+21	8,117542E+21	1,199332E+20	1,199432E+20	1,623479E+22	2,398764E+20	1,647467E+22
208	8,117463E+21	8,116896E+21	1,198922E+20	1,199247E+20	1,623436E+22	2,398169E+20	1,647418E+22
209	8,116719E+21	8,117151E+21	1,199577E+20	1,199013E+20	1,623387E+22	2,398591E+20	1,647373E+22
210	8,116861E+21	8,116978E+21	1,199179E+20	1,199610E+20	1,623384E+22	2,398789E+20	1,647372E+22
211	8,117204E+21	8,116725E+21	1,199121E+20	1,199087E+20	1,623393E+22	2,398208E+20	1,647375E+22
212	8,116771E+21	8,117292E+21	1,199566E+20	1,199120E+20	1,623406E+22	2,398686E+20	1,647393E+22
213	8,117391E+21	8,117145E+21	1,198955E+20	1,199479E+20	1,623454E+22	2,398433E+20	1,647438E+22
214	8,117489E+21	8,117399E+21	1,199192E+20	1,198836E+20	1,623489E+22	2,398027E+20	1,647469E+22
215	8,117330E+21	8,117922E+21	1,199368E+20	1,199288E+20	1,623525E+22	2,398656E+20	1,647512E+22
216	8,118034E+21	8,117647E+21	1,198751E+20	1,199213E+20	1,623568E+22	2,397965E+20	1,647548E+22
217	8,117802E+21	8,118060E+21	1,199288E+20	1,198767E+20	1,623586E+22	2,398055E+20	1,647567E+22
218	8,118002E+21	8,118196E+21	1,199150E+20	1,199371E+20	1,623620E+22	2,398521E+20	1,647605E+22
219	8,118428E+21	8,117873E+21	1,198824E+20	1,198930E+20	1,623630E+22	2,397753E+20	1,647608E+22
220	8,117751E+21	8,118233E+21	1,199442E+20	1,198924E+20	1,623598E+22	2,398366E+20	1,647582E+22
221	8,117914E+21	8,117857E+21	1,198909E+20	1,199470E+20	1,623577E+22	2,398379E+20	1,647561E+22
222	8,117845E+21	8,117469E+21	1,199042E+20	1,198964E+20	1,623531E+22	2,398006E+20	1,647511E+22
223	8,117165E+21	8,117610E+21	1,199512E+20	1,199271E+20	1,623477E+22	2,398783E+20	1,647465E+22
224	8,117402E+21	8,116927E+21	1,198893E+20	1,199424E+20	1,623433E+22	2,398317E+20	1,647416E+22
225	8,116797E+21	8,116792E+21	1,199471E+20	1,198973E+20	1,623359E+22	2,398444E+20	1,647343E+22
226	8,116346E+21	8,116771E+21	1,199494E+20	1,199527E+20	1,623312E+22	2,399020E+20	1,647302E+22
227	8,116603E+21	8,116113E+21	1,199084E+20	1,199413E+20	1,623272E+22	2,398497E+20	1,647257E+22
228	8,115954E+21	8,116329E+21	1,199665E+20	1,199145E+20	1,623228E+22	2,398809E+20	1,647216E+22
229	8,116198E+21	8,116219E+21	1,199268E+20	1,199734E+20	1,623242E+22	2,399002E+20	1,647232E+22
230	8,116570E+21	8,116026E+21	1,199206E+20	1,199201E+20	1,623260E+22	2,398407E+20	1,647244E+22
231	8,116151E+21	8,116688E+21	1,199660E+20	1,199198E+20	1,623284E+22	2,398858E+20	1,647272E+22
232	8,116713E+21	8,116555E+21	1,199044E+20	1,199570E+20	1,623327E+22	2,398614E+20	1,647313E+22
233	8,116711E+21	8,116735E+21	1,199291E+20	1,198949E+20	1,623345E+22	2,398240E+20	1,647327E+22
234	8,116656E+21	8,117246E+21	1,199506E+20	1,199376E+20	1,623390E+22	2,398882E+20	1,647379E+22

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 $\odot$ Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
235	8,117404E+21	8,116953E+21	1,198906E+20	1,199323E+20	1,623436E+22	2,398229E+20	1,647418E+22
236	8,117159E+21	8,117320E+21	1,199383E+20	1,198852E+20	1,623448E+22	2,398235E+20	1,647430E+22
237	8,117304E+21	8,117478E+21	1,199234E+20	1,199494E+20	1,623478E+22	2,398728E+20	1,647465E+22
238	8,117642E+21	8,117126E+21	1,198898E+20	1,199103E+20	1,623477E+22	2,398002E+20	1,647457E+22
239	8,117002E+21	8,117478E+21	1,199535E+20	1,199068E+20	1,623448E+22	2,398603E+20	1,647434E+22
240	8,117168E+21	8,117081E+21	1,199019E+20	1,199573E+20	1,623425E+22	2,398592E+20	1,647411E+22
241	8,117003E+21	8,116647E+21	1,199196E+20	1,199058E+20	1,623365E+22	2,398254E+20	1,647348E+22
242	8,116339E+21	8,116804E+21	1,199705E+20	1,199329E+20	1,623314E+22	2,399034E+20	1,647305E+22
243	8,116505E+21	8,116122E+21	1,199086E+20	1,199563E+20	1,623263E+22	2,398649E+20	1,647249E+22
244	8,115870E+21	8,115901E+21	1,199575E+20	1,199127E+20	1,623177E+22	2,398702E+20	1,647164E+22
245	8,115494E+21	8,115877E+21	1,199581E+20	1,199710E+20	1,623137E+22	2,399291E+20	1,647130E+22
246	8,115847E+21	8,115270E+21	1,199171E+20	1,199588E+20	1,623112E+22	2,398759E+20	1,647099E+22
247	8,115336E+21	8,115590E+21	1,199760E+20	1,199237E+20	1,623093E+22	2,398997E+20	1,647082E+22
248	8,115568E+21	8,115578E+21	1,199385E+20	1,199783E+20	1,623115E+22	2,399168E+20	1,647106E+22
249	8,115788E+21	8,115412E+21	1,199322E+20	1,199276E+20	1,623120E+22	2,398598E+20	1,647106E+22
250	8,115377E+21	8,116068E+21	1,199802E+20	1,199276E+20	1,623145E+22	2,399078E+20	1,647135E+22
251	8,115969E+21	8,115904E+21	1,199183E+20	1,199715E+20	1,623187E+22	2,398897E+20	1,647176E+22
252	8,116047E+21	8,115981E+21	1,199359E+20	1,199064E+20	1,623203E+22	2,398423E+20	1,647187E+22
253	8,116072E+21	8,116504E+21	1,199589E+20	1,199495E+20	1,623258E+22	2,399084E+20	1,647248E+22
254	8,116813E+21	8,116265E+21	1,198990E+20	1,199447E+20	1,623308E+22	2,398437E+20	1,647292E+22
255	8,116552E+21	8,116676E+21	1,199467E+20	1,198963E+20	1,623323E+22	2,398431E+20	1,647307E+22
256	8,116592E+21	8,116826E+21	1,199330E+20	1,199596E+20	1,623342E+22	2,398926E+20	1,647331E+22
257	8,116805E+21	8,116388E+21	1,199021E+20	1,199231E+20	1,623319E+22	2,398252E+20	1,647302E+22
258	8,116208E+21	8,116702E+21	1,199714E+20	1,199150E+20	1,623291E+22	2,398864E+20	1,647280E+22
259	8,116350E+21	8,116286E+21	1,199217E+20	1,199679E+20	1,623264E+22	2,398896E+20	1,647253E+22
260	8,116129E+21	8,115761E+21	1,199332E+20	1,199165E+20	1,623189E+22	2,398497E+20	1,647174E+22
261	8,115445E+21	8,115913E+21	1,199813E+20	1,199486E+20	1,623136E+22	2,399298E+20	1,647129E+22
262	8,115601E+21	8,115233E+21	1,199179E+20	1,199768E+20	1,623083E+22	2,398947E+20	1,647073E+22
263	8,115106E+21	8,115051E+21	1,199649E+20	1,199297E+20	1,623016E+22	2,398946E+20	1,647005E+22
264	8,114803E+21	8,115100E+21	1,199672E+20	1,199815E+20	1,622990E+22	2,399487E+20	1,646985E+22
265	8,115105E+21	8,114546E+21	1,199308E+20	1,199674E+20	1,622965E+22	2,398983E+20	1,646955E+22
266	8,114632E+21	8,114945E+21	1,199931E+20	1,199281E+20	1,622958E+22	2,399212E+20	1,646950E+22
267	8,114787E+21	8,114954E+21	1,199560E+20	1,199890E+20	1,622974E+22	2,399450E+20	1,646969E+22
268	8,114964E+21	8,114674E+21	1,199410E+20	1,199406E+20	1,622964E+22	2,398816E+20	1,646952E+22
269	8,114671E+21	8,115280E+21	1,199868E+20	1,199439E+20	1,622995E+22	2,399306E+20	1,646988E+22
270	8,115340E+21	8,115146E+21	1,199254E+20	1,199859E+20	1,623049E+22	2,399113E+20	1,647040E+22
271	8,115551E+21	8,115306E+21	1,199427E+20	1,199148E+20	1,623086E+22	2,398576E+20	1,647071E+22
272	8,115528E+21	8,115909E+21	1,199683E+20	1,199537E+20	1,623144E+22	2,399221E+20	1,647136E+22
273	8,116067E+21	8,115684E+21	1,199111E+20	1,199525E+20	1,623175E+22	2,398635E+20	1,647161E+22
274	8,115783E+21	8,116055E+21	1,199627E+20	1,199052E+20	1,623184E+22	2,398678E+20	1,647171E+22
275	8,115777E+21	8,116132E+21	1,199498E+20	1,199728E+20	1,623191E+22	2,399226E+20	1,647183E+22
276	8,115980E+21	8,115542E+21	1,199134E+20	1,199364E+20	1,623152E+22	2,398498E+20	1,647137E+22
277	8,115439E+21	8,115794E+21	1,199831E+20	1,199296E+20	1,623123E+22	2,399128E+20	1,647115E+22
278	8,115529E+21	8,115408E+21	1,199327E+20	1,199838E+20	1,623094E+22	2,399165E+20	1,647085E+22
279	8,115328E+21	8,114907E+21	1,199420E+20	1,199334E+20	1,623024E+22	2,398755E+20	1,647011E+22
280	8,114620E+21	8,115069E+21	1,199895E+20	1,199628E+20	1,622969E+22	2,399524E+20	1,646964E+22
281	8,114740E+21	8,114400E+21	1,199306E+20	1,199917E+20	1,622914E+22	2,399222E+20	1,646906E+22
282	8,114359E+21	8,114274E+21	1,199823E+20	1,199375E+20	1,622863E+22	2,399198E+20	1,646855E+22
283	8,114055E+21	8,114397E+21	1,199868E+20	1,199892E+20	1,622845E+22	2,399760E+20	1,646843E+22

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 ° Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
284	8,114293E+21	8,113798E+21	1,199440E+20	1,199754E+20	1,622809E+22	2,399194E+20	1,646801E+22
285	8,113817E+21	8,114183E+21	1,200028E+20	1,199412E+20	1,622800E+22	2,399439E+20	1,646794E+22
286	8,113977E+21	8,114206E+21	1,199637E+20	1,200050E+20	1,622818E+22	2,399687E+20	1,646815E+22
287	8,114323E+21	8,113940E+21	1,199459E+20	1,199547E+20	1,622826E+22	2,399006E+20	1,646816E+22
288	8,114125E+21	8,114602E+21	1,199932E+20	1,199516E+20	1,622873E+22	2,399448E+20	1,646867E+22
289	8,114751E+21	8,114531E+21	1,199379E+20	1,199923E+20	1,622928E+22	2,399302E+20	1,646921E+22
290	8,114962E+21	8,114759E+21	1,199583E+20	1,199187E+20	1,622972E+22	2,398770E+20	1,646960E+22
291	8,114816E+21	8,115362E+21	1,199840E+20	1,199640E+20	1,623018E+22	2,399481E+20	1,647013E+22
292	8,115248E+21	8,114964E+21	1,199206E+20	1,199659E+20	1,623021E+22	2,398865E+20	1,647010E+22
293	8,115029E+21	8,115222E+21	1,199718E+20	1,199230E+20	1,623025E+22	2,398948E+20	1,647015E+22
294	8,115025E+21	8,115286E+21	1,199597E+20	1,199876E+20	1,623031E+22	2,399472E+20	1,647026E+22
295	8,115301E+21	8,114708E+21	1,199228E+20	1,199495E+20	1,623001E+22	2,398723E+20	1,646988E+22
296	8,114704E+21	8,114988E+21	1,199925E+20	1,199390E+20	1,622969E+22	2,399316E+20	1,646962E+22
297	8,114631E+21	8,114615E+21	1,199458E+20	1,199964E+20	1,622925E+22	2,399421E+20	1,646919E+22
298	8,114473E+21	8,114127E+21	1,199583E+20	1,199450E+20	1,622860E+22	2,399033E+20	1,646850E+22
299	8,113782E+21	8,114287E+21	1,200061E+20	1,199753E+20	1,622807E+22	2,399815E+20	1,646805E+22
300	8,113893E+21	8,113549E+21	1,199451E+20	1,200027E+20	1,622744E+22	2,399479E+20	1,646739E+22
301	8,113602E+21	8,113426E+21	1,199957E+20	1,199503E+20	1,622703E+22	2,399461E+20	1,646697E+22
302	8,113235E+21	8,113612E+21	1,199990E+20	1,200011E+20	1,622685E+22	2,400001E+20	1,646685E+22
303	8,113513E+21	8,113042E+21	1,199519E+20	1,199905E+20	1,622655E+22	2,399424E+20	1,646650E+22
304	8,113073E+21	8,113417E+21	1,200084E+20	1,199531E+20	1,622649E+22	2,399615E+20	1,646645E+22
305	8,113237E+21	8,113476E+21	1,199740E+20	1,200164E+20	1,622671E+22	2,399904E+20	1,646670E+22
306	8,113726E+21	8,113302E+21	1,199601E+20	1,199599E+20	1,622703E+22	2,399200E+20	1,646695E+22
307	8,113536E+21	8,114029E+21	1,200084E+20	1,199580E+20	1,622756E+22	2,399664E+20	1,646753E+22
308	8,114055E+21	8,113907E+21	1,199495E+20	1,200000E+20	1,622796E+22	2,399496E+20	1,646791E+22
309	8,114260E+21	8,114076E+21	1,199664E+20	1,199338E+20	1,622834E+22	2,399002E+20	1,646824E+22
310	8,114064E+21	8,114645E+21	1,199913E+20	1,199793E+20	1,622871E+22	2,399706E+20	1,646868E+22
311	8,114590E+21	8,114206E+21	1,199256E+20	1,199813E+20	1,622880E+22	2,399070E+20	1,646870E+22
312	8,114395E+21	8,114445E+21	1,199794E+20	1,199332E+20	1,622884E+22	2,399125E+20	1,646875E+22
313	8,114295E+21	8,114537E+21	1,199736E+20	1,199961E+20	1,622883E+22	2,399697E+20	1,646880E+22
314	8,114536E+21	8,113997E+21	1,199411E+20	1,199570E+20	1,622853E+22	2,398981E+20	1,646843E+22
315	8,113837E+21	8,114254E+21	1,200090E+20	1,199517E+20	1,622809E+22	2,399607E+20	1,646805E+22
316	8,113696E+21	8,113730E+21	1,199590E+20	1,200108E+20	1,622743E+22	2,399698E+20	1,646740E+22
317	8,113639E+21	8,113186E+21	1,199706E+20	1,199624E+20	1,622682E+22	2,399330E+20	1,646676E+22
318	8,112969E+21	8,113413E+21	1,200181E+20	1,199876E+20	1,622638E+22	2,400057E+20	1,646639E+22
319	8,113153E+21	8,112729E+21	1,199565E+20	1,200149E+20	1,622588E+22	2,399714E+20	1,646585E+22
320	8,112814E+21	8,112660E+21	1,200051E+20	1,199600E+20	1,622547E+22	2,399651E+20	1,646544E+22
321	8,112347E+21	8,112877E+21	1,200108E+20	1,200126E+20	1,622522E+22	2,400234E+20	1,646525E+22
322	8,112715E+21	8,112336E+21	1,199658E+20	1,200010E+20	1,622505E+22	2,399668E+20	1,646502E+22
323	8,112367E+21	8,112731E+21	1,200201E+20	1,199640E+20	1,622510E+22	2,399841E+20	1,646508E+22
324	8,112565E+21	8,112740E+21	1,199857E+20	1,200253E+20	1,622530E+22	2,400109E+20	1,646532E+22
325	8,113154E+21	8,112603E+21	1,199704E+20	1,199711E+20	1,622576E+22	2,399415E+20	1,646570E+22
326	8,112892E+21	8,113402E+21	1,200171E+20	1,199690E+20	1,622629E+22	2,399861E+20	1,646628E+22
327	8,113409E+21	8,113268E+21	1,199554E+20	1,200145E+20	1,622668E+22	2,399699E+20	1,646665E+22
328	8,113612E+21	8,113380E+21	1,199709E+20	1,199466E+20	1,622699E+22	2,399175E+20	1,646691E+22
329	8,113357E+21	8,113933E+21	1,200024E+20	1,199888E+20	1,622729E+22	2,399912E+20	1,646728E+22
330	8,113931E+21	8,113542E+21	1,199423E+20	1,199861E+20	1,622747E+22	2,399284E+20	1,646740E+22
331	8,113682E+21	8,113768E+21	1,199964E+20	1,199398E+20	1,622745E+22	2,399362E+20	1,646739E+22
332	8,113408E+21	8,113751E+21	1,199890E+20	1,200049E+20	1,622716E+22	2,399939E+20	1,646715E+22

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 $\odot$ Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
333	8,113659E+21	8,113142E+21	1,199535E+20	1,199744E+20	1,622680E+22	2,399279E+20	1,646673E+22
334	8,112945E+21	8,113369E+21	1,200185E+20	1,199686E+20	1,622631E+22	2,399870E+20	1,646630E+22
335	8,112918E+21	8,112842E+21	1,199676E+20	1,200278E+20	1,622576E+22	2,399954E+20	1,646576E+22
336	8,112912E+21	8,112325E+21	1,199802E+20	1,199750E+20	1,622524E+22	2,399552E+20	1,646519E+22
337	8,112157E+21	8,112623E+21	1,200323E+20	1,199968E+20	1,622478E+22	2,400291E+20	1,646481E+22
338	8,112318E+21	8,112028E+21	1,199741E+20	1,200239E+20	1,622435E+22	2,399980E+20	1,646434E+22
339	8,111936E+21	8,111931E+21	1,200190E+20	1,199731E+20	1,622387E+22	2,399921E+20	1,646386E+22
340	8,111457E+21	8,112026E+21	1,200227E+20	1,200256E+20	1,622348E+22	2,400483E+20	1,646353E+22
341	8,112004E+21	8,111490E+21	1,199763E+20	1,200161E+20	1,622349E+22	2,399924E+20	1,646349E+22
342	8,111733E+21	8,111986E+21	1,200286E+20	1,199739E+20	1,622372E+22	2,400025E+20	1,646372E+22
343	8,112016E+21	8,112079E+21	1,199941E+20	1,200357E+20	1,622409E+22	2,400298E+20	1,646412E+22
344	8,112550E+21	8,112007E+21	1,199763E+20	1,199797E+20	1,622456E+22	2,399560E+20	1,646451E+22
345	8,112187E+21	8,112822E+21	1,200264E+20	1,199784E+20	1,622501E+22	2,400048E+20	1,646501E+22
346	8,112728E+21	8,112693E+21	1,199692E+20	1,200211E+20	1,622542E+22	2,399903E+20	1,646541E+22
347	8,112930E+21	8,112760E+21	1,199841E+20	1,199553E+20	1,622569E+22	2,399394E+20	1,646563E+22
348	8,112620E+21	8,113181E+21	1,200173E+20	1,199961E+20	1,622580E+22	2,400134E+20	1,646581E+22
349	8,113211E+21	8,112753E+21	1,199565E+20	1,199985E+20	1,622596E+22	2,399550E+20	1,646592E+22
350	8,112867E+21	8,112989E+21	1,200065E+20	1,199542E+20	1,622586E+22	2,399607E+20	1,646582E+22
351	8,112612E+21	8,112906E+21	1,199965E+20	1,200233E+20	1,622552E+22	2,400198E+20	1,646554E+22
352	8,112880E+21	8,112265E+21	1,199599E+20	1,199913E+20	1,622515E+22	2,399511E+20	1,646510E+22
353	8,112157E+21	8,112525E+21	1,200298E+20	1,199812E+20	1,622468E+22	2,400110E+20	1,646469E+22
354	8,112163E+21	8,112093E+21	1,199860E+20	1,200349E+20	1,622426E+22	2,400209E+20	1,646428E+22
355	8,112093E+21	8,111605E+21	1,199977E+20	1,199844E+20	1,622370E+22	2,399822E+20	1,646368E+22
356	8,111193E+21	8,111799E+21	1,200478E+20	1,200069E+20	1,622299E+22	2,400546E+20	1,646305E+22
357	8,111408E+21	8,111156E+21	1,199871E+20	1,200407E+20	1,622256E+22	2,400278E+20	1,646259E+22
358	8,111080E+21	8,111071E+21	1,200272E+20	1,199882E+20	1,622215E+22	2,400155E+20	1,646217E+22
359	8,110782E+21	8,111193E+21	1,200302E+20	1,200400E+20	1,622198E+22	2,400702E+20	1,646205E+22
360	8,111429E+21	8,110758E+21	1,199842E+20	1,200259E+20	1,622219E+22	2,400101E+20	1,646220E+22
361	8,111119E+21	8,111369E+21	1,200397E+20	1,199808E+20	1,622249E+22	2,400205E+20	1,646251E+22
362	8,111364E+21	8,111581E+21	1,200099E+20	1,200417E+20	1,622294E+22	2,400517E+20	1,646300E+22
363	8,111838E+21	8,111460E+21	1,199880E+20	1,199895E+20	1,622330E+22	2,399775E+20	1,646328E+22
364	8,111398E+21	8,112099E+21	1,200386E+20	1,199877E+20	1,622350E+22	2,400264E+20	1,646352E+22
365	8,112035E+21	8,111936E+21	1,199810E+20	1,200326E+20	1,622397E+22	2,400136E+20	1,646398E+22
366	8,112235E+21	8,112012E+21	1,199944E+20	1,199658E+20	1,622425E+22	2,399602E+20	1,646421E+22
367	8,111953E+21	8,112416E+21	1,200266E+20	1,200094E+20	1,622437E+22	2,400360E+20	1,646441E+22
368	8,112484E+21	8,111998E+21	1,199632E+20	1,200129E+20	1,622448E+22	2,399762E+20	1,646446E+22
369	8,112074E+21	8,112219E+21	1,200146E+20	1,199692E+20	1,622429E+22	2,399838E+20	1,646428E+22
370	8,111858E+21	8,112179E+21	1,200101E+20	1,200341E+20	1,622404E+22	2,400442E+20	1,646408E+22
371	8,112124E+21	8,111529E+21	1,199743E+20	1,200025E+20	1,622365E+22	2,399769E+20	1,646363E+22
372	8,111316E+21	8,111685E+21	1,200477E+20	1,199894E+20	1,622300E+22	2,400371E+20	1,646304E+22
373	8,111312E+21	8,111256E+21	1,200041E+20	1,200468E+20	1,622257E+22	2,400509E+20	1,646262E+22
374	8,111144E+21	8,110774E+21	1,200113E+20	1,200001E+20	1,622192E+22	2,400114E+20	1,646193E+22
375	8,110318E+21	8,110882E+21	1,200566E+20	1,200254E+20	1,622120E+22	2,400820E+20	1,646128E+22
376	8,110616E+21	8,110255E+21	1,199943E+20	1,200565E+20	1,622087E+22	2,400508E+20	1,646092E+22
377	8,110378E+21	8,110272E+21	1,200360E+20	1,199988E+20	1,622065E+22	2,400348E+20	1,646068E+22
378	8,110173E+21	8,110557E+21	1,200464E+20	1,200444E+20	1,622073E+22	2,400908E+20	1,646082E+22
379	8,110760E+21	8,110217E+21	1,199991E+20	1,200317E+20	1,622098E+22	2,400308E+20	1,646101E+22
380	8,110329E+21	8,110743E+21	1,200528E+20	1,199887E+20	1,622107E+22	2,400414E+20	1,646111E+22
381	8,110610E+21	8,110896E+21	1,200220E+20	1,200542E+20	1,622151E+22	2,400761E+20	1,646158E+22

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 $\odot$ Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
382	8,111094E+21	8,110759E+21	1,199953E+20	1,200030E+20	1,622185E+22	2,399983E+20	1,646185E+22
383	8,110789E+21	8,111327E+21	1,200452E+20	1,200017E+20	1,622212E+22	2,400469E+20	1,646216E+22
384	8,111449E+21	8,111202E+21	1,199878E+20	1,200437E+20	1,622265E+22	2,400315E+20	1,646268E+22
385	8,111590E+21	8,111336E+21	1,200031E+20	1,199768E+20	1,622293E+22	2,399799E+20	1,646291E+22
386	8,111261E+21	8,111792E+21	1,200403E+20	1,200197E+20	1,622305E+22	2,400600E+20	1,646311E+22
387	8,111725E+21	8,111325E+21	1,199756E+20	1,200256E+20	1,622305E+22	2,400012E+20	1,646305E+22
388	8,111245E+21	8,111387E+21	1,200290E+20	1,199806E+20	1,622263E+22	2,400096E+20	1,646264E+22
389	8,111083E+21	8,111337E+21	1,200265E+20	1,200445E+20	1,622242E+22	2,400710E+20	1,646249E+22
390	8,111282E+21	8,110714E+21	1,199898E+20	1,200143E+20	1,622200E+22	2,400041E+20	1,646200E+22
391	8,110463E+21	8,110816E+21	1,200607E+20	1,200041E+20	1,622128E+22	2,400648E+20	1,646134E+22
392	8,110405E+21	8,110391E+21	1,200137E+20	1,200624E+20	1,622080E+22	2,400761E+20	1,646087E+22
393	8,110239E+21	8,109894E+21	1,200208E+20	1,200161E+20	1,622013E+22	2,400370E+20	1,646017E+22
394	8,109528E+21	8,110082E+21	1,200698E+20	1,200363E+20	1,621961E+22	2,401061E+20	1,645972E+22
395	8,109905E+21	8,109519E+21	1,200080E+20	1,200662E+20	1,621942E+22	2,400742E+20	1,645950E+22
396	8,109638E+21	8,109508E+21	1,200510E+20	1,200058E+20	1,621915E+22	2,400569E+20	1,645920E+22
397	8,109461E+21	8,109879E+21	1,200613E+20	1,200542E+20	1,621934E+22	2,401155E+20	1,645946E+22
398	8,109968E+21	8,109574E+21	1,200095E+20	1,200454E+20	1,621954E+22	2,400549E+20	1,645960E+22
399	8,109618E+21	8,109987E+21	1,200587E+20	1,200052E+20	1,621960E+22	2,400639E+20	1,645967E+22
400	8,109962E+21	8,110146E+21	1,200268E+20	1,200668E+20	1,622011E+22	2,400936E+20	1,646020E+22
401	8,110489E+21	8,110058E+21	1,200019E+20	1,200126E+20	1,622055E+22	2,400146E+20	1,646056E+22
402	8,110234E+21	8,110726E+21	1,200586E+20	1,200075E+20	1,622096E+22	2,400662E+20	1,646103E+22
403	8,110799E+21	8,110641E+21	1,200009E+20	1,200508E+20	1,622144E+22	2,400518E+20	1,646149E+22
404	8,110798E+21	8,110647E+21	1,200164E+20	1,199866E+20	1,622144E+22	2,400031E+20	1,646145E+22
405	8,110492E+21	8,111045E+21	1,200536E+20	1,200317E+20	1,622154E+22	2,400854E+20	1,646162E+22
406	8,110917E+21	8,110562E+21	1,199875E+20	1,200394E+20	1,622148E+22	2,400269E+20	1,646151E+22
407	8,110523E+21	8,110520E+21	1,200404E+20	1,199962E+20	1,622104E+22	2,400366E+20	1,646108E+22
408	8,110323E+21	8,110492E+21	1,200381E+20	1,200562E+20	1,622082E+22	2,400943E+20	1,646091E+22
409	8,110432E+21	8,109911E+21	1,200018E+20	1,200292E+20	1,622034E+22	2,400310E+20	1,646037E+22
410	8,109599E+21	8,110018E+21	1,200749E+20	1,200179E+20	1,621962E+22	2,400928E+20	1,645971E+22
411	8,109510E+21	8,109558E+21	1,200262E+20	1,200760E+20	1,621907E+22	2,401021E+20	1,645917E+22
412	8,109359E+21	8,108976E+21	1,200343E+20	1,200280E+20	1,621833E+22	2,400624E+20	1,645840E+22
413	8,108782E+21	8,109228E+21	1,200844E+20	1,200455E+20	1,621801E+22	2,401300E+20	1,645814E+22
414	8,109139E+21	8,108790E+21	1,200230E+20	1,200769E+20	1,621793E+22	2,400998E+20	1,645803E+22
415	8,108917E+21	8,108766E+21	1,200607E+20	1,200198E+20	1,621768E+22	2,400805E+20	1,645776E+22
416	8,108721E+21	8,109170E+21	1,200678E+20	1,200671E+20	1,621789E+22	2,401349E+20	1,645803E+22
417	8,109244E+21	8,108888E+21	1,200149E+20	1,200586E+20	1,621813E+22	2,400736E+20	1,645821E+22
418	8,109003E+21	8,109344E+21	1,200683E+20	1,200139E+20	1,621835E+22	2,400822E+20	1,645843E+22
419	8,109367E+21	8,109540E+21	1,200385E+20	1,200721E+20	1,621891E+22	2,401106E+20	1,645902E+22
420	8,109823E+21	8,109392E+21	1,200167E+20	1,200184E+20	1,621921E+22	2,400351E+20	1,645925E+22
421	8,109559E+21	8,110082E+21	1,200731E+20	1,200168E+20	1,621964E+22	2,400899E+20	1,645973E+22
422	8,110013E+21	8,109981E+21	1,200133E+20	1,200654E+20	1,621999E+22	2,400787E+20	1,646007E+22
423	8,110069E+21	8,109825E+21	1,200241E+20	1,200047E+20	1,621989E+22	2,400289E+20	1,645992E+22
424	8,109796E+21	8,110220E+21	1,200602E+20	1,200451E+20	1,622002E+22	2,401053E+20	1,646012E+22
425	8,110204E+21	8,109768E+21	1,199972E+20	1,200510E+20	1,621997E+22	2,400482E+20	1,646002E+22
426	8,109791E+21	8,109785E+21	1,200561E+20	1,200063E+20	1,621958E+22	2,400624E+20	1,645964E+22
427	8,109468E+21	8,109765E+21	1,200522E+20	1,200657E+20	1,621923E+22	2,401179E+20	1,645935E+22
428	8,109448E+21	8,109034E+21	1,200173E+20	1,200429E+20	1,621848E+22	2,400603E+20	1,645854E+22
429	8,108700E+21	8,109107E+21	1,200882E+20	1,200314E+20	1,621781E+22	2,401196E+20	1,645793E+22
430	8,108642E+21	8,108686E+21	1,200394E+20	1,200902E+20	1,621733E+22	2,401296E+20	1,645746E+22

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 $\odot$ Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
431	8,108629E+21	8,108068E+21	1,200453E+20	1,200427E+20	1,621670E+22	2,400881E+20	1,645679E+22
432	8,108087E+21	8,108437E+21	1,200936E+20	1,200564E+20	1,621652E+22	2,401500E+20	1,645667E+22
433	8,108384E+21	8,108106E+21	1,200330E+20	1,200903E+20	1,621649E+22	2,401234E+20	1,645661E+22
434	8,108190E+21	8,108123E+21	1,200718E+20	1,200325E+20	1,621631E+22	2,401043E+20	1,645642E+22
435	8,107995E+21	8,108511E+21	1,200778E+20	1,200754E+20	1,621651E+22	2,401532E+20	1,645666E+22
436	8,108509E+21	8,108155E+21	1,200275E+20	1,200659E+20	1,621666E+22	2,400934E+20	1,645676E+22
437	8,108372E+21	8,108649E+21	1,200817E+20	1,200194E+20	1,621702E+22	2,401011E+20	1,645712E+22
438	8,108670E+21	8,108921E+21	1,200530E+20	1,200810E+20	1,621759E+22	2,401340E+20	1,645773E+22
439	8,109147E+21	8,108694E+21	1,200255E+20	1,200330E+20	1,621784E+22	2,400586E+20	1,645790E+22
440	8,108875E+21	8,109361E+21	1,200781E+20	1,200315E+20	1,621824E+22	2,401096E+20	1,645835E+22
441	8,109321E+21	8,109269E+21	1,200192E+20	1,200801E+20	1,621859E+22	2,400994E+20	1,645869E+22
442	8,109455E+21	8,109123E+21	1,200338E+20	1,200170E+20	1,621858E+22	2,400508E+20	1,645863E+22
443	8,109123E+21	8,109518E+21	1,200727E+20	1,200506E+20	1,621864E+22	2,401233E+20	1,645876E+22
444	8,109382E+21	8,109004E+21	1,200141E+20	1,200595E+20	1,621839E+22	2,400736E+20	1,645846E+22
445	8,108923E+21	8,108993E+21	1,200730E+20	1,200180E+20	1,621792E+22	2,400911E+20	1,645801E+22
446	8,108493E+21	8,108926E+21	1,200675E+20	1,200816E+20	1,621742E+22	2,401491E+20	1,645757E+22
447	8,108570E+21	8,108038E+21	1,200281E+20	1,200621E+20	1,621661E+22	2,400902E+20	1,645670E+22
448	8,107920E+21	8,108147E+21	1,200951E+20	1,200453E+20	1,621607E+22	2,401404E+20	1,645621E+22
449	8,107896E+21	8,107850E+21	1,200503E+20	1,201022E+20	1,621575E+22	2,401525E+20	1,645590E+22
450	8,107917E+21	8,107363E+21	1,200593E+20	1,200536E+20	1,621528E+22	2,401129E+20	1,645539E+22
451	8,107297E+21	8,107792E+21	1,201057E+20	1,200634E+20	1,621509E+22	2,401691E+20	1,645526E+22
452	8,107504E+21	8,107380E+21	1,200479E+20	1,201009E+20	1,621488E+22	2,401488E+20	1,645503E+22
453	8,107403E+21	8,107391E+21	1,200844E+20	1,200425E+20	1,621479E+22	2,401269E+20	1,645492E+22
454	8,107237E+21	8,107802E+21	1,200908E+20	1,200860E+20	1,621504E+22	2,401768E+20	1,645522E+22
455	8,107866E+21	8,107373E+21	1,200375E+20	1,200784E+20	1,621524E+22	2,401159E+20	1,645536E+22
456	8,107779E+21	8,107947E+21	1,200873E+20	1,200311E+20	1,621573E+22	2,401184E+20	1,645584E+22
457	8,108027E+21	8,108283E+21	1,200602E+20	1,200953E+20	1,621631E+22	2,401555E+20	1,645647E+22
458	8,108522E+21	8,108065E+21	1,200336E+20	1,200474E+20	1,621659E+22	2,400810E+20	1,645667E+22
459	8,108245E+21	8,108709E+21	1,200856E+20	1,200393E+20	1,621695E+22	2,401249E+20	1,645708E+22
460	8,108611E+21	8,108541E+21	1,200333E+20	1,200863E+20	1,621715E+22	2,401195E+20	1,645727E+22
461	8,108750E+21	8,108416E+21	1,200504E+20	1,200234E+20	1,621717E+22	2,400737E+20	1,645724E+22
462	8,108276E+21	8,108819E+21	1,200906E+20	1,200603E+20	1,621710E+22	2,401509E+20	1,645725E+22
463	8,108489E+21	8,108150E+21	1,200269E+20	1,200760E+20	1,621664E+22	2,401030E+20	1,645674E+22
464	8,108048E+21	8,108078E+21	1,200801E+20	1,200353E+20	1,621613E+22	2,401154E+20	1,645624E+22
465	8,107646E+21	8,108016E+21	1,200754E+20	1,200981E+20	1,621566E+22	2,401735E+20	1,645584E+22
466	8,107840E+21	8,107192E+21	1,200398E+20	1,200766E+20	1,621503E+22	2,401165E+20	1,645515E+22
467	8,107204E+21	8,107369E+21	1,201070E+20	1,200519E+20	1,621457E+22	2,401589E+20	1,645473E+22
468	8,107062E+21	8,107098E+21	1,200685E+20	1,201115E+20	1,621416E+22	2,401800E+20	1,645434E+22
469	8,107061E+21	8,106653E+21	1,200760E+20	1,200657E+20	1,621371E+22	2,401416E+20	1,645386E+22
470	8,106384E+21	8,107052E+21	1,201201E+20	1,200775E+20	1,621344E+22	2,401977E+20	1,645363E+22
471	8,106709E+21	8,106508E+21	1,200576E+20	1,201167E+20	1,621322E+22	2,401743E+20	1,645339E+22
472	8,106734E+21	8,106552E+21	1,200895E+20	1,200539E+20	1,621329E+22	2,401434E+20	1,645343E+22
473	8,106605E+21	8,107080E+21	1,200995E+20	1,200964E+20	1,621369E+22	2,401959E+20	1,645388E+22
474	8,107287E+21	8,106771E+21	1,200475E+20	1,200896E+20	1,621406E+22	2,401371E+20	1,645419E+22
475	8,107150E+21	8,107371E+21	1,200943E+20	1,200380E+20	1,621452E+22	2,401323E+20	1,645465E+22
476	8,107310E+21	8,107651E+21	1,200727E+20	1,201045E+20	1,621496E+22	2,401773E+20	1,645514E+22
477	8,107851E+21	8,107433E+21	1,200461E+20	1,200553E+20	1,621528E+22	2,401014E+20	1,645538E+22
478	8,107530E+21	8,108052E+21	1,201009E+20	1,200474E+20	1,621558E+22	2,401483E+20	1,645573E+22
479	8,107895E+21	8,107759E+21	1,200470E+20	1,200967E+20	1,621565E+22	2,401437E+20	1,645580E+22

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	8,107986E+21	8,107630E+21	1,200599E+20	1,200376E+20	1,621562E+22	2,400975E+20	1,645571E+22
481	8,107421E+21	8,108014E+21	1,201006E+20	1,200779E+20	1,621543E+22	2,401786E+20	1,645561E+22
482	8,107671E+21	8,107303E+21	1,200372E+20	1,200954E+20	1,621497E+22	2,401326E+20	1,645511E+22
483	8,107272E+21	8,107203E+21	1,200878E+20	1,200462E+20	1,621447E+22	2,401340E+20	1,645461E+22
484	8,106834E+21	8,107137E+21	1,200909E+20	1,201070E+20	1,621397E+22	2,401979E+20	1,645417E+22
485	8,107042E+21	8,106419E+21	1,200583E+20	1,200851E+20	1,621346E+22	2,401434E+20	1,645360E+22
486	8,106314E+21	8,106646E+21	1,201251E+20	1,200636E+20	1,621296E+22	2,401887E+20	1,645315E+22
487	8,106152E+21	8,106252E+21	1,200829E+20	1,201275E+20	1,621240E+22	2,402104E+20	1,645261E+22
488	8,106213E+21	8,105799E+21	1,200830E+20	1,200828E+20	1,621201E+22	2,401658E+20	1,645218E+22
489	8,105610E+21	8,106220E+21	1,201269E+20	1,200918E+20	1,621183E+22	2,402187E+20	1,645205E+22
490	8,106061E+21	8,105750E+21	1,200671E+20	1,201288E+20	1,621181E+22	2,401959E+20	1,645201E+22
491	8,106144E+21	8,105883E+21	1,200971E+20	1,200579E+20	1,621203E+22	2,401550E+20	1,645218E+22
492	8,105929E+21	8,106456E+21	1,201145E+20	1,201037E+20	1,621239E+22	2,402182E+20	1,645260E+22
493	8,106589E+21	8,106215E+21	1,200625E+20	1,200987E+20	1,621280E+22	2,401612E+20	1,645297E+22
494	8,106425E+21	8,106765E+21	1,201075E+20	1,200499E+20	1,621319E+22	2,401574E+20	1,645335E+22
495	8,106631E+21	8,106894E+21	1,200835E+20	1,201162E+20	1,621352E+22	2,401996E+20	1,645372E+22
496	8,107217E+21	8,106686E+21	1,200525E+20	1,200662E+20	1,621390E+22	2,401187E+20	1,645402E+22
497	8,106840E+21	8,107330E+21	1,201109E+20	1,200590E+20	1,621417E+22	2,401699E+20	1,645434E+22
498	8,107168E+21	8,107066E+21	1,200580E+20	1,201108E+20	1,621423E+22	2,401688E+20	1,645440E+22
499	8,107201E+21	8,106883E+21	1,200679E+20	1,200492E+20	1,621408E+22	2,401170E+20	1,645420E+22
500	8,106566E+21	8,107176E+21	1,201142E+20	1,200912E+20	1,621374E+22	2,402054E+20	1,645395E+22
501	8,106865E+21	8,106494E+21	1,200523E+20	1,201071E+20	1,621336E+22	2,401594E+20	1,645352E+22
502	8,106464E+21	8,106392E+21	1,201043E+20	1,200579E+20	1,621286E+22	2,401621E+20	1,645302E+22
503	8,106032E+21	8,106259E+21	1,201064E+20	1,201193E+20	1,621229E+22	2,402257E+20	1,645252E+22
504	8,106208E+21	8,105589E+21	1,200697E+20	1,201012E+20	1,621180E+22	2,401708E+20	1,645197E+22
505	8,105412E+21	8,105817E+21	1,201360E+20	1,200812E+20	1,621123E+22	2,402171E+20	1,645145E+22
506	8,105332E+21	8,105417E+21	1,200934E+20	1,201445E+20	1,621075E+22	2,402378E+20	1,645099E+22
507	8,105467E+21	8,104969E+21	1,200904E+20	1,200906E+20	1,621044E+22	2,401810E+20	1,645062E+22
508	8,104870E+21	8,105432E+21	1,201413E+20	1,200980E+20	1,621030E+22	2,402393E+20	1,645054E+22
509	8,105353E+21	8,105114E+21	1,200844E+20	1,201341E+20	1,621047E+22	2,402185E+20	1,645069E+22
510	8,105393E+21	8,105297E+21	1,201118E+20	1,200674E+20	1,621069E+22	2,401793E+20	1,645087E+22
511	8,105193E+21	8,105752E+21	1,201260E+20	1,201170E+20	1,621095E+22	2,402430E+20	1,645119E+22
512	8,105910E+21	8,105510E+21	1,200677E+20	1,201134E+20	1,621142E+22	2,401811E+20	1,645160E+22
513	8,105784E+21	8,106059E+21	1,201134E+20	1,200636E+20	1,621184E+22	2,401769E+20	1,645202E+22
514	8,106057E+21	8,106209E+21	1,200923E+20	1,201275E+20	1,621227E+22	2,402198E+20	1,645249E+22
515	8,106607E+21	8,106023E+21	1,200599E+20	1,200729E+20	1,621263E+22	2,401327E+20	1,645276E+22
516	8,106083E+21	8,106635E+21	1,201253E+20	1,200704E+20	1,621272E+22	2,401956E+20	1,645291E+22
517	8,106340E+21	8,106378E+21	1,200735E+20	1,201232E+20	1,621272E+22	2,401967E+20	1,645291E+22
518	8,106369E+21	8,106098E+21	1,200821E+20	1,200643E+20	1,621247E+22	2,401465E+20	1,645261E+22
519	8,105780E+21	8,106235E+21	1,201271E+20	1,201038E+20	1,621202E+22	2,402309E+20	1,645225E+22
520	8,106111E+21	8,105615E+21	1,200635E+20	1,201196E+20	1,621173E+22	2,401831E+20	1,645191E+22
521	8,105663E+21	8,105568E+21	1,201169E+20	1,200716E+20	1,621123E+22	2,401886E+20	1,645142E+22
522	8,105192E+21	8,105473E+21	1,201194E+20	1,201341E+20	1,621067E+22	2,402535E+20	1,645092E+22
523	8,105339E+21	8,104793E+21	1,200791E+20	1,201132E+20	1,621013E+22	2,401923E+20	1,645032E+22
524	8,104519E+21	8,104970E+21	1,201498E+20	1,200932E+20	1,620949E+22	2,402430E+20	1,644973E+22
525	8,104499E+21	8,104649E+21	1,201095E+20	1,201523E+20	1,620915E+22	2,402618E+20	1,644941E+22
526	8,104693E+21	8,104220E+21	1,201064E+20	1,200999E+20	1,620891E+22	2,402064E+20	1,644912E+22
527	8,104137E+21	8,104631E+21	1,201548E+20	1,201085E+20	1,620877E+22	2,402633E+20	1,644903E+22
528	8,104639E+21	8,104410E+21	1,200933E+20	1,201495E+20	1,620905E+22	2,402429E+20	1,644929E+22

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 $\odot$ Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
529	8,104682E+21	8,104600E+21	1,201181E+20	1,200848E+20	1,620928E+22	2,402028E+20	1,644948E+22
530	8,104590E+21	8,105055E+21	1,201320E+20	1,201322E+20	1,620964E+22	2,402641E+20	1,644991E+22
531	8,105352E+21	8,104839E+21	1,200718E+20	1,201192E+20	1,621019E+22	2,401909E+20	1,645038E+22
532	8,105167E+21	8,105400E+21	1,201259E+20	1,200698E+20	1,621057E+22	2,401957E+20	1,645076E+22
533	8,105362E+21	8,105647E+21	1,201091E+20	1,201318E+20	1,621101E+22	2,402409E+20	1,645125E+22
534	8,105812E+21	8,105407E+21	1,200757E+20	1,200841E+20	1,621122E+22	2,401598E+20	1,645138E+22
535	8,105271E+21	8,105820E+21	1,201380E+20	1,200848E+20	1,621109E+22	2,402228E+20	1,645131E+22
536	8,105570E+21	8,105530E+21	1,200820E+20	1,201389E+20	1,621110E+22	2,402209E+20	1,645132E+22
537	8,105610E+21	8,105236E+21	1,200915E+20	1,200791E+20	1,621085E+22	2,401706E+20	1,645102E+22
538	8,105091E+21	8,105404E+21	1,201377E+20	1,201161E+20	1,621049E+22	2,402538E+20	1,645075E+22
539	8,105359E+21	8,104837E+21	1,200743E+20	1,201281E+20	1,621020E+22	2,402024E+20	1,645040E+22
540	8,104764E+21	8,104787E+21	1,201338E+20	1,200859E+20	1,620955E+22	2,402196E+20	1,644977E+22
541	8,104240E+21	8,104714E+21	1,201373E+20	1,201459E+20	1,620895E+22	2,402832E+20	1,644924E+22
542	8,104414E+21	8,103952E+21	1,200951E+20	1,201282E+20	1,620837E+22	2,402234E+20	1,644859E+22
543	8,103677E+21	8,104000E+21	1,201624E+20	1,201050E+20	1,620768E+22	2,402674E+20	1,644794E+22
544	8,103733E+21	8,103775E+21	1,201198E+20	1,201644E+20	1,620751E+22	2,402842E+20	1,644779E+22
545	8,103936E+21	8,103449E+21	1,201159E+20	1,201138E+20	1,620739E+22	2,402298E+20	1,644761E+22
546	8,103455E+21	8,103924E+21	1,201621E+20	1,201237E+20	1,620738E+22	2,402858E+20	1,644767E+22
547	8,103987E+21	8,103749E+21	1,200989E+20	1,201601E+20	1,620774E+22	2,402589E+20	1,644799E+22
548	8,104031E+21	8,103947E+21	1,201276E+20	1,200954E+20	1,620798E+22	2,402230E+20	1,644820E+22
549	8,103957E+21	8,104489E+21	1,201460E+20	1,201354E+20	1,620845E+22	2,402814E+20	1,644873E+22
550	8,104712E+21	8,104261E+21	1,200867E+20	1,201250E+20	1,620897E+22	2,402116E+20	1,644918E+22
551	8,104469E+21	8,104684E+21	1,201400E+20	1,200784E+20	1,620915E+22	2,402185E+20	1,644937E+22
552	8,104594E+21	8,104943E+21	1,201199E+20	1,201459E+20	1,620954E+22	2,402658E+20	1,644980E+22
553	8,105023E+21	8,104629E+21	1,200845E+20	1,201022E+20	1,620965E+22	2,401866E+20	1,644984E+22
554	8,104586E+21	8,104972E+21	1,201445E+20	1,201011E+20	1,620956E+22	2,402456E+20	1,644980E+22
555	8,104912E+21	8,104720E+21	1,200890E+20	1,201467E+20	1,620963E+22	2,402357E+20	1,644987E+22
556	8,104879E+21	8,104461E+21	1,201060E+20	1,200889E+20	1,620934E+22	2,401949E+20	1,644954E+22
557	8,104252E+21	8,104734E+21	1,201559E+20	1,201223E+20	1,620899E+22	2,402782E+20	1,644926E+22
558	8,104426E+21	8,104113E+21	1,200922E+20	1,201420E+20	1,620854E+22	2,402342E+20	1,644877E+22
559	8,103805E+21	8,103856E+21	1,201486E+20	1,201025E+20	1,620766E+22	2,402511E+20	1,644791E+22
560	8,103343E+21	8,103780E+21	1,201474E+20	1,201618E+20	1,620712E+22	2,403092E+20	1,644743E+22
561	8,103578E+21	8,103023E+21	1,201055E+20	1,201443E+20	1,620660E+22	2,402498E+20	1,644685E+22
562	8,102985E+21	8,103119E+21	1,201704E+20	1,201182E+20	1,620610E+22	2,402887E+20	1,644639E+22
563	8,103049E+21	8,103026E+21	1,201281E+20	1,201733E+20	1,620607E+22	2,403015E+20	1,644638E+22
564	8,103185E+21	8,102774E+21	1,201283E+20	1,201272E+20	1,620596E+22	2,402555E+20	1,644622E+22
565	8,102722E+21	8,103329E+21	1,201759E+20	1,201318E+20	1,620605E+22	2,403078E+20	1,644636E+22
566	8,103294E+21	8,103122E+21	1,201136E+20	1,201685E+20	1,620642E+22	2,402821E+20	1,644670E+22
567	8,103360E+21	8,103212E+21	1,201402E+20	1,201021E+20	1,620657E+22	2,402423E+20	1,644681E+22
568	8,103288E+21	8,103806E+21	1,201573E+20	1,201425E+20	1,620709E+22	2,402998E+20	1,644739E+22
569	8,103954E+21	8,103589E+21	1,200972E+20	1,201370E+20	1,620754E+22	2,402342E+20	1,644778E+22
570	8,103768E+21	8,103960E+21	1,201462E+20	1,200945E+20	1,620773E+22	2,402407E+20	1,644797E+22
571	8,103910E+21	8,104197E+21	1,201252E+20	1,201575E+20	1,620811E+22	2,402826E+20	1,644839E+22
572	8,104324E+21	8,103878E+21	1,200945E+20	1,201156E+20	1,620820E+22	2,402100E+20	1,644841E+22
573	8,103903E+21	8,104292E+21	1,201584E+20	1,201071E+20	1,620819E+22	2,402655E+20	1,644846E+22
574	8,104184E+21	8,104029E+21	1,201060E+20	1,201552E+20	1,620821E+22	2,402611E+20	1,644847E+22
575	8,104038E+21	8,103649E+21	1,201220E+20	1,201024E+20	1,620769E+22	2,402244E+20	1,644791E+22
576	8,103333E+21	8,103901E+21	1,201685E+20	1,201387E+20	1,620723E+22	2,403072E+20	1,644754E+22
577	8,103480E+21	8,103200E+21	1,201041E+20	1,201618E+20	1,620668E+22	2,402659E+20	1,644695E+22

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 $\odot$ Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
578	8,103003E+21	8,102873E+21	1,201566E+20	1,201197E+20	1,620588E+22	2,402763E+20	1,644615E+22
579	8,102596E+21	8,102868E+21	1,201556E+20	1,201697E+20	1,620546E+22	2,403254E+20	1,644579E+22
580	8,102803E+21	8,102220E+21	1,201200E+20	1,201550E+20	1,620502E+22	2,402750E+20	1,644530E+22
581	8,102185E+21	8,102473E+21	1,201859E+20	1,201244E+20	1,620466E+22	2,403102E+20	1,644497E+22
582	8,102249E+21	8,102395E+21	1,201448E+20	1,201848E+20	1,620464E+22	2,403296E+20	1,644497E+22
583	8,102396E+21	8,102016E+21	1,201415E+20	1,201392E+20	1,620441E+22	2,402807E+20	1,644469E+22
584	8,101997E+21	8,102602E+21	1,201857E+20	1,201414E+20	1,620460E+22	2,403272E+20	1,644493E+22
585	8,102599E+21	8,102410E+21	1,201239E+20	1,201790E+20	1,620501E+22	2,403029E+20	1,644531E+22
586	8,102755E+21	8,102484E+21	1,201469E+20	1,201135E+20	1,620524E+22	2,402604E+20	1,644550E+22
587	8,102639E+21	8,103147E+21	1,201639E+20	1,201518E+20	1,620579E+22	2,403156E+20	1,644610E+22
588	8,103229E+21	8,102937E+21	1,201072E+20	1,201527E+20	1,620617E+22	2,402599E+20	1,644643E+22
589	8,103074E+21	8,103318E+21	1,201568E+20	1,201048E+20	1,620639E+22	2,402616E+20	1,644665E+22
590	8,103261E+21	8,103508E+21	1,201385E+20	1,201670E+20	1,620677E+22	2,403055E+20	1,644707E+22
591	8,103633E+21	8,103085E+21	1,201080E+20	1,201242E+20	1,620672E+22	2,402322E+20	1,644695E+22
592	8,103162E+21	8,103545E+21	1,201715E+20	1,201161E+20	1,620671E+22	2,402876E+20	1,644699E+22
593	8,103312E+21	8,103269E+21	1,201200E+20	1,201695E+20	1,620658E+22	2,402895E+20	1,644687E+22
594	8,103189E+21	8,102790E+21	1,201317E+20	1,201219E+20	1,620598E+22	2,402536E+20	1,644623E+22
595	8,102490E+21	8,103012E+21	1,201766E+20	1,201519E+20	1,620550E+22	2,403285E+20	1,644583E+22
596	8,102622E+21	8,102320E+21	1,201170E+20	1,201766E+20	1,620494E+22	2,402936E+20	1,644524E+22
597	8,102207E+21	8,102073E+21	1,201716E+20	1,201262E+20	1,620428E+22	2,402978E+20	1,644458E+22
598	8,101809E+21	8,102097E+21	1,201740E+20	1,201773E+20	1,620391E+22	2,403512E+20	1,644426E+22
599	8,101928E+21	8,101419E+21	1,201372E+20	1,201675E+20	1,620335E+22	2,403048E+20	1,644365E+22
600	8,101331E+21	8,101701E+21	1,201975E+20	1,201392E+20	1,620303E+22	2,403367E+20	1,644337E+22
601	8,101414E+21	8,101597E+21	1,201568E+20	1,202016E+20	1,620301E+22	2,403584E+20	1,644337E+22
602	8,101728E+21	8,101202E+21	1,201471E+20	1,201538E+20	1,620293E+22	2,403009E+20	1,644323E+22
603	8,101386E+21	8,101864E+21	1,201914E+20	1,201473E+20	1,620325E+22	2,403387E+20	1,644359E+22
604	8,101920E+21	8,101769E+21	1,201349E+20	1,201882E+20	1,620369E+22	2,403230E+20	1,644401E+22
605	8,102054E+21	8,101933E+21	1,201583E+20	1,201203E+20	1,620399E+22	2,402786E+20	1,644427E+22
606	8,101945E+21	8,102543E+21	1,201774E+20	1,201628E+20	1,620449E+22	2,403403E+20	1,644483E+22
607	8,102513E+21	8,102211E+21	1,201193E+20	1,201652E+20	1,620472E+22	2,402845E+20	1,644501E+22
608	8,102420E+21	8,102592E+21	1,201659E+20	1,201153E+20	1,620501E+22	2,402812E+20	1,644529E+22
609	8,102582E+21	8,102775E+21	1,201512E+20	1,201775E+20	1,620536E+22	2,403286E+20	1,644569E+22
610	8,102975E+21	8,102322E+21	1,201172E+20	1,201376E+20	1,620530E+22	2,402548E+20	1,644555E+22
611	8,102399E+21	8,102801E+21	1,201810E+20	1,201278E+20	1,620520E+22	2,403088E+20	1,644551E+22
612	8,102426E+21	8,102495E+21	1,201335E+20	1,201865E+20	1,620492E+22	2,403200E+20	1,644524E+22
613	8,102322E+21	8,101993E+21	1,201465E+20	1,201341E+20	1,620431E+22	2,402806E+20	1,644460E+22
614	8,101678E+21	8,102162E+21	1,201930E+20	1,201617E+20	1,620384E+22	2,403547E+20	1,644419E+22
615	8,101762E+21	8,101400E+21	1,201343E+20	1,201864E+20	1,620316E+22	2,403207E+20	1,644348E+22
616	8,101340E+21	8,101222E+21	1,201852E+20	1,201366E+20	1,620256E+22	2,403218E+20	1,644288E+22
617	8,100899E+21	8,101287E+21	1,201879E+20	1,201930E+20	1,620219E+22	2,403809E+20	1,644257E+22
618	8,101119E+21	8,100571E+21	1,201456E+20	1,201870E+20	1,620169E+22	2,403326E+20	1,644202E+22
619	8,100597E+21	8,100900E+21	1,202029E+20	1,201518E+20	1,620150E+22	2,403547E+20	1,644185E+22
620	8,100706E+21	8,100868E+21	1,201675E+20	1,202135E+20	1,620157E+22	2,403810E+20	1,644195E+22
621	8,101075E+21	8,100575E+21	1,201591E+20	1,201586E+20	1,620165E+22	2,403178E+20	1,644197E+22
622	8,100741E+21	8,101257E+21	1,202057E+20	1,201532E+20	1,620200E+22	2,403590E+20	1,644236E+22
623	8,101148E+21	8,101106E+21	1,201491E+20	1,201990E+20	1,620225E+22	2,403481E+20	1,644260E+22
624	8,101320E+21	8,101247E+21	1,201679E+20	1,201333E+20	1,620257E+22	2,403011E+20	1,644287E+22
625	8,101249E+21	8,101805E+21	1,201889E+20	1,201773E+20	1,620305E+22	2,403662E+20	1,644342E+22
626	8,101934E+21	8,101439E+21	1,201265E+20	1,201780E+20	1,620337E+22	2,403044E+20	1,644368E+22

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 $\odot$ Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
627	8,101836E+21	8,101877E+21	1,201731E+20	1,201226E+20	1,620371E+22	2,402956E+20	1,644401E+22
628	8,101851E+21	8,102122E+21	1,201640E+20	1,201878E+20	1,620397E+22	2,403518E+20	1,644433E+22
629	8,102166E+21	8,101699E+21	1,201308E+20	1,201482E+20	1,620387E+22	2,402790E+20	1,644414E+22
630	8,101566E+21	8,102051E+21	1,201970E+20	1,201404E+20	1,620362E+22	2,403373E+20	1,644395E+22
631	8,101501E+21	8,101613E+21	1,201492E+20	1,201998E+20	1,620311E+22	2,403490E+20	1,644346E+22
632	8,101472E+21	8,101082E+21	1,201592E+20	1,201468E+20	1,620255E+22	2,403060E+20	1,644286E+22
633	8,100829E+21	8,101232E+21	1,202079E+20	1,201748E+20	1,620206E+22	2,403828E+20	1,644244E+22
634	8,100964E+21	8,100495E+21	1,201449E+20	1,202033E+20	1,620146E+22	2,403482E+20	1,644181E+22
635	8,100530E+21	8,100390E+21	1,201927E+20	1,201521E+20	1,620092E+22	2,403448E+20	1,644126E+22
636	8,100054E+21	8,100496E+21	1,201990E+20	1,202106E+20	1,620055E+22	2,404096E+20	1,644096E+22
637	8,100359E+21	8,099849E+21	1,201579E+20	1,201978E+20	1,620021E+22	2,403557E+20	1,644056E+22
638	8,099916E+21	8,100180E+21	1,202169E+20	1,201578E+20	1,620010E+22	2,403747E+20	1,644047E+22
639	8,099939E+21	8,100140E+21	1,201840E+20	1,202185E+20	1,620008E+22	2,404025E+20	1,644048E+22
640	8,100306E+21	8,099902E+21	1,201716E+20	1,201662E+20	1,620021E+22	2,403378E+20	1,644055E+22
641	8,099950E+21	8,100567E+21	1,202185E+20	1,201671E+20	1,620052E+22	2,403856E+20	1,644090E+22
642	8,100468E+21	8,100359E+21	1,201560E+20	1,202163E+20	1,620083E+22	2,403723E+20	1,644120E+22
643	8,100726E+21	8,100531E+21	1,201712E+20	1,201453E+20	1,620126E+22	2,403166E+20	1,644157E+22
644	8,100666E+21	8,101141E+21	1,201976E+20	1,201884E+20	1,620181E+22	2,403860E+20	1,644219E+22
645	8,101347E+21	8,100854E+21	1,201387E+20	1,201830E+20	1,620220E+22	2,403216E+20	1,644252E+22
646	8,101181E+21	8,101276E+21	1,201880E+20	1,201304E+20	1,620246E+22	2,403184E+20	1,644277E+22
647	8,100983E+21	8,101411E+21	1,201802E+20	1,201995E+20	1,620239E+22	2,403797E+20	1,644277E+22
648	8,101278E+21	8,100886E+21	1,201436E+20	1,201637E+20	1,620216E+22	2,403073E+20	1,644247E+22
649	8,100707E+21	8,101135E+21	1,202105E+20	1,201572E+20	1,620184E+22	2,403677E+20	1,644221E+22
650	8,100738E+21	8,100640E+21	1,201585E+20	1,202148E+20	1,620138E+22	2,403733E+20	1,644175E+22
651	8,100718E+21	8,100181E+21	1,201676E+20	1,201580E+20	1,620090E+22	2,403256E+20	1,644122E+22
652	8,099995E+21	8,100424E+21	1,202196E+20	1,201885E+20	1,620042E+22	2,404080E+20	1,644083E+22
653	8,100112E+21	8,099774E+21	1,201591E+20	1,202159E+20	1,619989E+22	2,403750E+20	1,644026E+22
654	8,099723E+21	8,099635E+21	1,202074E+20	1,201645E+20	1,619936E+22	2,403719E+20	1,643973E+22
655	8,099181E+21	8,099692E+21	1,202151E+20	1,202203E+20	1,619887E+22	2,404354E+20	1,643931E+22
656	8,099564E+21	8,099068E+21	1,201721E+20	1,202063E+20	1,619863E+22	2,403783E+20	1,643901E+22
657	8,099141E+21	8,099394E+21	1,202319E+20	1,201677E+20	1,619853E+22	2,403996E+20	1,643893E+22
658	8,099194E+21	8,099367E+21	1,201936E+20	1,202323E+20	1,619856E+22	2,404259E+20	1,643899E+22
659	8,099581E+21	8,099176E+21	1,201767E+20	1,201814E+20	1,619876E+22	2,403580E+20	1,643912E+22
660	8,099259E+21	8,099854E+21	1,202255E+20	1,201842E+20	1,619911E+22	2,404096E+20	1,643952E+22
661	8,099891E+21	8,099731E+21	1,201655E+20	1,202262E+20	1,619962E+22	2,403917E+20	1,644001E+22
662	8,100216E+21	8,099904E+21	1,201822E+20	1,201504E+20	1,620012E+22	2,403326E+20	1,644045E+22
663	8,099978E+21	8,100503E+21	1,202127E+20	1,201923E+20	1,620048E+22	2,404049E+20	1,644089E+22
664	8,100585E+21	8,100229E+21	1,201513E+20	1,201908E+20	1,620081E+22	2,403421E+20	1,644116E+22
665	8,100338E+21	8,100535E+21	1,202023E+20	1,201462E+20	1,620087E+22	2,403485E+20	1,644122E+22
666	8,100173E+21	8,100555E+21	1,201891E+20	1,202167E+20	1,620073E+22	2,404057E+20	1,644113E+22
667	8,100525E+21	8,100012E+21	1,201501E+20	1,201790E+20	1,620054E+22	2,403290E+20	1,644087E+22
668	8,099965E+21	8,100267E+21	1,202203E+20	1,201708E+20	1,620023E+22	2,403911E+20	1,644062E+22
669	8,100008E+21	8,099869E+21	1,201723E+20	1,202234E+20	1,619988E+22	2,403957E+20	1,644027E+22
670	8,099942E+21	8,099430E+21	1,201827E+20	1,201683E+20	1,619937E+22	2,403510E+20	1,643972E+22
671	8,099044E+21	8,099627E+21	1,202361E+20	1,202009E+20	1,619867E+22	2,404370E+20	1,643911E+22
672	8,099197E+21	8,098948E+21	1,201748E+20	1,202302E+20	1,619814E+22	2,404050E+20	1,643855E+22
673	8,098862E+21	8,098759E+21	1,202233E+20	1,201798E+20	1,619762E+22	2,404031E+20	1,643802E+22
674	8,098406E+21	8,098800E+21	1,202259E+20	1,202320E+20	1,619721E+22	2,404579E+20	1,643766E+22
675	8,098808E+21	8,098260E+21	1,201801E+20	1,202175E+20	1,619707E+22	2,403976E+20	1,643747E+22

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 $\odot$ Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
676	8,098366E+21	8,098655E+21	1,202396E+20	1,201818E+20	1,619702E+22	2,404215E+20	1,643744E+22
677	8,098476E+21	8,098706E+21	1,202038E+20	1,202442E+20	1,619718E+22	2,404480E+20	1,643763E+22
678	8,098956E+21	8,098526E+21	1,201862E+20	1,201915E+20	1,619748E+22	2,403778E+20	1,643786E+22
679	8,098602E+21	8,099190E+21	1,202370E+20	1,201917E+20	1,619779E+22	2,404286E+20	1,643822E+22
680	8,099275E+21	8,099098E+21	1,201788E+20	1,202313E+20	1,619837E+22	2,404100E+20	1,643878E+22
681	8,099562E+21	8,099261E+21	1,201963E+20	1,201600E+20	1,619882E+22	2,403563E+20	1,643918E+22
682	8,099264E+21	8,099803E+21	1,202222E+20	1,202041E+20	1,619907E+22	2,404263E+20	1,643949E+22
683	8,099814E+21	8,099492E+21	1,201577E+20	1,202064E+20	1,619931E+22	2,403641E+20	1,643967E+22
684	8,099569E+21	8,099724E+21	1,202104E+20	1,201640E+20	1,619929E+22	2,403745E+20	1,643967E+22
685	8,099469E+21	8,099769E+21	1,202005E+20	1,202270E+20	1,619924E+22	2,404275E+20	1,643967E+22
686	8,099845E+21	8,099228E+21	1,201637E+20	1,201862E+20	1,619907E+22	2,403499E+20	1,643942E+22
687	8,099114E+21	8,099472E+21	1,202362E+20	1,201780E+20	1,619859E+22	2,404142E+20	1,643900E+22
688	8,099100E+21	8,099100E+21	1,201889E+20	1,202341E+20	1,619820E+22	2,404230E+20	1,643862E+22
689	8,099001E+21	8,098589E+21	1,201995E+20	1,201870E+20	1,619759E+22	2,403865E+20	1,643798E+22
690	8,098159E+21	8,098704E+21	1,202463E+20	1,202177E+20	1,619686E+22	2,404640E+20	1,643733E+22
691	8,098387E+21	8,098051E+21	1,201832E+20	1,202461E+20	1,619644E+22	2,404294E+20	1,643687E+22
692	8,098088E+21	8,097891E+21	1,202333E+20	1,201939E+20	1,619598E+22	2,404271E+20	1,643641E+22
693	8,097674E+21	8,098059E+21	1,202381E+20	1,202406E+20	1,619573E+22	2,404788E+20	1,643621E+22
694	8,098076E+21	8,097564E+21	1,201919E+20	1,202275E+20	1,619564E+22	2,404193E+20	1,643606E+22
695	8,097536E+21	8,097929E+21	1,202515E+20	1,201929E+20	1,619546E+22	2,404444E+20	1,643591E+22
696	8,097759E+21	8,098008E+21	1,202170E+20	1,202546E+20	1,619577E+22	2,404715E+20	1,643624E+22
697	8,098317E+21	8,097826E+21	1,201996E+20	1,202022E+20	1,619614E+22	2,404018E+20	1,643655E+22
698	8,098008E+21	8,098485E+21	1,202461E+20	1,201986E+20	1,619649E+22	2,404447E+20	1,643694E+22
699	8,098636E+21	8,098463E+21	1,201866E+20	1,202397E+20	1,619710E+22	2,404263E+20	1,643752E+22
700	8,098831E+21	8,098616E+21	1,202038E+20	1,201744E+20	1,619745E+22	2,403782E+20	1,643783E+22
701	8,098540E+21	8,099152E+21	1,202323E+20	1,202162E+20	1,619769E+22	2,404485E+20	1,643814E+22
702	8,099117E+21	8,098781E+21	1,201678E+20	1,202173E+20	1,619790E+22	2,403851E+20	1,643828E+22
703	8,098799E+21	8,098941E+21	1,202233E+20	1,201732E+20	1,619774E+22	2,403965E+20	1,643814E+22
704	8,098728E+21	8,098987E+21	1,202167E+20	1,202339E+20	1,619772E+22	2,404506E+20	1,643817E+22
705	8,099041E+21	8,098439E+21	1,201811E+20	1,202000E+20	1,619748E+22	2,403811E+20	1,643786E+22
706	8,098254E+21	8,098619E+21	1,202468E+20	1,201942E+20	1,619687E+22	2,404410E+20	1,643731E+22
707	8,098214E+21	8,098227E+21	1,201980E+20	1,202538E+20	1,619644E+22	2,404519E+20	1,643689E+22
708	8,098154E+21	8,097683E+21	1,202089E+20	1,202079E+20	1,619584E+22	2,404169E+20	1,643625E+22
709	8,097406E+21	8,097849E+21	1,202582E+20	1,202281E+20	1,619526E+22	2,404863E+20	1,643574E+22
710	8,097642E+21	8,097251E+21	1,201974E+20	1,202522E+20	1,619489E+22	2,404496E+20	1,643534E+22
711	8,097207E+21	8,097116E+21	1,202481E+20	1,202004E+20	1,619432E+22	2,404485E+20	1,643477E+22
712	8,096792E+21	8,097319E+21	1,202544E+20	1,202490E+20	1,619411E+22	2,405033E+20	1,643461E+22
713	8,097235E+21	8,096820E+21	1,202075E+20	1,202433E+20	1,619405E+22	2,404508E+20	1,643451E+22
714	8,096820E+21	8,097143E+21	1,202588E+20	1,202058E+20	1,619396E+22	2,404646E+20	1,643443E+22
715	8,097142E+21	8,097285E+21	1,202245E+20	1,202665E+20	1,619443E+22	2,404910E+20	1,643492E+22
716	8,097724E+21	8,097156E+21	1,202073E+20	1,202134E+20	1,619488E+22	2,404207E+20	1,643530E+22
717	8,097412E+21	8,097899E+21	1,202560E+20	1,202057E+20	1,619531E+22	2,404617E+20	1,643577E+22
718	8,097956E+21	8,097880E+21	1,201967E+20	1,202481E+20	1,619584E+22	2,404448E+20	1,643628E+22
719	8,098014E+21	8,097927E+21	1,202153E+20	1,201868E+20	1,619594E+22	2,404021E+20	1,643634E+22
720	8,097788E+21	8,098408E+21	1,202467E+20	1,202269E+20	1,619620E+22	2,404736E+20	1,643667E+22
721	8,098396E+21	8,097998E+21	1,201834E+20	1,202306E+20	1,619639E+22	2,404140E+20	1,643681E+22
722	8,098085E+21	8,098097E+21	1,202328E+20	1,201839E+20	1,619618E+22	2,404167E+20	1,643660E+22
723	8,097966E+21	8,098186E+21	1,202259E+20	1,202474E+20	1,619615E+22	2,404733E+20	1,643663E+22
724	8,098198E+21	8,097628E+21	1,201907E+20	1,202186E+20	1,619583E+22	2,404094E+20	1,643623E+22

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 ° Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
725	8,097443E+21	8,097820E+21	1,202581E+20	1,202091E+20	1,619526E+22	2,404672E+20	1,643573E+22
726	8,097424E+21	8,097419E+21	1,202107E+20	1,202645E+20	1,619484E+22	2,404752E+20	1,643532E+22
727	8,097270E+21	8,096838E+21	1,202251E+20	1,202175E+20	1,619411E+22	2,404425E+20	1,643455E+22
728	8,096560E+21	8,097036E+21	1,202768E+20	1,202336E+20	1,619360E+22	2,405105E+20	1,643411E+22
729	8,096753E+21	8,096456E+21	1,202163E+20	1,202651E+20	1,619321E+22	2,404814E+20	1,643369E+22
730	8,096316E+21	8,096261E+21	1,202578E+20	1,202149E+20	1,619258E+22	2,404727E+20	1,643305E+22
731	8,095990E+21	8,096480E+21	1,202626E+20	1,202669E+20	1,619247E+22	2,405295E+20	1,643300E+22
732	8,096531E+21	8,096024E+21	1,202150E+20	1,202607E+20	1,619255E+22	2,404757E+20	1,643303E+22
733	8,096262E+21	8,096455E+21	1,202669E+20	1,202146E+20	1,619272E+22	2,404815E+20	1,643320E+22
734	8,096578E+21	8,096685E+21	1,202353E+20	1,202703E+20	1,619326E+22	2,405056E+20	1,643377E+22
735	8,096983E+21	8,096576E+21	1,202190E+20	1,202197E+20	1,619356E+22	2,404387E+20	1,643400E+22
736	8,096649E+21	8,097293E+21	1,202703E+20	1,202137E+20	1,619394E+22	2,404840E+20	1,643443E+22
737	8,097176E+21	8,097206E+21	1,202111E+20	1,202629E+20	1,619438E+22	2,404740E+20	1,643486E+22
738	8,097300E+21	8,097129E+21	1,202225E+20	1,202005E+20	1,619443E+22	2,404230E+20	1,643485E+22
739	8,097146E+21	8,097601E+21	1,202555E+20	1,202403E+20	1,619475E+22	2,404958E+20	1,643524E+22
740	8,097737E+21	8,097226E+21	1,201932E+20	1,202448E+20	1,619496E+22	2,404379E+20	1,643540E+22
741	8,097417E+21	8,097374E+21	1,202430E+20	1,201955E+20	1,619479E+22	2,404384E+20	1,643523E+22
742	8,097183E+21	8,097464E+21	1,202377E+20	1,202580E+20	1,619465E+22	2,404957E+20	1,643514E+22
743	8,097279E+21	8,096831E+21	1,202051E+20	1,202327E+20	1,619411E+22	2,404378E+20	1,643455E+22
744	8,096575E+21	8,096977E+21	1,202766E+20	1,202185E+20	1,619355E+22	2,404951E+20	1,643405E+22
745	8,096545E+21	8,096570E+21	1,202311E+20	1,202758E+20	1,619312E+22	2,405069E+20	1,643362E+22
746	8,096377E+21	8,095925E+21	1,202387E+20	1,202285E+20	1,619230E+22	2,404671E+20	1,643277E+22
747	8,095661E+21	8,096146E+21	1,202876E+20	1,202487E+20	1,619181E+22	2,405363E+20	1,643234E+22
748	8,095855E+21	8,095590E+21	1,202256E+20	1,202851E+20	1,619145E+22	2,405107E+20	1,643196E+22
749	8,095574E+21	8,095446E+21	1,202644E+20	1,202309E+20	1,619102E+22	2,404953E+20	1,643152E+22
750	8,095348E+21	8,095746E+21	1,202710E+20	1,202766E+20	1,619109E+22	2,405476E+20	1,643164E+22
751	8,095848E+21	8,095348E+21	1,202275E+20	1,202683E+20	1,619120E+22	2,404958E+20	1,643169E+22
752	8,095619E+21	8,095849E+21	1,202827E+20	1,202182E+20	1,619147E+22	2,405009E+20	1,643197E+22
753	8,095848E+21	8,096106E+21	1,202519E+20	1,202805E+20	1,619195E+22	2,405324E+20	1,643249E+22
754	8,096196E+21	8,095873E+21	1,202271E+20	1,202331E+20	1,619207E+22	2,404602E+20	1,643253E+22
755	8,095940E+21	8,096519E+21	1,202775E+20	1,202309E+20	1,619246E+22	2,405084E+20	1,643297E+22
756	8,096516E+21	8,096421E+21	1,202189E+20	1,202784E+20	1,619294E+22	2,404973E+20	1,643343E+22
757	8,096747E+21	8,096399E+21	1,202306E+20	1,202097E+20	1,619315E+22	2,404404E+20	1,643359E+22
758	8,096547E+21	8,096929E+21	1,202662E+20	1,202451E+20	1,619348E+22	2,405113E+20	1,643399E+22
759	8,096916E+21	8,096559E+21	1,202074E+20	1,202534E+20	1,619348E+22	2,404608E+20	1,643394E+22
760	8,096563E+21	8,096676E+21	1,202602E+20	1,202057E+20	1,619324E+22	2,404659E+20	1,643370E+22
761	8,096292E+21	8,096696E+21	1,202558E+20	1,202724E+20	1,619299E+22	2,405282E+20	1,643352E+22
762	8,096394E+21	8,095926E+21	1,202172E+20	1,202475E+20	1,619232E+22	2,404647E+20	1,643278E+22
763	8,095758E+21	8,096033E+21	1,202888E+20	1,202337E+20	1,619179E+22	2,405225E+20	1,643231E+22
764	8,095688E+21	8,095661E+21	1,202428E+20	1,202914E+20	1,619135E+22	2,405343E+20	1,643188E+22
765	8,095560E+21	8,095070E+21	1,202480E+20	1,202444E+20	1,619063E+22	2,404924E+20	1,643112E+22
766	8,094843E+21	8,095316E+21	1,202963E+20	1,202624E+20	1,619016E+22	2,405587E+20	1,643072E+22
767	8,095008E+21	8,094781E+21	1,202383E+20	1,202999E+20	1,618979E+22	2,405382E+20	1,643033E+22
768	8,094869E+21	8,094702E+21	1,202795E+20	1,202388E+20	1,618957E+22	2,405183E+20	1,643009E+22
769	8,094663E+21	8,095076E+21	1,202887E+20	1,202841E+20	1,618974E+22	2,405728E+20	1,643031E+22
770	8,095115E+21	8,094657E+21	1,202391E+20	1,202755E+20	1,618977E+22	2,405146E+20	1,643029E+22
771	8,094874E+21	8,095152E+21	1,202921E+20	1,202305E+20	1,619003E+22	2,405226E+20	1,643055E+22
772	8,095067E+21	8,095404E+21	1,202605E+20	1,202957E+20	1,619047E+22	2,405562E+20	1,643103E+22
773	8,095552E+21	8,095157E+21	1,202328E+20	1,202469E+20	1,619071E+22	2,404797E+20	1,643119E+22

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 ° Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
774	8,095356E+21	8,095813E+21	1,202850E+20	1,202391E+20	1,619117E+22	2,405241E+20	1,643169E+22
775	8,095864E+21	8,095751E+21	1,202318E+20	1,202859E+20	1,619162E+22	2,405177E+20	1,643213E+22
776	8,096096E+21	8,095765E+21	1,202468E+20	1,202147E+20	1,619186E+22	2,404615E+20	1,643232E+22
777	8,095768E+21	8,096296E+21	1,202830E+20	1,202564E+20	1,619206E+22	2,405394E+20	1,643260E+22
778	8,096035E+21	8,095769E+21	1,202185E+20	1,202688E+20	1,619180E+22	2,404872E+20	1,643229E+22
779	8,095734E+21	8,095776E+21	1,202707E+20	1,202258E+20	1,619151E+22	2,404965E+20	1,643201E+22
780	8,095466E+21	8,095782E+21	1,202665E+20	1,202888E+20	1,619125E+22	2,405553E+20	1,643180E+22
781	8,095651E+21	8,095032E+21	1,202274E+20	1,202613E+20	1,619068E+22	2,404887E+20	1,643117E+22
782	8,094974E+21	8,095181E+21	1,202993E+20	1,202427E+20	1,619016E+22	2,405420E+20	1,643070E+22
783	8,094751E+21	8,094841E+21	1,202567E+20	1,203038E+20	1,618959E+22	2,405605E+20	1,643015E+22
784	8,094676E+21	8,094276E+21	1,202642E+20	1,202559E+20	1,618895E+22	2,405201E+20	1,642947E+22
785	8,094013E+21	8,094544E+21	1,203120E+20	1,202755E+20	1,618856E+22	2,405875E+20	1,642914E+22
786	8,094216E+21	8,093967E+21	1,202514E+20	1,203111E+20	1,618818E+22	2,405626E+20	1,642875E+22
787	8,094186E+21	8,093920E+21	1,202914E+20	1,202508E+20	1,618811E+22	2,405422E+20	1,642865E+22
788	8,093936E+21	8,094360E+21	1,203002E+20	1,202943E+20	1,618830E+22	2,405944E+20	1,642889E+22
789	8,094402E+21	8,093982E+21	1,202467E+20	1,202881E+20	1,618838E+22	2,405348E+20	1,642892E+22
790	8,094171E+21	8,094453E+21	1,202981E+20	1,202417E+20	1,618862E+22	2,405398E+20	1,642916E+22
791	8,094325E+21	8,094693E+21	1,202712E+20	1,203071E+20	1,618902E+22	2,405783E+20	1,642960E+22
792	8,094930E+21	8,094501E+21	1,202467E+20	1,202530E+20	1,618943E+22	2,404997E+20	1,642993E+22
793	8,094744E+21	8,095190E+21	1,203003E+20	1,202465E+20	1,618993E+22	2,405467E+20	1,643048E+22
794	8,095140E+21	8,095066E+21	1,202440E+20	1,202942E+20	1,619021E+22	2,405382E+20	1,643074E+22
795	8,095348E+21	8,095030E+21	1,202563E+20	1,202307E+20	1,619038E+22	2,404870E+20	1,643086E+22
796	8,094949E+21	8,095511E+21	1,202917E+20	1,202727E+20	1,619046E+22	2,405645E+20	1,643102E+22
797	8,095301E+21	8,094949E+21	1,202253E+20	1,202853E+20	1,619025E+22	2,405106E+20	1,643076E+22
798	8,095023E+21	8,094933E+21	1,202801E+20	1,202372E+20	1,618996E+22	2,405174E+20	1,643047E+22
799	8,094648E+21	8,094961E+21	1,202817E+20	1,202980E+20	1,618961E+22	2,405797E+20	1,643019E+22
800	8,094816E+21	8,094258E+21	1,202464E+20	1,202696E+20	1,618907E+22	2,405160E+20	1,642959E+22
801	8,094060E+21	8,094395E+21	1,203162E+20	1,202559E+20	1,618846E+22	2,405720E+20	1,642903E+22
802	8,093794E+21	8,093937E+21	1,202703E+20	1,203192E+20	1,618773E+22	2,405894E+20	1,642832E+22
803	8,093851E+21	8,093342E+21	1,202764E+20	1,202736E+20	1,618719E+22	2,405499E+20	1,642774E+22
804	8,093235E+21	8,093690E+21	1,203235E+20	1,202876E+20	1,618692E+22	2,406111E+20	1,642754E+22
805	8,093536E+21	8,093197E+21	1,202620E+20	1,203219E+20	1,618673E+22	2,405839E+20	1,642732E+22
806	8,093456E+21	8,093213E+21	1,203003E+20	1,202586E+20	1,618667E+22	2,405589E+20	1,642723E+22
807	8,093086E+21	8,093692E+21	1,203117E+20	1,203045E+20	1,618678E+22	2,406162E+20	1,642739E+22
808	8,093628E+21	8,093323E+21	1,202599E+20	1,202976E+20	1,618695E+22	2,405575E+20	1,642751E+22
809	8,093476E+21	8,093783E+21	1,203097E+20	1,202528E+20	1,618726E+22	2,405625E+20	1,642782E+22
810	8,093660E+21	8,093957E+21	1,202823E+20	1,203163E+20	1,618762E+22	2,405986E+20	1,642822E+22
811	8,094349E+21	8,093778E+21	1,202570E+20	1,202648E+20	1,618813E+22	2,405218E+20	1,642865E+22
812	8,094085E+21	8,094521E+21	1,203092E+20	1,202581E+20	1,618861E+22	2,405673E+20	1,642917E+22
813	8,094464E+21	8,094387E+21	1,202508E+20	1,203091E+20	1,618885E+22	2,405598E+20	1,642941E+22
814	8,094640E+21	8,094288E+21	1,202628E+20	1,202449E+20	1,618893E+22	2,405077E+20	1,642944E+22
815	8,094167E+21	8,094735E+21	1,203038E+20	1,202841E+20	1,618890E+22	2,405879E+20	1,642949E+22
816	8,094554E+21	8,094202E+21	1,202428E+20	1,202918E+20	1,618876E+22	2,405346E+20	1,642929E+22
817	8,094231E+21	8,094177E+21	1,202984E+20	1,202456E+20	1,618841E+22	2,405440E+20	1,642895E+22
818	8,093706E+21	8,094109E+21	1,202979E+20	1,203075E+20	1,618781E+22	2,406054E+20	1,642842E+22
819	8,093887E+21	8,093361E+21	1,202602E+20	1,202877E+20	1,618725E+22	2,405479E+20	1,642780E+22
820	8,093141E+21	8,093477E+21	1,203261E+20	1,202730E+20	1,618662E+22	2,405991E+20	1,642722E+22
821	8,093010E+21	8,093042E+21	1,202793E+20	1,203360E+20	1,618605E+22	2,406153E+20	1,642667E+22
822	8,093144E+21	8,092510E+21	1,202853E+20	1,202854E+20	1,618565E+22	2,405707E+20	1,642622E+22

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 ° Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
823	8,092465E+21	8,092936E+21	1,203368E+20	1,202955E+20	1,618540E+22	2,406323E+20	1,642603E+22
824	8,092754E+21	8,092551E+21	1,202790E+20	1,203289E+20	1,618531E+22	2,406079E+20	1,642591E+22
825	8,092634E+21	8,092558E+21	1,203138E+20	1,202706E+20	1,618519E+22	2,405844E+20	1,642578E+22
826	8,092239E+21	8,092903E+21	1,203231E+20	1,203173E+20	1,618514E+22	2,406403E+20	1,642578E+22
827	8,092946E+21	8,092520E+21	1,202696E+20	1,203128E+20	1,618547E+22	2,405824E+20	1,642605E+22
828	8,092863E+21	8,093040E+21	1,203174E+20	1,202631E+20	1,618590E+22	2,405804E+20	1,642648E+22
829	8,093125E+21	8,093285E+21	1,202906E+20	1,203263E+20	1,618641E+22	2,406168E+20	1,642703E+22
830	8,093741E+21	8,093160E+21	1,202636E+20	1,202733E+20	1,618690E+22	2,405369E+20	1,642744E+22
831	8,093335E+21	8,093901E+21	1,203196E+20	1,202682E+20	1,618724E+22	2,405878E+20	1,642782E+22
832	8,093717E+21	8,093761E+21	1,202655E+20	1,203173E+20	1,618748E+22	2,405828E+20	1,642806E+22
833	8,093886E+21	8,093600E+21	1,202774E+20	1,202562E+20	1,618749E+22	2,405336E+20	1,642802E+22
834	8,093351E+21	8,093911E+21	1,203196E+20	1,202931E+20	1,618726E+22	2,406127E+20	1,642788E+22
835	8,093762E+21	8,093334E+21	1,202585E+20	1,203052E+20	1,618710E+22	2,405636E+20	1,642766E+22
836	8,093341E+21	8,093314E+21	1,203103E+20	1,202603E+20	1,618666E+22	2,405705E+20	1,642723E+22
837	8,092846E+21	8,093204E+21	1,203065E+20	1,203263E+20	1,618605E+22	2,406328E+20	1,642668E+22
838	8,093046E+21	8,092435E+21	1,202680E+20	1,203054E+20	1,618548E+22	2,405734E+20	1,642605E+22
839	8,092316E+21	8,092603E+21	1,203369E+20	1,202865E+20	1,618492E+22	2,406235E+20	1,642554E+22
840	8,092260E+21	8,092287E+21	1,202972E+20	1,203431E+20	1,618455E+22	2,406404E+20	1,642519E+22
841	8,092358E+21	8,091814E+21	1,203023E+20	1,202939E+20	1,618417E+22	2,405962E+20	1,642477E+22
842	8,091554E+21	8,092170E+21	1,203517E+20	1,203038E+20	1,618372E+22	2,406556E+20	1,642438E+22
843	8,091887E+21	8,091749E+21	1,202916E+20	1,203441E+20	1,618364E+22	2,406357E+20	1,642427E+22
844	8,091819E+21	8,091757E+21	1,203215E+20	1,202848E+20	1,618358E+22	2,406063E+20	1,642418E+22
845	8,091607E+21	8,092118E+21	1,203299E+20	1,203313E+20	1,618372E+22	2,406612E+20	1,642439E+22
846	8,092399E+21	8,091820E+21	1,202768E+20	1,203225E+20	1,618422E+22	2,405992E+20	1,642482E+22
847	8,092276E+21	8,092430E+21	1,203273E+20	1,202703E+20	1,618471E+22	2,405976E+20	1,642530E+22
848	8,092488E+21	8,092775E+21	1,203058E+20	1,203323E+20	1,618526E+22	2,406381E+20	1,642590E+22
849	8,093019E+21	8,092603E+21	1,202762E+20	1,202845E+20	1,618562E+22	2,405607E+20	1,642618E+22
850	8,092523E+21	8,093149E+21	1,203331E+20	1,202790E+20	1,618567E+22	2,406120E+20	1,642628E+22
851	8,092973E+21	8,092955E+21	1,202790E+20	1,203301E+20	1,618593E+22	2,406091E+20	1,642654E+22
852	8,093127E+21	8,092780E+21	1,202892E+20	1,202681E+20	1,618591E+22	2,405573E+20	1,642646E+22
853	8,092605E+21	8,093062E+21	1,203305E+20	1,203066E+20	1,618567E+22	2,406371E+20	1,642630E+22
854	8,092944E+21	8,092506E+21	1,202668E+20	1,203201E+20	1,618545E+22	2,405870E+20	1,642604E+22
855	8,092458E+21	8,092464E+21	1,203194E+20	1,202759E+20	1,618492E+22	2,405953E+20	1,642552E+22
856	8,092020E+21	8,092407E+21	1,203211E+20	1,203378E+20	1,618443E+22	2,406588E+20	1,642509E+22
857	8,092253E+21	8,091662E+21	1,202833E+20	1,203176E+20	1,618392E+22	2,406010E+20	1,642452E+22
858	8,091469E+21	8,091754E+21	1,203542E+20	1,202949E+20	1,618322E+22	2,406492E+20	1,642387E+22
859	8,091435E+21	8,091469E+21	1,203151E+20	1,203544E+20	1,618290E+22	2,406696E+20	1,642357E+22
860	8,091446E+21	8,091023E+21	1,203152E+20	1,203080E+20	1,618247E+22	2,406232E+20	1,642309E+22
861	8,090718E+21	8,091315E+21	1,203601E+20	1,203211E+20	1,618203E+22	2,406812E+20	1,642271E+22
862	8,091130E+21	8,090908E+21	1,202980E+20	1,203595E+20	1,618204E+22	2,406576E+20	1,642270E+22
863	8,091144E+21	8,090991E+21	1,203290E+20	1,202954E+20	1,618213E+22	2,406244E+20	1,642276E+22
864	8,091035E+21	8,091505E+21	1,203449E+20	1,203362E+20	1,618254E+22	2,406812E+20	1,642322E+22
865	8,091775E+21	8,091293E+21	1,202913E+20	1,203285E+20	1,618307E+22	2,406198E+20	1,642369E+22
866	8,091515E+21	8,091814E+21	1,203406E+20	1,202783E+20	1,618333E+22	2,406189E+20	1,642395E+22
867	8,091740E+21	8,092086E+21	1,203186E+20	1,203449E+20	1,618383E+22	2,406635E+20	1,642449E+22
868	8,092243E+21	8,091869E+21	1,202847E+20	1,202986E+20	1,618411E+22	2,405833E+20	1,642470E+22
869	8,091864E+21	8,092335E+21	1,203406E+20	1,202940E+20	1,618420E+22	2,406346E+20	1,642483E+22
870	8,092309E+21	8,092154E+21	1,202872E+20	1,203418E+20	1,618446E+22	2,406289E+20	1,642509E+22
871	8,092389E+21	8,092018E+21	1,202994E+20	1,202800E+20	1,618441E+22	2,405794E+20	1,642499E+22

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 ° Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
872	8,091827E+21	8,092354E+21	1,203457E+20	1,203172E+20	1,618418E+22	2,406629E+20	1,642484E+22
873	8,092097E+21	8,091755E+21	1,202811E+20	1,203345E+20	1,618385E+22	2,406156E+20	1,642447E+22
874	8,091564E+21	8,091568E+21	1,203343E+20	1,202888E+20	1,618313E+22	2,406231E+20	1,642376E+22
875	8,091207E+21	8,091514E+21	1,203376E+20	1,203497E+20	1,618272E+22	2,406872E+20	1,642341E+22
876	8,091401E+21	8,090824E+21	1,202990E+20	1,203294E+20	1,618223E+22	2,406284E+20	1,642285E+22
877	8,090636E+21	8,090897E+21	1,203668E+20	1,203087E+20	1,618153E+22	2,406755E+20	1,642221E+22
878	8,090544E+21	8,090644E+21	1,203250E+20	1,203687E+20	1,618119E+22	2,406938E+20	1,642188E+22
879	8,090559E+21	8,090197E+21	1,203238E+20	1,203235E+20	1,618076E+22	2,406473E+20	1,642140E+22
880	8,089964E+21	8,090561E+21	1,203723E+20	1,203318E+20	1,618052E+22	2,407042E+20	1,642123E+22
881	8,090467E+21	8,090226E+21	1,203109E+20	1,203693E+20	1,618069E+22	2,406802E+20	1,642137E+22
882	8,090474E+21	8,090273E+21	1,203430E+20	1,203016E+20	1,618075E+22	2,406446E+20	1,642139E+22
883	8,090393E+21	8,090860E+21	1,203598E+20	1,203450E+20	1,618125E+22	2,407048E+20	1,642196E+22
884	8,091030E+21	8,090680E+21	1,203017E+20	1,203408E+20	1,618171E+22	2,406425E+20	1,642235E+22
885	8,090814E+21	8,091072E+21	1,203471E+20	1,202950E+20	1,618189E+22	2,406422E+20	1,642253E+22
886	8,091064E+21	8,091330E+21	1,203242E+20	1,203583E+20	1,618239E+22	2,406825E+20	1,642308E+22
887	8,091589E+21	8,091123E+21	1,202919E+20	1,203096E+20	1,618271E+22	2,406015E+20	1,642331E+22
888	8,091239E+21	8,091662E+21	1,203553E+20	1,203005E+20	1,618290E+22	2,406558E+20	1,642356E+22
889	8,091578E+21	8,091513E+21	1,203020E+20	1,203496E+20	1,618309E+22	2,406516E+20	1,642374E+22
890	8,091501E+21	8,091242E+21	1,203145E+20	1,202908E+20	1,618274E+22	2,406052E+20	1,642335E+22
891	8,090967E+21	8,091515E+21	1,203603E+20	1,203309E+20	1,618248E+22	2,406912E+20	1,642317E+22
892	8,091212E+21	8,090907E+21	1,202942E+20	1,203499E+20	1,618212E+22	2,406441E+20	1,642276E+22
893	8,090787E+21	8,090646E+21	1,203460E+20	1,203056E+20	1,618143E+22	2,406516E+20	1,642208E+22
894	8,090419E+21	8,090639E+21	1,203492E+20	1,203621E+20	1,618106E+22	2,407113E+20	1,642177E+22
895	8,090538E+21	8,090005E+21	1,203109E+20	1,203441E+20	1,618054E+22	2,406550E+20	1,642120E+22
896	8,089770E+21	8,090122E+21	1,203809E+20	1,203219E+20	1,617989E+22	2,407029E+20	1,642060E+22
897	8,089664E+21	8,089851E+21	1,203378E+20	1,203823E+20	1,617951E+22	2,407201E+20	1,642023E+22
898	8,089706E+21	8,089321E+21	1,203369E+20	1,203353E+20	1,617903E+22	2,406722E+20	1,641970E+22
899	8,089277E+21	8,089744E+21	1,203862E+20	1,203411E+20	1,617902E+22	2,407273E+20	1,641975E+22
900	8,089763E+21	8,089530E+21	1,203251E+20	1,203786E+20	1,617929E+22	2,407037E+20	1,642000E+22
901	8,089821E+21	8,089581E+21	1,203513E+20	1,203142E+20	1,617940E+22	2,406655E+20	1,642007E+22
902	8,089698E+21	8,090193E+21	1,203660E+20	1,203569E+20	1,617989E+22	2,407228E+20	1,642061E+22
903	8,090317E+21	8,090016E+21	1,203070E+20	1,203535E+20	1,618033E+22	2,406606E+20	1,642099E+22
904	8,090190E+21	8,090436E+21	1,203575E+20	1,203043E+20	1,618063E+22	2,406618E+20	1,642129E+22
905	8,090430E+21	8,090705E+21	1,203368E+20	1,203644E+20	1,618113E+22	2,407012E+20	1,642184E+22
906	8,090870E+21	8,090409E+21	1,203076E+20	1,203163E+20	1,618128E+22	2,406239E+20	1,642190E+22
907	8,090508E+21	8,090938E+21	1,203710E+20	1,203106E+20	1,618145E+22	2,406816E+20	1,642213E+22
908	8,090718E+21	8,090771E+21	1,203155E+20	1,203648E+20	1,618149E+22	2,406803E+20	1,642217E+22
909	8,090699E+21	8,090342E+21	1,203231E+20	1,203106E+20	1,618104E+22	2,406337E+20	1,642167E+22
910	8,090197E+21	8,090613E+21	1,203675E+20	1,203463E+20	1,618081E+22	2,407138E+20	1,642152E+22
911	8,090442E+21	8,090054E+21	1,203044E+20	1,203638E+20	1,618050E+22	2,406682E+20	1,642116E+22
912	8,090023E+21	8,089874E+21	1,203624E+20	1,203164E+20	1,617990E+22	2,406787E+20	1,642058E+22
913	8,089546E+21	8,089904E+21	1,203646E+20	1,203713E+20	1,617945E+22	2,407360E+20	1,642019E+22
914	8,089546E+21	8,089138E+21	1,203273E+20	1,203569E+20	1,617868E+22	2,406842E+20	1,641937E+22
915	8,088868E+21	8,089221E+21	1,203949E+20	1,203348E+20	1,617809E+22	2,407298E+20	1,641882E+22
916	8,088810E+21	8,089000E+21	1,203507E+20	1,203958E+20	1,617781E+22	2,407464E+20	1,641856E+22
917	8,089012E+21	8,088449E+21	1,203465E+20	1,203492E+20	1,617746E+22	2,406957E+20	1,641816E+22
918	8,088638E+21	8,088997E+21	1,203943E+20	1,203512E+20	1,617764E+22	2,407455E+20	1,641838E+22
919	8,089078E+21	8,088895E+21	1,203343E+20	1,203905E+20	1,617797E+22	2,407248E+20	1,641870E+22
920	8,089142E+21	8,088995E+21	1,203619E+20	1,203256E+20	1,617814E+22	2,406875E+20	1,641882E+22

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 ° Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
921	8,088998E+21	8,089578E+21	1,203762E+20	1,203650E+20	1,617858E+22	2,407412E+20	1,641932E+22
922	8,089578E+21	8,089292E+21	1,203195E+20	1,203610E+20	1,617887E+22	2,406805E+20	1,641955E+22
923	8,089539E+21	8,089713E+21	1,203716E+20	1,203112E+20	1,617925E+22	2,406828E+20	1,641994E+22
924	8,089692E+21	8,090029E+21	1,203518E+20	1,203737E+20	1,617972E+22	2,407255E+20	1,642045E+22
925	8,090129E+21	8,089644E+21	1,203173E+20	1,203319E+20	1,617977E+22	2,406492E+20	1,642042E+22
926	8,089743E+21	8,090140E+21	1,203765E+20	1,203271E+20	1,617988E+22	2,407036E+20	1,642059E+22
927	8,089942E+21	8,089962E+21	1,203221E+20	1,203817E+20	1,617990E+22	2,407038E+20	1,642061E+22
928	8,090006E+21	8,089567E+21	1,203342E+20	1,203249E+20	1,617957E+22	2,406590E+20	1,642023E+22
929	8,089471E+21	8,089853E+21	1,203812E+20	1,203531E+20	1,617932E+22	2,407343E+20	1,642006E+22
930	8,089577E+21	8,089245E+21	1,203233E+20	1,203724E+20	1,617882E+22	2,406956E+20	1,641952E+22
931	8,089128E+21	8,089053E+21	1,203808E+20	1,203280E+20	1,617818E+22	2,407088E+20	1,641889E+22
932	8,088530E+21	8,089050E+21	1,203807E+20	1,203865E+20	1,617758E+22	2,407673E+20	1,641835E+22
933	8,088643E+21	8,088150E+21	1,203377E+20	1,203764E+20	1,617679E+22	2,407141E+20	1,641751E+22
934	8,088096E+21	8,088271E+21	1,204010E+20	1,203489E+20	1,617637E+22	2,407499E+20	1,641712E+22
935	8,088104E+21	8,088183E+21	1,203606E+20	1,204075E+20	1,617629E+22	2,407681E+20	1,641706E+22
936	8,088366E+21	8,087797E+21	1,203596E+20	1,203582E+20	1,617616E+22	2,407178E+20	1,641688E+22
937	8,087919E+21	8,088420E+21	1,204058E+20	1,203569E+20	1,617634E+22	2,407627E+20	1,641710E+22
938	8,088255E+21	8,088239E+21	1,203485E+20	1,203996E+20	1,617649E+22	2,407480E+20	1,641724E+22
939	8,088400E+21	8,088305E+21	1,203741E+20	1,203355E+20	1,617671E+22	2,407095E+20	1,641741E+22
940	8,088259E+21	8,088892E+21	1,203888E+20	1,203754E+20	1,617715E+22	2,407641E+20	1,641792E+22
941	8,088938E+21	8,088514E+21	1,203288E+20	1,203740E+20	1,617745E+22	2,407028E+20	1,641815E+22
942	8,088924E+21	8,088976E+21	1,203776E+20	1,203236E+20	1,617790E+22	2,407012E+20	1,641860E+22
943	8,089006E+21	8,089339E+21	1,203594E+20	1,203887E+20	1,617835E+22	2,407481E+20	1,641909E+22
944	8,089442E+21	8,088961E+21	1,203270E+20	1,203476E+20	1,617840E+22	2,406746E+20	1,641908E+22
945	8,089042E+21	8,089421E+21	1,203856E+20	1,203370E+20	1,617846E+22	2,407226E+20	1,641919E+22
946	8,089167E+21	8,089159E+21	1,203377E+20	1,203897E+20	1,617833E+22	2,407274E+20	1,641905E+22
947	8,089238E+21	8,088778E+21	1,203527E+20	1,203328E+20	1,617802E+22	2,406855E+20	1,641870E+22
948	8,088565E+21	8,089089E+21	1,204002E+20	1,203627E+20	1,617765E+22	2,407629E+20	1,641842E+22
949	8,088624E+21	8,088341E+21	1,203372E+20	1,203888E+20	1,617696E+22	2,407261E+20	1,641769E+22
950	8,088187E+21	8,088106E+21	1,203890E+20	1,203456E+20	1,617629E+22	2,407345E+20	1,641703E+22
951	8,087641E+21	8,088114E+21	1,203891E+20	1,204032E+20	1,617576E+22	2,407923E+20	1,641655E+22
952	8,087893E+21	8,087305E+21	1,203495E+20	1,203910E+20	1,617520E+22	2,407404E+20	1,641594E+22
953	8,087404E+21	8,087515E+21	1,204119E+20	1,203553E+20	1,617492E+22	2,407673E+20	1,641569E+22
954	8,087327E+21	8,087465E+21	1,203780E+20	1,204156E+20	1,617479E+22	2,407936E+20	1,641559E+22
955	8,087583E+21	8,087142E+21	1,203752E+20	1,203687E+20	1,617473E+22	2,407439E+20	1,641547E+22
956	8,087071E+21	8,087742E+21	1,204192E+20	1,203698E+20	1,617481E+22	2,407890E+20	1,641560E+22
957	8,087501E+21	8,087424E+21	1,203570E+20	1,204150E+20	1,617492E+22	2,407720E+20	1,641570E+22
958	8,087759E+21	8,087508E+21	1,203781E+20	1,203480E+20	1,617527E+22	2,407262E+20	1,641599E+22
959	8,087643E+21	8,088173E+21	1,203968E+20	1,203865E+20	1,617582E+22	2,407833E+20	1,641660E+22
960	8,088349E+21	8,087906E+21	1,203395E+20	1,203852E+20	1,617626E+22	2,407247E+20	1,641698E+22
961	8,088271E+21	8,088370E+21	1,203860E+20	1,203307E+20	1,617664E+22	2,407168E+20	1,641736E+22
962	8,088233E+21	8,088650E+21	1,203737E+20	1,203981E+20	1,617688E+22	2,407718E+20	1,641765E+22
963	8,088708E+21	8,088254E+21	1,203411E+20	1,203572E+20	1,617696E+22	2,406983E+20	1,641766E+22
964	8,088249E+21	8,088685E+21	1,204020E+20	1,203466E+20	1,617693E+22	2,407485E+20	1,641768E+22
965	8,088382E+21	8,088310E+21	1,203524E+20	1,204017E+20	1,617669E+22	2,407541E+20	1,641745E+22
966	8,088419E+21	8,087931E+21	1,203637E+20	1,203480E+20	1,617635E+22	2,407117E+20	1,641706E+22
967	8,087651E+21	8,088231E+21	1,204110E+20	1,203803E+20	1,617588E+22	2,407913E+20	1,641667E+22
968	8,087743E+21	8,087467E+21	1,203489E+20	1,204081E+20	1,617521E+22	2,407570E+20	1,641597E+22
969	8,087361E+21	8,087204E+21	1,203972E+20	1,203570E+20	1,617456E+22	2,407542E+20	1,641532E+22

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 $\odot$ Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
970	8,086815E+21	8,087219E+21	1,204045E+20	1,204126E+20	1,617403E+22	2,408171E+20	1,641485E+22
971	8,087124E+21	8,086532E+21	1,203676E+20	1,203992E+20	1,617366E+22	2,407669E+20	1,641442E+22
972	8,086565E+21	8,086825E+21	1,204289E+20	1,203656E+20	1,617339E+22	2,407944E+20	1,641418E+22
973	8,086486E+21	8,086682E+21	1,203909E+20	1,204308E+20	1,617317E+22	2,408217E+20	1,641399E+22
974	8,086792E+21	8,086354E+21	1,203809E+20	1,203850E+20	1,617315E+22	2,407659E+20	1,641391E+22
975	8,086348E+21	8,086971E+21	1,204249E+20	1,203838E+20	1,617332E+22	2,408087E+20	1,641413E+22
976	8,086894E+21	8,086726E+21	1,203662E+20	1,204263E+20	1,617362E+22	2,407925E+20	1,641441E+22
977	8,087192E+21	8,086872E+21	1,203865E+20	1,203519E+20	1,617406E+22	2,407384E+20	1,641480E+22
978	8,086977E+21	8,087544E+21	1,204128E+20	1,203931E+20	1,617452E+22	2,408060E+20	1,641533E+22
979	8,087626E+21	8,087313E+21	1,203556E+20	1,203945E+20	1,617494E+22	2,407501E+20	1,641569E+22
980	8,087490E+21	8,087712E+21	1,203996E+20	1,203438E+20	1,617520E+22	2,407434E+20	1,641595E+22
981	8,087492E+21	8,087818E+21	1,203846E+20	1,204118E+20	1,617531E+22	2,407964E+20	1,641611E+22
982	8,088005E+21	8,087429E+21	1,203486E+20	1,203706E+20	1,617543E+22	2,407192E+20	1,641615E+22
983	8,087497E+21	8,087885E+21	1,204131E+20	1,203594E+20	1,617538E+22	2,407725E+20	1,641615E+22
984	8,087579E+21	8,087554E+21	1,203654E+20	1,204160E+20	1,617513E+22	2,407814E+20	1,641591E+22
985	8,087549E+21	8,087129E+21	1,203737E+20	1,203603E+20	1,617468E+22	2,407340E+20	1,641541E+22
986	8,086712E+21	8,087325E+21	1,204258E+20	1,203940E+20	1,617404E+22	2,408198E+20	1,641486E+22
987	8,086875E+21	8,086597E+21	1,203647E+20	1,204208E+20	1,617347E+22	2,407855E+20	1,641426E+22
988	8,086525E+21	8,086357E+21	1,204127E+20	1,203691E+20	1,617288E+22	2,407818E+20	1,641366E+22
989	8,086028E+21	8,086330E+21	1,204191E+20	1,204251E+20	1,617236E+22	2,408442E+20	1,641320E+22
990	8,086337E+21	8,085739E+21	1,203782E+20	1,204148E+20	1,617208E+22	2,407930E+20	1,641287E+22
991	8,085730E+21	8,086060E+21	1,204384E+20	1,203820E+20	1,617179E+22	2,408204E+20	1,641261E+22
992	8,085726E+21	8,085935E+21	1,204012E+20	1,204466E+20	1,617166E+22	2,408478E+20	1,641251E+22
993	8,086108E+21	8,085603E+21	1,203878E+20	1,203921E+20	1,617171E+22	2,407799E+20	1,641249E+22
994	8,085655E+21	8,086232E+21	1,204392E+20	1,203894E+20	1,617189E+22	2,408285E+20	1,641272E+22
995	8,086225E+21	8,086116E+21	1,203830E+20	1,204310E+20	1,617234E+22	2,408140E+20	1,641316E+22
996	8,086451E+21	8,086287E+21	1,204011E+20	1,203607E+20	1,617274E+22	2,407619E+20	1,641350E+22
997	8,086230E+21	8,086826E+21	1,204243E+20	1,204069E+20	1,617306E+22	2,408312E+20	1,641389E+22
998	8,086922E+21	8,086575E+21	1,203615E+20	1,204102E+20	1,617350E+22	2,407718E+20	1,641427E+22
999	8,086808E+21	8,086954E+21	1,204060E+20	1,203588E+20	1,617376E+22	2,407648E+20	1,641453E+22
1000	8,086867E+21	8,087089E+21	1,203946E+20	1,204239E+20	1,617396E+22	2,408186E+20	1,641478E+22
1001	8,087336E+21	8,086707E+21	1,203579E+20	1,203782E+20	1,617404E+22	2,407361E+20	1,641478E+22
1002	8,086673E+21	8,087123E+21	1,204296E+20	1,203708E+20	1,617380E+22	2,408004E+20	1,641460E+22
1003	8,086670E+21	8,086794E+21	1,203826E+20	1,204288E+20	1,617346E+22	2,408114E+20	1,641428E+22
1004	8,086617E+21	8,086272E+21	1,203891E+20	1,203766E+20	1,617289E+22	2,407657E+20	1,641365E+22
1005	8,085859E+21	8,086317E+21	1,204384E+20	1,204089E+20	1,617218E+22	2,408472E+20	1,641302E+22
1006	8,086091E+21	8,085665E+21	1,203758E+20	1,204352E+20	1,617176E+22	2,408109E+20	1,641257E+22
1007	8,085732E+21	8,085516E+21	1,204246E+20	1,203828E+20	1,617125E+22	2,408075E+20	1,641206E+22
1008	8,085228E+21	8,085576E+21	1,204324E+20	1,204387E+20	1,617080E+22	2,408711E+20	1,641167E+22
1009	8,085505E+21	8,085003E+21	1,203881E+20	1,204251E+20	1,617051E+22	2,408133E+20	1,641132E+22
1010	8,084876E+21	8,085273E+21	1,204521E+20	1,203927E+20	1,617015E+22	2,408448E+20	1,641099E+22
1011	8,084925E+21	8,085215E+21	1,204171E+20	1,204536E+20	1,617014E+22	2,408707E+20	1,641101E+22
1012	8,085359E+21	8,084904E+21	1,204023E+20	1,204009E+20	1,617026E+22	2,408032E+20	1,641107E+22
1013	8,084968E+21	8,085454E+21	1,204518E+20	1,203999E+20	1,617042E+22	2,408517E+20	1,641127E+22
1014	8,085546E+21	8,085425E+21	1,203916E+20	1,204460E+20	1,617097E+22	2,408376E+20	1,641181E+22
1015	8,085755E+21	8,085594E+21	1,204070E+20	1,203779E+20	1,617135E+22	2,407849E+20	1,641213E+22
1016	8,085609E+21	8,086119E+21	1,204306E+20	1,204227E+20	1,617173E+22	2,408533E+20	1,641258E+22
1017	8,086332E+21	8,085875E+21	1,203665E+20	1,204174E+20	1,617221E+22	2,407838E+20	1,641299E+22
1018	8,086150E+21	8,086240E+21	1,204199E+20	1,203664E+20	1,617239E+22	2,407863E+20	1,641318E+22

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 ° Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
1019	8,086119E+21	8,086459E+21	1,204130E+20	1,204288E+20	1,617258E+22	2,408419E+20	1,641342E+22
1020	8,086465E+21	8,086024E+21	1,203750E+20	1,203904E+20	1,617249E+22	2,407653E+20	1,641325E+22
1021	8,085768E+21	8,086224E+21	1,204434E+20	1,203867E+20	1,617199E+22	2,408300E+20	1,641282E+22
1022	8,085808E+21	8,085869E+21	1,203918E+20	1,204465E+20	1,617168E+22	2,408383E+20	1,641252E+22
1023	8,085793E+21	8,085342E+21	1,203987E+20	1,203930E+20	1,617113E+22	2,407917E+20	1,641193E+22
1024	8,085134E+21	8,085450E+21	1,204496E+20	1,204221E+20	1,617058E+22	2,408717E+20	1,641146E+22
1025	8,085345E+21	8,084877E+21	1,203878E+20	1,204435E+20	1,617022E+22	2,408313E+20	1,641105E+22
1026	8,084854E+21	8,084749E+21	1,204420E+20	1,203955E+20	1,616960E+22	2,408375E+20	1,641044E+22
1027	8,084305E+21	8,084858E+21	1,204501E+20	1,204494E+20	1,616916E+22	2,408995E+20	1,641006E+22
1028	8,084603E+21	8,084210E+21	1,204031E+20	1,204391E+20	1,616881E+22	2,408422E+20	1,640966E+22
1029	8,084073E+21	8,084353E+21	1,204633E+20	1,204045E+20	1,616843E+22	2,408678E+20	1,640929E+22
1030	8,084215E+21	8,084395E+21	1,204265E+20	1,204652E+20	1,616861E+22	2,408917E+20	1,640950E+22
1031	8,084658E+21	8,084176E+21	1,204109E+20	1,204136E+20	1,616883E+22	2,408245E+20	1,640966E+22
1032	8,084331E+21	8,084791E+21	1,204590E+20	1,204144E+20	1,616912E+22	2,408733E+20	1,641000E+22
1033	8,084913E+21	8,084784E+21	1,203973E+20	1,204559E+20	1,616970E+22	2,408532E+20	1,641055E+22
1034	8,085102E+21	8,084931E+21	1,204169E+20	1,203886E+20	1,617003E+22	2,408055E+20	1,641084E+22
1035	8,084962E+21	8,085522E+21	1,204448E+20	1,204268E+20	1,617048E+22	2,408716E+20	1,641136E+22
1036	8,085645E+21	8,085254E+21	1,203818E+20	1,204242E+20	1,617090E+22	2,408060E+20	1,641170E+22
1037	8,085403E+21	8,085470E+21	1,204350E+20	1,203770E+20	1,617087E+22	2,408120E+20	1,641169E+22
1038	8,085288E+21	8,085691E+21	1,204250E+20	1,204440E+20	1,617098E+22	2,408690E+20	1,641185E+22
1039	8,085588E+21	8,085175E+21	1,203852E+20	1,204100E+20	1,617076E+22	2,407952E+20	1,641156E+22
1040	8,084998E+21	8,085297E+21	1,204515E+20	1,204044E+20	1,617029E+22	2,408559E+20	1,641115E+22
1041	8,085072E+21	8,084976E+21	1,204003E+20	1,204557E+20	1,617005E+22	2,408561E+20	1,641090E+22
1042	8,085009E+21	8,084498E+21	1,204142E+20	1,204035E+20	1,616951E+22	2,408178E+20	1,641032E+22
1043	8,084265E+21	8,084729E+21	1,204684E+20	1,204284E+20	1,616899E+22	2,408968E+20	1,640989E+22
1044	8,084391E+21	8,084147E+21	1,204062E+20	1,204571E+20	1,616854E+22	2,408633E+20	1,640940E+22
1045	8,083899E+21	8,083835E+21	1,204563E+20	1,204119E+20	1,616773E+22	2,408682E+20	1,640860E+22
1046	8,083426E+21	8,083956E+21	1,204597E+20	1,204647E+20	1,616738E+22	2,409245E+20	1,640831E+22
1047	8,083804E+21	8,083332E+21	1,204121E+20	1,204542E+20	1,616714E+22	2,408663E+20	1,640800E+22
1048	8,083429E+21	8,083530E+21	1,204706E+20	1,204167E+20	1,616696E+22	2,408874E+20	1,640785E+22
1049	8,083591E+21	8,083703E+21	1,204346E+20	1,204726E+20	1,616729E+22	2,409073E+20	1,640820E+22
1050	8,083961E+21	8,083551E+21	1,204230E+20	1,204253E+20	1,616751E+22	2,408482E+20	1,640836E+22
1051	8,083630E+21	8,084228E+21	1,204725E+20	1,204224E+20	1,616786E+22	2,408949E+20	1,640875E+22
1052	8,084231E+21	8,084171E+21	1,204111E+20	1,204653E+20	1,616840E+22	2,408763E+20	1,640928E+22
1053	8,084438E+21	8,084178E+21	1,204288E+20	1,203973E+20	1,616862E+22	2,408260E+20	1,640944E+22
1054	8,084289E+21	8,084814E+21	1,204562E+20	1,204352E+20	1,616910E+22	2,408913E+20	1,640999E+22
1055	8,084868E+21	8,084546E+21	1,203932E+20	1,204365E+20	1,616941E+22	2,408297E+20	1,641024E+22
1056	8,084644E+21	8,084707E+21	1,204437E+20	1,203937E+20	1,616935E+22	2,408373E+20	1,641019E+22
1057	8,084519E+21	8,084881E+21	1,204323E+20	1,204560E+20	1,616940E+22	2,408884E+20	1,641029E+22
1058	8,084785E+21	8,084333E+21	1,203972E+20	1,204245E+20	1,616912E+22	2,408217E+20	1,640994E+22
1059	8,084226E+21	8,084529E+21	1,204659E+20	1,204120E+20	1,616875E+22	2,408779E+20	1,640963E+22
1060	8,084279E+21	8,084206E+21	1,204180E+20	1,204656E+20	1,616849E+22	2,408835E+20	1,640937E+22
1061	8,084139E+21	8,083635E+21	1,204310E+20	1,204175E+20	1,616777E+22	2,408484E+20	1,640862E+22
1062	8,083342E+21	8,083889E+21	1,204813E+20	1,204444E+20	1,616723E+22	2,409257E+20	1,640816E+22
1063	8,083436E+21	8,083249E+21	1,204182E+20	1,204765E+20	1,616668E+22	2,408947E+20	1,640758E+22
1064	8,083098E+21	8,082890E+21	1,204642E+20	1,204291E+20	1,616599E+22	2,408932E+20	1,640688E+22
1065	8,082701E+21	8,083080E+21	1,204676E+20	1,204723E+20	1,616578E+22	2,409399E+20	1,640672E+22
1066	8,083067E+21	8,082567E+21	1,204260E+20	1,204636E+20	1,616563E+22	2,408896E+20	1,640652E+22
1067	8,082685E+21	8,082923E+21	1,204853E+20	1,204218E+20	1,616561E+22	2,409070E+20	1,640652E+22

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 $\odot$ Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
1068	8,082831E+21	8,083110E+21	1,204505E+20	1,204833E+20	1,616594E+22	2,409338E+20	1,640688E+22
1069	8,083207E+21	8,082828E+21	1,204349E+20	1,204377E+20	1,616604E+22	2,408726E+20	1,640691E+22
1070	8,082943E+21	8,083522E+21	1,204813E+20	1,204329E+20	1,616646E+22	2,409142E+20	1,640738E+22
1071	8,083555E+21	8,083470E+21	1,204209E+20	1,204761E+20	1,616702E+22	2,408970E+20	1,640792E+22
1072	8,083841E+21	8,083449E+21	1,204365E+20	1,204095E+20	1,616729E+22	2,408460E+20	1,640814E+22
1073	8,083618E+21	8,084126E+21	1,204645E+20	1,204441E+20	1,616774E+22	2,409086E+20	1,640865E+22
1074	8,084081E+21	8,083846E+21	1,204048E+20	1,204522E+20	1,616793E+22	2,408570E+20	1,640878E+22
1075	8,083851E+21	8,083982E+21	1,204558E+20	1,204053E+20	1,616783E+22	2,408611E+20	1,640869E+22
1076	8,083760E+21	8,084093E+21	1,204464E+20	1,204675E+20	1,616785E+22	2,409140E+20	1,640877E+22
1077	8,084015E+21	8,083442E+21	1,204117E+20	1,204354E+20	1,616746E+22	2,408471E+20	1,640830E+22
1078	8,083433E+21	8,083701E+21	1,204794E+20	1,204224E+20	1,616713E+22	2,409018E+20	1,640804E+22
1079	8,083373E+21	8,083401E+21	1,204330E+20	1,204801E+20	1,616677E+22	2,409131E+20	1,640769E+22
1080	8,083258E+21	8,082762E+21	1,204419E+20	1,204370E+20	1,616602E+22	2,408789E+20	1,640690E+22
1081	8,082473E+21	8,083002E+21	1,204899E+20	1,204570E+20	1,616547E+22	2,409469E+20	1,640642E+22
1082	8,082567E+21	8,082378E+21	1,204312E+20	1,204906E+20	1,616495E+22	2,409217E+20	1,640587E+22
1083	8,082301E+21	8,082114E+21	1,204786E+20	1,204353E+20	1,616442E+22	2,409139E+20	1,640533E+22
1084	8,081947E+21	8,082346E+21	1,204849E+20	1,204799E+20	1,616429E+22	2,409648E+20	1,640526E+22
1085	8,082261E+21	8,081810E+21	1,204420E+20	1,204756E+20	1,616407E+22	2,409176E+20	1,640499E+22
1086	8,081912E+21	8,082214E+21	1,204954E+20	1,204361E+20	1,616413E+22	2,409316E+20	1,640506E+22
1087	8,082072E+21	8,082372E+21	1,204614E+20	1,204993E+20	1,616444E+22	2,409607E+20	1,640540E+22
1088	8,082595E+21	8,082067E+21	1,204402E+20	1,204521E+20	1,616466E+22	2,408923E+20	1,640555E+22
1089	8,082373E+21	8,082816E+21	1,204870E+20	1,204385E+20	1,616519E+22	2,409255E+20	1,640611E+22
1090	8,082880E+21	8,082829E+21	1,204328E+20	1,204842E+20	1,616571E+22	2,409170E+20	1,640663E+22
1091	8,083107E+21	8,082883E+21	1,204493E+20	1,204165E+20	1,616599E+22	2,408658E+20	1,640686E+22
1092	8,082855E+21	8,083474E+21	1,204794E+20	1,204558E+20	1,616633E+22	2,409351E+20	1,640726E+22
1093	8,083278E+21	8,083037E+21	1,204181E+20	1,204661E+20	1,616631E+22	2,408842E+20	1,640720E+22
1094	8,083116E+21	8,083163E+21	1,204655E+20	1,204175E+20	1,616628E+22	2,408829E+20	1,640716E+22
1095	8,083002E+21	8,083267E+21	1,204594E+20	1,204794E+20	1,616627E+22	2,409388E+20	1,640721E+22
1096	8,083295E+21	8,082609E+21	1,204226E+20	1,204502E+20	1,616590E+22	2,408728E+20	1,640678E+22
1097	8,082625E+21	8,082905E+21	1,204903E+20	1,204342E+20	1,616553E+22	2,409245E+20	1,640646E+22
1098	8,082436E+21	8,082594E+21	1,204481E+20	1,204972E+20	1,616503E+22	2,409452E+20	1,640598E+22
1099	8,082338E+21	8,081944E+21	1,204571E+20	1,204503E+20	1,616428E+22	2,409074E+20	1,640519E+22
1100	8,081620E+21	8,082128E+21	1,205057E+20	1,204679E+20	1,616375E+22	2,409736E+20	1,640472E+22
1101	8,081705E+21	8,081453E+21	1,204475E+20	1,205014E+20	1,616316E+22	2,409489E+20	1,640411E+22
1102	8,081479E+21	8,081282E+21	1,204910E+20	1,204454E+20	1,616276E+22	2,409365E+20	1,640370E+22
1103	8,081099E+21	8,081578E+21	1,204984E+20	1,204945E+20	1,616268E+22	2,409930E+20	1,640367E+22
1104	8,081521E+21	8,081027E+21	1,204501E+20	1,204939E+20	1,616255E+22	2,409439E+20	1,640349E+22
1105	8,081236E+21	8,081471E+21	1,205003E+20	1,204474E+20	1,616271E+22	2,409477E+20	1,640365E+22
1106	8,081413E+21	8,081693E+21	1,204710E+20	1,205104E+20	1,616311E+22	2,409814E+20	1,640409E+22
1107	8,081972E+21	8,081473E+21	1,204514E+20	1,204564E+20	1,616344E+22	2,409078E+20	1,640435E+22
1108	8,081739E+21	8,082221E+21	1,205016E+20	1,204443E+20	1,616396E+22	2,409459E+20	1,640491E+22
1109	8,082105E+21	8,082163E+21	1,204477E+20	1,204946E+20	1,616427E+22	2,409423E+20	1,640521E+22
1110	8,082332E+21	8,082170E+21	1,204598E+20	1,204304E+20	1,616450E+22	2,408901E+20	1,640539E+22
1111	8,082092E+21	8,082676E+21	1,204914E+20	1,204716E+20	1,616477E+22	2,409629E+20	1,640573E+22
1112	8,082628E+21	8,082185E+21	1,204260E+20	1,204814E+20	1,616481E+22	2,409074E+20	1,640572E+22
1113	8,082471E+21	8,082364E+21	1,204734E+20	1,204262E+20	1,616484E+22	2,408996E+20	1,640574E+22
1114	8,082223E+21	8,082536E+21	1,204733E+20	1,204905E+20	1,616476E+22	2,409638E+20	1,640572E+22
1115	8,082422E+21	8,081931E+21	1,204380E+20	1,204616E+20	1,616435E+22	2,408996E+20	1,640525E+22
1116	8,081724E+21	8,082118E+21	1,205071E+20	1,204480E+20	1,616384E+22	2,409552E+20	1,640480E+22

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 ° Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
1117	8,081463E+21	8,081672E+21	1,204645E+20	1,205114E+20	1,616313E+22	2,409759E+20	1,640411E+22
1118	8,081459E+21	8,081014E+21	1,204699E+20	1,204639E+20	1,616247E+22	2,409338E+20	1,640341E+22
1119	8,080776E+21	8,081192E+21	1,205203E+20	1,204807E+20	1,616197E+22	2,410011E+20	1,640297E+22
1120	8,080940E+21	8,080567E+21	1,204585E+20	1,205175E+20	1,616151E+22	2,409760E+20	1,640248E+22
1121	8,080725E+21	8,080497E+21	1,204979E+20	1,204590E+20	1,616122E+22	2,409569E+20	1,640218E+22
1122	8,080306E+21	8,080840E+21	1,205092E+20	1,205108E+20	1,616115E+22	2,410200E+20	1,640217E+22
1123	8,080799E+21	8,080369E+21	1,204615E+20	1,205037E+20	1,616117E+22	2,409652E+20	1,640213E+22
1124	8,080604E+21	8,080800E+21	1,205131E+20	1,204533E+20	1,616140E+22	2,409664E+20	1,640237E+22
1125	8,080696E+21	8,081000E+21	1,204869E+20	1,205149E+20	1,616170E+22	2,410019E+20	1,640270E+22
1126	8,081241E+21	8,080827E+21	1,204637E+20	1,204634E+20	1,616207E+22	2,409270E+20	1,640300E+22
1127	8,080946E+21	8,081531E+21	1,205149E+20	1,204578E+20	1,616248E+22	2,409727E+20	1,640345E+22
1128	8,081386E+21	8,081395E+21	1,204554E+20	1,205125E+20	1,616278E+22	2,409678E+20	1,640375E+22
1129	8,081678E+21	8,081396E+21	1,204639E+20	1,204435E+20	1,616307E+22	2,409075E+20	1,640398E+22
1130	8,081434E+21	8,081931E+21	1,205005E+20	1,204842E+20	1,616336E+22	2,409847E+20	1,640435E+22
1131	8,081967E+21	8,081521E+21	1,204389E+20	1,204888E+20	1,616349E+22	2,409277E+20	1,640442E+22
1132	8,081756E+21	8,081678E+21	1,204894E+20	1,204359E+20	1,616343E+22	2,409253E+20	1,640436E+22
1133	8,081304E+21	8,081762E+21	1,204907E+20	1,205035E+20	1,616307E+22	2,409942E+20	1,640406E+22
1134	8,081482E+21	8,081072E+21	1,204522E+20	1,204785E+20	1,616255E+22	2,409307E+20	1,640349E+22
1135	8,080802E+21	8,081158E+21	1,205218E+20	1,204655E+20	1,616196E+22	2,409874E+20	1,640295E+22
1136	8,080656E+21	8,080666E+21	1,204745E+20	1,205271E+20	1,616132E+22	2,410017E+20	1,640232E+22
1137	8,080679E+21	8,080088E+21	1,204788E+20	1,204746E+20	1,616077E+22	2,409534E+20	1,640172E+22
1138	8,079946E+21	8,080383E+21	1,205321E+20	1,204937E+20	1,616033E+22	2,410257E+20	1,640136E+22
1139	8,080109E+21	8,079874E+21	1,204729E+20	1,205290E+20	1,615998E+22	2,410019E+20	1,640098E+22
1140	8,079952E+21	8,079787E+21	1,205115E+20	1,204703E+20	1,615974E+22	2,409818E+20	1,640072E+22
1141	8,079495E+21	8,080090E+21	1,205241E+20	1,205197E+20	1,615958E+22	2,410438E+20	1,640063E+22
1142	8,080068E+21	8,079653E+21	1,204739E+20	1,205113E+20	1,615972E+22	2,409852E+20	1,640071E+22
1143	8,079889E+21	8,080076E+21	1,205269E+20	1,204625E+20	1,615996E+22	2,409895E+20	1,640095E+22
1144	8,080006E+21	8,080274E+21	1,204963E+20	1,205278E+20	1,616028E+22	2,410241E+20	1,640130E+22
1145	8,080541E+21	8,080134E+21	1,204689E+20	1,204777E+20	1,616067E+22	2,409466E+20	1,640162E+22
1146	8,080246E+21	8,080811E+21	1,205221E+20	1,204756E+20	1,616106E+22	2,409977E+20	1,640205E+22
1147	8,080758E+21	8,080722E+21	1,204650E+20	1,205238E+20	1,616148E+22	2,409888E+20	1,640247E+22
1148	8,081112E+21	8,080707E+21	1,204749E+20	1,204510E+20	1,616182E+22	2,409259E+20	1,640275E+22
1149	8,080710E+21	8,081218E+21	1,205161E+20	1,204898E+20	1,616193E+22	2,410059E+20	1,640293E+22
1150	8,081167E+21	8,080832E+21	1,204536E+20	1,204978E+20	1,616200E+22	2,409514E+20	1,640295E+22
1151	8,080857E+21	8,080884E+21	1,205059E+20	1,204524E+20	1,616174E+22	2,409583E+20	1,640270E+22
1152	8,080418E+21	8,080848E+21	1,205018E+20	1,205213E+20	1,616127E+22	2,410230E+20	1,640229E+22
1153	8,080650E+21	8,080140E+21	1,204599E+20	1,204945E+20	1,616079E+22	2,409544E+20	1,640174E+22
1154	8,079985E+21	8,080224E+21	1,205322E+20	1,204798E+20	1,616021E+22	2,410119E+20	1,640122E+22
1155	8,079867E+21	8,079853E+21	1,204889E+20	1,205359E+20	1,615972E+22	2,410248E+20	1,640074E+22
1156	8,079891E+21	8,079321E+21	1,204941E+20	1,204844E+20	1,615921E+22	2,409785E+20	1,640019E+22
1157	8,079016E+21	8,079599E+21	1,205485E+20	1,205056E+20	1,615862E+22	2,410540E+20	1,639967E+22
1158	8,079232E+21	8,079088E+21	1,204880E+20	1,205431E+20	1,615832E+22	2,410311E+20	1,639935E+22
1159	8,079138E+21	8,078958E+21	1,205256E+20	1,204851E+20	1,615810E+22	2,410107E+20	1,639911E+22
1160	8,078788E+21	8,079253E+21	1,205333E+20	1,205311E+20	1,615804E+22	2,410644E+20	1,639911E+22
1161	8,079382E+21	8,078904E+21	1,204803E+20	1,205210E+20	1,615829E+22	2,410014E+20	1,639929E+22
1162	8,079160E+21	8,079384E+21	1,205344E+20	1,204759E+20	1,615854E+22	2,410103E+20	1,639955E+22
1163	8,079296E+21	8,079654E+21	1,205063E+20	1,205397E+20	1,615895E+22	2,410460E+20	1,640000E+22
1164	8,079902E+21	8,079481E+21	1,204784E+20	1,204887E+20	1,615938E+22	2,409671E+20	1,640035E+22
1165	8,079570E+21	8,080114E+21	1,205337E+20	1,204846E+20	1,615968E+22	2,410182E+20	1,640070E+22

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 ° Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
1166	8,080125E+21	8,080042E+21	1,204786E+20	1,205301E+20	1,616017E+22	2,410087E+20	1,640118E+22
1167	8,080426E+21	8,080008E+21	1,204904E+20	1,204614E+20	1,616043E+22	2,409518E+20	1,640139E+22
1168	8,079967E+21	8,080467E+21	1,205271E+20	1,205021E+20	1,616043E+22	2,410293E+20	1,640146E+22
1169	8,080331E+21	8,080046E+21	1,204620E+20	1,205138E+20	1,616038E+22	2,409758E+20	1,640135E+22
1170	8,079994E+21	8,080016E+21	1,205159E+20	1,204719E+20	1,616001E+22	2,409878E+20	1,640100E+22
1171	8,079615E+21	8,079994E+21	1,205142E+20	1,205330E+20	1,615961E+22	2,410472E+20	1,640066E+22
1172	8,079892E+21	8,079282E+21	1,204742E+20	1,205030E+20	1,615917E+22	2,409772E+20	1,640015E+22
1173	8,079100E+21	8,079370E+21	1,205485E+20	1,204872E+20	1,615847E+22	2,410357E+20	1,639951E+22
1174	8,078951E+21	8,079055E+21	1,205059E+20	1,205466E+20	1,615801E+22	2,410525E+20	1,639906E+22
1175	8,078953E+21	8,078493E+21	1,205108E+20	1,205023E+20	1,615745E+22	2,410131E+20	1,639846E+22
1176	8,078166E+21	8,078707E+21	1,205579E+20	1,205220E+20	1,615687E+22	2,410799E+20	1,639795E+22
1177	8,078470E+21	8,078247E+21	1,204953E+20	1,205579E+20	1,615672E+22	2,410533E+20	1,639777E+22
1178	8,078422E+21	8,078156E+21	1,205338E+20	1,204987E+20	1,615658E+22	2,410325E+20	1,639761E+22
1179	8,078112E+21	8,078575E+21	1,205446E+20	1,205387E+20	1,615669E+22	2,410832E+20	1,639777E+22
1180	8,078705E+21	8,078273E+21	1,204914E+20	1,205298E+20	1,615698E+22	2,410212E+20	1,639800E+22
1181	8,078376E+21	8,078705E+21	1,205465E+20	1,204865E+20	1,615708E+22	2,410330E+20	1,639811E+22
1182	8,078594E+21	8,078972E+21	1,205198E+20	1,205503E+20	1,615757E+22	2,410701E+20	1,639864E+22
1183	8,079258E+21	8,078765E+21	1,204919E+20	1,205001E+20	1,615802E+22	2,409921E+20	1,639902E+22
1184	8,078962E+21	8,079365E+21	1,205429E+20	1,204929E+20	1,615833E+22	2,410358E+20	1,639936E+22
1185	8,079462E+21	8,079360E+21	1,204870E+20	1,205391E+20	1,615882E+22	2,410261E+20	1,639985E+22
1186	8,079646E+21	8,079305E+21	1,204995E+20	1,204769E+20	1,615895E+22	2,409764E+20	1,639993E+22
1187	8,079152E+21	8,079758E+21	1,205390E+20	1,205149E+20	1,615891E+22	2,410539E+20	1,639996E+22
1188	8,079535E+21	8,079262E+21	1,204738E+20	1,205258E+20	1,615880E+22	2,409997E+20	1,639980E+22
1189	8,079124E+21	8,079146E+21	1,205301E+20	1,204826E+20	1,615827E+22	2,410128E+20	1,639928E+22
1190	8,078791E+21	8,079129E+21	1,205308E+20	1,205413E+20	1,615792E+22	2,410721E+20	1,639899E+22
1191	8,079030E+21	8,078417E+21	1,204923E+20	1,205176E+20	1,615745E+22	2,410099E+20	1,639846E+22
1192	8,078226E+21	8,078476E+21	1,205589E+20	1,205037E+20	1,615670E+22	2,410626E+20	1,639776E+22
1193	8,078072E+21	8,078182E+21	1,205149E+20	1,205664E+20	1,615625E+22	2,410813E+20	1,639734E+22
1194	8,078113E+21	8,077608E+21	1,205196E+20	1,205233E+20	1,615572E+22	2,410429E+20	1,639676E+22
1195	8,077437E+21	8,077901E+21	1,205683E+20	1,205325E+20	1,615534E+22	2,411008E+20	1,639644E+22
1196	8,077781E+21	8,077502E+21	1,205082E+20	1,205633E+20	1,615528E+22	2,410715E+20	1,639636E+22
1197	8,077612E+21	8,077449E+21	1,205483E+20	1,205040E+20	1,615506E+22	2,410523E+20	1,639611E+22
1198	8,077302E+21	8,077904E+21	1,205610E+20	1,205458E+20	1,615521E+22	2,411068E+20	1,639631E+22
1199	8,077898E+21	8,077579E+21	1,205071E+20	1,205446E+20	1,615548E+22	2,410517E+20	1,639653E+22
1200	8,077692E+21	8,077941E+21	1,205530E+20	1,204998E+20	1,615563E+22	2,410528E+20	1,639668E+22
1201	8,077988E+21	8,078246E+21	1,205265E+20	1,205623E+20	1,615623E+22	2,410888E+20	1,639732E+22
1202	8,078657E+21	8,078078E+21	1,204993E+20	1,205121E+20	1,615674E+22	2,410114E+20	1,639775E+22
1203	8,078354E+21	8,078755E+21	1,205535E+20	1,205003E+20	1,615711E+22	2,410538E+20	1,639816E+22
1204	8,078755E+21	8,078746E+21	1,204986E+20	1,205475E+20	1,615750E+22	2,410461E+20	1,639855E+22
1205	8,078774E+21	8,078576E+21	1,205131E+20	1,204905E+20	1,615735E+22	2,410036E+20	1,639835E+22
1206	8,078318E+21	8,078944E+21	1,205546E+20	1,205270E+20	1,615726E+22	2,410816E+20	1,639834E+22
1207	8,078719E+21	8,078395E+21	1,204902E+20	1,205407E+20	1,615711E+22	2,410310E+20	1,639814E+22
1208	8,078342E+21	8,078209E+21	1,205402E+20	1,204947E+20	1,615655E+22	2,410349E+20	1,639759E+22
1209	8,077976E+21	8,078254E+21	1,205408E+20	1,205551E+20	1,615623E+22	2,410959E+20	1,639733E+22
1210	8,078144E+21	8,077567E+21	1,205028E+20	1,205371E+20	1,615571E+22	2,410399E+20	1,639675E+22
1211	8,077384E+21	8,077662E+21	1,205702E+20	1,205190E+20	1,615505E+22	2,410892E+20	1,639613E+22
1212	8,077280E+21	8,077381E+21	1,205278E+20	1,205775E+20	1,615466E+22	2,411053E+20	1,639577E+22
1213	8,077258E+21	8,076794E+21	1,205353E+20	1,205324E+20	1,615405E+22	2,410678E+20	1,639512E+22
1214	8,076635E+21	8,077134E+21	1,205865E+20	1,205369E+20	1,615377E+22	2,411234E+20	1,639489E+22

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 ° Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
1215	8,076946E+21	8,076764E+21	1,205269E+20	1,205742E+20	1,615371E+22	2,411011E+20	1,639481E+22
1216	8,076774E+21	8,076651E+21	1,205577E+20	1,205173E+20	1,615343E+22	2,410750E+20	1,639450E+22
1217	8,076536E+21	8,077121E+21	1,205687E+20	1,205634E+20	1,615366E+22	2,411321E+20	1,639479E+22
1218	8,077217E+21	8,076806E+21	1,205137E+20	1,205626E+20	1,615402E+22	2,410763E+20	1,639510E+22
1219	8,077149E+21	8,077257E+21	1,205599E+20	1,205093E+20	1,615441E+22	2,410692E+20	1,639547E+22
1220	8,077447E+21	8,077637E+21	1,205368E+20	1,205663E+20	1,615508E+22	2,411031E+20	1,639619E+22
1221	8,077921E+21	8,077480E+21	1,205118E+20	1,205186E+20	1,615540E+22	2,410304E+20	1,639643E+22
1222	8,077564E+21	8,078125E+21	1,205691E+20	1,205086E+20	1,615569E+22	2,410778E+20	1,639677E+22
1223	8,077907E+21	8,078023E+21	1,205146E+20	1,205627E+20	1,615593E+22	2,410773E+20	1,639701E+22
1224	8,077980E+21	8,077707E+21	1,205218E+20	1,205060E+20	1,615569E+22	2,410277E+20	1,639671E+22
1225	8,077591E+21	8,078054E+21	1,205637E+20	1,205419E+20	1,615565E+22	2,411056E+20	1,639675E+22
1226	8,077972E+21	8,077527E+21	1,205005E+20	1,205567E+20	1,615550E+22	2,410572E+20	1,639656E+22
1227	8,077607E+21	8,077417E+21	1,205508E+20	1,205072E+20	1,615502E+22	2,410580E+20	1,639608E+22
1228	8,077160E+21	8,077489E+21	1,205535E+20	1,205663E+20	1,615465E+22	2,411198E+20	1,639577E+22
1229	8,077200E+21	8,076758E+21	1,205189E+20	1,205519E+20	1,615396E+22	2,410708E+20	1,639503E+22
1230	8,076513E+21	8,076818E+21	1,205888E+20	1,205289E+20	1,615333E+22	2,411178E+20	1,639445E+22
1231	8,076408E+21	8,076541E+21	1,205482E+20	1,205885E+20	1,615295E+22	2,411367E+20	1,639409E+22
1232	8,076407E+21	8,075912E+21	1,205477E+20	1,205428E+20	1,615232E+22	2,410905E+20	1,639341E+22
1233	8,075787E+21	8,076290E+21	1,205965E+20	1,205506E+20	1,615208E+22	2,411471E+20	1,639322E+22
1234	8,076087E+21	8,075959E+21	1,205355E+20	1,205931E+20	1,615205E+22	2,411286E+20	1,639317E+22
1235	8,076070E+21	8,075899E+21	1,205635E+20	1,205322E+20	1,615197E+22	2,410957E+20	1,639306E+22
1236	8,075940E+21	8,076426E+21	1,205765E+20	1,205727E+20	1,615237E+22	2,411492E+20	1,639352E+22
1237	8,076578E+21	8,076163E+21	1,205257E+20	1,205699E+20	1,615274E+22	2,410956E+20	1,639384E+22
1238	8,076543E+21	8,076659E+21	1,205752E+20	1,205128E+20	1,615320E+22	2,410880E+20	1,639429E+22
1239	8,076737E+21	8,077057E+21	1,205539E+20	1,205756E+20	1,615379E+22	2,411295E+20	1,639492E+22
1240	8,077133E+21	8,076768E+21	1,205206E+20	1,205325E+20	1,615390E+22	2,410531E+20	1,639495E+22
1241	8,076802E+21	8,077319E+21	1,205775E+20	1,205270E+20	1,615412E+22	2,411046E+20	1,639523E+22
1242	8,077161E+21	8,077176E+21	1,205228E+20	1,205805E+20	1,615434E+22	2,411033E+20	1,639544E+22
1243	8,077335E+21	8,076890E+21	1,205305E+20	1,205174E+20	1,615423E+22	2,410480E+20	1,639527E+22
1244	8,076920E+21	8,077287E+21	1,205756E+20	1,205481E+20	1,615421E+22	2,411237E+20	1,639533E+22
1245	8,077096E+21	8,076779E+21	1,205170E+20	1,205664E+20	1,615387E+22	2,410834E+20	1,639496E+22
1246	8,076693E+21	8,076656E+21	1,205696E+20	1,205182E+20	1,615335E+22	2,410878E+20	1,639444E+22
1247	8,076216E+21	8,076672E+21	1,205725E+20	1,205815E+20	1,615289E+22	2,411540E+20	1,639404E+22
1248	8,076279E+21	8,075818E+21	1,205313E+20	1,205675E+20	1,615210E+22	2,410989E+20	1,639320E+22
1249	8,075676E+21	8,075876E+21	1,206002E+20	1,205443E+20	1,615155E+22	2,411445E+20	1,639270E+22
1250	8,075562E+21	8,075643E+21	1,205595E+20	1,206037E+20	1,615121E+22	2,411632E+20	1,639237E+22
1251	8,075621E+21	8,075097E+21	1,205565E+20	1,205572E+20	1,615072E+22	2,411137E+20	1,639183E+22
1252	8,075021E+21	8,075519E+21	1,206050E+20	1,205630E+20	1,615054E+22	2,411680E+20	1,639171E+22
1253	8,075284E+21	8,075207E+21	1,205478E+20	1,206073E+20	1,615049E+22	2,411551E+20	1,639165E+22
1254	8,075414E+21	8,075200E+21	1,205771E+20	1,205397E+20	1,615061E+22	2,411168E+20	1,639173E+22
1255	8,075313E+21	8,075786E+21	1,205928E+20	1,205800E+20	1,615110E+22	2,411728E+20	1,639227E+22
1256	8,075903E+21	8,075498E+21	1,205364E+20	1,205763E+20	1,615140E+22	2,411127E+20	1,639251E+22
1257	8,075835E+21	8,075990E+21	1,205845E+20	1,205252E+20	1,615183E+22	2,411097E+20	1,639294E+22
1258	8,075946E+21	8,076356E+21	1,205628E+20	1,205914E+20	1,615230E+22	2,411542E+20	1,639346E+22
1259	8,076441E+21	8,076035E+21	1,205269E+20	1,205477E+20	1,615248E+22	2,410746E+20	1,639355E+22
1260	8,076166E+21	8,076562E+21	1,205861E+20	1,205365E+20	1,615273E+22	2,411226E+20	1,639385E+22
1261	8,076438E+21	8,076436E+21	1,205371E+20	1,205892E+20	1,615287E+22	2,411263E+20	1,639400E+22
1262	8,076619E+21	8,076172E+21	1,205481E+20	1,205233E+20	1,615279E+22	2,410715E+20	1,639386E+22
1263	8,076076E+21	8,076568E+21	1,205940E+20	1,205599E+20	1,615264E+22	2,411539E+20	1,639380E+22

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 $\odot$ Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
1264	8,076160E+21	8,075932E+21	1,205295E+20	1,205831E+20	1,615209E+22	2,411127E+20	1,639321E+22
1265	8,075810E+21	8,075711E+21	1,205809E+20	1,205396E+20	1,615152E+22	2,411205E+20	1,639264E+22
1266	8,075345E+21	8,075720E+21	1,205833E+20	1,205992E+20	1,615107E+22	2,411825E+20	1,639225E+22
1267	8,075518E+21	8,074915E+21	1,205414E+20	1,205813E+20	1,615043E+22	2,411226E+20	1,639156E+22
1268	8,074900E+21	8,075030E+21	1,206108E+20	1,205522E+20	1,614993E+22	2,411630E+20	1,639109E+22
1269	8,074641E+21	8,074858E+21	1,205741E+20	1,206146E+20	1,614950E+22	2,411887E+20	1,639069E+22
1270	8,074755E+21	8,074343E+21	1,205725E+20	1,205675E+20	1,614910E+22	2,411400E+20	1,639024E+22
1271	8,074226E+21	8,074783E+21	1,206202E+20	1,205758E+20	1,614901E+22	2,411960E+20	1,639020E+22
1272	8,074554E+21	8,074432E+21	1,205593E+20	1,206185E+20	1,614899E+22	2,411778E+20	1,639016E+22
1273	8,074789E+21	8,074461E+21	1,205869E+20	1,205514E+20	1,614925E+22	2,411383E+20	1,639039E+22
1274	8,074644E+21	8,075108E+21	1,206027E+20	1,205902E+20	1,614975E+22	2,411929E+20	1,639095E+22
1275	8,075237E+21	8,074865E+21	1,205434E+20	1,205881E+20	1,615010E+22	2,411314E+20	1,639123E+22
1276	8,075146E+21	8,075320E+21	1,205917E+20	1,205369E+20	1,615047E+22	2,411285E+20	1,639159E+22
1277	8,075177E+21	8,075636E+21	1,205749E+20	1,206036E+20	1,615081E+22	2,411785E+20	1,639199E+22
1278	8,075757E+21	8,075320E+21	1,205418E+20	1,205554E+20	1,615108E+22	2,410972E+20	1,639217E+22
1279	8,075487E+21	8,075849E+21	1,206018E+20	1,205456E+20	1,615134E+22	2,411474E+20	1,639248E+22
1280	8,075651E+21	8,075648E+21	1,205498E+20	1,205988E+20	1,615130E+22	2,411486E+20	1,639245E+22
1281	8,075797E+21	8,075359E+21	1,205588E+20	1,205405E+20	1,615116E+22	2,410993E+20	1,639225E+22
1282	8,075186E+21	8,075715E+21	1,206036E+20	1,205776E+20	1,615090E+22	2,411812E+20	1,639208E+22
1283	8,075357E+21	8,075059E+21	1,205379E+20	1,206007E+20	1,615042E+22	2,411386E+20	1,639156E+22
1284	8,075050E+21	8,074835E+21	1,205913E+20	1,205518E+20	1,614989E+22	2,411431E+20	1,639103E+22
1285	8,074487E+21	8,074875E+21	1,205992E+20	1,206082E+20	1,614936E+22	2,412074E+20	1,639057E+22
1286	8,074667E+21	8,074131E+21	1,205607E+20	1,205888E+20	1,614880E+22	2,411495E+20	1,638995E+22
1287	8,073995E+21	8,074254E+21	1,206279E+20	1,205644E+20	1,614825E+22	2,411923E+20	1,638944E+22
1288	8,073707E+21	8,073987E+21	1,205873E+20	1,206297E+20	1,614769E+22	2,412169E+20	1,638891E+22
1289	8,073968E+21	8,073462E+21	1,205828E+20	1,205857E+20	1,614743E+22	2,411685E+20	1,638860E+22
1290	8,073512E+21	8,073969E+21	1,206293E+20	1,205887E+20	1,614748E+22	2,412180E+20	1,638870E+22
1291	8,073959E+21	8,073722E+21	1,205681E+20	1,206286E+20	1,614768E+22	2,411967E+20	1,638888E+22
1292	8,074158E+21	8,073822E+21	1,205952E+20	1,205577E+20	1,614798E+22	2,411529E+20	1,638913E+22
1293	8,073853E+21	8,074504E+21	1,206150E+20	1,205988E+20	1,614836E+22	2,412138E+20	1,638957E+22
1294	8,074476E+21	8,074243E+21	1,205571E+20	1,205967E+20	1,614872E+22	2,411538E+20	1,638987E+22
1295	8,074421E+21	8,074636E+21	1,206046E+20	1,205486E+20	1,614906E+22	2,411531E+20	1,639021E+22
1296	8,074464E+21	8,074860E+21	1,205861E+20	1,206138E+20	1,614932E+22	2,412000E+20	1,639052E+22
1297	8,075119E+21	8,074532E+21	1,205525E+20	1,205685E+20	1,614965E+22	2,411210E+20	1,639077E+22
1298	8,074772E+21	8,075093E+21	1,206113E+20	1,205582E+20	1,614987E+22	2,411695E+20	1,639103E+22
1299	8,074922E+21	8,074905E+21	1,205581E+20	1,206142E+20	1,614983E+22	2,411723E+20	1,639100E+22
1300	8,075022E+21	8,074563E+21	1,205673E+20	1,205559E+20	1,614958E+22	2,411232E+20	1,639071E+22
1301	8,074327E+21	8,074884E+21	1,206172E+20	1,205903E+20	1,614921E+22	2,412075E+20	1,639042E+22
1302	8,074541E+21	8,074250E+21	1,205564E+20	1,206085E+20	1,614879E+22	2,411650E+20	1,638996E+22
1303	8,074203E+21	8,074025E+21	1,206106E+20	1,205609E+20	1,614823E+22	2,411716E+20	1,638940E+22
1304	8,073520E+21	8,073989E+21	1,206155E+20	1,206180E+20	1,614751E+22	2,412334E+20	1,638874E+22
1305	8,073715E+21	8,073224E+21	1,205742E+20	1,206072E+20	1,614694E+22	2,411814E+20	1,638812E+22
1306	8,073073E+21	8,073343E+21	1,206367E+20	1,205823E+20	1,614642E+22	2,412189E+20	1,638764E+22
1307	8,072963E+21	8,073121E+21	1,205952E+20	1,206466E+20	1,614608E+22	2,412419E+20	1,638733E+22
1308	8,073325E+21	8,072687E+21	1,205907E+20	1,205966E+20	1,614601E+22	2,411873E+20	1,638720E+22
1309	8,072825E+21	8,073279E+21	1,206418E+20	1,205952E+20	1,614610E+22	2,412370E+20	1,638734E+22
1310	8,073250E+21	8,073136E+21	1,205847E+20	1,206335E+20	1,614639E+22	2,412181E+20	1,638760E+22
1311	8,073391E+21	8,073229E+21	1,206084E+20	1,205689E+20	1,614662E+22	2,411773E+20	1,638780E+22
1312	8,073027E+21	8,073751E+21	1,206262E+20	1,206116E+20	1,614678E+22	2,412378E+20	1,638802E+22

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 ° Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
1313	8,073776E+21	8,073446E+21	1,205664E+20	1,206127E+20	1,614722E+22	2,411791E+20	1,638840E+22
1314	8,073782E+21	8,073856E+21	1,206119E+20	1,205602E+20	1,614764E+22	2,411721E+20	1,638881E+22
1315	8,073897E+21	8,074132E+21	1,205946E+20	1,206241E+20	1,614803E+22	2,412187E+20	1,638925E+22
1316	8,074473E+21	8,073860E+21	1,205608E+20	1,205775E+20	1,614833E+22	2,411383E+20	1,638947E+22
1317	8,073960E+21	8,074413E+21	1,206232E+20	1,205692E+20	1,614837E+22	2,411925E+20	1,638957E+22
1318	8,074098E+21	8,074214E+21	1,205745E+20	1,206239E+20	1,614831E+22	2,411984E+20	1,638951E+22
1319	8,074195E+21	8,073805E+21	1,205835E+20	1,205694E+20	1,614800E+22	2,411529E+20	1,638915E+22
1320	8,073444E+21	8,073994E+21	1,206332E+20	1,206005E+20	1,614744E+22	2,412337E+20	1,638867E+22
1321	8,073692E+21	8,073335E+21	1,205721E+20	1,206231E+20	1,614703E+22	2,411951E+20	1,638822E+22
1322	8,073284E+21	8,073120E+21	1,206226E+20	1,205759E+20	1,614640E+22	2,411985E+20	1,638760E+22
1323	8,072653E+21	8,073082E+21	1,206246E+20	1,206365E+20	1,614573E+22	2,412612E+20	1,638700E+22
1324	8,072890E+21	8,072322E+21	1,205829E+20	1,206248E+20	1,614521E+22	2,412076E+20	1,638642E+22
1325	8,072275E+21	8,072499E+21	1,206471E+20	1,205956E+20	1,614477E+22	2,412427E+20	1,638602E+22
1326	8,072269E+21	8,072405E+21	1,206120E+20	1,206533E+20	1,614467E+22	2,412653E+20	1,638594E+22
1327	8,072605E+21	8,072039E+21	1,206067E+20	1,206036E+20	1,614464E+22	2,412103E+20	1,638585E+22
1328	8,071986E+21	8,072580E+21	1,206557E+20	1,206019E+20	1,614457E+22	2,412576E+20	1,638582E+22
1329	8,072433E+21	8,072406E+21	1,205967E+20	1,206471E+20	1,614484E+22	2,412438E+20	1,638608E+22
1330	8,072595E+21	8,072468E+21	1,206159E+20	1,205829E+20	1,614506E+22	2,411988E+20	1,638626E+22
1331	8,072404E+21	8,072984E+21	1,206330E+20	1,206258E+20	1,614539E+22	2,412588E+20	1,638665E+22
1332	8,073213E+21	8,072736E+21	1,205737E+20	1,206228E+20	1,614595E+22	2,411965E+20	1,638715E+22
1333	8,073167E+21	8,073205E+21	1,206221E+20	1,205680E+20	1,614637E+22	2,411901E+20	1,638756E+22
1334	8,073226E+21	8,073560E+21	1,206106E+20	1,206303E+20	1,614679E+22	2,412408E+20	1,638803E+22
1335	8,073694E+21	8,073244E+21	1,205750E+20	1,205902E+20	1,614694E+22	2,411652E+20	1,638810E+22
1336	8,073080E+21	8,073600E+21	1,206374E+20	1,205826E+20	1,614668E+22	2,412200E+20	1,638790E+22
1337	8,073278E+21	8,073329E+21	1,205885E+20	1,206395E+20	1,614661E+22	2,412280E+20	1,638784E+22
1338	8,073365E+21	8,072906E+21	1,205957E+20	1,205839E+20	1,614627E+22	2,411796E+20	1,638745E+22
1339	8,072655E+21	8,073082E+21	1,206446E+20	1,206146E+20	1,614574E+22	2,412592E+20	1,638700E+22
1340	8,072833E+21	8,072469E+21	1,205822E+20	1,206377E+20	1,614530E+22	2,412199E+20	1,638652E+22
1341	8,072361E+21	8,072247E+21	1,206328E+20	1,205911E+20	1,614461E+22	2,412239E+20	1,638583E+22
1342	8,071796E+21	8,072266E+21	1,206401E+20	1,206477E+20	1,614406E+22	2,412878E+20	1,638535E+22
1343	8,072098E+21	8,071558E+21	1,205981E+20	1,206371E+20	1,614366E+22	2,412352E+20	1,638489E+22
1344	8,071469E+21	8,071679E+21	1,206626E+20	1,206034E+20	1,614315E+22	2,412661E+20	1,638441E+22
1345	8,071508E+21	8,071638E+21	1,206286E+20	1,206635E+20	1,614315E+22	2,412921E+20	1,638444E+22
1346	8,071773E+21	8,071320E+21	1,206181E+20	1,206156E+20	1,614309E+22	2,412338E+20	1,638433E+22
1347	8,071217E+21	8,071811E+21	1,206634E+20	1,206177E+20	1,614303E+22	2,412812E+20	1,638431E+22
1348	8,071715E+21	8,071639E+21	1,206030E+20	1,206618E+20	1,614335E+22	2,412648E+20	1,638462E+22
1349	8,071937E+21	8,071730E+21	1,206230E+20	1,205940E+20	1,614367E+22	2,412169E+20	1,638488E+22
1350	8,071840E+21	8,072361E+21	1,206477E+20	1,206311E+20	1,614420E+22	2,412788E+20	1,638548E+22
1351	8,072595E+21	8,072178E+21	1,205882E+20	1,206297E+20	1,614477E+22	2,412179E+20	1,638599E+22
1352	8,072390E+21	8,072547E+21	1,206355E+20	1,205768E+20	1,614494E+22	2,412123E+20	1,638615E+22
1353	8,072436E+21	8,072833E+21	1,206236E+20	1,206445E+20	1,614527E+22	2,412681E+20	1,638654E+22
1354	8,072865E+21	8,072453E+21	1,205845E+20	1,206063E+20	1,614532E+22	2,411908E+20	1,638651E+22
1355	8,072365E+21	8,072733E+21	1,206464E+20	1,205990E+20	1,614510E+22	2,412454E+20	1,638634E+22
1356	8,072555E+21	8,072474E+21	1,205987E+20	1,206516E+20	1,614503E+22	2,412502E+20	1,638628E+22
1357	8,072556E+21	8,072076E+21	1,206081E+20	1,205961E+20	1,614463E+22	2,412041E+20	1,638584E+22
1358	8,071813E+21	8,072312E+21	1,206610E+20	1,206250E+20	1,614412E+22	2,412860E+20	1,638541E+22
1359	8,071922E+21	8,071668E+21	1,205978E+20	1,206528E+20	1,614359E+22	2,412506E+20	1,638484E+22
1360	8,071422E+21	8,071320E+21	1,206474E+20	1,206048E+20	1,614274E+22	2,412522E+20	1,638399E+22
1361	8,070982E+21	8,071359E+21	1,206557E+20	1,206606E+20	1,614234E+22	2,413164E+20	1,638366E+22

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 ° Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
1362	8,071277E+21	8,070730E+21	1,206127E+20	1,206484E+20	1,614201E+22	2,412611E+20	1,638327E+22
1363	8,070703E+21	8,070873E+21	1,206740E+20	1,206156E+20	1,614158E+22	2,412896E+20	1,638287E+22
1364	8,070681E+21	8,070887E+21	1,206383E+20	1,206760E+20	1,614157E+22	2,413143E+20	1,638288E+22
1365	8,070927E+21	8,070568E+21	1,206260E+20	1,206301E+20	1,614149E+22	2,412561E+20	1,638275E+22
1366	8,070496E+21	8,071103E+21	1,206751E+20	1,206282E+20	1,614160E+22	2,413033E+20	1,638290E+22
1367	8,071070E+21	8,070983E+21	1,206149E+20	1,206720E+20	1,614205E+22	2,412869E+20	1,638334E+22
1368	8,071285E+21	8,071020E+21	1,206354E+20	1,206010E+20	1,614230E+22	2,412364E+20	1,638354E+22
1369	8,071219E+21	8,071694E+21	1,206616E+20	1,206407E+20	1,614291E+22	2,413023E+20	1,638422E+22
1370	8,071860E+21	8,071542E+21	1,205989E+20	1,206424E+20	1,614340E+22	2,412413E+20	1,638464E+22
1371	8,071685E+21	8,071790E+21	1,206432E+20	1,205944E+20	1,614347E+22	2,412376E+20	1,638471E+22
1372	8,071718E+21	8,072048E+21	1,206312E+20	1,206589E+20	1,614377E+22	2,412901E+20	1,638506E+22
1373	8,072147E+21	8,071652E+21	1,205933E+20	1,206190E+20	1,614380E+22	2,412122E+20	1,638501E+22
1374	8,071658E+21	8,071979E+21	1,206628E+20	1,206061E+20	1,614364E+22	2,412689E+20	1,638491E+22
1375	8,071739E+21	8,071757E+21	1,206150E+20	1,206599E+20	1,614350E+22	2,412749E+20	1,638477E+22
1376	8,071588E+21	8,071228E+21	1,206243E+20	1,206074E+20	1,614282E+22	2,412317E+20	1,638405E+22
1377	8,070882E+21	8,071408E+21	1,206763E+20	1,206399E+20	1,614229E+22	2,413162E+20	1,638361E+22
1378	8,070999E+21	8,070773E+21	1,206114E+20	1,206692E+20	1,614177E+22	2,412806E+20	1,638305E+22
1379	8,070646E+21	8,070391E+21	1,206581E+20	1,206217E+20	1,614104E+22	2,412798E+20	1,638232E+22
1380	8,070227E+21	8,070513E+21	1,206668E+20	1,206724E+20	1,614074E+22	2,413392E+20	1,638208E+22
1381	8,070466E+21	8,069957E+21	1,206240E+20	1,206614E+20	1,614042E+22	2,412854E+20	1,638171E+22
1382	8,069892E+21	8,070171E+21	1,206878E+20	1,206268E+20	1,614006E+22	2,413145E+20	1,638138E+22
1383	8,069850E+21	8,070173E+21	1,206507E+20	1,206888E+20	1,614002E+22	2,413395E+20	1,638136E+22
1384	8,070111E+21	8,069749E+21	1,206377E+20	1,206419E+20	1,613986E+22	2,412796E+20	1,638114E+22
1385	8,069854E+21	8,070319E+21	1,206874E+20	1,206388E+20	1,614017E+22	2,413262E+20	1,638150E+22
1386	8,070422E+21	8,070301E+21	1,206278E+20	1,206812E+20	1,614072E+22	2,413090E+20	1,638203E+22
1387	8,070684E+21	8,070344E+21	1,206437E+20	1,206128E+20	1,614103E+22	2,412564E+20	1,638228E+22
1388	8,070547E+21	8,071041E+21	1,206687E+20	1,206520E+20	1,614159E+22	2,413208E+20	1,638291E+22
1389	8,071115E+21	8,070862E+21	1,206059E+20	1,206553E+20	1,614198E+22	2,412613E+20	1,638324E+22
1390	8,071002E+21	8,071116E+21	1,206551E+20	1,206050E+20	1,614212E+22	2,412600E+20	1,638338E+22
1391	8,071007E+21	8,071357E+21	1,206450E+20	1,206664E+20	1,614236E+22	2,413114E+20	1,638368E+22
1392	8,071337E+21	8,070856E+21	1,206099E+20	1,206271E+20	1,614219E+22	2,412370E+20	1,638343E+22
1393	8,070850E+21	8,071160E+21	1,206796E+20	1,206172E+20	1,614201E+22	2,412968E+20	1,638331E+22
1394	8,070799E+21	8,070929E+21	1,206294E+20	1,206758E+20	1,614173E+22	2,413052E+20	1,638303E+22
1395	8,070716E+21	8,070271E+21	1,206339E+20	1,206284E+20	1,614099E+22	2,412623E+20	1,638225E+22
1396	8,070062E+21	8,070456E+21	1,206838E+20	1,206569E+20	1,614052E+22	2,413407E+20	1,638186E+22
1397	8,070207E+21	8,069887E+21	1,206218E+20	1,206844E+20	1,614009E+22	2,413062E+20	1,638140E+22
1398	8,069893E+21	8,069616E+21	1,206738E+20	1,206322E+20	1,613951E+22	2,413060E+20	1,638082E+22
1399	8,069382E+21	8,069803E+21	1,206819E+20	1,206806E+20	1,613918E+22	2,413625E+20	1,638055E+22
1400	8,069505E+21	8,069150E+21	1,206392E+20	1,206731E+20	1,613865E+22	2,413123E+20	1,637997E+22
1401	8,069031E+21	8,069324E+21	1,207008E+20	1,206396E+20	1,613836E+22	2,413404E+20	1,637970E+22
1402	8,069043E+21	8,069378E+21	1,206628E+20	1,207018E+20	1,613842E+22	2,413646E+20	1,637979E+22
1403	8,069484E+21	8,068936E+21	1,206463E+20	1,206551E+20	1,613842E+22	2,413014E+20	1,637972E+22
1404	8,069277E+21	8,069617E+21	1,206952E+20	1,206483E+20	1,613889E+22	2,413435E+20	1,638024E+22
1405	8,069791E+21	8,069694E+21	1,206368E+20	1,206920E+20	1,613949E+22	2,413287E+20	1,638081E+22
1406	8,070023E+21	8,069775E+21	1,206547E+20	1,206235E+20	1,613980E+22	2,412781E+20	1,638108E+22
1407	8,069831E+21	8,070428E+21	1,206795E+20	1,206609E+20	1,614026E+22	2,413404E+20	1,638160E+22
1408	8,070339E+21	8,070111E+21	1,206187E+20	1,206641E+20	1,614045E+22	2,412828E+20	1,638173E+22
1409	8,070302E+21	8,070333E+21	1,206701E+20	1,206140E+20	1,614063E+22	2,412841E+20	1,638192E+22
1410	8,070213E+21	8,070608E+21	1,206608E+20	1,206762E+20	1,614082E+22	2,413371E+20	1,638216E+22

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 ° Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
1411	8,070532E+21	8,070019E+21	1,206209E+20	1,206433E+20	1,614055E+22	2,412642E+20	1,638182E+22
1412	8,070008E+21	8,070296E+21	1,206865E+20	1,206343E+20	1,614030E+22	2,413208E+20	1,638163E+22
1413	8,069945E+21	8,070044E+21	1,206372E+20	1,206939E+20	1,613999E+22	2,413311E+20	1,638132E+22
1414	8,069956E+21	8,069440E+21	1,206460E+20	1,206435E+20	1,613940E+22	2,412895E+20	1,638069E+22
1415	8,069303E+21	8,069667E+21	1,206973E+20	1,206650E+20	1,613897E+22	2,413623E+20	1,638033E+22
1416	8,069337E+21	8,069063E+21	1,206405E+20	1,206932E+20	1,613840E+22	2,413336E+20	1,637973E+22
1417	8,069020E+21	8,068812E+21	1,206919E+20	1,206436E+20	1,613783E+22	2,413356E+20	1,637917E+22
1418	8,068404E+21	8,068996E+21	1,206979E+20	1,206946E+20	1,613740E+22	2,413925E+20	1,637879E+22
1419	8,068640E+21	8,068227E+21	1,206494E+20	1,206917E+20	1,613687E+22	2,413411E+20	1,637821E+22
1420	8,068305E+21	8,068432E+21	1,207064E+20	1,206534E+20	1,613674E+22	2,413597E+20	1,637810E+22
1421	8,068383E+21	8,068595E+21	1,206719E+20	1,207130E+20	1,613698E+22	2,413849E+20	1,637836E+22
1422	8,068888E+21	8,068325E+21	1,206584E+20	1,206628E+20	1,613721E+22	2,413213E+20	1,637853E+22
1423	8,068609E+21	8,069069E+21	1,207062E+20	1,206534E+20	1,613768E+22	2,413596E+20	1,637904E+22
1424	8,068985E+21	8,069060E+21	1,206506E+20	1,207006E+20	1,613804E+22	2,413511E+20	1,637940E+22
1425	8,069283E+21	8,069083E+21	1,206669E+20	1,206346E+20	1,613837E+22	2,413015E+20	1,637967E+22
1426	8,069068E+21	8,069716E+21	1,206922E+20	1,206719E+20	1,613878E+22	2,413641E+20	1,638015E+22
1427	8,069661E+21	8,069298E+21	1,206282E+20	1,206779E+20	1,613896E+22	2,413061E+20	1,638027E+22
1428	8,069631E+21	8,069534E+21	1,206775E+20	1,206273E+20	1,613916E+22	2,413048E+20	1,638047E+22
1429	8,069457E+21	8,069840E+21	1,206697E+20	1,206914E+20	1,613930E+22	2,413611E+20	1,638066E+22
1430	8,069760E+21	8,069268E+21	1,206321E+20	1,206601E+20	1,613903E+22	2,412922E+20	1,638032E+22
1431	8,069219E+21	8,069500E+21	1,206963E+20	1,206464E+20	1,613872E+22	2,413427E+20	1,638006E+22
1432	8,069101E+21	8,069174E+21	1,206530E+20	1,207045E+20	1,613828E+22	2,413575E+20	1,637963E+22
1433	8,069162E+21	8,068598E+21	1,206647E+20	1,206533E+20	1,613776E+22	2,413180E+20	1,637908E+22
1434	8,068396E+21	8,068882E+21	1,207165E+20	1,206741E+20	1,613728E+22	2,413906E+20	1,637867E+22
1435	8,068405E+21	8,068181E+21	1,206552E+20	1,207085E+20	1,613659E+22	2,413637E+20	1,637795E+22
1436	8,068084E+21	8,067905E+21	1,207009E+20	1,206602E+20	1,613599E+22	2,413611E+20	1,637735E+22
1437	8,067527E+21	8,068099E+21	1,207059E+20	1,207109E+20	1,613563E+22	2,414168E+20	1,637704E+22
1438	8,067912E+21	8,067426E+21	1,206602E+20	1,207056E+20	1,613534E+22	2,413658E+20	1,637670E+22
1439	8,067661E+21	8,067724E+21	1,207158E+20	1,206593E+20	1,613539E+22	2,413751E+20	1,637676E+22
1440	8,067681E+21	8,067922E+21	1,206881E+20	1,207198E+20	1,613560E+22	2,414079E+20	1,637701E+22
1441	8,068182E+21	8,067717E+21	1,206732E+20	1,206719E+20	1,613590E+22	2,413450E+20	1,637724E+22
1442	8,067816E+21	8,068444E+21	1,207192E+20	1,206653E+20	1,613626E+22	2,413846E+20	1,637764E+22
1443	8,068257E+21	8,068279E+21	1,206589E+20	1,207160E+20	1,613654E+22	2,413749E+20	1,637791E+22
1444	8,068638E+21	8,068293E+21	1,206714E+20	1,206485E+20	1,613693E+22	2,413199E+20	1,637825E+22
1445	8,068428E+21	8,068960E+21	1,207005E+20	1,206838E+20	1,613739E+22	2,413843E+20	1,637877E+22
1446	8,069015E+21	8,068636E+21	1,206400E+20	1,206892E+20	1,613765E+22	2,413291E+20	1,637898E+22
1447	8,068904E+21	8,068865E+21	1,206870E+20	1,206356E+20	1,613777E+22	2,413225E+20	1,637909E+22
1448	8,068597E+21	8,069064E+21	1,206848E+20	1,207022E+20	1,613766E+22	2,413871E+20	1,637905E+22
1449	8,068947E+21	8,068471E+21	1,206478E+20	1,206722E+20	1,613742E+22	2,413200E+20	1,637874E+22
1450	8,068370E+21	8,068691E+21	1,207133E+20	1,206575E+20	1,613706E+22	2,413709E+20	1,637843E+22
1451	8,068279E+21	8,068278E+21	1,206688E+20	1,207178E+20	1,613656E+22	2,413865E+20	1,637794E+22
1452	8,068321E+21	8,067722E+21	1,206768E+20	1,206688E+20	1,613604E+22	2,413455E+20	1,637739E+22
1453	8,067460E+21	8,068006E+21	1,207278E+20	1,206907E+20	1,613547E+22	2,414185E+20	1,637688E+22
1454	8,067495E+21	8,067325E+21	1,206672E+20	1,207270E+20	1,613482E+22	2,413942E+20	1,637621E+22
1455	8,067250E+21	8,067023E+21	1,207089E+20	1,206719E+20	1,613427E+22	2,413808E+20	1,637565E+22
1456	8,066721E+21	8,067220E+21	1,207205E+20	1,207205E+20	1,613394E+22	2,414410E+20	1,637538E+22
1457	8,067207E+21	8,066682E+21	1,206771E+20	1,207136E+20	1,613389E+22	2,413906E+20	1,637528E+22
1458	8,066902E+21	8,067079E+21	1,207310E+20	1,206679E+20	1,613398E+22	2,413990E+20	1,637538E+22
1459	8,066923E+21	8,067208E+21	1,206998E+20	1,207336E+20	1,613413E+22	2,414334E+20	1,637556E+22

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 ° Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
1460	8,067446E+21	8,066992E+21	1,206783E+20	1,206872E+20	1,613444E+22	2,413655E+20	1,637580E+22
1461	8,067119E+21	8,067707E+21	1,207248E+20	1,206790E+20	1,613483E+22	2,414038E+20	1,637623E+22
1462	8,067648E+21	8,067605E+21	1,206680E+20	1,207271E+20	1,613525E+22	2,413951E+20	1,637665E+22
1463	8,068045E+21	8,067641E+21	1,206801E+20	1,206536E+20	1,613569E+22	2,413337E+20	1,637702E+22
1464	8,067723E+21	8,068287E+21	1,207171E+20	1,206912E+20	1,613601E+22	2,414083E+20	1,637742E+22
1465	8,068252E+21	8,067982E+21	1,206572E+20	1,206996E+20	1,613623E+22	2,413568E+20	1,637759E+22
1466	8,068060E+21	8,068142E+21	1,207017E+20	1,206497E+20	1,613620E+22	2,413514E+20	1,637755E+22
1467	8,067800E+21	8,068165E+21	1,206967E+20	1,207178E+20	1,613597E+22	2,414145E+20	1,637738E+22
1468	8,068182E+21	8,067577E+21	1,206571E+20	1,206876E+20	1,613576E+22	2,413446E+20	1,637710E+22
1469	8,067572E+21	8,067831E+21	1,207251E+20	1,206713E+20	1,613540E+22	2,413963E+20	1,637680E+22
1470	8,067434E+21	8,067484E+21	1,206833E+20	1,207315E+20	1,613492E+22	2,414148E+20	1,637633E+22
1471	8,067406E+21	8,066907E+21	1,206879E+20	1,206808E+20	1,613431E+22	2,413688E+20	1,637568E+22
1472	8,066486E+21	8,067094E+21	1,207430E+20	1,207040E+20	1,613358E+22	2,414471E+20	1,637503E+22
1473	8,066615E+21	8,066450E+21	1,206831E+20	1,207397E+20	1,613306E+22	2,414228E+20	1,637449E+22
1474	8,066431E+21	8,066198E+21	1,207232E+20	1,206832E+20	1,613263E+22	2,414064E+20	1,637404E+22
1475	8,065994E+21	8,066367E+21	1,207340E+20	1,207325E+20	1,613236E+22	2,414665E+20	1,637383E+22
1476	8,066499E+21	8,065948E+21	1,206869E+20	1,207275E+20	1,613245E+22	2,414145E+20	1,637386E+22
1477	8,066149E+21	8,066383E+21	1,207391E+20	1,206829E+20	1,613253E+22	2,414220E+20	1,637395E+22
1478	8,066211E+21	8,066534E+21	1,207094E+20	1,207484E+20	1,613274E+22	2,414578E+20	1,637420E+22
1479	8,066788E+21	8,066296E+21	1,206841E+20	1,206951E+20	1,613308E+22	2,413792E+20	1,637446E+22
1480	8,066444E+21	8,066981E+21	1,207385E+20	1,206856E+20	1,613342E+22	2,414242E+20	1,637485E+22
1481	8,066984E+21	8,066978E+21	1,206851E+20	1,207324E+20	1,613396E+22	2,414174E+20	1,637538E+22
1482	8,067290E+21	8,067021E+21	1,206958E+20	1,206624E+20	1,613431E+22	2,413582E+20	1,637567E+22
1483	8,066931E+21	8,067516E+21	1,207297E+20	1,207058E+20	1,613445E+22	2,414355E+20	1,637588E+22
1484	8,067479E+21	8,067175E+21	1,206644E+20	1,207174E+20	1,613465E+22	2,413818E+20	1,637604E+22
1485	8,067301E+21	8,067292E+21	1,207088E+20	1,206666E+20	1,613459E+22	2,413754E+20	1,637597E+22
1486	8,067097E+21	8,067365E+21	1,207074E+20	1,207313E+20	1,613446E+22	2,414387E+20	1,637590E+22
1487	8,067453E+21	8,066794E+21	1,206677E+20	1,206964E+20	1,613425E+22	2,413641E+20	1,637561E+22
1488	8,066696E+21	8,067015E+21	1,207430E+20	1,206825E+20	1,613371E+22	2,414255E+20	1,637514E+22
1489	8,066483E+21	8,066693E+21	1,207019E+20	1,207440E+20	1,613318E+22	2,414459E+20	1,637462E+22
1490	8,066424E+21	8,066032E+21	1,207040E+20	1,206972E+20	1,613246E+22	2,414012E+20	1,637386E+22
1491	8,065613E+21	8,066077E+21	1,207553E+20	1,207198E+20	1,613169E+22	2,414750E+20	1,637317E+22
1492	8,065848E+21	8,065522E+21	1,206936E+20	1,207547E+20	1,613137E+22	2,414482E+20	1,637282E+22
1493	8,065689E+21	8,065381E+21	1,207334E+20	1,206959E+20	1,613107E+22	2,414293E+20	1,637250E+22
1494	8,065268E+21	8,065677E+21	1,207460E+20	1,207448E+20	1,613094E+22	2,414907E+20	1,637244E+22
1495	8,065736E+21	8,065290E+21	1,206957E+20	1,207365E+20	1,613103E+22	2,414321E+20	1,637246E+22
1496	8,065355E+21	8,065670E+21	1,207520E+20	1,206931E+20	1,613103E+22	2,414451E+20	1,637247E+22
1497	8,065473E+21	8,065871E+21	1,207249E+20	1,207550E+20	1,613134E+22	2,414799E+20	1,637282E+22
1498	8,066078E+21	8,065641E+21	1,206983E+20	1,207033E+20	1,613172E+22	2,414016E+20	1,637312E+22
1499	8,065788E+21	8,066215E+21	1,207512E+20	1,206963E+20	1,613200E+22	2,414474E+20	1,637345E+22
1500	8,066299E+21	8,066269E+21	1,206944E+20	1,207471E+20	1,613257E+22	2,414415E+20	1,637401E+22
1501	8,066558E+21	8,066295E+21	1,207022E+20	1,206799E+20	1,613285E+22	2,413821E+20	1,637424E+22
1502	8,066252E+21	8,066759E+21	1,207369E+20	1,207227E+20	1,613301E+22	2,414596E+20	1,637447E+22
1503	8,066819E+21	8,066409E+21	1,206707E+20	1,207267E+20	1,613323E+22	2,413974E+20	1,637463E+22
1504	8,066582E+21	8,066506E+21	1,207240E+20	1,206759E+20	1,613309E+22	2,413999E+20	1,637449E+22
1505	8,066297E+21	8,066661E+21	1,207272E+20	1,207369E+20	1,613296E+22	2,414641E+20	1,637442E+22
1506	8,066522E+21	8,066058E+21	1,206863E+20	1,207086E+20	1,613258E+22	2,413949E+20	1,637397E+22
1507	8,065727E+21	8,066069E+21	1,207579E+20	1,206987E+20	1,613180E+22	2,414566E+20	1,637325E+22
1508	8,065554E+21	8,065725E+21	1,207122E+20	1,207623E+20	1,613128E+22	2,414744E+20	1,637275E+22

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 ° Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
1509	8,065559E+21	8,065068E+21	1,207131E+20	1,207144E+20	1,613063E+22	2,414275E+20	1,637205E+22
1510	8,064877E+21	8,065200E+21	1,207657E+20	1,207335E+20	1,613008E+22	2,414992E+20	1,637158E+22
1511	8,065134E+21	8,064755E+21	1,207049E+20	1,207631E+20	1,612989E+22	2,414679E+20	1,637136E+22
1512	8,064880E+21	8,064660E+21	1,207495E+20	1,207071E+20	1,612954E+22	2,414565E+20	1,637100E+22
1513	8,064424E+21	8,065029E+21	1,207631E+20	1,207542E+20	1,612945E+22	2,415174E+20	1,637097E+22
1514	8,064900E+21	8,064577E+21	1,207098E+20	1,207491E+20	1,612948E+22	2,414589E+20	1,637094E+22
1515	8,064606E+21	8,064810E+21	1,207625E+20	1,207050E+20	1,612942E+22	2,414675E+20	1,637088E+22
1516	8,064805E+21	8,065093E+21	1,207335E+20	1,207668E+20	1,612990E+22	2,415003E+20	1,637140E+22
1517	8,065399E+21	8,064921E+21	1,207062E+20	1,207156E+20	1,613032E+22	2,414218E+20	1,637174E+22
1518	8,065147E+21	8,065549E+21	1,207587E+20	1,207104E+20	1,613070E+22	2,414690E+20	1,637217E+22
1519	8,065639E+21	8,065606E+21	1,207008E+20	1,207570E+20	1,613125E+22	2,414579E+20	1,637270E+22
1520	8,065855E+21	8,065582E+21	1,207132E+20	1,206914E+20	1,613144E+22	2,414046E+20	1,637284E+22
1521	8,065554E+21	8,066103E+21	1,207520E+20	1,207281E+20	1,613166E+22	2,414800E+20	1,637314E+22
1522	8,066071E+21	8,065727E+21	1,206873E+20	1,207348E+20	1,613180E+22	2,414221E+20	1,637322E+22
1523	8,065782E+21	8,065675E+21	1,207406E+20	1,206880E+20	1,613146E+22	2,414285E+20	1,637289E+22
1524	8,065412E+21	8,065837E+21	1,207404E+20	1,207526E+20	1,613125E+22	2,414930E+20	1,637274E+22
1525	8,065570E+21	8,065155E+21	1,206974E+20	1,207290E+20	1,613073E+22	2,414264E+20	1,637215E+22
1526	8,064885E+21	8,065101E+21	1,207663E+20	1,207179E+20	1,612999E+22	2,414842E+20	1,637147E+22
1527	8,064776E+21	8,064790E+21	1,207205E+20	1,207730E+20	1,612957E+22	2,414936E+20	1,637106E+22
1528	8,064774E+21	8,064206E+21	1,207284E+20	1,207252E+20	1,612898E+22	2,414536E+20	1,637043E+22
1529	8,064061E+21	8,064494E+21	1,207843E+20	1,207392E+20	1,612855E+22	2,415235E+20	1,637008E+22
1530	8,064236E+21	8,064080E+21	1,207235E+20	1,207750E+20	1,612832E+22	2,414985E+20	1,636981E+22
1531	8,063988E+21	8,063821E+21	1,207629E+20	1,207221E+20	1,612781E+22	2,414850E+20	1,636929E+22
1532	8,063598E+21	8,064191E+21	1,207721E+20	1,207685E+20	1,612779E+22	2,415406E+20	1,636933E+22
1533	8,064145E+21	8,063765E+21	1,207170E+20	1,207630E+20	1,612791E+22	2,414800E+20	1,636939E+22
1534	8,064006E+21	8,064042E+21	1,207692E+20	1,207166E+20	1,612805E+22	2,414858E+20	1,636953E+22
1535	8,064214E+21	8,064432E+21	1,207416E+20	1,207732E+20	1,612865E+22	2,415148E+20	1,637016E+22
1536	8,064721E+21	8,064310E+21	1,207186E+20	1,207264E+20	1,612903E+22	2,414450E+20	1,637048E+22
1537	8,064437E+21	8,064973E+21	1,207726E+20	1,207189E+20	1,612941E+22	2,414915E+20	1,637090E+22
1538	8,064921E+21	8,064961E+21	1,207150E+20	1,207677E+20	1,612988E+22	2,414827E+20	1,637136E+22
1539	8,065152E+21	8,064772E+21	1,207255E+20	1,207024E+20	1,612992E+22	2,414279E+20	1,637135E+22
1540	8,064836E+21	8,065328E+21	1,207640E+20	1,207379E+20	1,613016E+22	2,415019E+20	1,637167E+22
1541	8,065241E+21	8,064953E+21	1,206994E+20	1,207482E+20	1,613019E+22	2,414476E+20	1,637164E+22
1542	8,064943E+21	8,064850E+21	1,207509E+20	1,207059E+20	1,612979E+22	2,414568E+20	1,637125E+22
1543	8,064549E+21	8,064964E+21	1,207489E+20	1,207660E+20	1,612951E+22	2,415150E+20	1,637103E+22
1544	8,064691E+21	8,064244E+21	1,207107E+20	1,207447E+20	1,612893E+22	2,414554E+20	1,637039E+22
1545	8,064066E+21	8,064274E+21	1,207812E+20	1,207264E+20	1,612834E+22	2,415076E+20	1,636985E+22
1546	8,063971E+21	8,063991E+21	1,207386E+20	1,207832E+20	1,612796E+22	2,415218E+20	1,636948E+22
1547	8,063922E+21	8,063340E+21	1,207453E+20	1,207384E+20	1,612726E+22	2,414837E+20	1,636875E+22
1548	8,063179E+21	8,063693E+21	1,207966E+20	1,207540E+20	1,612687E+22	2,415506E+20	1,636842E+22
1549	8,063323E+21	8,063240E+21	1,207346E+20	1,207931E+20	1,612656E+22	2,415277E+20	1,636809E+22
1550	8,063225E+21	8,062950E+21	1,207697E+20	1,207388E+20	1,612618E+22	2,415085E+20	1,636768E+22
1551	8,062927E+21	8,063386E+21	1,207790E+20	1,207755E+20	1,612631E+22	2,415545E+20	1,636787E+22
1552	8,063461E+21	8,063053E+21	1,207301E+20	1,207710E+20	1,612651E+22	2,415011E+20	1,636801E+22
1553	8,063317E+21	8,063476E+21	1,207836E+20	1,207206E+20	1,612679E+22	2,415042E+20	1,636830E+22
1554	8,063482E+21	8,063864E+21	1,207574E+20	1,207830E+20	1,612735E+22	2,415404E+20	1,636889E+22
1555	8,063973E+21	8,063590E+21	1,207307E+20	1,207391E+20	1,612756E+22	2,414698E+20	1,636903E+22
1556	8,063744E+21	8,064247E+21	1,207810E+20	1,207309E+20	1,612799E+22	2,415119E+20	1,636950E+22
1557	8,064218E+21	8,064222E+21	1,207245E+20	1,207796E+20	1,612844E+22	2,415041E+20	1,636994E+22

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 $\odot$ Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
1558	8,064519E+21	8,064009E+21	1,207339E+20	1,207166E+20	1,612853E+22	2,414505E+20	1,636998E+22
1559	8,064127E+21	8,064591E+21	1,207736E+20	1,207472E+20	1,612872E+22	2,415208E+20	1,637024E+22
1560	8,064393E+21	8,064202E+21	1,207131E+20	1,207639E+20	1,612860E+22	2,414769E+20	1,637007E+22
1561	8,064077E+21	8,064066E+21	1,207654E+20	1,207182E+20	1,612814E+22	2,414836E+20	1,636963E+22
1562	8,063701E+21	8,064106E+21	1,207646E+20	1,207787E+20	1,612781E+22	2,415434E+20	1,636935E+22
1563	8,063860E+21	8,063284E+21	1,207259E+20	1,207576E+20	1,612714E+22	2,414834E+20	1,636863E+22
1564	8,063246E+21	8,063390E+21	1,207943E+20	1,207376E+20	1,612664E+22	2,415319E+20	1,636817E+22
1565	8,063064E+21	8,063168E+21	1,207534E+20	1,207974E+20	1,612623E+22	2,415508E+20	1,636778E+22
1566	8,063057E+21	8,062499E+21	1,207562E+20	1,207569E+20	1,612556E+22	2,415131E+20	1,636707E+22
1567	8,062331E+21	8,062852E+21	1,208050E+20	1,207652E+20	1,612518E+22	2,415702E+20	1,636675E+22
1568	8,062488E+21	8,062426E+21	1,207472E+20	1,208057E+20	1,612491E+22	2,415528E+20	1,636647E+22
1569	8,062466E+21	8,062234E+21	1,207833E+20	1,207443E+20	1,612470E+22	2,415276E+20	1,636623E+22
1570	8,062217E+21	8,062705E+21	1,207957E+20	1,207827E+20	1,612492E+22	2,415783E+20	1,636650E+22
1571	8,062713E+21	8,062333E+21	1,207452E+20	1,207824E+20	1,612505E+22	2,415276E+20	1,636657E+22
1572	8,062588E+21	8,062796E+21	1,207927E+20	1,207347E+20	1,612538E+22	2,415274E+20	1,636691E+22
1573	8,062746E+21	8,063140E+21	1,207668E+20	1,207996E+20	1,612589E+22	2,415664E+20	1,636745E+22
1574	8,063366E+21	8,062823E+21	1,207353E+20	1,207552E+20	1,612619E+22	2,414905E+20	1,636768E+22
1575	8,063171E+21	8,063522E+21	1,207869E+20	1,207381E+20	1,612669E+22	2,415250E+20	1,636822E+22
1576	8,063534E+21	8,063548E+21	1,207377E+20	1,207879E+20	1,612708E+22	2,415256E+20	1,636861E+22
1577	8,063745E+21	8,063403E+21	1,207491E+20	1,207242E+20	1,612715E+22	2,414732E+20	1,636862E+22
1578	8,063289E+21	8,063885E+21	1,207904E+20	1,207592E+20	1,612717E+22	2,415496E+20	1,636872E+22
1579	8,063489E+21	8,063309E+21	1,207281E+20	1,207789E+20	1,612680E+22	2,415070E+20	1,636830E+22
1580	8,063248E+21	8,063161E+21	1,207755E+20	1,207319E+20	1,612641E+22	2,415074E+20	1,636792E+22
1581	8,062875E+21	8,063198E+21	1,207776E+20	1,207916E+20	1,612607E+22	2,415692E+20	1,636764E+22
1582	8,063101E+21	8,062404E+21	1,207376E+20	1,207733E+20	1,612550E+22	2,415109E+20	1,636702E+22
1583	8,062439E+21	8,062585E+21	1,208055E+20	1,207488E+20	1,612502E+22	2,415544E+20	1,636658E+22
1584	8,062139E+21	8,062381E+21	1,207691E+20	1,208135E+20	1,612452E+22	2,415826E+20	1,636610E+22
1585	8,062152E+21	8,061726E+21	1,207713E+20	1,207695E+20	1,612388E+22	2,415408E+20	1,636542E+22
1586	8,061504E+21	8,062024E+21	1,208200E+20	1,207757E+20	1,612353E+22	2,415957E+20	1,636512E+22
1587	8,061672E+21	8,061550E+21	1,207625E+20	1,208158E+20	1,612322E+22	2,415783E+20	1,636480E+22
1588	8,061713E+21	8,061455E+21	1,207942E+20	1,207538E+20	1,612317E+22	2,415480E+20	1,636472E+22
1589	8,061434E+21	8,061985E+21	1,208081E+20	1,207963E+20	1,612342E+22	2,416043E+20	1,636502E+22
1590	8,062025E+21	8,061609E+21	1,207524E+20	1,208004E+20	1,612363E+22	2,415528E+20	1,636519E+22
1591	8,061961E+21	8,062088E+21	1,207970E+20	1,207459E+20	1,612405E+22	2,415429E+20	1,636559E+22
1592	8,062117E+21	8,062479E+21	1,207765E+20	1,208104E+20	1,612460E+22	2,415869E+20	1,636618E+22
1593	8,062754E+21	8,062235E+21	1,207473E+20	1,207597E+20	1,612499E+22	2,415070E+20	1,636650E+22
1594	8,062515E+21	8,062904E+21	1,208032E+20	1,207440E+20	1,612542E+22	2,415472E+20	1,636697E+22
1595	8,062717E+21	8,062843E+21	1,207541E+20	1,207984E+20	1,612556E+22	2,415525E+20	1,636711E+22
1596	8,062893E+21	8,062627E+21	1,207611E+20	1,207392E+20	1,612552E+22	2,415003E+20	1,636702E+22
1597	8,062423E+21	8,063000E+21	1,208031E+20	1,207764E+20	1,612542E+22	2,415795E+20	1,636700E+22
1598	8,062748E+21	8,062368E+21	1,207368E+20	1,207966E+20	1,612512E+22	2,415334E+20	1,636665E+22
1599	8,062534E+21	8,062274E+21	1,207838E+20	1,207420E+20	1,612481E+22	2,415259E+20	1,636633E+22
1600	8,062058E+21	8,062403E+21	1,207922E+20	1,208033E+20	1,612446E+22	2,415955E+20	1,636606E+22
1601	8,062197E+21	8,061697E+21	1,207544E+20	1,207846E+20	1,612389E+22	2,415390E+20	1,636543E+22
1602	8,061510E+21	8,061797E+21	1,208228E+20	1,207625E+20	1,612331E+22	2,415853E+20	1,636489E+22
1603	8,061160E+21	8,061464E+21	1,207857E+20	1,208278E+20	1,612262E+22	2,416135E+20	1,636424E+22
1604	8,061281E+21	8,060817E+21	1,207830E+20	1,207830E+20	1,612210E+22	2,415660E+20	1,636366E+22
1605	8,060692E+21	8,061127E+21	1,208326E+20	1,207884E+20	1,612182E+22	2,416210E+20	1,636344E+22
1606	8,060970E+21	8,060713E+21	1,207721E+20	1,208314E+20	1,612168E+22	2,416035E+20	1,636329E+22

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 ° Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
1607	8,061038E+21	8,060736E+21	1,208002E+20	1,207657E+20	1,612177E+22	2,415659E+20	1,636334E+22
1608	8,060722E+21	8,061313E+21	1,208186E+20	1,208113E+20	1,612203E+22	2,416300E+20	1,636366E+22
1609	8,061351E+21	8,061008E+21	1,207640E+20	1,208095E+20	1,612236E+22	2,415736E+20	1,636393E+22
1610	8,061363E+21	8,061450E+21	1,208094E+20	1,207523E+20	1,612281E+22	2,415617E+20	1,636437E+22
1611	8,061417E+21	8,061783E+21	1,207924E+20	1,208151E+20	1,612320E+22	2,416075E+20	1,636481E+22
1612	8,062020E+21	8,061576E+21	1,207597E+20	1,207671E+20	1,612360E+22	2,415268E+20	1,636512E+22
1613	8,061690E+21	8,062183E+21	1,208173E+20	1,207575E+20	1,612387E+22	2,415748E+20	1,636545E+22
1614	8,061928E+21	8,062027E+21	1,207629E+20	1,208169E+20	1,612395E+22	2,415798E+20	1,636553E+22
1615	8,062158E+21	8,061786E+21	1,207666E+20	1,207535E+20	1,612394E+22	2,415202E+20	1,636546E+22
1616	8,061685E+21	8,062171E+21	1,208132E+20	1,207902E+20	1,612386E+22	2,416034E+20	1,636546E+22
1617	8,062017E+21	8,061632E+21	1,207512E+20	1,208054E+20	1,612365E+22	2,415566E+20	1,636521E+22
1618	8,061773E+21	8,061526E+21	1,208009E+20	1,207523E+20	1,612330E+22	2,415532E+20	1,636485E+22
1619	8,061112E+21	8,061590E+21	1,208106E+20	1,208162E+20	1,612270E+22	2,416268E+20	1,636433E+22
1620	8,061237E+21	8,060832E+21	1,207690E+20	1,208021E+20	1,612207E+22	2,415711E+20	1,636364E+22
1621	8,060566E+21	8,060835E+21	1,208369E+20	1,207804E+20	1,612140E+22	2,416172E+20	1,636302E+22
1622	8,060356E+21	8,060479E+21	1,207951E+20	1,208442E+20	1,612083E+22	2,416393E+20	1,636247E+22
1623	8,060543E+21	8,059927E+21	1,207910E+20	1,207932E+20	1,612047E+22	2,415842E+20	1,636205E+22
1624	8,059927E+21	8,060364E+21	1,208444E+20	1,208001E+20	1,612029E+22	2,416444E+20	1,636193E+22
1625	8,060204E+21	8,060086E+21	1,207865E+20	1,208413E+20	1,612029E+22	2,416278E+20	1,636192E+22
1626	8,060311E+21	8,060083E+21	1,208133E+20	1,207755E+20	1,612039E+22	2,415888E+20	1,636198E+22
1627	8,059959E+21	8,060606E+21	1,208325E+20	1,208198E+20	1,612056E+22	2,416524E+20	1,636222E+22
1628	8,060658E+21	8,060322E+21	1,207751E+20	1,208169E+20	1,612098E+22	2,415921E+20	1,636257E+22
1629	8,060665E+21	8,060741E+21	1,208226E+20	1,207618E+20	1,612141E+22	2,415844E+20	1,636299E+22
1630	8,060739E+21	8,061061E+21	1,208022E+20	1,208279E+20	1,612180E+22	2,416301E+20	1,636343E+22
1631	8,061299E+21	8,060867E+21	1,207659E+20	1,207813E+20	1,612217E+22	2,415472E+20	1,636371E+22
1632	8,060935E+21	8,061419E+21	1,208258E+20	1,207761E+20	1,612235E+22	2,416019E+20	1,636396E+22
1633	8,061214E+21	8,061282E+21	1,207736E+20	1,208298E+20	1,612250E+22	2,416034E+20	1,636410E+22
1634	8,061505E+21	8,061009E+21	1,207785E+20	1,207630E+20	1,612251E+22	2,415415E+20	1,636405E+22
1635	8,060903E+21	8,061366E+21	1,208292E+20	1,207976E+20	1,612227E+22	2,416268E+20	1,636390E+22
1636	8,061166E+21	8,060869E+21	1,207669E+20	1,208159E+20	1,612204E+22	2,415829E+20	1,636362E+22
1637	8,060825E+21	8,060693E+21	1,208180E+20	1,207697E+20	1,612152E+22	2,415877E+20	1,636311E+22
1638	8,060192E+21	8,060654E+21	1,208222E+20	1,208347E+20	1,612085E+22	2,416569E+20	1,636250E+22
1639	8,060382E+21	8,059895E+21	1,207772E+20	1,208180E+20	1,612028E+22	2,415953E+20	1,636187E+22
1640	8,059749E+21	8,059912E+21	1,208475E+20	1,207941E+20	1,611966E+22	2,416416E+20	1,636130E+22
1641	8,059572E+21	8,059694E+21	1,208100E+20	1,208521E+20	1,611927E+22	2,416621E+20	1,636093E+22
1642	8,059790E+21	8,059203E+21	1,208060E+20	1,208017E+20	1,611899E+22	2,416076E+20	1,636060E+22
1643	8,059057E+21	8,059625E+21	1,208601E+20	1,208108E+20	1,611868E+22	2,416709E+20	1,636035E+22
1644	8,059389E+21	8,059362E+21	1,208006E+20	1,208545E+20	1,611875E+22	2,416551E+20	1,636041E+22
1645	8,059562E+21	8,059313E+21	1,208256E+20	1,207895E+20	1,611887E+22	2,416151E+20	1,636049E+22
1646	8,059320E+21	8,059820E+21	1,208404E+20	1,208309E+20	1,611914E+22	2,416713E+20	1,636081E+22
1647	8,060031E+21	8,059622E+21	1,207809E+20	1,208253E+20	1,611965E+22	2,416062E+20	1,636126E+22
1648	8,059963E+21	8,060074E+21	1,208309E+20	1,207747E+20	1,612004E+22	2,416055E+20	1,636164E+22
1649	8,060003E+21	8,060451E+21	1,208135E+20	1,208393E+20	1,612045E+22	2,416528E+20	1,636211E+22
1650	8,060604E+21	8,060178E+21	1,207766E+20	1,207931E+20	1,612078E+22	2,415697E+20	1,636235E+22
1651	8,060188E+21	8,060644E+21	1,208380E+20	1,207864E+20	1,612083E+22	2,416244E+20	1,636246E+22
1652	8,060514E+21	8,060518E+21	1,207871E+20	1,208383E+20	1,612103E+22	2,416254E+20	1,636266E+22
1653	8,060755E+21	8,060223E+21	1,207945E+20	1,207751E+20	1,612098E+22	2,415696E+20	1,636255E+22
1654	8,060118E+21	8,060553E+21	1,208410E+20	1,208114E+20	1,612067E+22	2,416524E+20	1,636232E+22
1655	8,060298E+21	8,060049E+21	1,207773E+20	1,208323E+20	1,612035E+22	2,416097E+20	1,636196E+22

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 $\odot$ Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
1656	8,059910E+21	8,059799E+21	1,208301E+20	1,207900E+20	1,611971E+22	2,416201E+20	1,636133E+22
1657	8,059333E+21	8,059780E+21	1,208357E+20	1,208469E+20	1,611911E+22	2,416826E+20	1,636080E+22
1658	8,059580E+21	8,059008E+21	1,207919E+20	1,208270E+20	1,611859E+22	2,416189E+20	1,636021E+22
1659	8,058858E+21	8,059042E+21	1,208634E+20	1,208014E+20	1,611790E+22	2,416648E+20	1,635957E+22
1660	8,058686E+21	8,058904E+21	1,208264E+20	1,208622E+20	1,611759E+22	2,416886E+20	1,635928E+22
1661	8,058888E+21	8,058414E+21	1,208215E+20	1,208183E+20	1,611730E+22	2,416398E+20	1,635894E+22
1662	8,058271E+21	8,058792E+21	1,208682E+20	1,208269E+20	1,611706E+22	2,416951E+20	1,635876E+22
1663	8,058696E+21	8,058585E+21	1,208065E+20	1,208682E+20	1,611728E+22	2,416746E+20	1,635896E+22
1664	8,058913E+21	8,058578E+21	1,208324E+20	1,208024E+20	1,611749E+22	2,416347E+20	1,635913E+22
1665	8,058694E+21	8,059197E+21	1,208514E+20	1,208373E+20	1,611789E+22	2,416887E+20	1,635958E+22
1666	8,059381E+21	8,059026E+21	1,207921E+20	1,208328E+20	1,611841E+22	2,416249E+20	1,636003E+22
1667	8,059180E+21	8,059405E+21	1,208434E+20	1,207855E+20	1,611858E+22	2,416290E+20	1,636021E+22
1668	8,059263E+21	8,059737E+21	1,208271E+20	1,208510E+20	1,611900E+22	2,416781E+20	1,636068E+22
1669	8,059899E+21	8,059408E+21	1,207902E+20	1,208067E+20	1,611931E+22	2,415969E+20	1,636090E+22
1670	8,059544E+21	8,059826E+21	1,208471E+20	1,207971E+20	1,611937E+22	2,416442E+20	1,636101E+22
1671	8,059821E+21	8,059774E+21	1,207968E+20	1,208483E+20	1,611959E+22	2,416451E+20	1,636124E+22
1672	8,059942E+21	8,059471E+21	1,208059E+20	1,207912E+20	1,611941E+22	2,415971E+20	1,636101E+22
1673	8,059236E+21	8,059803E+21	1,208551E+20	1,208241E+20	1,611904E+22	2,416791E+20	1,636072E+22
1674	8,059427E+21	8,059225E+21	1,207908E+20	1,208449E+20	1,611865E+22	2,416358E+20	1,636029E+22
1675	8,058974E+21	8,058879E+21	1,208454E+20	1,208013E+20	1,611785E+22	2,416467E+20	1,635950E+22
1676	8,058461E+21	8,058876E+21	1,208524E+20	1,208556E+20	1,611734E+22	2,417080E+20	1,635905E+22
1677	8,058704E+21	8,058127E+21	1,208100E+20	1,208411E+20	1,611683E+22	2,416511E+20	1,635848E+22
1678	8,058016E+21	8,058160E+21	1,208733E+20	1,208170E+20	1,611618E+22	2,416903E+20	1,635787E+22
1679	8,057863E+21	8,058082E+21	1,208352E+20	1,208806E+20	1,611595E+22	2,417158E+20	1,635766E+22
1680	8,058104E+21	8,057593E+21	1,208294E+20	1,208381E+20	1,611570E+22	2,416675E+20	1,635736E+22
1681	8,057598E+21	8,058060E+21	1,208776E+20	1,208363E+20	1,611566E+22	2,417139E+20	1,635737E+22
1682	8,058075E+21	8,057907E+21	1,208181E+20	1,208725E+20	1,611598E+22	2,416906E+20	1,635767E+22
1683	8,058159E+21	8,057921E+21	1,208462E+20	1,208070E+20	1,611608E+22	2,416532E+20	1,635773E+22
1684	8,057920E+21	8,058567E+21	1,208671E+20	1,208444E+20	1,611649E+22	2,417115E+20	1,635820E+22
1685	8,058573E+21	8,058345E+21	1,208075E+20	1,208475E+20	1,611692E+22	2,416549E+20	1,635857E+22
1686	8,058482E+21	8,058620E+21	1,208502E+20	1,208001E+20	1,611710E+22	2,416503E+20	1,635875E+22
1687	8,058637E+21	8,058972E+21	1,208342E+20	1,208636E+20	1,611761E+22	2,416979E+20	1,635931E+22
1688	8,059254E+21	8,058667E+21	1,207988E+20	1,208201E+20	1,611792E+22	2,416189E+20	1,635954E+22
1689	8,058884E+21	8,059159E+21	1,208589E+20	1,208056E+20	1,611804E+22	2,416645E+20	1,635971E+22
1690	8,059054E+21	8,059093E+21	1,208103E+20	1,208575E+20	1,611815E+22	2,416678E+20	1,635981E+22
1691	8,058996E+21	8,058683E+21	1,208213E+20	1,208062E+20	1,611768E+22	2,416275E+20	1,635931E+22
1692	8,058325E+21	8,058923E+21	1,208716E+20	1,208373E+20	1,611725E+22	2,417089E+20	1,635896E+22
1693	8,058531E+21	8,058288E+21	1,208077E+20	1,208607E+20	1,611682E+22	2,416684E+20	1,635849E+22
1694	8,058149E+21	8,057892E+21	1,208555E+20	1,208144E+20	1,611604E+22	2,416699E+20	1,635771E+22
1695	8,057632E+21	8,057974E+21	1,208627E+20	1,208691E+20	1,611561E+22	2,417318E+20	1,635734E+22
1696	8,057824E+21	8,057285E+21	1,208209E+20	1,208601E+20	1,611511E+22	2,416810E+20	1,635679E+22
1697	8,057195E+21	8,057382E+21	1,208839E+20	1,208313E+20	1,611458E+22	2,417153E+20	1,635629E+22
1698	8,057113E+21	8,057327E+21	1,208474E+20	1,208909E+20	1,611444E+22	2,417383E+20	1,635618E+22
1699	8,057309E+21	8,056845E+21	1,208434E+20	1,208464E+20	1,611415E+22	2,416898E+20	1,635584E+22
1700	8,056865E+21	8,057355E+21	1,208939E+20	1,208401E+20	1,611422E+22	2,417340E+20	1,635595E+22
1701	8,057304E+21	8,057237E+21	1,208357E+20	1,208820E+20	1,611454E+22	2,417177E+20	1,635626E+22
1702	8,057395E+21	8,057189E+21	1,208553E+20	1,208197E+20	1,611458E+22	2,416750E+20	1,635626E+22
1703	8,057195E+21	8,057832E+21	1,208754E+20	1,208615E+20	1,611503E+22	2,417369E+20	1,635676E+22
1704	8,057900E+21	8,057582E+21	1,208145E+20	1,208661E+20	1,611548E+22	2,416805E+20	1,635716E+22

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 $\odot$ Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
1705	8,057915E+21	8,057910E+21	1,208573E+20	1,208102E+20	1,611582E+22	2,416675E+20	1,635749E+22
1706	8,058069E+21	8,058318E+21	1,208448E+20	1,208683E+20	1,611639E+22	2,417130E+20	1,635810E+22
1707	8,058484E+21	8,058012E+21	1,208128E+20	1,208274E+20	1,611650E+22	2,416402E+20	1,635814E+22
1708	8,058039E+21	8,058474E+21	1,208762E+20	1,208146E+20	1,611651E+22	2,416908E+20	1,635820E+22
1709	8,058132E+21	8,058315E+21	1,208282E+20	1,208731E+20	1,611645E+22	2,417013E+20	1,635815E+22
1710	8,058125E+21	8,057747E+21	1,208315E+20	1,208232E+20	1,611587E+22	2,416547E+20	1,635753E+22
1711	8,057526E+21	8,057973E+21	1,208813E+20	1,208529E+20	1,611550E+22	2,417342E+20	1,635723E+22
1712	8,057719E+21	8,057360E+21	1,208187E+20	1,208774E+20	1,611508E+22	2,416962E+20	1,635678E+22
1713	8,057370E+21	8,057063E+21	1,208666E+20	1,208264E+20	1,611443E+22	2,416930E+20	1,635613E+22
1714	8,056813E+21	8,057198E+21	1,208757E+20	1,208800E+20	1,611401E+22	2,417557E+20	1,635577E+22
1715	8,056886E+21	8,056490E+21	1,208372E+20	1,208748E+20	1,611338E+22	2,417120E+20	1,635509E+22
1716	8,056352E+21	8,056575E+21	1,209009E+20	1,208416E+20	1,611293E+22	2,417425E+20	1,635467E+22
1717	8,056298E+21	8,056533E+21	1,208663E+20	1,209017E+20	1,611283E+22	2,417680E+20	1,635460E+22
1718	8,056541E+21	8,056027E+21	1,208543E+20	1,208561E+20	1,611257E+22	2,417104E+20	1,635428E+22
1719	8,056106E+21	8,056587E+21	1,209034E+20	1,208524E+20	1,611269E+22	2,417558E+20	1,635445E+22
1720	8,056492E+21	8,056498E+21	1,208443E+20	1,208997E+20	1,611299E+22	2,417440E+20	1,635473E+22
1721	8,056705E+21	8,056483E+21	1,208610E+20	1,208340E+20	1,611319E+22	2,416950E+20	1,635488E+22
1722	8,056600E+21	8,057133E+21	1,208832E+20	1,208710E+20	1,611373E+22	2,417542E+20	1,635549E+22
1723	8,057247E+21	8,056915E+21	1,208265E+20	1,208740E+20	1,611416E+22	2,417005E+20	1,635586E+22
1724	8,057297E+21	8,057273E+21	1,208726E+20	1,208146E+20	1,611457E+22	2,416872E+20	1,635626E+22
1725	8,057334E+21	8,057690E+21	1,208625E+20	1,208776E+20	1,611502E+22	2,417402E+20	1,635676E+22
1726	8,057667E+21	8,057264E+21	1,208230E+20	1,208422E+20	1,611493E+22	2,416652E+20	1,635660E+22
1727	8,057214E+21	8,057628E+21	1,208864E+20	1,208339E+20	1,611484E+22	2,417203E+20	1,635656E+22
1728	8,057299E+21	8,057409E+21	1,208378E+20	1,208922E+20	1,611471E+22	2,417300E+20	1,635644E+22
1729	8,057392E+21	8,056862E+21	1,208413E+20	1,208361E+20	1,611425E+22	2,416773E+20	1,635593E+22
1730	8,056788E+21	8,057130E+21	1,208938E+20	1,208598E+20	1,611392E+22	2,417537E+20	1,635567E+22
1731	8,056803E+21	8,056561E+21	1,208359E+20	1,208881E+20	1,611336E+22	2,417240E+20	1,635509E+22
1732	8,056441E+21	8,056273E+21	1,208850E+20	1,208376E+20	1,611271E+22	2,417226E+20	1,635444E+22
1733	8,055873E+21	8,056386E+21	1,208944E+20	1,208954E+20	1,611226E+22	2,417898E+20	1,635405E+22
1734	8,056013E+21	8,055588E+21	1,208493E+20	1,208899E+20	1,611160E+22	2,417392E+20	1,635334E+22
1735	8,055574E+21	8,055700E+21	1,209116E+20	1,208557E+20	1,611127E+22	2,417673E+20	1,635304E+22
1736	8,055519E+21	8,055710E+21	1,208771E+20	1,209155E+20	1,611123E+22	2,417925E+20	1,635302E+22
1737	8,055811E+21	8,055288E+21	1,208626E+20	1,208682E+20	1,611110E+22	2,417308E+20	1,635283E+22
1738	8,055394E+21	8,055885E+21	1,209117E+20	1,208634E+20	1,611128E+22	2,417751E+20	1,635305E+22
1739	8,055723E+21	8,055792E+21	1,208564E+20	1,209132E+20	1,611152E+22	2,417696E+20	1,635328E+22
1740	8,056065E+21	8,055798E+21	1,208738E+20	1,208418E+20	1,611186E+22	2,417156E+20	1,635358E+22
1741	8,055987E+21	8,056485E+21	1,208988E+20	1,208788E+20	1,611247E+22	2,417776E+20	1,635425E+22
1742	8,056588E+21	8,056229E+21	1,208372E+20	1,208810E+20	1,611282E+22	2,417182E+20	1,635454E+22
1743	8,056584E+21	8,056586E+21	1,208829E+20	1,208275E+20	1,611317E+22	2,417104E+20	1,635488E+22
1744	8,056502E+21	8,056954E+21	1,208728E+20	1,208940E+20	1,611346E+22	2,417668E+20	1,635522E+22
1745	8,056896E+21	8,056481E+21	1,208310E+20	1,208583E+20	1,611338E+22	2,416893E+20	1,635507E+22
1746	8,056492E+21	8,056797E+21	1,208961E+20	1,208448E+20	1,611329E+22	2,417409E+20	1,635503E+22
1747	8,056477E+21	8,056580E+21	1,208527E+20	1,209024E+20	1,611306E+22	2,417552E+20	1,635481E+22
1748	8,056593E+21	8,056059E+21	1,208594E+20	1,208438E+20	1,611265E+22	2,417032E+20	1,635435E+22
1749	8,055902E+21	8,056340E+21	1,209128E+20	1,208724E+20	1,611224E+22	2,417852E+20	1,635403E+22
1750	8,055857E+21	8,055684E+21	1,208496E+20	1,209057E+20	1,611154E+22	2,417553E+20	1,635330E+22
1751	8,055563E+21	8,055335E+21	1,208965E+20	1,208591E+20	1,611090E+22	2,417556E+20	1,635265E+22
1752	8,055012E+21	8,055447E+21	1,209050E+20	1,209131E+20	1,611046E+22	2,418181E+20	1,635228E+22
1753	8,055277E+21	8,054729E+21	1,208582E+20	1,209028E+20	1,611001E+22	2,417610E+20	1,635177E+22

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 $\odot$ Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
1754	8,054845E+21	8,054905E+21	1,209215E+20	1,208621E+20	1,610975E+22	2,417836E+20	1,635153E+22
1755	8,054643E+21	8,054989E+21	1,208915E+20	1,209247E+20	1,610963E+22	2,418161E+20	1,635145E+22
1756	8,054990E+21	8,054599E+21	1,208779E+20	1,208772E+20	1,610959E+22	2,417551E+20	1,635134E+22
1757	8,054639E+21	8,055189E+21	1,209265E+20	1,208756E+20	1,610983E+22	2,418021E+20	1,635163E+22
1758	8,055045E+21	8,055049E+21	1,208668E+20	1,209242E+20	1,611009E+22	2,417910E+20	1,635188E+22
1759	8,055479E+21	8,055082E+21	1,208826E+20	1,208532E+20	1,611056E+22	2,417359E+20	1,635230E+22
1760	8,055342E+21	8,055814E+21	1,209084E+20	1,208891E+20	1,611116E+22	2,417975E+20	1,635295E+22
1761	8,055927E+21	8,055600E+21	1,208447E+20	1,208925E+20	1,611153E+22	2,417372E+20	1,635326E+22
1762	8,055867E+21	8,055902E+21	1,208917E+20	1,208398E+20	1,611177E+22	2,417315E+20	1,635350E+22
1763	8,055670E+21	8,056199E+21	1,208861E+20	1,209076E+20	1,611187E+22	2,417937E+20	1,635366E+22
1764	8,056137E+21	8,055694E+21	1,208467E+20	1,208680E+20	1,611183E+22	2,417147E+20	1,635355E+22
1765	8,055741E+21	8,055997E+21	1,209128E+20	1,208552E+20	1,611174E+22	2,417680E+20	1,635351E+22
1766	8,055646E+21	8,055713E+21	1,208667E+20	1,209130E+20	1,611136E+22	2,417796E+20	1,635314E+22
1767	8,055721E+21	8,055194E+21	1,208718E+20	1,208611E+20	1,611092E+22	2,417329E+20	1,635265E+22
1768	8,054969E+21	8,055452E+21	1,209232E+20	1,208909E+20	1,611042E+22	2,418141E+20	1,635224E+22
1769	8,055016E+21	8,054790E+21	1,208591E+20	1,209235E+20	1,610981E+22	2,417826E+20	1,635159E+22
1770	8,054790E+21	8,054463E+21	1,209069E+20	1,208709E+20	1,610925E+22	2,417778E+20	1,635103E+22
1771	8,054166E+21	8,054625E+21	1,209206E+20	1,209212E+20	1,610879E+22	2,418418E+20	1,635063E+22
1772	8,054454E+21	8,053980E+21	1,208768E+20	1,209088E+20	1,610843E+22	2,417856E+20	1,635022E+22
1773	8,053987E+21	8,054185E+21	1,209382E+20	1,208728E+20	1,610817E+22	2,418111E+20	1,634998E+22
1774	8,053763E+21	8,054182E+21	1,209042E+20	1,209389E+20	1,610795E+22	2,418431E+20	1,634979E+22
1775	8,054249E+21	8,053781E+21	1,208873E+20	1,208948E+20	1,610803E+22	2,417821E+20	1,634981E+22
1776	8,053976E+21	8,054407E+21	1,209340E+20	1,208892E+20	1,610838E+22	2,418231E+20	1,635021E+22
1777	8,054493E+21	8,054362E+21	1,208745E+20	1,209340E+20	1,610886E+22	2,418085E+20	1,635066E+22
1778	8,054890E+21	8,054459E+21	1,208902E+20	1,208598E+20	1,610935E+22	2,417499E+20	1,635110E+22
1779	8,054561E+21	8,055209E+21	1,209207E+20	1,208979E+20	1,610977E+22	2,418186E+20	1,635159E+22
1780	8,055136E+21	8,054964E+21	1,208590E+20	1,209018E+20	1,611010E+22	2,417609E+20	1,635186E+22
1781	8,055094E+21	8,055175E+21	1,209062E+20	1,208530E+20	1,611027E+22	2,417592E+20	1,635203E+22
1782	8,054896E+21	8,055360E+21	1,208986E+20	1,209189E+20	1,611026E+22	2,418175E+20	1,635207E+22
1783	8,055427E+21	8,054836E+21	1,208586E+20	1,208825E+20	1,611026E+22	2,417410E+20	1,635200E+22
1784	8,054953E+21	8,055148E+21	1,209232E+20	1,208688E+20	1,611010E+22	2,417919E+20	1,635189E+22
1785	8,054855E+21	8,054907E+21	1,208760E+20	1,209290E+20	1,610976E+22	2,418049E+20	1,635157E+22
1786	8,054896E+21	8,054356E+21	1,208818E+20	1,208771E+20	1,610925E+22	2,417588E+20	1,635101E+22
1787	8,054065E+21	8,054593E+21	1,209374E+20	1,209042E+20	1,610866E+22	2,418416E+20	1,635050E+22
1788	8,054181E+21	8,053970E+21	1,208778E+20	1,209317E+20	1,610815E+22	2,418095E+20	1,634996E+22
1789	8,053945E+21	8,053659E+21	1,209260E+20	1,208800E+20	1,610760E+22	2,418059E+20	1,634941E+22
1790	8,053235E+21	8,053772E+21	1,209365E+20	1,209300E+20	1,610701E+22	2,418665E+20	1,634887E+22
1791	8,053544E+21	8,053130E+21	1,208898E+20	1,209257E+20	1,610667E+22	2,418155E+20	1,634849E+22
1792	8,053110E+21	8,053330E+21	1,209461E+20	1,208898E+20	1,610644E+22	2,418359E+20	1,634828E+22
1793	8,053077E+21	8,053375E+21	1,209110E+20	1,209550E+20	1,610645E+22	2,418661E+20	1,634832E+22
1794	8,053666E+21	8,053061E+21	1,208938E+20	1,209048E+20	1,610673E+22	2,417986E+20	1,634853E+22
1795	8,053347E+21	8,053769E+21	1,209451E+20	1,208956E+20	1,610712E+22	2,418407E+20	1,634896E+22
1796	8,053844E+21	8,053814E+21	1,208904E+20	1,209379E+20	1,610766E+22	2,418283E+20	1,634949E+22
1797	8,054160E+21	8,053897E+21	1,209043E+20	1,208707E+20	1,610806E+22	2,417750E+20	1,634983E+22
1798	8,053748E+21	8,054469E+21	1,209332E+20	1,209107E+20	1,610822E+22	2,418438E+20	1,635006E+22
1799	8,054392E+21	8,054146E+21	1,208694E+20	1,209186E+20	1,610854E+22	2,417880E+20	1,635033E+22
1800	8,054386E+21	8,054334E+21	1,209141E+20	1,208664E+20	1,610872E+22	2,417805E+20	1,635050E+22
1801	8,054253E+21	8,054545E+21	1,209077E+20	1,209301E+20	1,610880E+22	2,418378E+20	1,635064E+22
1802	8,054705E+21	8,054079E+21	1,208684E+20	1,208925E+20	1,610878E+22	2,417609E+20	1,635055E+22

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 ° Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
1803	8,054071E+21	8,054396E+21	1,209362E+20	1,208807E+20	1,610847E+22	2,418170E+20	1,635028E+22
1804	8,053962E+21	8,054149E+21	1,208937E+20	1,209397E+20	1,610811E+22	2,418335E+20	1,634994E+22
1805	8,054015E+21	8,053551E+21	1,208991E+20	1,208918E+20	1,610757E+22	2,417909E+20	1,634936E+22
1806	8,053150E+21	8,053675E+21	1,209533E+20	1,209148E+20	1,610682E+22	2,418682E+20	1,634869E+22
1807	8,053314E+21	8,053052E+21	1,208935E+20	1,209461E+20	1,610637E+22	2,418396E+20	1,634821E+22
1808	8,053033E+21	8,052760E+21	1,209374E+20	1,208946E+20	1,610579E+22	2,418320E+20	1,634763E+22
1809	8,052391E+21	8,052899E+21	1,209453E+20	1,209477E+20	1,610529E+22	2,418930E+20	1,634718E+22
1810	8,052756E+21	8,052284E+21	1,208975E+20	1,209431E+20	1,610504E+22	2,418406E+20	1,634688E+22
1811	8,052366E+21	8,052531E+21	1,209547E+20	1,209032E+20	1,610490E+22	2,418579E+20	1,634675E+22
1812	8,052456E+21	8,052706E+21	1,209261E+20	1,209615E+20	1,610516E+22	2,418876E+20	1,634705E+22
1813	8,053034E+21	8,052467E+21	1,209088E+20	1,209109E+20	1,610550E+22	2,418197E+20	1,634732E+22
1814	8,052585E+21	8,053125E+21	1,209590E+20	1,209011E+20	1,610571E+22	2,418602E+20	1,634757E+22
1815	8,053065E+21	8,053134E+21	1,209026E+20	1,209506E+20	1,610620E+22	2,418533E+20	1,634805E+22
1816	8,053354E+21	8,053140E+21	1,209124E+20	1,208853E+20	1,610649E+22	2,417976E+20	1,634829E+22
1817	8,053086E+21	8,053681E+21	1,209403E+20	1,209253E+20	1,610677E+22	2,418656E+20	1,634863E+22
1818	8,053776E+21	8,053390E+21	1,208774E+20	1,209294E+20	1,610717E+22	2,418068E+20	1,634897E+22
1819	8,053702E+21	8,053610E+21	1,209251E+20	1,208751E+20	1,610731E+22	2,418002E+20	1,634911E+22
1820	8,053523E+21	8,053897E+21	1,209247E+20	1,209366E+20	1,610742E+22	2,418613E+20	1,634928E+22
1821	8,053866E+21	8,053400E+21	1,208847E+20	1,209062E+20	1,610727E+22	2,417909E+20	1,634906E+22
1822	8,053137E+21	8,053534E+21	1,209517E+20	1,208954E+20	1,610667E+22	2,418470E+20	1,634852E+22
1823	8,053092E+21	8,053219E+21	1,209088E+20	1,209568E+20	1,610631E+22	2,418656E+20	1,634818E+22
1824	8,053146E+21	8,052611E+21	1,209117E+20	1,209072E+20	1,610576E+22	2,418188E+20	1,634758E+22
1825	8,052346E+21	8,052748E+21	1,209642E+20	1,209288E+20	1,610509E+22	2,418930E+20	1,634699E+22
1826	8,052450E+21	8,052190E+21	1,209038E+20	1,209600E+20	1,610464E+22	2,418638E+20	1,634650E+22
1827	8,052111E+21	8,051918E+21	1,209475E+20	1,209092E+20	1,610403E+22	2,418568E+20	1,634589E+22
1828	8,051567E+21	8,052116E+21	1,209606E+20	1,209584E+20	1,610368E+22	2,419190E+20	1,634560E+22
1829	8,052020E+21	8,051568E+21	1,209126E+20	1,209549E+20	1,610359E+22	2,418674E+20	1,634546E+22
1830	8,051644E+21	8,051773E+21	1,209688E+20	1,209100E+20	1,610342E+22	2,418788E+20	1,634530E+22
1831	8,051771E+21	8,051999E+21	1,209416E+20	1,209706E+20	1,610377E+22	2,419122E+20	1,634568E+22
1832	8,052268E+21	8,051807E+21	1,209189E+20	1,209216E+20	1,610408E+22	2,418406E+20	1,634592E+22
1833	8,051859E+21	8,052408E+21	1,209665E+20	1,209160E+20	1,610427E+22	2,418825E+20	1,634615E+22
1834	8,052346E+21	8,052398E+21	1,209094E+20	1,209649E+20	1,610474E+22	2,418743E+20	1,634662E+22
1835	8,052666E+21	8,052391E+21	1,209200E+20	1,208975E+20	1,610506E+22	2,418175E+20	1,634687E+22
1836	8,052476E+21	8,053002E+21	1,209553E+20	1,209317E+20	1,610548E+22	2,418870E+20	1,634736E+22
1837	8,053109E+21	8,052758E+21	1,208928E+20	1,209376E+20	1,610587E+22	2,418304E+20	1,634770E+22
1838	8,052874E+21	8,052875E+21	1,209392E+20	1,208850E+20	1,610575E+22	2,418241E+20	1,634757E+22
1839	8,052667E+21	8,053101E+21	1,209386E+20	1,209522E+20	1,610577E+22	2,418908E+20	1,634766E+22
1840	8,052969E+21	8,052539E+21	1,208954E+20	1,209242E+20	1,610551E+22	2,418196E+20	1,634733E+22
1841	8,052357E+21	8,052609E+21	1,209613E+20	1,209129E+20	1,610497E+22	2,418742E+20	1,634684E+22
1842	8,052315E+21	8,052328E+21	1,209196E+20	1,209698E+20	1,610464E+22	2,418894E+20	1,634653E+22
1843	8,052301E+21	8,051749E+21	1,209246E+20	1,209198E+20	1,610405E+22	2,418444E+20	1,634589E+22
1844	8,051490E+21	8,051966E+21	1,209812E+20	1,209385E+20	1,610346E+22	2,419197E+20	1,634538E+22
1845	8,051549E+21	8,051408E+21	1,209203E+20	1,209746E+20	1,610296E+22	2,418949E+20	1,634485E+22
1846	8,051194E+21	8,051025E+21	1,209618E+20	1,209223E+20	1,610222E+22	2,418841E+20	1,634410E+22
1847	8,050802E+21	8,051253E+21	1,209751E+20	1,209715E+20	1,610205E+22	2,419466E+20	1,634400E+22
1848	8,051265E+21	8,050783E+21	1,209255E+20	1,209652E+20	1,610205E+22	2,418908E+20	1,634394E+22
1849	8,050963E+21	8,051035E+21	1,209785E+20	1,209206E+20	1,610200E+22	2,418990E+20	1,634390E+22
1850	8,051027E+21	8,051328E+21	1,209508E+20	1,209810E+20	1,610235E+22	2,419318E+20	1,634429E+22
1851	8,051466E+21	8,051122E+21	1,209265E+20	1,209348E+20	1,610259E+22	2,418613E+20	1,634445E+22

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 $\odot$ Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
1852	8,051157E+21	8,051738E+21	1,209786E+20	1,209261E+20	1,610289E+22	2,419046E+20	1,634480E+22
1853	8,051691E+21	8,051747E+21	1,209217E+20	1,209751E+20	1,610344E+22	2,418969E+20	1,634533E+22
1854	8,051989E+21	8,051658E+21	1,209327E+20	1,209051E+20	1,610365E+22	2,418378E+20	1,634548E+22
1855	8,051826E+21	8,052280E+21	1,209697E+20	1,209421E+20	1,610411E+22	2,419118E+20	1,634602E+22
1856	8,052331E+21	8,052056E+21	1,209045E+20	1,209512E+20	1,610439E+22	2,418557E+20	1,634624E+22
1857	8,052122E+21	8,052068E+21	1,209476E+20	1,209040E+20	1,610419E+22	2,418516E+20	1,634604E+22
1858	8,051890E+21	8,052260E+21	1,209471E+20	1,209683E+20	1,610415E+22	2,419155E+20	1,634607E+22
1859	8,052182E+21	8,051682E+21	1,209053E+20	1,209391E+20	1,610386E+22	2,418444E+20	1,634571E+22
1860	8,051599E+21	8,051801E+21	1,209789E+20	1,209207E+20	1,610340E+22	2,418997E+20	1,634530E+22
1861	8,051454E+21	8,051569E+21	1,209378E+20	1,209781E+20	1,610302E+22	2,419159E+20	1,634494E+22
1862	8,051298E+21	8,050877E+21	1,209418E+20	1,209309E+20	1,610218E+22	2,418727E+20	1,634405E+22
1863	8,050529E+21	8,051039E+21	1,209970E+20	1,209536E+20	1,610157E+22	2,419506E+20	1,634352E+22
1864	8,050620E+21	8,050507E+21	1,209335E+20	1,209912E+20	1,610113E+22	2,419248E+20	1,634305E+22
1865	8,050451E+21	8,050121E+21	1,209707E+20	1,209385E+20	1,610057E+22	2,419092E+20	1,634248E+22
1866	8,050105E+21	8,050457E+21	1,209847E+20	1,209824E+20	1,610056E+22	2,419671E+20	1,634253E+22
1867	8,050528E+21	8,050079E+21	1,209356E+20	1,209764E+20	1,610061E+22	2,419120E+20	1,634252E+22
1868	8,050223E+21	8,050409E+21	1,209915E+20	1,209300E+20	1,610063E+22	2,419215E+20	1,634255E+22
1869	8,050250E+21	8,050691E+21	1,209632E+20	1,209929E+20	1,610094E+22	2,419561E+20	1,634290E+22
1870	8,050679E+21	8,050347E+21	1,209377E+20	1,209465E+20	1,610103E+22	2,418841E+20	1,634291E+22
1871	8,050525E+21	8,050956E+21	1,209904E+20	1,209376E+20	1,610148E+22	2,419280E+20	1,634341E+22
1872	8,051041E+21	8,051037E+21	1,209338E+20	1,209852E+20	1,610208E+22	2,419189E+20	1,634400E+22
1873	8,051372E+21	8,050943E+21	1,209408E+20	1,209174E+20	1,610232E+22	2,418582E+20	1,634417E+22
1874	8,051121E+21	8,051592E+21	1,209773E+20	1,209544E+20	1,610271E+22	2,419317E+20	1,634464E+22
1875	8,051540E+21	8,051330E+21	1,209131E+20	1,209656E+20	1,610287E+22	2,418787E+20	1,634475E+22
1876	8,051382E+21	8,051342E+21	1,209617E+20	1,209160E+20	1,610272E+22	2,418777E+20	1,634460E+22
1877	8,051125E+21	8,051519E+21	1,209628E+20	1,209767E+20	1,610264E+22	2,419396E+20	1,634458E+22
1878	8,051306E+21	8,050830E+21	1,209234E+20	1,209479E+20	1,610214E+22	2,418714E+20	1,634401E+22
1879	8,050733E+21	8,050927E+21	1,209965E+20	1,209323E+20	1,610166E+22	2,419288E+20	1,634359E+22
1880	8,050463E+21	8,050692E+21	1,209528E+20	1,209937E+20	1,610116E+22	2,419465E+20	1,634310E+22
1881	8,050393E+21	8,049905E+21	1,209517E+20	1,209518E+20	1,610030E+22	2,419035E+20	1,634220E+22
1882	8,049709E+21	8,050093E+21	1,210044E+20	1,209708E+20	1,609980E+22	2,419753E+20	1,634178E+22
1883	8,049856E+21	8,049640E+21	1,209435E+20	1,210062E+20	1,609950E+22	2,419497E+20	1,634144E+22
1884	8,049760E+21	8,049396E+21	1,209853E+20	1,209474E+20	1,609916E+22	2,419327E+20	1,634109E+22
1885	8,049337E+21	8,049817E+21	1,209993E+20	1,209888E+20	1,609915E+22	2,419880E+20	1,634114E+22
1886	8,049632E+21	8,049358E+21	1,209499E+20	1,209858E+20	1,609899E+22	2,419357E+20	1,634093E+22
1887	8,049413E+21	8,049632E+21	1,210040E+20	1,209423E+20	1,609905E+22	2,419463E+20	1,634099E+22
1888	8,049470E+21	8,049934E+21	1,209746E+20	1,210055E+20	1,609940E+22	2,419801E+20	1,634138E+22
1889	8,050073E+21	8,049564E+21	1,209450E+20	1,209601E+20	1,609964E+22	2,419050E+20	1,634154E+22
1890	8,049964E+21	8,050250E+21	1,209974E+20	1,209479E+20	1,610021E+22	2,419453E+20	1,634216E+22
1891	8,050413E+21	8,050406E+21	1,209429E+20	1,209962E+20	1,610082E+22	2,419391E+20	1,634276E+22
1892	8,050703E+21	8,050352E+21	1,209532E+20	1,209282E+20	1,610106E+22	2,418815E+20	1,634294E+22
1893	8,050365E+21	8,050949E+21	1,209900E+20	1,209642E+20	1,610131E+22	2,419543E+20	1,634327E+22
1894	8,050702E+21	8,050529E+21	1,209274E+20	1,209761E+20	1,610123E+22	2,419035E+20	1,634313E+22
1895	8,050604E+21	8,050480E+21	1,209781E+20	1,209274E+20	1,610108E+22	2,419054E+20	1,634299E+22
1896	8,050252E+21	8,050684E+21	1,209793E+20	1,209875E+20	1,610094E+22	2,419668E+20	1,634290E+22
1897	8,050437E+21	8,049922E+21	1,209352E+20	1,209648E+20	1,610036E+22	2,419000E+20	1,634226E+22
1898	8,049826E+21	8,050007E+21	1,210043E+20	1,209498E+20	1,609983E+22	2,419540E+20	1,634179E+22
1899	8,049559E+21	8,049766E+21	1,209614E+20	1,210124E+20	1,609932E+22	2,419737E+20	1,634130E+22
1900	8,049605E+21	8,049058E+21	1,209641E+20	1,209668E+20	1,609866E+22	2,419309E+20	1,634059E+22

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 ° Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
1901	8,048963E+21	8,049321E+21	1,210174E+20	1,209789E+20	1,609828E+22	2,419963E+20	1,634028E+22
1902	8,049030E+21	8,048852E+21	1,209615E+20	1,210141E+20	1,609788E+22	2,419756E+20	1,633986E+22
1903	8,048951E+21	8,048649E+21	1,210022E+20	1,209574E+20	1,609760E+22	2,419596E+20	1,633956E+22
1904	8,048429E+21	8,049087E+21	1,210139E+20	1,210012E+20	1,609752E+22	2,420151E+20	1,633953E+22
1905	8,048825E+21	8,048518E+21	1,209585E+20	1,210036E+20	1,609734E+22	2,419621E+20	1,633930E+22
1906	8,048734E+21	8,048807E+21	1,210087E+20	1,209565E+20	1,609754E+22	2,419652E+20	1,633951E+22
1907	8,048860E+21	8,049188E+21	1,209829E+20	1,210168E+20	1,609805E+22	2,419997E+20	1,634005E+22
1908	8,049515E+21	8,048975E+21	1,209573E+20	1,209673E+20	1,609849E+22	2,419246E+20	1,634041E+22
1909	8,049327E+21	8,049709E+21	1,210089E+20	1,209530E+20	1,609904E+22	2,419619E+20	1,634100E+22
1910	8,049596E+21	8,049757E+21	1,209577E+20	1,210047E+20	1,609935E+22	2,419624E+20	1,634132E+22
1911	8,049928E+21	8,049626E+21	1,209664E+20	1,209408E+20	1,609955E+22	2,419072E+20	1,634146E+22
1912	8,049548E+21	8,050180E+21	1,210034E+20	1,209759E+20	1,609973E+22	2,419793E+20	1,634171E+22
1913	8,049959E+21	8,049661E+21	1,209377E+20	1,209908E+20	1,609962E+22	2,419286E+20	1,634155E+22
1914	8,049865E+21	8,049621E+21	1,209872E+20	1,209415E+20	1,609949E+22	2,419287E+20	1,634141E+22
1915	8,049425E+21	8,049845E+21	1,209895E+20	1,210028E+20	1,609927E+22	2,419923E+20	1,634126E+22
1916	8,049595E+21	8,049120E+21	1,209482E+20	1,209816E+20	1,609872E+22	2,419299E+20	1,634064E+22
1917	8,048981E+21	8,049165E+21	1,210149E+20	1,209628E+20	1,609815E+22	2,419777E+20	1,634012E+22
1918	8,048683E+21	8,048862E+21	1,209775E+20	1,210240E+20	1,609755E+22	2,420015E+20	1,633955E+22
1919	8,048817E+21	8,048203E+21	1,209821E+20	1,209772E+20	1,609702E+22	2,419593E+20	1,633898E+22
1920	8,048088E+21	8,048547E+21	1,210353E+20	1,209871E+20	1,609663E+22	2,420224E+20	1,633866E+22
1921	8,048152E+21	8,048027E+21	1,209750E+20	1,210284E+20	1,609618E+22	2,420035E+20	1,633818E+22
1922	8,048070E+21	8,047818E+21	1,210103E+20	1,209732E+20	1,609589E+22	2,419836E+20	1,633787E+22
1923	8,047603E+21	8,048257E+21	1,210215E+20	1,210170E+20	1,609586E+22	2,420385E+20	1,633790E+22
1924	8,048149E+21	8,047783E+21	1,209689E+20	1,210163E+20	1,609593E+22	2,419852E+20	1,633792E+22
1925	8,048133E+21	8,048144E+21	1,210177E+20	1,209621E+20	1,609628E+22	2,419798E+20	1,633826E+22
1926	8,048196E+21	8,048534E+21	1,209984E+20	1,210230E+20	1,609673E+22	2,420214E+20	1,633875E+22
1927	8,048836E+21	8,048359E+21	1,209718E+20	1,209761E+20	1,609720E+22	2,419479E+20	1,633914E+22
1928	8,048535E+21	8,049075E+21	1,210219E+20	1,209650E+20	1,609761E+22	2,419869E+20	1,633960E+22
1929	8,048854E+21	8,048962E+21	1,209664E+20	1,210210E+20	1,609782E+22	2,419874E+20	1,633980E+22
1930	8,049241E+21	8,048800E+21	1,209720E+20	1,209568E+20	1,609804E+22	2,419287E+20	1,633997E+22
1931	8,048855E+21	8,049367E+21	1,210125E+20	1,209888E+20	1,609822E+22	2,420013E+20	1,634022E+22
1932	8,049241E+21	8,048937E+21	1,209510E+20	1,210021E+20	1,609818E+22	2,419531E+20	1,634013E+22
1933	8,049058E+21	8,048888E+21	1,209985E+20	1,209502E+20	1,609795E+22	2,419487E+20	1,633989E+22
1934	8,048482E+21	8,048997E+21	1,210060E+20	1,210142E+20	1,609748E+22	2,420201E+20	1,633950E+22
1935	8,048710E+21	8,048251E+21	1,209651E+20	1,209953E+20	1,609696E+22	2,419604E+20	1,633892E+22
1936	8,048095E+21	8,048311E+21	1,210310E+20	1,209751E+20	1,609641E+22	2,420061E+20	1,633841E+22
1937	8,047864E+21	8,047953E+21	1,209922E+20	1,210383E+20	1,609582E+22	2,420305E+20	1,633785E+22
1938	8,048006E+21	8,047355E+21	1,209937E+20	1,209925E+20	1,609536E+22	2,419862E+20	1,633735E+22
1939	8,047211E+21	8,047725E+21	1,210463E+20	1,210019E+20	1,609494E+22	2,420482E+20	1,633698E+22
1940	8,047293E+21	8,047258E+21	1,209876E+20	1,210446E+20	1,609455E+22	2,420322E+20	1,633658E+22
1941	8,047284E+21	8,047021E+21	1,210183E+20	1,209840E+20	1,609430E+22	2,420023E+20	1,633631E+22
1942	8,046840E+21	8,047429E+21	1,210357E+20	1,210262E+20	1,609427E+22	2,420620E+20	1,633633E+22
1943	8,047498E+21	8,047075E+21	1,209844E+20	1,210241E+20	1,609457E+22	2,420086E+20	1,633658E+22
1944	8,047436E+21	8,047524E+21	1,210314E+20	1,209698E+20	1,609496E+22	2,420012E+20	1,633696E+22
1945	8,047486E+21	8,047848E+21	1,210092E+20	1,210360E+20	1,609533E+22	2,420452E+20	1,633738E+22
1946	8,048120E+21	8,047659E+21	1,209773E+20	1,209914E+20	1,609578E+22	2,419688E+20	1,633775E+22
1947	8,047826E+21	8,048330E+21	1,210282E+20	1,209792E+20	1,609616E+22	2,420075E+20	1,633816E+22
1948	8,048207E+21	8,048271E+21	1,209767E+20	1,210321E+20	1,609648E+22	2,420088E+20	1,633849E+22
1949	8,048592E+21	8,048103E+21	1,209822E+20	1,209631E+20	1,609669E+22	2,419453E+20	1,633864E+22

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 $\odot$ Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
1950	8,048077E+21	8,048618E+21	1,210303E+20	1,209967E+20	1,609670E+22	2,420270E+20	1,633872E+22
1951	8,048403E+21	8,048198E+21	1,209691E+20	1,210139E+20	1,609660E+22	2,419829E+20	1,633858E+22
1952	8,048128E+21	8,048081E+21	1,210137E+20	1,209655E+20	1,609621E+22	2,419792E+20	1,633819E+22
1953	8,047618E+21	8,048030E+21	1,210178E+20	1,210322E+20	1,609565E+22	2,420499E+20	1,633770E+22
1954	8,047911E+21	8,047307E+21	1,209750E+20	1,210130E+20	1,609522E+22	2,419880E+20	1,633721E+22
1955	8,047294E+21	8,047423E+21	1,210427E+20	1,209894E+20	1,609472E+22	2,420322E+20	1,633675E+22
1956	8,047041E+21	8,047172E+21	1,210075E+20	1,210511E+20	1,609421E+22	2,420586E+20	1,633627E+22
1957	8,047107E+21	8,046575E+21	1,210053E+20	1,210034E+20	1,609368E+22	2,420087E+20	1,633569E+22
1958	8,046252E+21	8,046860E+21	1,210611E+20	1,210142E+20	1,609311E+22	2,420753E+20	1,633519E+22
1959	8,046437E+21	8,046418E+21	1,210027E+20	1,210567E+20	1,609286E+22	2,420594E+20	1,633491E+22
1960	8,046502E+21	8,046240E+21	1,210310E+20	1,209942E+20	1,609274E+22	2,420253E+20	1,633477E+22
1961	8,046183E+21	8,046627E+21	1,210478E+20	1,210376E+20	1,609281E+22	2,420855E+20	1,633490E+22
1962	8,046863E+21	8,046389E+21	1,209936E+20	1,210370E+20	1,609325E+22	2,420306E+20	1,633528E+22
1963	8,046752E+21	8,046876E+21	1,210388E+20	1,209836E+20	1,609363E+22	2,420224E+20	1,633565E+22
1964	8,046807E+21	8,047222E+21	1,210190E+20	1,210499E+20	1,609403E+22	2,420688E+20	1,633610E+22
1965	8,047462E+21	8,046987E+21	1,209836E+20	1,209999E+20	1,609445E+22	2,419834E+20	1,633643E+22
1966	8,047131E+21	8,047586E+21	1,210425E+20	1,209869E+20	1,609472E+22	2,420294E+20	1,633675E+22
1967	8,047502E+21	8,047591E+21	1,209944E+20	1,210381E+20	1,609509E+22	2,420325E+20	1,633713E+22
1968	8,047778E+21	8,047423E+21	1,209985E+20	1,209730E+20	1,609520E+22	2,419714E+20	1,633717E+22
1969	8,047226E+21	8,047777E+21	1,210435E+20	1,210124E+20	1,609500E+22	2,420559E+20	1,633706E+22
1970	8,047560E+21	8,047322E+21	1,209779E+20	1,210336E+20	1,609488E+22	2,420115E+20	1,633689E+22
1971	8,047316E+21	8,047164E+21	1,210217E+20	1,209836E+20	1,609448E+22	2,420054E+20	1,633649E+22
1972	8,046869E+21	8,047190E+21	1,210297E+20	1,210462E+20	1,609406E+22	2,420758E+20	1,633614E+22
1973	8,047154E+21	8,046506E+21	1,209869E+20	1,210221E+20	1,609366E+22	2,420090E+20	1,633567E+22
1974	8,046401E+21	8,046593E+21	1,210613E+20	1,209997E+20	1,609299E+22	2,420610E+20	1,633505E+22
1975	8,046088E+21	8,046389E+21	1,210268E+20	1,210625E+20	1,609248E+22	2,420894E+20	1,633457E+22
1976	8,046130E+21	8,045733E+21	1,210210E+20	1,210187E+20	1,609186E+22	2,420397E+20	1,633390E+22
1977	8,045402E+21	8,045878E+21	1,210723E+20	1,210301E+20	1,609128E+22	2,421024E+20	1,633338E+22
1978	8,045719E+21	8,045537E+21	1,210120E+20	1,210716E+20	1,609126E+22	2,420837E+20	1,633334E+22
1979	8,045827E+21	8,045468E+21	1,210395E+20	1,210058E+20	1,609130E+22	2,420453E+20	1,633334E+22
1980	8,045531E+21	8,046000E+21	1,210590E+20	1,210484E+20	1,609153E+22	2,421074E+20	1,633364E+22
1981	8,046159E+21	8,045790E+21	1,210020E+20	1,210446E+20	1,609195E+22	2,420465E+20	1,633400E+22
1982	8,045985E+21	8,046197E+21	1,210515E+20	1,209935E+20	1,609218E+22	2,420450E+20	1,633423E+22
1983	8,046082E+21	8,046565E+21	1,210339E+20	1,210573E+20	1,609265E+22	2,420911E+20	1,633474E+22
1984	8,046735E+21	8,046316E+21	1,209971E+20	1,210092E+20	1,609305E+22	2,420063E+20	1,633506E+22
1985	8,046448E+21	8,046782E+21	1,210551E+20	1,209991E+20	1,609323E+22	2,420542E+20	1,633528E+22
1986	8,046782E+21	8,046829E+21	1,210045E+20	1,210537E+20	1,609361E+22	2,420583E+20	1,633567E+22
1987	8,046992E+21	8,046635E+21	1,210064E+20	1,209912E+20	1,609363E+22	2,419976E+20	1,633562E+22
1988	8,046479E+21	8,046962E+21	1,210523E+20	1,210303E+20	1,609344E+22	2,420826E+20	1,633552E+22
1989	8,046823E+21	8,046484E+21	1,209860E+20	1,210449E+20	1,609331E+22	2,420309E+20	1,633534E+22
1990	8,046535E+21	8,046312E+21	1,210375E+20	1,209944E+20	1,609285E+22	2,420319E+20	1,633488E+22
1991	8,046035E+21	8,046428E+21	1,210500E+20	1,210524E+20	1,609246E+22	2,421024E+20	1,633457E+22
1992	8,046192E+21	8,045744E+21	1,210062E+20	1,210338E+20	1,609194E+22	2,420400E+20	1,633398E+22
1993	8,045416E+21	8,045652E+21	1,210765E+20	1,210155E+20	1,609107E+22	2,420919E+20	1,633316E+22
1994	8,045147E+21	8,045438E+21	1,210374E+20	1,210805E+20	1,609058E+22	2,421180E+20	1,633270E+22
1995	8,045278E+21	8,044797E+21	1,210294E+20	1,210354E+20	1,609008E+22	2,420648E+20	1,633214E+22
1996	8,044708E+21	8,045048E+21	1,210818E+20	1,210431E+20	1,608976E+22	2,421249E+20	1,633188E+22
1997	8,045071E+21	8,044826E+21	1,210225E+20	1,210790E+20	1,608990E+22	2,421014E+20	1,633200E+22
1998	8,045104E+21	8,044811E+21	1,210540E+20	1,210150E+20	1,608991E+22	2,420690E+20	1,633198E+22

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 $\odot$ Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
1999	8,044767E+21	8,045413E+21	1,210750E+20	1,210567E+20	1,609018E+22	2,421317E+20	1,633231E+22
2000	8,045372E+21	8,045147E+21	1,210150E+20	1,210566E+20	1,609052E+22	2,420715E+20	1,633259E+22
2001	8,045280E+21	8,045378E+21	1,210614E+20	1,210066E+20	1,609066E+22	2,420680E+20	1,633273E+22
2002	8,045436E+21	8,045804E+21	1,210427E+20	1,210697E+20	1,609124E+22	2,421124E+20	1,633335E+22
2003	8,046063E+21	8,045581E+21	1,210056E+20	1,210217E+20	1,609164E+22	2,420272E+20	1,633367E+22
2004	8,045772E+21	8,046087E+21	1,210643E+20	1,210130E+20	1,609186E+22	2,420773E+20	1,633394E+22
2005	8,046056E+21	8,046116E+21	1,210124E+20	1,210643E+20	1,609217E+22	2,420767E+20	1,633425E+22
2006	8,046198E+21	8,045839E+21	1,210189E+20	1,210038E+20	1,609204E+22	2,420227E+20	1,633406E+22
2007	8,045702E+21	8,046215E+21	1,210681E+20	1,210374E+20	1,609192E+22	2,421055E+20	1,633402E+22
2008	8,046009E+21	8,045733E+21	1,210038E+20	1,210544E+20	1,609174E+22	2,420582E+20	1,633380E+22
2009	8,045690E+21	8,045425E+21	1,210551E+20	1,210076E+20	1,609111E+22	2,420626E+20	1,633318E+22
2010	8,045120E+21	8,045574E+21	1,210641E+20	1,210680E+20	1,609069E+22	2,421321E+20	1,633283E+22
2011	8,045208E+21	8,044830E+21	1,210177E+20	1,210539E+20	1,609004E+22	2,420716E+20	1,633211E+22
2012	8,044544E+21	8,044693E+21	1,210853E+20	1,210346E+20	1,608924E+22	2,421200E+20	1,633136E+22
2013	8,044364E+21	8,044514E+21	1,210456E+20	1,210918E+20	1,608888E+22	2,421374E+20	1,633102E+22
2014	8,044516E+21	8,043950E+21	1,210435E+20	1,210459E+20	1,608847E+22	2,420894E+20	1,633056E+22
2015	8,043960E+21	8,044374E+21	1,210986E+20	1,210487E+20	1,608833E+22	2,421473E+20	1,633048E+22
2016	8,044253E+21	8,044207E+21	1,210395E+20	1,210898E+20	1,608846E+22	2,421292E+20	1,633059E+22
2017	8,044291E+21	8,044046E+21	1,210658E+20	1,210295E+20	1,608834E+22	2,420953E+20	1,633043E+22
2018	8,044016E+21	8,044644E+21	1,210833E+20	1,210704E+20	1,608866E+22	2,421537E+20	1,633081E+22
2019	8,044664E+21	8,044388E+21	1,210215E+20	1,210695E+20	1,608905E+22	2,420910E+20	1,633114E+22
2020	8,044701E+21	8,044649E+21	1,210685E+20	1,210182E+20	1,608935E+22	2,420867E+20	1,633144E+22
2021	8,044833E+21	8,045136E+21	1,210518E+20	1,210758E+20	1,608997E+22	2,421275E+20	1,633210E+22
2022	8,045347E+21	8,044938E+21	1,210189E+20	1,210323E+20	1,609028E+22	2,420512E+20	1,633234E+22
2023	8,045013E+21	8,045454E+21	1,210789E+20	1,210224E+20	1,609047E+22	2,421013E+20	1,633257E+22
2024	8,045265E+21	8,045403E+21	1,210274E+20	1,210765E+20	1,609067E+22	2,421039E+20	1,633277E+22
2025	8,045438E+21	8,044959E+21	1,210321E+20	1,210172E+20	1,609040E+22	2,420494E+20	1,633245E+22
2026	8,044936E+21	8,045374E+21	1,210808E+20	1,210488E+20	1,609031E+22	2,421296E+20	1,633244E+22
2027	8,045142E+21	8,044907E+21	1,210169E+20	1,210683E+20	1,609005E+22	2,420853E+20	1,633213E+22
2028	8,044807E+21	8,044573E+21	1,210670E+20	1,210256E+20	1,608938E+22	2,420925E+20	1,633147E+22
2029	8,044203E+21	8,044683E+21	1,210738E+20	1,210813E+20	1,608889E+22	2,421551E+20	1,633104E+22
2030	8,044286E+21	8,043899E+21	1,210313E+20	1,210699E+20	1,608819E+22	2,421012E+20	1,633029E+22
2031	8,043712E+21	8,043852E+21	1,210994E+20	1,210434E+20	1,608756E+22	2,421428E+20	1,632971E+22
2032	8,043580E+21	8,043731E+21	1,210627E+20	1,211020E+20	1,608731E+22	2,421647E+20	1,632948E+22
2033	8,043738E+21	8,043129E+21	1,210593E+20	1,210580E+20	1,608687E+22	2,421174E+20	1,632898E+22
2034	8,043175E+21	8,043648E+21	1,211102E+20	1,210620E+20	1,608682E+22	2,421722E+20	1,632899E+22
2035	8,043433E+21	8,043460E+21	1,210498E+20	1,211059E+20	1,608689E+22	2,421557E+20	1,632905E+22
2036	8,043586E+21	8,043262E+21	1,210721E+20	1,210455E+20	1,608685E+22	2,421176E+20	1,632897E+22
2037	8,043386E+21	8,043900E+21	1,210896E+20	1,210772E+20	1,608729E+22	2,421668E+20	1,632945E+22
2038	8,044002E+21	8,043696E+21	1,210340E+20	1,210769E+20	1,608770E+22	2,421108E+20	1,632981E+22
2039	8,044015E+21	8,044073E+21	1,210830E+20	1,210221E+20	1,608809E+22	2,421051E+20	1,633019E+22
2040	8,044078E+21	8,044545E+21	1,210681E+20	1,210853E+20	1,608862E+22	2,421535E+20	1,633078E+22
2041	8,044553E+21	8,044168E+21	1,210319E+20	1,210464E+20	1,608872E+22	2,420783E+20	1,633080E+22
2042	8,044268E+21	8,044664E+21	1,210877E+20	1,210365E+20	1,608893E+22	2,421242E+20	1,633106E+22
2043	8,044506E+21	8,044592E+21	1,210372E+20	1,210902E+20	1,608910E+22	2,421274E+20	1,633123E+22
2044	8,044746E+21	8,044140E+21	1,210417E+20	1,210332E+20	1,608889E+22	2,420749E+20	1,633096E+22
2045	8,044177E+21	8,044579E+21	1,210915E+20	1,210586E+20	1,608876E+22	2,421500E+20	1,633091E+22
2046	8,044233E+21	8,044103E+21	1,210320E+20	1,210838E+20	1,608834E+22	2,421159E+20	1,633045E+22
2047	8,043876E+21	8,043753E+21	1,210824E+20	1,210388E+20	1,608763E+22	2,421212E+20	1,632975E+22

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 $\odot$ Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
2048	8,043302E+21	8,043787E+21	1,210897E+20	1,210951E+20	1,608709E+22	2,421848E+20	1,632927E+22
2049	8,043442E+21	8,042917E+21	1,210463E+20	1,210842E+20	1,608636E+22	2,421305E+20	1,632849E+22
2050	8,042933E+21	8,042974E+21	1,211116E+20	1,210547E+20	1,608591E+22	2,421663E+20	1,632807E+22
2051	8,042738E+21	8,042945E+21	1,210770E+20	1,211149E+20	1,608568E+22	2,421919E+20	1,632787E+22
2052	8,042941E+21	8,042369E+21	1,210694E+20	1,210747E+20	1,608531E+22	2,421441E+20	1,632745E+22
2053	8,042385E+21	8,042884E+21	1,211180E+20	1,210715E+20	1,608527E+22	2,421896E+20	1,632746E+22
2054	8,042647E+21	8,042716E+21	1,210616E+20	1,211169E+20	1,608536E+22	2,421785E+20	1,632754E+22
2055	8,042879E+21	8,042607E+21	1,210848E+20	1,210503E+20	1,608549E+22	2,421352E+20	1,632762E+22
2056	8,042711E+21	8,043261E+21	1,211056E+20	1,210840E+20	1,608597E+22	2,421896E+20	1,632816E+22
2057	8,043287E+21	8,042998E+21	1,210488E+20	1,210878E+20	1,608628E+22	2,421366E+20	1,632842E+22
2058	8,043300E+21	8,043394E+21	1,210922E+20	1,210361E+20	1,608669E+22	2,421283E+20	1,632882E+22
2059	8,043327E+21	8,043804E+21	1,210777E+20	1,211020E+20	1,608713E+22	2,421797E+20	1,632931E+22
2060	8,043910E+21	8,043368E+21	1,210374E+20	1,210640E+20	1,608728E+22	2,421014E+20	1,632938E+22
2061	8,043649E+21	8,043885E+21	1,210944E+20	1,210452E+20	1,608753E+22	2,421397E+20	1,632967E+22
2062	8,043779E+21	8,043859E+21	1,210512E+20	1,210998E+20	1,608764E+22	2,421510E+20	1,632979E+22
2063	8,043919E+21	8,043471E+21	1,210583E+20	1,210419E+20	1,608739E+22	2,421002E+20	1,632949E+22
2064	8,043266E+21	8,043823E+21	1,211094E+20	1,210712E+20	1,608709E+22	2,421806E+20	1,632927E+22
2065	8,043263E+21	8,043158E+21	1,210484E+20	1,210998E+20	1,608642E+22	2,421482E+20	1,632857E+22
2066	8,042992E+21	8,042798E+21	1,210936E+20	1,210534E+20	1,608579E+22	2,421470E+20	1,632794E+22
2067	8,042452E+21	8,042847E+21	1,211026E+20	1,211083E+20	1,608530E+22	2,422110E+20	1,632751E+22
2068	8,042681E+21	8,042030E+21	1,210584E+20	1,210999E+20	1,608471E+22	2,421583E+20	1,632687E+22
2069	8,042161E+21	8,042193E+21	1,211219E+20	1,210649E+20	1,608435E+22	2,421867E+20	1,632654E+22
2070	8,041867E+21	8,042206E+21	1,210920E+20	1,211296E+20	1,608407E+22	2,422216E+20	1,632629E+22
2071	8,042082E+21	8,041665E+21	1,210835E+20	1,210861E+20	1,608375E+22	2,421696E+20	1,632592E+22
2072	8,041609E+21	8,042126E+21	1,211317E+20	1,210816E+20	1,608374E+22	2,422133E+20	1,632595E+22
2073	8,041888E+21	8,041894E+21	1,210755E+20	1,211267E+20	1,608378E+22	2,422022E+20	1,632598E+22
2074	8,042185E+21	8,041873E+21	1,210947E+20	1,210597E+20	1,608406E+22	2,421544E+20	1,632621E+22
2075	8,041974E+21	8,042562E+21	1,211173E+20	1,210970E+20	1,608454E+22	2,422144E+20	1,632675E+22
2076	8,042611E+21	8,042289E+21	1,210560E+20	1,211058E+20	1,608490E+22	2,421618E+20	1,632706E+22
2077	8,042664E+21	8,042673E+21	1,210962E+20	1,210481E+20	1,608534E+22	2,421444E+20	1,632748E+22
2078	8,042668E+21	8,043099E+21	1,210872E+20	1,211137E+20	1,608577E+22	2,422009E+20	1,632797E+22
2079	8,043256E+21	8,042740E+21	1,210500E+20	1,210703E+20	1,608600E+22	2,421203E+20	1,632812E+22
2080	8,042952E+21	8,043219E+21	1,211120E+20	1,210523E+20	1,608617E+22	2,421643E+20	1,632834E+22
2081	8,042921E+21	8,043100E+21	1,210696E+20	1,211106E+20	1,608602E+22	2,421803E+20	1,632820E+22
2082	8,043017E+21	8,042652E+21	1,210723E+20	1,210578E+20	1,608567E+22	2,421302E+20	1,632780E+22
2083	8,042325E+21	8,042884E+21	1,211233E+20	1,210890E+20	1,608521E+22	2,422123E+20	1,632742E+22
2084	8,042451E+21	8,042166E+21	1,210577E+20	1,211192E+20	1,608462E+22	2,421769E+20	1,632679E+22
2085	8,042238E+21	8,041859E+21	1,211015E+20	1,210642E+20	1,608410E+22	2,421657E+20	1,632626E+22
2086	8,041634E+21	8,042023E+21	1,211171E+20	1,211198E+20	1,608366E+22	2,422369E+20	1,632589E+22
2087	8,041807E+21	8,041343E+21	1,210755E+20	1,211100E+20	1,608315E+22	2,421855E+20	1,632534E+22
2088	8,041266E+21	8,041458E+21	1,211387E+20	1,210771E+20	1,608272E+22	2,422157E+20	1,632494E+22
2089	8,040941E+21	8,041353E+21	1,211081E+20	1,211428E+20	1,608229E+22	2,422509E+20	1,632454E+22
2090	8,041270E+21	8,040827E+21	1,210937E+20	1,210986E+20	1,608210E+22	2,421923E+20	1,632429E+22
2091	8,040858E+21	8,041299E+21	1,211430E+20	1,210932E+20	1,608216E+22	2,422362E+20	1,632439E+22
2092	8,041247E+21	8,041121E+21	1,210842E+20	1,211412E+20	1,608237E+22	2,422254E+20	1,632459E+22
2093	8,041560E+21	8,041198E+21	1,211002E+20	1,210702E+20	1,608276E+22	2,421704E+20	1,632493E+22
2094	8,041295E+21	8,041920E+21	1,211275E+20	1,211118E+20	1,608321E+22	2,422393E+20	1,632545E+22
2095	8,041942E+21	8,041692E+21	1,210677E+20	1,211158E+20	1,608363E+22	2,421835E+20	1,632582E+22
2096	8,042052E+21	8,042017E+21	1,211088E+20	1,210563E+20	1,608407E+22	2,421651E+20	1,632623E+22

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 ° Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
2097	8,041963E+21	8,042366E+21	1,211037E+20	1,211197E+20	1,608433E+22	2,422233E+20	1,632655E+22
2098	8,042501E+21	8,042036E+21	1,210638E+20	1,210790E+20	1,608454E+22	2,421428E+20	1,632668E+22
2099	8,042079E+21	8,042447E+21	1,211275E+20	1,210662E+20	1,608453E+22	2,421937E+20	1,632672E+22
2100	8,042042E+21	8,042222E+21	1,210802E+20	1,211299E+20	1,608426E+22	2,422100E+20	1,632647E+22
2101	8,042180E+21	8,041734E+21	1,210791E+20	1,210735E+20	1,608391E+22	2,421526E+20	1,632607E+22
2102	8,041505E+21	8,041967E+21	1,211337E+20	1,211042E+20	1,608347E+22	2,422379E+20	1,632571E+22
2103	8,041660E+21	8,041364E+21	1,210726E+20	1,211294E+20	1,608302E+22	2,422020E+20	1,632523E+22
2104	8,041457E+21	8,041078E+21	1,211185E+20	1,210746E+20	1,608254E+22	2,421931E+20	1,632473E+22
2105	8,040708E+21	8,041208E+21	1,211354E+20	1,211321E+20	1,608192E+22	2,422676E+20	1,632418E+22
2106	8,040880E+21	8,040521E+21	1,210898E+20	1,211266E+20	1,608140E+22	2,422164E+20	1,632362E+22
2107	8,040358E+21	8,040552E+21	1,211517E+20	1,210940E+20	1,608091E+22	2,422457E+20	1,632316E+22
2108	8,040180E+21	8,040434E+21	1,211165E+20	1,211589E+20	1,608061E+22	2,422754E+20	1,632289E+22
2109	8,040594E+21	8,040004E+21	1,210999E+20	1,211081E+20	1,608060E+22	2,422080E+20	1,632281E+22
2110	8,040162E+21	8,040585E+21	1,211535E+20	1,211041E+20	1,608075E+22	2,422575E+20	1,632300E+22
2111	8,040536E+21	8,040552E+21	1,210979E+20	1,211503E+20	1,608109E+22	2,422482E+20	1,632334E+22
2112	8,040876E+21	8,040590E+21	1,211129E+20	1,210795E+20	1,608147E+22	2,421924E+20	1,632366E+22
2113	8,040565E+21	8,041228E+21	1,211414E+20	1,211206E+20	1,608179E+22	2,422621E+20	1,632406E+22
2114	8,041273E+21	8,041010E+21	1,210788E+20	1,211238E+20	1,608228E+22	2,422026E+20	1,632449E+22
2115	8,041348E+21	8,041291E+21	1,211225E+20	1,210666E+20	1,608264E+22	2,421891E+20	1,632483E+22
2116	8,041264E+21	8,041619E+21	1,211142E+20	1,211329E+20	1,608288E+22	2,422471E+20	1,632513E+22
2117	8,041737E+21	8,041284E+21	1,210712E+20	1,210932E+20	1,608302E+22	2,421645E+20	1,632519E+22
2118	8,041247E+21	8,041626E+21	1,211376E+20	1,210851E+20	1,608287E+22	2,422227E+20	1,632510E+22
2119	8,041236E+21	8,041412E+21	1,210923E+20	1,211439E+20	1,608265E+22	2,422362E+20	1,632488E+22
2120	8,041440E+21	8,040879E+21	1,210921E+20	1,210846E+20	1,608232E+22	2,421767E+20	1,632450E+22
2121	8,040680E+21	8,041091E+21	1,211500E+20	1,211128E+20	1,608177E+22	2,422628E+20	1,632403E+22
2122	8,040797E+21	8,040559E+21	1,210892E+20	1,211406E+20	1,608136E+22	2,422298E+20	1,632359E+22
2123	8,040506E+21	8,040243E+21	1,211356E+20	1,210912E+20	1,608075E+22	2,422268E+20	1,632298E+22
2124	8,039798E+21	8,040297E+21	1,211468E+20	1,211503E+20	1,608010E+22	2,422971E+20	1,632239E+22
2125	8,040037E+21	8,039619E+21	1,210974E+20	1,211417E+20	1,607966E+22	2,422391E+20	1,632190E+22
2126	8,039569E+21	8,039680E+21	1,211609E+20	1,211075E+20	1,607925E+22	2,422684E+20	1,632152E+22
2127	8,039443E+21	8,039707E+21	1,211305E+20	1,211662E+20	1,607915E+22	2,422966E+20	1,632145E+22
2128	8,039903E+21	8,039341E+21	1,211142E+20	1,211156E+20	1,607924E+22	2,422298E+20	1,632147E+22
2129	8,039377E+21	8,039904E+21	1,211688E+20	1,211139E+20	1,607928E+22	2,422827E+20	1,632156E+22
2130	8,039781E+21	8,039879E+21	1,211115E+20	1,211631E+20	1,607966E+22	2,422746E+20	1,632194E+22
2131	8,040161E+21	8,039850E+21	1,211240E+20	1,210938E+20	1,608001E+22	2,422177E+20	1,632223E+22
2132	8,039946E+21	8,040442E+21	1,211483E+20	1,211328E+20	1,608039E+22	2,422811E+20	1,632267E+22
2133	8,040651E+21	8,040298E+21	1,210843E+20	1,211325E+20	1,608095E+22	2,422168E+20	1,632316E+22
2134	8,040634E+21	8,040598E+21	1,211317E+20	1,210800E+20	1,608123E+22	2,422117E+20	1,632344E+22
2135	8,040472E+21	8,040974E+21	1,211271E+20	1,211444E+20	1,608145E+22	2,422714E+20	1,632372E+22
2136	8,040956E+21	8,040542E+21	1,210837E+20	1,211061E+20	1,608150E+22	2,421898E+20	1,632369E+22
2137	8,040413E+21	8,040763E+21	1,211510E+20	1,210967E+20	1,608118E+22	2,422477E+20	1,632342E+22
2138	8,040460E+21	8,040564E+21	1,211064E+20	1,211539E+20	1,608102E+22	2,422603E+20	1,632328E+22
2139	8,040632E+21	8,040022E+21	1,211086E+20	1,210975E+20	1,608065E+22	2,422062E+20	1,632286E+22
2140	8,039869E+21	8,040232E+21	1,211622E+20	1,211272E+20	1,608010E+22	2,422894E+20	1,632239E+22
2141	8,039921E+21	8,039737E+21	1,211000E+20	1,211571E+20	1,607966E+22	2,422572E+20	1,632192E+22
2142	8,039586E+21	8,039365E+21	1,211475E+20	1,211117E+20	1,607895E+22	2,422592E+20	1,632121E+22
2143	8,038938E+21	8,039459E+21	1,211600E+20	1,211627E+20	1,607840E+22	2,423227E+20	1,632072E+22
2144	8,039270E+21	8,038776E+21	1,211114E+20	1,211503E+20	1,607805E+22	2,422617E+20	1,632031E+22
2145	8,038743E+21	8,038858E+21	1,211764E+20	1,211138E+20	1,607760E+22	2,422903E+20	1,631989E+22

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 $\odot$ Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
2146	8,038639E+21	8,038980E+21	1,211465E+20	1,211748E+20	1,607762E+22	2,423213E+20	1,631994E+22
2147	8,039063E+21	8,038617E+21	1,211289E+20	1,211303E+20	1,607768E+22	2,422591E+20	1,631994E+22
2148	8,038649E+21	8,039131E+21	1,211756E+20	1,211298E+20	1,607778E+22	2,423054E+20	1,632009E+22
2149	8,039140E+21	8,039145E+21	1,211164E+20	1,211759E+20	1,607829E+22	2,422923E+20	1,632058E+22
2150	8,039546E+21	8,039143E+21	1,211299E+20	1,211066E+20	1,607869E+22	2,422365E+20	1,632093E+22
2151	8,039337E+21	8,039839E+21	1,211596E+20	1,211387E+20	1,607918E+22	2,422982E+20	1,632147E+22
2152	8,039992E+21	8,039697E+21	1,210966E+20	1,211393E+20	1,607969E+22	2,422359E+20	1,632193E+22
2153	8,039818E+21	8,039905E+21	1,211462E+20	1,210911E+20	1,607972E+22	2,422373E+20	1,632196E+22
2154	8,039663E+21	8,040208E+21	1,211418E+20	1,211571E+20	1,607987E+22	2,422989E+20	1,632217E+22
2155	8,040157E+21	8,039691E+21	1,210981E+20	1,211216E+20	1,607985E+22	2,422197E+20	1,632207E+22
2156	8,039699E+21	8,039853E+21	1,211597E+20	1,211101E+20	1,607955E+22	2,422697E+20	1,632182E+22
2157	8,039715E+21	8,039733E+21	1,211162E+20	1,211656E+20	1,607945E+22	2,422818E+20	1,632173E+22
2158	8,039780E+21	8,039218E+21	1,211207E+20	1,211149E+20	1,607900E+22	2,422356E+20	1,632123E+22
2159	8,038954E+21	8,039464E+21	1,211770E+20	1,211401E+20	1,607842E+22	2,423171E+20	1,632074E+22
2160	8,039024E+21	8,038906E+21	1,211148E+20	1,211701E+20	1,607793E+22	2,422849E+20	1,632021E+22
2161	8,038646E+21	8,038450E+21	1,211632E+20	1,211234E+20	1,607710E+22	2,422866E+20	1,631938E+22
2162	8,038075E+21	8,038572E+21	1,211762E+20	1,211714E+20	1,607665E+22	2,423476E+20	1,631899E+22
2163	8,038423E+21	8,037927E+21	1,211281E+20	1,211636E+20	1,607635E+22	2,422917E+20	1,631864E+22
2164	8,037965E+21	8,038014E+21	1,211848E+20	1,211284E+20	1,607598E+22	2,423132E+20	1,631829E+22
2165	8,037890E+21	8,038221E+21	1,211543E+20	1,211916E+20	1,607611E+22	2,423459E+20	1,631846E+22
2166	8,038346E+21	8,037868E+21	1,211357E+20	1,211488E+20	1,607621E+22	2,422846E+20	1,631850E+22
2167	8,038027E+21	8,038460E+21	1,211841E+20	1,211389E+20	1,607649E+22	2,423229E+20	1,631881E+22
2168	8,038569E+21	8,038513E+21	1,211273E+20	1,211798E+20	1,607708E+22	2,423070E+20	1,631939E+22
2169	8,038834E+21	8,038508E+21	1,211439E+20	1,211112E+20	1,607734E+22	2,422550E+20	1,631960E+22
2170	8,038574E+21	8,039216E+21	1,211758E+20	1,211454E+20	1,607779E+22	2,423212E+20	1,632011E+22
2171	8,039148E+21	8,038999E+21	1,211125E+20	1,211538E+20	1,607815E+22	2,422663E+20	1,632041E+22
2172	8,039056E+21	8,039066E+21	1,211536E+20	1,211072E+20	1,607812E+22	2,422608E+20	1,632038E+22
2173	8,038968E+21	8,039372E+21	1,211491E+20	1,211712E+20	1,607834E+22	2,423203E+20	1,632066E+22
2174	8,039450E+21	8,038872E+21	1,211072E+20	1,211372E+20	1,607832E+22	2,422443E+20	1,632057E+22
2175	8,038987E+21	8,039126E+21	1,211723E+20	1,211198E+20	1,607811E+22	2,422921E+20	1,632041E+22
2176	8,038927E+21	8,039011E+21	1,211314E+20	1,211752E+20	1,607794E+22	2,423066E+20	1,632024E+22
2177	8,038809E+21	8,038412E+21	1,211383E+20	1,211300E+20	1,607722E+22	2,422683E+20	1,631949E+22
2178	8,038013E+21	8,038577E+21	1,211942E+20	1,211535E+20	1,607659E+22	2,423477E+20	1,631894E+22
2179	8,038092E+21	8,037955E+21	1,211320E+20	1,211857E+20	1,607605E+22	2,423177E+20	1,631836E+22
2180	8,037819E+21	8,037464E+21	1,211726E+20	1,211366E+20	1,607528E+22	2,423092E+20	1,631759E+22
2181	8,037282E+21	8,037691E+21	1,211860E+20	1,211840E+20	1,607497E+22	2,423700E+20	1,631734E+22
2182	8,037591E+21	8,037130E+21	1,211385E+20	1,211813E+20	1,607472E+22	2,423198E+20	1,631704E+22
2183	8,037197E+21	8,037310E+21	1,211945E+20	1,211411E+20	1,607451E+22	2,423357E+20	1,631684E+22
2184	8,037201E+21	8,037529E+21	1,211657E+20	1,212008E+20	1,607473E+22	2,423665E+20	1,631710E+22
2185	8,037615E+21	8,037180E+21	1,211486E+20	1,211562E+20	1,607479E+22	2,423048E+20	1,631710E+22
2186	8,037355E+21	8,037803E+21	1,211994E+20	1,211422E+20	1,607516E+22	2,423416E+20	1,631750E+22
2187	8,037833E+21	8,037874E+21	1,211443E+20	1,211882E+20	1,607571E+22	2,423325E+20	1,631804E+22
2188	8,038093E+21	8,037794E+21	1,211526E+20	1,211245E+20	1,607589E+22	2,422771E+20	1,631816E+22
2189	8,037833E+21	8,038471E+21	1,211842E+20	1,211632E+20	1,607630E+22	2,423474E+20	1,631865E+22
2190	8,038421E+21	8,038197E+21	1,211197E+20	1,211745E+20	1,607662E+22	2,422942E+20	1,631891E+22
2191	8,038429E+21	8,038292E+21	1,211611E+20	1,211193E+20	1,607672E+22	2,422804E+20	1,631900E+22
2192	8,038354E+21	8,038638E+21	1,211604E+20	1,211774E+20	1,607699E+22	2,423378E+20	1,631933E+22
2193	8,038647E+21	8,038147E+21	1,211230E+20	1,211458E+20	1,607679E+22	2,422687E+20	1,631906E+22
2194	8,038097E+21	8,038383E+21	1,211910E+20	1,211296E+20	1,607648E+22	2,423206E+20	1,631880E+22

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	8,037942E+21	8,038192E+21	1,211506E+20	1,211913E+20	1,607613E+22	2,423419E+20	1,631847E+22
2196	8,037884E+21	8,037433E+21	1,211491E+20	1,211481E+20	1,607532E+22	2,422972E+20	1,631761E+22
2197	8,037170E+21	8,037598E+21	1,212038E+20	1,211691E+20	1,607477E+22	2,423729E+20	1,631714E+22
2198	8,037261E+21	8,037021E+21	1,211429E+20	1,212023E+20	1,607428E+22	2,423452E+20	1,631663E+22
2199	8,037045E+21	8,036652E+21	1,211835E+20	1,211475E+20	1,607370E+22	2,423310E+20	1,631603E+22
2200	8,036511E+21	8,036956E+21	1,211989E+20	1,211935E+20	1,607347E+22	2,423925E+20	1,631586E+22
2201	8,036715E+21	8,036399E+21	1,211546E+20	1,211948E+20	1,607311E+22	2,423494E+20	1,631546E+22
2202	8,036422E+21	8,036571E+21	1,212099E+20	1,211509E+20	1,607299E+22	2,423608E+20	1,631535E+22
2203	8,036460E+21	8,036796E+21	1,211823E+20	1,212113E+20	1,607326E+22	2,423936E+20	1,631565E+22
2204	8,036927E+21	8,036418E+21	1,211572E+20	1,211656E+20	1,607335E+22	2,423228E+20	1,631567E+22
2205	8,036667E+21	8,037093E+21	1,212078E+20	1,211539E+20	1,607376E+22	2,423617E+20	1,631612E+22
2206	8,037060E+21	8,037178E+21	1,211527E+20	1,212052E+20	1,607424E+22	2,423579E+20	1,631660E+22
2207	8,037393E+21	8,037110E+21	1,211594E+20	1,211390E+20	1,607450E+22	2,422984E+20	1,631680E+22
2208	8,037217E+21	8,037750E+21	1,211931E+20	1,211732E+20	1,607497E+22	2,423663E+20	1,631733E+22
2209	8,037725E+21	8,037477E+21	1,211329E+20	1,211837E+20	1,607520E+22	2,423166E+20	1,631752E+22
2210	8,037765E+21	8,037589E+21	1,211767E+20	1,211251E+20	1,607535E+22	2,423018E+20	1,631766E+22
2211	8,037568E+21	8,037933E+21	1,211790E+20	1,211873E+20	1,607550E+22	2,423663E+20	1,631787E+22
2212	8,037783E+21	8,037344E+21	1,211347E+20	1,211614E+20	1,607513E+22	2,422961E+20	1,631742E+22
2213	8,037216E+21	8,037502E+21	1,212027E+20	1,211493E+20	1,607472E+22	2,423520E+20	1,631707E+22
2214	8,037037E+21	8,037243E+21	1,211615E+20	1,212115E+20	1,607428E+22	2,423729E+20	1,631665E+22
2215	8,037089E+21	8,036514E+21	1,211595E+20	1,211619E+20	1,607360E+22	2,423214E+20	1,631592E+22
2216	8,036406E+21	8,036720E+21	1,212163E+20	1,211763E+20	1,607313E+22	2,423926E+20	1,631552E+22
2217	8,036348E+21	8,036210E+21	1,211602E+20	1,212127E+20	1,607256E+22	2,423729E+20	1,631493E+22
2218	8,036141E+21	8,035879E+21	1,212010E+20	1,211578E+20	1,607202E+22	2,423588E+20	1,631438E+22
2219	8,035606E+21	8,036177E+21	1,212166E+20	1,212084E+20	1,607178E+22	2,424251E+20	1,631421E+22
2220	8,035904E+21	8,035551E+21	1,211645E+20	1,212099E+20	1,607146E+22	2,423744E+20	1,631383E+22
2221	8,035720E+21	8,035762E+21	1,212180E+20	1,211646E+20	1,607148E+22	2,423826E+20	1,631386E+22
2222	8,035759E+21	8,036043E+21	1,211915E+20	1,212246E+20	1,607180E+22	2,424161E+20	1,631422E+22
2223	8,036273E+21	8,035751E+21	1,211649E+20	1,211762E+20	1,607202E+22	2,423412E+20	1,631437E+22
2224	8,036010E+21	8,036446E+21	1,212168E+20	1,211637E+20	1,607246E+22	2,423805E+20	1,631484E+22
2225	8,036302E+21	8,036502E+21	1,211655E+20	1,212183E+20	1,607280E+22	2,423839E+20	1,631519E+22
2226	8,036723E+21	8,036401E+21	1,211726E+20	1,211477E+20	1,607312E+22	2,423203E+20	1,631544E+22
2227	8,036561E+21	8,037048E+21	1,212085E+20	1,211823E+20	1,607361E+22	2,423908E+20	1,631600E+22
2228	8,037039E+21	8,036724E+21	1,211439E+20	1,211924E+20	1,607376E+22	2,423363E+20	1,631610E+22
2229	8,037019E+21	8,036847E+21	1,211880E+20	1,211388E+20	1,607387E+22	2,423268E+20	1,631619E+22
2230	8,036688E+21	8,037154E+21	1,211906E+20	1,212043E+20	1,607384E+22	2,423949E+20	1,631624E+22
2231	8,036936E+21	8,036521E+21	1,211446E+20	1,211785E+20	1,607346E+22	2,423231E+20	1,631578E+22
2232	8,036424E+21	8,036622E+21	1,212138E+20	1,211608E+20	1,607305E+22	2,423747E+20	1,631542E+22
2233	8,036152E+21	8,036365E+21	1,211772E+20	1,212222E+20	1,607252E+22	2,423994E+20	1,631492E+22
2234	8,036246E+21	8,035669E+21	1,211779E+20	1,211700E+20	1,607192E+22	2,423479E+20	1,631426E+22
2235	8,035515E+21	8,035907E+21	1,212349E+20	1,211887E+20	1,607142E+22	2,424235E+20	1,631385E+22
2236	8,035432E+21	8,035343E+21	1,211735E+20	1,212301E+20	1,607077E+22	2,424036E+20	1,631318E+22
2237	8,035308E+21	8,034996E+21	1,212111E+20	1,211786E+20	1,607030E+22	2,423897E+20	1,631269E+22
2238	8,034815E+21	8,035301E+21	1,212257E+20	1,212259E+20	1,607012E+22	2,424517E+20	1,631257E+22
2239	8,035246E+21	8,034775E+21	1,211723E+20	1,212215E+20	1,607002E+22	2,423938E+20	1,631242E+22
2240	8,035089E+21	8,035054E+21	1,212273E+20	1,211695E+20	1,607014E+22	2,423968E+20	1,631254E+22
2241	8,034953E+21	8,035399E+21	1,212062E+20	1,212320E+20	1,607035E+22	2,424382E+20	1,631279E+22
2242	8,035487E+21	8,035121E+21	1,211798E+20	1,211843E+20	1,607061E+22	2,423640E+20	1,631297E+22
2243	8,035255E+21	8,035757E+21	1,212314E+20	1,211761E+20	1,607101E+22	2,424075E+20	1,631342E+22

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 $\odot$ Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
2244	8,035613E+21	8,035735E+21	1,211755E+20	1,212301E+20	1,607135E+22	2,424055E+20	1,631375E+22
2245	8,036119E+21	8,035655E+21	1,211811E+20	1,211600E+20	1,607177E+22	2,423411E+20	1,631412E+22
2246	8,035890E+21	8,036327E+21	1,212181E+20	1,211939E+20	1,607222E+22	2,424119E+20	1,631463E+22
2247	8,036346E+21	8,036056E+21	1,211529E+20	1,212044E+20	1,607240E+22	2,423573E+20	1,631476E+22
2248	8,036256E+21	8,036123E+21	1,211987E+20	1,211521E+20	1,607238E+22	2,423508E+20	1,631473E+22
2249	8,035782E+21	8,036349E+21	1,212055E+20	1,212190E+20	1,607213E+22	2,424245E+20	1,631456E+22
2250	8,036095E+21	8,035662E+21	1,211609E+20	1,211902E+20	1,607176E+22	2,423511E+20	1,631411E+22
2251	8,035597E+21	8,035736E+21	1,212307E+20	1,211727E+20	1,607133E+22	2,424034E+20	1,631374E+22
2252	8,035283E+21	8,035434E+21	1,211906E+20	1,212341E+20	1,607072E+22	2,424248E+20	1,631314E+22
2253	8,035363E+21	8,034778E+21	1,211901E+20	1,211875E+20	1,607014E+22	2,423776E+20	1,631252E+22
2254	8,034590E+21	8,035025E+21	1,212450E+20	1,212075E+20	1,606962E+22	2,424525E+20	1,631207E+22
2255	8,034626E+21	8,034490E+21	1,211833E+20	1,212474E+20	1,606912E+22	2,424307E+20	1,631155E+22
2256	8,034588E+21	8,034183E+21	1,212209E+20	1,211892E+20	1,606877E+22	2,424101E+20	1,631118E+22
2257	8,034035E+21	8,034552E+21	1,212403E+20	1,212326E+20	1,606859E+22	2,424729E+20	1,631106E+22
2258	8,034487E+21	8,034093E+21	1,211897E+20	1,212254E+20	1,606858E+22	2,424151E+20	1,631100E+22
2259	8,034292E+21	8,034402E+21	1,212434E+20	1,211786E+20	1,606869E+22	2,424220E+20	1,631112E+22
2260	8,034130E+21	8,034658E+21	1,212184E+20	1,212453E+20	1,606879E+22	2,424637E+20	1,631125E+22
2261	8,034770E+21	8,034350E+21	1,211887E+20	1,212017E+20	1,606912E+22	2,423904E+20	1,631151E+22
2262	8,034610E+21	8,034984E+21	1,212379E+20	1,211909E+20	1,606959E+22	2,424288E+20	1,631202E+22
2263	8,035071E+21	8,035036E+21	1,211827E+20	1,212403E+20	1,607011E+22	2,424230E+20	1,631253E+22
2264	8,035540E+21	8,035012E+21	1,211893E+20	1,211667E+20	1,607055E+22	2,423560E+20	1,631291E+22
2265	8,035096E+21	8,035695E+21	1,212316E+20	1,212025E+20	1,607079E+22	2,424341E+20	1,631323E+22
2266	8,035502E+21	8,035384E+21	1,211688E+20	1,212143E+20	1,607089E+22	2,423831E+20	1,631327E+22
2267	8,035405E+21	8,035343E+21	1,212147E+20	1,211671E+20	1,607075E+22	2,423818E+20	1,631313E+22
2268	8,034931E+21	8,035437E+21	1,212183E+20	1,212319E+20	1,607037E+22	2,424503E+20	1,631282E+22
2269	8,035311E+21	8,034739E+21	1,211733E+20	1,212061E+20	1,607005E+22	2,423794E+20	1,631243E+22
2270	8,034769E+21	8,034824E+21	1,212414E+20	1,211870E+20	1,606959E+22	2,424284E+20	1,631202E+22
2271	8,034475E+21	8,034600E+21	1,212013E+20	1,212497E+20	1,606908E+22	2,424510E+20	1,631153E+22
2272	8,034541E+21	8,033952E+21	1,212012E+20	1,212027E+20	1,606849E+22	2,424039E+20	1,631090E+22
2273	8,033687E+21	8,034188E+21	1,212594E+20	1,212207E+20	1,606787E+22	2,424801E+20	1,631035E+22
2274	8,033809E+21	8,033702E+21	1,212012E+20	1,212557E+20	1,606751E+22	2,424569E+20	1,630997E+22
2275	8,033787E+21	8,033418E+21	1,212383E+20	1,211977E+20	1,606721E+22	2,424360E+20	1,630964E+22
2276	8,033173E+21	8,033753E+21	1,212548E+20	1,212403E+20	1,606693E+22	2,424951E+20	1,630942E+22
2277	8,033643E+21	8,033321E+21	1,212015E+20	1,212406E+20	1,606696E+22	2,424421E+20	1,630941E+22
2278	8,033460E+21	8,033606E+21	1,212505E+20	1,211951E+20	1,606707E+22	2,424456E+20	1,630951E+22
2279	8,033478E+21	8,033894E+21	1,212246E+20	1,212611E+20	1,606737E+22	2,424857E+20	1,630986E+22
2280	8,034216E+21	8,033649E+21	1,211945E+20	1,212118E+20	1,606786E+22	2,424063E+20	1,631027E+22
2281	8,033998E+21	8,034344E+21	1,212484E+20	1,211979E+20	1,606834E+22	2,424463E+20	1,631079E+22
2282	8,034433E+21	8,034468E+21	1,211983E+20	1,212445E+20	1,606890E+22	2,424428E+20	1,631134E+22
2283	8,034799E+21	8,034420E+21	1,212041E+20	1,211783E+20	1,606922E+22	2,423824E+20	1,631160E+22
2284	8,034250E+21	8,034930E+21	1,212448E+20	1,212162E+20	1,606918E+22	2,424609E+20	1,631164E+22
2285	8,034698E+21	8,034525E+21	1,211803E+20	1,212324E+20	1,606922E+22	2,424127E+20	1,631164E+22
2286	8,034623E+21	8,034436E+21	1,212240E+20	1,211825E+20	1,606906E+22	2,424065E+20	1,631147E+22
2287	8,034230E+21	8,034556E+21	1,212286E+20	1,212438E+20	1,606879E+22	2,424724E+20	1,631126E+22
2288	8,034541E+21	8,033923E+21	1,211850E+20	1,212165E+20	1,606846E+22	2,424015E+20	1,631087E+22
2289	8,033846E+21	8,034032E+21	1,212551E+20	1,211991E+20	1,606788E+22	2,424542E+20	1,631033E+22
2290	8,033547E+21	8,033811E+21	1,212197E+20	1,212608E+20	1,606736E+22	2,424805E+20	1,630984E+22
2291	8,033643E+21	8,033140E+21	1,212187E+20	1,212174E+20	1,606678E+22	2,424361E+20	1,630922E+22
2292	8,032799E+21	8,033294E+21	1,212742E+20	1,212307E+20	1,606609E+22	2,425049E+20	1,630860E+22

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 $\odot$ Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
2293	8,032986E+21	8,032836E+21	1,212160E+20	1,212689E+20	1,606582E+22	2,424849E+20	1,630831E+22
2294	8,032939E+21	8,032588E+21	1,212489E+20	1,212108E+20	1,606553E+22	2,424597E+20	1,630799E+22
2295	8,032400E+21	8,032965E+21	1,212633E+20	1,212560E+20	1,606536E+22	2,425193E+20	1,630788E+22
2296	8,032916E+21	8,032563E+21	1,212089E+20	1,212564E+20	1,606548E+22	2,424653E+20	1,630794E+22
2297	8,032765E+21	8,032864E+21	1,212583E+20	1,212081E+20	1,606563E+22	2,424664E+20	1,630810E+22
2298	8,032897E+21	8,033248E+21	1,212386E+20	1,212673E+20	1,606615E+22	2,425059E+20	1,630865E+22
2299	8,033624E+21	8,033069E+21	1,212084E+20	1,212182E+20	1,606669E+22	2,424266E+20	1,630912E+22
2300	8,033273E+21	8,033701E+21	1,212618E+20	1,212037E+20	1,606697E+22	2,424656E+20	1,630944E+22
2301	8,033657E+21	8,033795E+21	1,212112E+20	1,212573E+20	1,606745E+22	2,424686E+20	1,630992E+22
2302	8,033966E+21	8,033646E+21	1,212137E+20	1,211942E+20	1,606761E+22	2,424079E+20	1,631002E+22
2303	8,033530E+21	8,034101E+21	1,212536E+20	1,212315E+20	1,606763E+22	2,424852E+20	1,631012E+22
2304	8,034008E+21	8,033710E+21	1,211894E+20	1,212441E+20	1,606772E+22	2,424335E+20	1,631015E+22
2305	8,033850E+21	8,033624E+21	1,212361E+20	1,211923E+20	1,606747E+22	2,424284E+20	1,630990E+22
2306	8,033425E+21	8,033819E+21	1,212464E+20	1,212510E+20	1,606724E+22	2,424974E+20	1,630974E+22
2307	8,033646E+21	8,033180E+21	1,212025E+20	1,212312E+20	1,606683E+22	2,424338E+20	1,630926E+22
2308	8,032876E+21	8,033135E+21	1,212705E+20	1,212148E+20	1,606601E+22	2,424853E+20	1,630850E+22
2309	8,032663E+21	8,032871E+21	1,212347E+20	1,212792E+20	1,606553E+22	2,425138E+20	1,630805E+22
2310	8,032781E+21	8,032200E+21	1,212303E+20	1,212334E+20	1,606498E+22	2,424637E+20	1,630744E+22
2311	8,032034E+21	8,032402E+21	1,212840E+20	1,212435E+20	1,606444E+22	2,425275E+20	1,630696E+22
2312	8,032178E+21	8,032033E+21	1,212259E+20	1,212808E+20	1,606421E+22	2,425067E+20	1,630672E+22
2313	8,032061E+21	8,031818E+21	1,212586E+20	1,212239E+20	1,606388E+22	2,424825E+20	1,630636E+22
2314	8,031621E+21	8,032244E+21	1,212778E+20	1,212662E+20	1,606387E+22	2,425441E+20	1,630641E+22
2315	8,032226E+21	8,031890E+21	1,212228E+20	1,212680E+20	1,606412E+22	2,424908E+20	1,630661E+22
2316	8,032104E+21	8,032148E+21	1,212702E+20	1,212151E+20	1,606425E+22	2,424853E+20	1,630674E+22
2317	8,032281E+21	8,032578E+21	1,212528E+20	1,212762E+20	1,606486E+22	2,425289E+20	1,630739E+22
2318	8,032913E+21	8,032436E+21	1,212187E+20	1,212284E+20	1,606535E+22	2,424471E+20	1,630780E+22
2319	8,032581E+21	8,033018E+21	1,212704E+20	1,212180E+20	1,606560E+22	2,424884E+20	1,630809E+22
2320	8,032916E+21	8,033067E+21	1,212198E+20	1,212714E+20	1,606598E+22	2,424912E+20	1,630847E+22
2321	8,033216E+21	8,032865E+21	1,212225E+20	1,212082E+20	1,606608E+22	2,424307E+20	1,630851E+22
2322	8,032846E+21	8,033340E+21	1,212691E+20	1,212392E+20	1,606619E+22	2,425083E+20	1,630869E+22
2323	8,033269E+21	8,032987E+21	1,212057E+20	1,212536E+20	1,606626E+22	2,424594E+20	1,630872E+22
2324	8,032971E+21	8,032814E+21	1,212508E+20	1,212026E+20	1,606579E+22	2,424534E+20	1,630824E+22
2325	8,032517E+21	8,032969E+21	1,212612E+20	1,212673E+20	1,606549E+22	2,425285E+20	1,630802E+22
2326	8,032704E+21	8,032281E+21	1,212146E+20	1,212502E+20	1,606499E+22	2,424648E+20	1,630745E+22
2327	8,032071E+21	8,032194E+21	1,212804E+20	1,212324E+20	1,606427E+22	2,425128E+20	1,630678E+22
2328	8,031881E+21	8,031989E+21	1,212458E+20	1,212917E+20	1,606387E+22	2,425375E+20	1,630641E+22
2329	8,031948E+21	8,031360E+21	1,212428E+20	1,212453E+20	1,606331E+22	2,424880E+20	1,630580E+22
2330	8,031207E+21	8,031650E+21	1,213005E+20	1,212517E+20	1,606286E+22	2,425522E+20	1,630541E+22
2331	8,031315E+21	8,031311E+21	1,212418E+20	1,212945E+20	1,606263E+22	2,425362E+20	1,630516E+22
2332	8,031196E+21	8,030988E+21	1,212714E+20	1,212366E+20	1,606218E+22	2,425080E+20	1,630469E+22
2333	8,030920E+21	8,031437E+21	1,212911E+20	1,212799E+20	1,606236E+22	2,425709E+20	1,630493E+22
2334	8,031556E+21	8,031152E+21	1,212344E+20	1,212782E+20	1,606271E+22	2,425126E+20	1,630522E+22
2335	8,031507E+21	8,031458E+21	1,212789E+20	1,212248E+20	1,606296E+22	2,425038E+20	1,630547E+22
2336	8,031600E+21	8,031954E+21	1,212617E+20	1,212856E+20	1,606355E+22	2,425472E+20	1,630610E+22
2337	8,032118E+21	8,031770E+21	1,212265E+20	1,212415E+20	1,606389E+22	2,424680E+20	1,630636E+22
2338	8,031844E+21	8,032333E+21	1,212833E+20	1,212287E+20	1,606418E+22	2,425119E+20	1,630669E+22
2339	8,032204E+21	8,032371E+21	1,212327E+20	1,212827E+20	1,606458E+22	2,425154E+20	1,630709E+22
2340	8,032470E+21	8,032064E+21	1,212356E+20	1,212173E+20	1,606453E+22	2,424529E+20	1,630699E+22
2341	8,032136E+21	8,032539E+21	1,212839E+20	1,212507E+20	1,606467E+22	2,425346E+20	1,630721E+22

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 $\odot$ Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
2342	8,032438E+21	8,032203E+21	1,212185E+20	1,212682E+20	1,606464E+22	2,424868E+20	1,630713E+22
2343	8,032172E+21	8,031960E+21	1,212603E+20	1,212220E+20	1,606413E+22	2,424823E+20	1,630661E+22
2344	8,031695E+21	8,032094E+21	1,212708E+20	1,212843E+20	1,606379E+22	2,425550E+20	1,630634E+22
2345	8,031868E+21	8,031395E+21	1,212254E+20	1,212663E+20	1,606326E+22	2,424917E+20	1,630576E+22
2346	8,031287E+21	8,031372E+21	1,212977E+20	1,212409E+20	1,606266E+22	2,425385E+20	1,630520E+22
2347	8,031020E+21	8,031228E+21	1,212640E+20	1,212998E+20	1,606225E+22	2,425638E+20	1,630481E+22
2348	8,030967E+21	8,030519E+21	1,212595E+20	1,212556E+20	1,606149E+22	2,425151E+20	1,630400E+22
2349	8,030289E+21	8,030773E+21	1,213159E+20	1,212663E+20	1,606106E+22	2,425822E+20	1,630364E+22
2350	8,030440E+21	8,030462E+21	1,212546E+20	1,213105E+20	1,606090E+22	2,425651E+20	1,630347E+22
2351	8,030533E+21	8,030155E+21	1,212787E+20	1,212515E+20	1,606069E+22	2,425302E+20	1,630322E+22
2352	8,030305E+21	8,030708E+21	1,212994E+20	1,212896E+20	1,606101E+22	2,425891E+20	1,630360E+22
2353	8,030892E+21	8,030514E+21	1,212433E+20	1,212877E+20	1,606141E+22	2,425310E+20	1,630394E+22
2354	8,030831E+21	8,030887E+21	1,212917E+20	1,212328E+20	1,606172E+22	2,425245E+20	1,630424E+22
2355	8,030850E+21	8,031362E+21	1,212746E+20	1,212966E+20	1,606221E+22	2,425712E+20	1,630478E+22
2356	8,031326E+21	8,031014E+21	1,212381E+20	1,212534E+20	1,606234E+22	2,424915E+20	1,630483E+22
2357	8,031179E+21	8,031522E+21	1,212955E+20	1,212416E+20	1,606270E+22	2,425371E+20	1,630524E+22
2358	8,031510E+21	8,031601E+21	1,212449E+20	1,212937E+20	1,606311E+22	2,425386E+20	1,630565E+22
2359	8,031809E+21	8,031284E+21	1,212445E+20	1,212303E+20	1,606309E+22	2,424747E+20	1,630557E+22
2360	8,031377E+21	8,031790E+21	1,212927E+20	1,212636E+20	1,606317E+22	2,425563E+20	1,630572E+22
2361	8,031579E+21	8,031417E+21	1,212286E+20	1,212843E+20	1,606300E+22	2,425129E+20	1,630551E+22
2362	8,031359E+21	8,031170E+21	1,212755E+20	1,212354E+20	1,606253E+22	2,425110E+20	1,630504E+22
2363	8,030874E+21	8,031305E+21	1,212868E+20	1,212942E+20	1,606218E+22	2,425810E+20	1,630476E+22
2364	8,030963E+21	8,030511E+21	1,212435E+20	1,212759E+20	1,606147E+22	2,425195E+20	1,630399E+22
2365	8,030412E+21	8,030483E+21	1,213155E+20	1,212526E+20	1,606090E+22	2,425681E+20	1,630346E+22
2366	8,030045E+21	8,030363E+21	1,212794E+20	1,213146E+20	1,606041E+22	2,425939E+20	1,630300E+22
2367	8,030083E+21	8,029589E+21	1,212692E+20	1,212759E+20	1,605967E+22	2,425451E+20	1,630222E+22
2368	8,029508E+21	8,029875E+21	1,213223E+20	1,212837E+20	1,605938E+22	2,426060E+20	1,630199E+22
2369	8,029731E+21	8,029632E+21	1,212630E+20	1,213254E+20	1,605936E+22	2,425884E+20	1,630195E+22
2370	8,029915E+21	8,029481E+21	1,212911E+20	1,212590E+20	1,605940E+22	2,425501E+20	1,630195E+22
2371	8,029629E+21	8,030132E+21	1,213127E+20	1,212946E+20	1,605976E+22	2,426073E+20	1,630237E+22
2372	8,030062E+21	8,029865E+21	1,212568E+20	1,212953E+20	1,605993E+22	2,425521E+20	1,630248E+22
2373	8,030057E+21	8,030168E+21	1,213043E+20	1,212450E+20	1,606022E+22	2,425492E+20	1,630277E+22
2374	8,030071E+21	8,030621E+21	1,212862E+20	1,213091E+20	1,606069E+22	2,425953E+20	1,630329E+22
2375	8,030703E+21	8,030225E+21	1,212454E+20	1,212675E+20	1,606093E+22	2,425129E+20	1,630344E+22
2376	8,030589E+21	8,030776E+21	1,213028E+20	1,212526E+20	1,606137E+22	2,425554E+20	1,630392E+22
2377	8,030837E+21	8,030905E+21	1,212547E+20	1,213053E+20	1,606174E+22	2,425600E+20	1,630430E+22
2378	8,031088E+21	8,030641E+21	1,212578E+20	1,212419E+20	1,606173E+22	2,424997E+20	1,630423E+22
2379	8,030566E+21	8,031098E+21	1,213064E+20	1,212752E+20	1,606166E+22	2,425815E+20	1,630425E+22
2380	8,030685E+21	8,030571E+21	1,212443E+20	1,212969E+20	1,606126E+22	2,425413E+20	1,630380E+22
2381	8,030547E+21	8,030263E+21	1,212930E+20	1,212488E+20	1,606081E+22	2,425418E+20	1,630335E+22
2382	8,029976E+21	8,030432E+21	1,213040E+20	1,213051E+20	1,606041E+22	2,426091E+20	1,630302E+22
2383	8,030087E+21	8,029593E+21	1,212558E+20	1,212921E+20	1,605968E+22	2,425480E+20	1,630223E+22
2384	8,029493E+21	8,029567E+21	1,213240E+20	1,212690E+20	1,605906E+22	2,425930E+20	1,630165E+22
2385	8,029131E+21	8,029454E+21	1,212882E+20	1,213327E+20	1,605858E+22	2,426209E+20	1,630121E+22
2386	8,029311E+21	8,028773E+21	1,212811E+20	1,212897E+20	1,605808E+22	2,425708E+20	1,630065E+22
2387	8,028812E+21	8,029150E+21	1,213341E+20	1,212911E+20	1,605796E+22	2,426253E+20	1,630059E+22
2388	8,028984E+21	8,028910E+21	1,212797E+20	1,213318E+20	1,605789E+22	2,426115E+20	1,630051E+22
2389	8,029196E+21	8,028804E+21	1,213068E+20	1,212674E+20	1,605800E+22	2,425742E+20	1,630057E+22
2390	8,028801E+21	8,029480E+21	1,213266E+20	1,213050E+20	1,605828E+22	2,426315E+20	1,630091E+22

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 $\odot$ Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
2391	8,029305E+21	8,029100E+21	1,212647E+20	1,213118E+20	1,605840E+22	2,425765E+20	1,630098E+22
2392	8,029387E+21	8,029381E+21	1,213091E+20	1,212599E+20	1,605877E+22	2,425690E+20	1,630134E+22
2393	8,029449E+21	8,029866E+21	1,212939E+20	1,213216E+20	1,605932E+22	2,426155E+20	1,630193E+22
2394	8,030118E+21	8,029592E+21	1,212576E+20	1,212757E+20	1,605971E+22	2,425332E+20	1,630224E+22
2395	8,029923E+21	8,030182E+21	1,213143E+20	1,212592E+20	1,606011E+22	2,425735E+20	1,630268E+22
2396	8,029987E+21	8,030201E+21	1,212703E+20	1,213149E+20	1,606019E+22	2,425852E+20	1,630277E+22
2397	8,030263E+21	8,029856E+21	1,212728E+20	1,212566E+20	1,606012E+22	2,425294E+20	1,630265E+22
2398	8,029699E+21	8,030268E+21	1,213207E+20	1,212881E+20	1,605997E+22	2,426088E+20	1,630258E+22
2399	8,029886E+21	8,029651E+21	1,212557E+20	1,213128E+20	1,605954E+22	2,425685E+20	1,630211E+22
2400	8,029752E+21	8,029362E+21	1,213030E+20	1,212638E+20	1,605911E+22	2,425668E+20	1,630168E+22
2401	8,029103E+21	8,029546E+21	1,213148E+20	1,213201E+20	1,605865E+22	2,426349E+20	1,630128E+22
2402	8,029206E+21	8,028775E+21	1,212697E+20	1,213082E+20	1,605798E+22	2,425778E+20	1,630056E+22
2403	8,028635E+21	8,028732E+21	1,213348E+20	1,212818E+20	1,605737E+22	2,426166E+20	1,629998E+22
2404	8,028267E+21	8,028566E+21	1,213039E+20	1,213445E+20	1,605683E+22	2,426484E+20	1,629948E+22
2405	8,028575E+21	8,027956E+21	1,212978E+20	1,212998E+20	1,605653E+22	2,425976E+20	1,629913E+22
2406	8,028020E+21	8,028431E+21	1,213503E+20	1,212980E+20	1,605645E+22	2,426483E+20	1,629910E+22
2407	8,028202E+21	8,028172E+21	1,212919E+20	1,213441E+20	1,605637E+22	2,426360E+20	1,629901E+22
2408	8,028394E+21	8,028069E+21	1,213138E+20	1,212821E+20	1,605646E+22	2,425959E+20	1,629906E+22
2409	8,028020E+21	8,028715E+21	1,213336E+20	1,213202E+20	1,605673E+22	2,426537E+20	1,629939E+22
2410	8,028650E+21	8,028413E+21	1,212742E+20	1,213241E+20	1,605706E+22	2,425983E+20	1,629966E+22
2411	8,028803E+21	8,028732E+21	1,213176E+20	1,212661E+20	1,605754E+22	2,425837E+20	1,630012E+22
2412	8,028792E+21	8,029200E+21	1,213095E+20	1,213279E+20	1,605799E+22	2,426374E+20	1,630063E+22
2413	8,029447E+21	8,028949E+21	1,212732E+20	1,212849E+20	1,605840E+22	2,425581E+20	1,630095E+22
2414	8,029112E+21	8,029517E+21	1,213285E+20	1,212715E+20	1,605863E+22	2,426000E+20	1,630123E+22
2415	8,029207E+21	8,029377E+21	1,212801E+20	1,213325E+20	1,605858E+22	2,426126E+20	1,630120E+22
2416	8,029515E+21	8,028976E+21	1,212799E+20	1,212745E+20	1,605849E+22	2,425544E+20	1,630105E+22
2417	8,028940E+21	8,029390E+21	1,213306E+20	1,213019E+20	1,605833E+22	2,426325E+20	1,630096E+22
2418	8,029106E+21	8,028873E+21	1,212702E+20	1,213238E+20	1,605798E+22	2,425940E+20	1,630057E+22
2419	8,028885E+21	8,028585E+21	1,213158E+20	1,212725E+20	1,605747E+22	2,425884E+20	1,630006E+22
2420	8,028109E+21	8,028668E+21	1,213323E+20	1,213314E+20	1,605678E+22	2,426637E+20	1,629944E+22
2421	8,028290E+21	8,027877E+21	1,212873E+20	1,213226E+20	1,605617E+22	2,426099E+20	1,629878E+22
2422	8,027752E+21	8,027873E+21	1,213497E+20	1,212940E+20	1,605562E+22	2,426438E+20	1,629827E+22
2423	8,027497E+21	8,027683E+21	1,213172E+20	1,213586E+20	1,605518E+22	2,426757E+20	1,629786E+22
2424	8,027827E+21	8,027163E+21	1,213080E+20	1,213140E+20	1,605499E+22	2,426220E+20	1,629761E+22
2425	8,027222E+21	8,027685E+21	1,213595E+20	1,213114E+20	1,605491E+22	2,426709E+20	1,629758E+22
2426	8,027410E+21	8,027493E+21	1,213034E+20	1,213585E+20	1,605490E+22	2,426619E+20	1,629756E+22
2427	8,027658E+21	8,027353E+21	1,213211E+20	1,212929E+20	1,605501E+22	2,426140E+20	1,629762E+22
2428	8,027306E+21	8,027933E+21	1,213472E+20	1,213298E+20	1,605524E+22	2,426770E+20	1,629792E+22
2429	8,028041E+21	8,027718E+21	1,212894E+20	1,213324E+20	1,605576E+22	2,426218E+20	1,629838E+22
2430	8,028139E+21	8,028106E+21	1,213307E+20	1,212736E+20	1,605624E+22	2,426042E+20	1,629885E+22
2431	8,028090E+21	8,028497E+21	1,213203E+20	1,213406E+20	1,605659E+22	2,426609E+20	1,629925E+22
2432	8,028702E+21	8,028231E+21	1,212797E+20	1,213011E+20	1,605693E+22	2,425808E+20	1,629951E+22
2433	8,028354E+21	8,028727E+21	1,213359E+20	1,212868E+20	1,605708E+22	2,426227E+20	1,629970E+22
2434	8,028493E+21	8,028637E+21	1,212919E+20	1,213442E+20	1,605713E+22	2,426360E+20	1,629977E+22
2435	8,028800E+21	8,028229E+21	1,212917E+20	1,212821E+20	1,605703E+22	2,425738E+20	1,629960E+22
2436	8,028095E+21	8,028576E+21	1,213495E+20	1,213099E+20	1,605667E+22	2,426594E+20	1,629933E+22
2437	8,028212E+21	8,028076E+21	1,212895E+20	1,213358E+20	1,605629E+22	2,426253E+20	1,629891E+22
2438	8,027903E+21	8,027737E+21	1,213317E+20	1,212877E+20	1,605564E+22	2,426194E+20	1,629826E+22
2439	8,027215E+21	8,027679E+21	1,213442E+20	1,213502E+20	1,605489E+22	2,426944E+20	1,629759E+22

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 $\odot$ Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
2440	8,027491E+21	8,026932E+21	1,212968E+20	1,213414E+20	1,605442E+22	2,426382E+20	1,629706E+22
2441	8,026988E+21	8,026997E+21	1,213597E+20	1,213083E+20	1,605398E+22	2,426679E+20	1,629665E+22
2442	8,026739E+21	8,026959E+21	1,213314E+20	1,213701E+20	1,605370E+22	2,427015E+20	1,629640E+22
2443	8,027010E+21	8,026471E+21	1,213188E+20	1,213229E+20	1,605348E+22	2,426416E+20	1,629612E+22
2444	8,026332E+21	8,026913E+21	1,213741E+20	1,213220E+20	1,605324E+22	2,426960E+20	1,629594E+22
2445	8,026620E+21	8,026732E+21	1,213184E+20	1,213694E+20	1,605335E+22	2,426877E+20	1,629604E+22
2446	8,026920E+21	8,026629E+21	1,213334E+20	1,213022E+20	1,605355E+22	2,426356E+20	1,629618E+22
2447	8,026695E+21	8,027167E+21	1,213582E+20	1,213412E+20	1,605386E+22	2,426994E+20	1,629656E+22
2448	8,027436E+21	8,027037E+21	1,212982E+20	1,213451E+20	1,605447E+22	2,426433E+20	1,629712E+22
2449	8,027469E+21	8,027449E+21	1,213378E+20	1,212871E+20	1,605492E+22	2,426249E+20	1,629754E+22
2450	8,027400E+21	8,027869E+21	1,213308E+20	1,213542E+20	1,605527E+22	2,426849E+20	1,629795E+22
2451	8,028002E+21	8,027537E+21	1,212874E+20	1,213110E+20	1,605554E+22	2,425984E+20	1,629814E+22
2452	8,027603E+21	8,027936E+21	1,213514E+20	1,212959E+20	1,605554E+22	2,426474E+20	1,629819E+22
2453	8,027730E+21	8,027882E+21	1,213107E+20	1,213515E+20	1,605561E+22	2,426622E+20	1,629827E+22
2454	8,027920E+21	8,027474E+21	1,213091E+20	1,212928E+20	1,605539E+22	2,426019E+20	1,629800E+22
2455	8,027183E+21	8,027664E+21	1,213631E+20	1,213265E+20	1,605485E+22	2,426896E+20	1,629754E+22
2456	8,027297E+21	8,027137E+21	1,212991E+20	1,213570E+20	1,605443E+22	2,426561E+20	1,629709E+22
2457	8,027040E+21	8,026771E+21	1,213390E+20	1,213073E+20	1,605381E+22	2,426463E+20	1,629646E+22
2458	8,026453E+21	8,026821E+21	1,213554E+20	1,213649E+20	1,605327E+22	2,427202E+20	1,629599E+22
2459	8,026756E+21	8,026150E+21	1,213086E+20	1,213505E+20	1,605291E+22	2,426591E+20	1,629556E+22
2460	8,026154E+21	8,026212E+21	1,213779E+20	1,213169E+20	1,605237E+22	2,426947E+20	1,629506E+22
2461	8,025860E+21	8,026244E+21	1,213509E+20	1,213797E+20	1,605210E+22	2,427306E+20	1,629483E+22
2462	8,026095E+21	8,025719E+21	1,213337E+20	1,213363E+20	1,605181E+22	2,426700E+20	1,629448E+22
2463	8,025537E+21	8,026002E+21	1,213843E+20	1,213374E+20	1,605154E+22	2,427217E+20	1,629426E+22
2464	8,025948E+21	8,025911E+21	1,213263E+20	1,213843E+20	1,605186E+22	2,427106E+20	1,629457E+22
2465	8,026302E+21	8,025894E+21	1,213402E+20	1,213132E+20	1,605220E+22	2,426534E+20	1,629485E+22
2466	8,026092E+21	8,026572E+21	1,213689E+20	1,213510E+20	1,605266E+22	2,427199E+20	1,629538E+22
2467	8,026766E+21	8,026470E+21	1,213070E+20	1,213520E+20	1,605324E+22	2,426591E+20	1,629589E+22
2468	8,026704E+21	8,026775E+21	1,213514E+20	1,212971E+20	1,605348E+22	2,426485E+20	1,629613E+22
2469	8,026660E+21	8,027191E+21	1,213465E+20	1,213622E+20	1,605385E+22	2,427086E+20	1,629656E+22
2470	8,027237E+21	8,026829E+21	1,213015E+20	1,213212E+20	1,605407E+22	2,426227E+20	1,629669E+22
2471	8,026869E+21	8,027084E+21	1,213650E+20	1,213091E+20	1,605395E+22	2,426740E+20	1,629663E+22
2472	8,026949E+21	8,027064E+21	1,213217E+20	1,213677E+20	1,605401E+22	2,426894E+20	1,629670E+22
2473	8,027064E+21	8,026621E+21	1,213179E+20	1,213118E+20	1,605368E+22	2,426297E+20	1,629631E+22
2474	8,026366E+21	8,026802E+21	1,213729E+20	1,213452E+20	1,605317E+22	2,427181E+20	1,629589E+22
2475	8,026519E+21	8,026258E+21	1,213086E+20	1,213699E+20	1,605278E+22	2,426786E+20	1,629546E+22
2476	8,026245E+21	8,025891E+21	1,213553E+20	1,213184E+20	1,605214E+22	2,426737E+20	1,629481E+22
2477	8,025646E+21	8,026054E+21	1,213756E+20	1,213710E+20	1,605170E+22	2,427466E+20	1,629445E+22
2478	8,025823E+21	8,025418E+21	1,213279E+20	1,213607E+20	1,605124E+22	2,426886E+20	1,629393E+22
2479	8,025207E+21	8,025335E+21	1,213921E+20	1,213315E+20	1,605054E+22	2,427237E+20	1,629327E+22
2480	8,024951E+21	8,025355E+21	1,213611E+20	1,213968E+20	1,605031E+22	2,427579E+20	1,629306E+22
2481	8,025279E+21	8,024837E+21	1,213405E+20	1,213522E+20	1,605012E+22	2,426928E+20	1,629281E+22
2482	8,024896E+21	8,025232E+21	1,213926E+20	1,213497E+20	1,605013E+22	2,427423E+20	1,629287E+22
2483	8,025359E+21	8,025248E+21	1,213358E+20	1,213909E+20	1,605061E+22	2,427267E+20	1,629333E+22
2484	8,025637E+21	8,025276E+21	1,213539E+20	1,213211E+20	1,605091E+22	2,426749E+20	1,629359E+22
2485	8,025378E+21	8,026010E+21	1,213843E+20	1,213588E+20	1,605139E+22	2,427432E+20	1,629413E+22
2486	8,025990E+21	8,025844E+21	1,213200E+20	1,213641E+20	1,605183E+22	2,426840E+20	1,629452E+22
2487	8,025994E+21	8,025946E+21	1,213612E+20	1,213122E+20	1,605194E+22	2,426734E+20	1,629461E+22
2488	8,025985E+21	8,026390E+21	1,213554E+20	1,213761E+20	1,605237E+22	2,427315E+20	1,629511E+22

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 ° Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
2489	8,026523E+21	8,026042E+21	1,213099E+20	1,213351E+20	1,605256E+22	2,426450E+20	1,629521E+22
2490	8,026140E+21	8,026331E+21	1,213750E+20	1,213235E+20	1,605247E+22	2,426986E+20	1,629517E+22
2491	8,026152E+21	8,026296E+21	1,213312E+20	1,213791E+20	1,605245E+22	2,427102E+20	1,629516E+22
2492	8,026202E+21	8,025765E+21	1,213324E+20	1,213251E+20	1,605197E+22	2,426575E+20	1,629462E+22
2493	8,025537E+21	8,025992E+21	1,213898E+20	1,213536E+20	1,605153E+22	2,427433E+20	1,629427E+22
2494	8,025673E+21	8,025473E+21	1,213270E+20	1,213803E+20	1,605115E+22	2,427073E+20	1,629385E+22
2495	8,025396E+21	8,024987E+21	1,213726E+20	1,213318E+20	1,605038E+22	2,427044E+20	1,629309E+22
2496	8,024748E+21	8,025215E+21	1,213896E+20	1,213856E+20	1,604996E+22	2,427752E+20	1,629274E+22
2497	8,024870E+21	8,024552E+21	1,213389E+20	1,213791E+20	1,604942E+22	2,427180E+20	1,629214E+22
2498	8,024360E+21	8,024449E+21	1,214008E+20	1,213494E+20	1,604881E+22	2,427502E+20	1,629156E+22
2499	8,024211E+21	8,024502E+21	1,213689E+20	1,214075E+20	1,604871E+22	2,427764E+20	1,629149E+22
2500	8,024576E+21	8,024048E+21	1,213536E+20	1,213615E+20	1,604862E+22	2,427152E+20	1,629134E+22
2501	8,024235E+21	8,024607E+21	1,214082E+20	1,213544E+20	1,604884E+22	2,427625E+20	1,629160E+22
2502	8,024622E+21	8,024683E+21	1,213518E+20	1,213999E+20	1,604931E+22	2,427518E+20	1,629206E+22
2503	8,024882E+21	8,024563E+21	1,213648E+20	1,213348E+20	1,604944E+22	2,426996E+20	1,629214E+22
2504	8,024656E+21	8,025279E+21	1,213920E+20	1,213729E+20	1,604994E+22	2,427649E+20	1,629270E+22
2505	8,025288E+21	8,025090E+21	1,213260E+20	1,213773E+20	1,605038E+22	2,427033E+20	1,629308E+22
2506	8,025395E+21	8,025217E+21	1,213690E+20	1,213249E+20	1,605061E+22	2,426939E+20	1,629331E+22
2507	8,025354E+21	8,025693E+21	1,213658E+20	1,213825E+20	1,605105E+22	2,427483E+20	1,629380E+22
2508	8,025757E+21	8,025345E+21	1,213255E+20	1,213457E+20	1,605110E+22	2,426712E+20	1,629377E+22
2509	8,025323E+21	8,025633E+21	1,213910E+20	1,213335E+20	1,605096E+22	2,427246E+20	1,629368E+22
2510	8,025277E+21	8,025507E+21	1,213475E+20	1,213926E+20	1,605078E+22	2,427401E+20	1,629352E+22
2511	8,025371E+21	8,024817E+21	1,213461E+20	1,213408E+20	1,605019E+22	2,426869E+20	1,629287E+22
2512	8,024732E+21	8,025093E+21	1,214022E+20	1,213666E+20	1,604983E+22	2,427689E+20	1,629259E+22
2513	8,024789E+21	8,024610E+21	1,213403E+20	1,213947E+20	1,604940E+22	2,427350E+20	1,629213E+22
2514	8,024511E+21	8,024147E+21	1,213849E+20	1,213491E+20	1,604866E+22	2,427340E+20	1,629139E+22
2515	8,023831E+21	8,024353E+21	1,213996E+20	1,213981E+20	1,604818E+22	2,427977E+20	1,629098E+22
2516	8,023955E+21	8,023655E+21	1,213522E+20	1,213942E+20	1,604761E+22	2,427464E+20	1,629036E+22
2517	8,023562E+21	8,023640E+21	1,214139E+20	1,213577E+20	1,604720E+22	2,427716E+20	1,628997E+22
2518	8,023476E+21	8,023768E+21	1,213848E+20	1,214167E+20	1,604724E+22	2,428015E+20	1,629005E+22
2519	8,023877E+21	8,023284E+21	1,213675E+20	1,213728E+20	1,604716E+22	2,427404E+20	1,628990E+22
2520	8,023535E+21	8,023939E+21	1,214181E+20	1,213669E+20	1,604747E+22	2,427850E+20	1,629026E+22
2521	8,023872E+21	8,024003E+21	1,213608E+20	1,214151E+20	1,604788E+22	2,427759E+20	1,629065E+22
2522	8,024229E+21	8,023842E+21	1,213707E+20	1,213508E+20	1,604807E+22	2,427216E+20	1,629079E+22
2523	8,024054E+21	8,024570E+21	1,213987E+20	1,213800E+20	1,604862E+22	2,427787E+20	1,629140E+22
2524	8,024633E+21	8,024404E+21	1,213391E+20	1,213845E+20	1,604904E+22	2,427236E+20	1,629176E+22
2525	8,024688E+21	8,024609E+21	1,213850E+20	1,213293E+20	1,604930E+22	2,427143E+20	1,629201E+22
2526	8,024544E+21	8,025057E+21	1,213832E+20	1,213921E+20	1,604960E+22	2,427752E+20	1,629238E+22
2527	8,024890E+21	8,024506E+21	1,213395E+20	1,213612E+20	1,604940E+22	2,427007E+20	1,629210E+22
2528	8,024502E+21	8,024763E+21	1,214004E+20	1,213493E+20	1,604926E+22	2,427497E+20	1,629201E+22
2529	8,024464E+21	8,024627E+21	1,213576E+20	1,214076E+20	1,604909E+22	2,427652E+20	1,629186E+22
2530	8,024635E+21	8,023959E+21	1,213568E+20	1,213575E+20	1,604859E+22	2,427143E+20	1,629131E+22
2531	8,023951E+21	8,024281E+21	1,214139E+20	1,213758E+20	1,604823E+22	2,427897E+20	1,629102E+22
2532	8,023867E+21	8,023804E+21	1,213568E+20	1,214089E+20	1,604767E+22	2,427657E+20	1,629044E+22
2533	8,023568E+21	8,023345E+21	1,214012E+20	1,213617E+20	1,604691E+22	2,427629E+20	1,628968E+22
2534	8,022925E+21	8,023482E+21	1,214153E+20	1,214117E+20	1,604641E+22	2,428270E+20	1,628923E+22
2535	8,023132E+21	8,022698E+21	1,213661E+20	1,214087E+20	1,604583E+22	2,427748E+20	1,628860E+22
2536	8,022842E+21	8,022804E+21	1,214238E+20	1,213691E+20	1,604565E+22	2,427929E+20	1,628844E+22
2537	8,022726E+21	8,023032E+21	1,213971E+20	1,214287E+20	1,604576E+22	2,428258E+20	1,628858E+22

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 ° Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
2538	8,023167E+21	8,022610E+21	1,213766E+20	1,213878E+20	1,604578E+22	2,427644E+20	1,628854E+22
2539	8,022828E+21	8,023260E+21	1,214257E+20	1,213752E+20	1,604609E+22	2,428009E+20	1,628889E+22
2540	8,023139E+21	8,023318E+21	1,213727E+20	1,214250E+20	1,604646E+22	2,427977E+20	1,628925E+22
2541	8,023553E+21	8,023220E+21	1,213833E+20	1,213561E+20	1,604677E+22	2,427393E+20	1,628951E+22
2542	8,023372E+21	8,023926E+21	1,214148E+20	1,213870E+20	1,604730E+22	2,428018E+20	1,629010E+22
2543	8,023891E+21	8,023675E+21	1,213540E+20	1,213958E+20	1,604757E+22	2,427498E+20	1,629032E+22
2544	8,023932E+21	8,023881E+21	1,213947E+20	1,213439E+20	1,604781E+22	2,427386E+20	1,629055E+22
2545	8,023732E+21	8,024251E+21	1,213932E+20	1,214095E+20	1,604798E+22	2,428028E+20	1,629079E+22
2546	8,024180E+21	8,023646E+21	1,213464E+20	1,213808E+20	1,604783E+22	2,427272E+20	1,629055E+22
2547	8,023827E+21	8,023917E+21	1,214078E+20	1,213598E+20	1,604774E+22	2,427677E+20	1,629051E+22
2548	8,023697E+21	8,023834E+21	1,213727E+20	1,214182E+20	1,604753E+22	2,427909E+20	1,629032E+22
2549	8,023778E+21	8,023247E+21	1,213746E+20	1,213667E+20	1,604703E+22	2,427413E+20	1,628977E+22
2550	8,022998E+21	8,023507E+21	1,214325E+20	1,213879E+20	1,604650E+22	2,428204E+20	1,628932E+22
2551	8,022861E+21	8,022854E+21	1,213733E+20	1,214251E+20	1,604572E+22	2,427984E+20	1,628851E+22
2552	8,022665E+21	8,022388E+21	1,214119E+20	1,213767E+20	1,604505E+22	2,427886E+20	1,628784E+22
2553	8,022092E+21	8,022557E+21	1,214272E+20	1,214250E+20	1,604465E+22	2,428523E+20	1,628750E+22
2554	8,022433E+21	8,021861E+21	1,213775E+20	1,214238E+20	1,604429E+22	2,428013E+20	1,628709E+22
2555	8,022162E+21	8,022093E+21	1,214332E+20	1,213774E+20	1,604426E+22	2,428106E+20	1,628707E+22
2556	8,021959E+21	8,022382E+21	1,214114E+20	1,214412E+20	1,604434E+22	2,428526E+20	1,628719E+22
2557	8,022385E+21	8,021996E+21	1,213902E+20	1,213975E+20	1,604438E+22	2,427876E+20	1,628717E+22
2558	8,022102E+21	8,022579E+21	1,214388E+20	1,213846E+20	1,604468E+22	2,428233E+20	1,628750E+22
2559	8,022420E+21	8,022537E+21	1,213859E+20	1,214343E+20	1,604496E+22	2,428202E+20	1,628778E+22
2560	8,022882E+21	8,022501E+21	1,213929E+20	1,213656E+20	1,604538E+22	2,427585E+20	1,628814E+22
2561	8,022643E+21	8,023218E+21	1,214267E+20	1,213995E+20	1,604586E+22	2,428262E+20	1,628869E+22
2562	8,023185E+21	8,022947E+21	1,213621E+20	1,214140E+20	1,604613E+22	2,427761E+20	1,628891E+22
2563	8,023244E+21	8,023120E+21	1,213998E+20	1,213566E+20	1,604636E+22	2,427564E+20	1,628912E+22
2564	8,023014E+21	8,023481E+21	1,214038E+20	1,214221E+20	1,604649E+22	2,428258E+20	1,628932E+22
2565	8,023465E+21	8,022955E+21	1,213605E+20	1,213886E+20	1,604642E+22	2,427491E+20	1,628917E+22
2566	8,023074E+21	8,023195E+21	1,214264E+20	1,213680E+20	1,604627E+22	2,427944E+20	1,628906E+22
2567	8,022794E+21	8,023019E+21	1,213923E+20	1,214295E+20	1,604581E+22	2,428218E+20	1,628863E+22
2568	8,022833E+21	8,022399E+21	1,213893E+20	1,213835E+20	1,604523E+22	2,427728E+20	1,628800E+22
2569	8,022020E+21	8,022544E+21	1,214463E+20	1,214061E+20	1,604456E+22	2,428524E+20	1,628742E+22
2570	8,022024E+21	8,021859E+21	1,213829E+20	1,214454E+20	1,604388E+22	2,428283E+20	1,628671E+22
2571	8,021927E+21	8,021460E+21	1,214193E+20	1,213875E+20	1,604339E+22	2,428069E+20	1,628619E+22
2572	8,021321E+21	8,021754E+21	1,214413E+20	1,214359E+20	1,604308E+22	2,428772E+20	1,628595E+22
2573	8,021629E+21	8,021225E+21	1,213939E+20	1,214327E+20	1,604285E+22	2,428266E+20	1,628568E+22
2574	8,021334E+21	8,021422E+21	1,214485E+20	1,213882E+20	1,604276E+22	2,428367E+20	1,628559E+22
2575	8,021098E+21	8,021595E+21	1,214261E+20	1,214535E+20	1,604269E+22	2,428796E+20	1,628557E+22
2576	8,021635E+21	8,021225E+21	1,213986E+20	1,214094E+20	1,604286E+22	2,428080E+20	1,628567E+22
2577	8,021400E+21	8,021801E+21	1,214487E+20	1,213957E+20	1,604320E+22	2,428444E+20	1,628605E+22
2578	8,021811E+21	8,021807E+21	1,213943E+20	1,214481E+20	1,604362E+22	2,428424E+20	1,628646E+22
2579	8,022270E+21	8,021838E+21	1,213989E+20	1,213755E+20	1,604411E+22	2,427744E+20	1,628688E+22
2580	8,021953E+21	8,022563E+21	1,214375E+20	1,214140E+20	1,604452E+22	2,428515E+20	1,628737E+22
2581	8,022479E+21	8,022313E+21	1,213748E+20	1,214252E+20	1,604479E+22	2,428000E+20	1,628759E+22
2582	8,022575E+21	8,022408E+21	1,214130E+20	1,213667E+20	1,604498E+22	2,427796E+20	1,628776E+22
2583	8,022265E+21	8,022685E+21	1,214200E+20	1,214302E+20	1,604495E+22	2,428502E+20	1,628780E+22
2584	8,022672E+21	8,022193E+21	1,213749E+20	1,213991E+20	1,604486E+22	2,427740E+20	1,628764E+22
2585	8,022160E+21	8,022379E+21	1,214429E+20	1,213824E+20	1,604454E+22	2,428252E+20	1,628736E+22
2586	8,021874E+21	8,022118E+21	1,214045E+20	1,214488E+20	1,604399E+22	2,428533E+20	1,628685E+22

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 ° Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
2587	8,021949E+21	8,021457E+21	1,213979E+20	1,213993E+20	1,604341E+22	2,427971E+20	1,628620E+22
2588	8,021173E+21	8,021604E+21	1,214572E+20	1,214212E+20	1,604278E+22	2,428784E+20	1,628566E+22
2589	8,021221E+21	8,021047E+21	1,213982E+20	1,214555E+20	1,604227E+22	2,428537E+20	1,628512E+22
2590	8,021165E+21	8,020700E+21	1,214354E+20	1,213968E+20	1,604186E+22	2,428322E+20	1,628470E+22
2591	8,020460E+21	8,020981E+21	1,214587E+20	1,214468E+20	1,604144E+22	2,429055E+20	1,628435E+22
2592	8,020773E+21	8,020480E+21	1,214073E+20	1,214473E+20	1,604125E+22	2,428547E+20	1,628411E+22
2593	8,020499E+21	8,020607E+21	1,214602E+20	1,214036E+20	1,604111E+22	2,428638E+20	1,628397E+22
2594	8,020406E+21	8,020760E+21	1,214337E+20	1,214687E+20	1,604117E+22	2,429025E+20	1,628407E+22
2595	8,021022E+21	8,020472E+21	1,214037E+20	1,214179E+20	1,604149E+22	2,428216E+20	1,628432E+22
2596	8,020755E+21	8,021125E+21	1,214588E+20	1,214059E+20	1,604188E+22	2,428647E+20	1,628475E+22
2597	8,021116E+21	8,021259E+21	1,214081E+20	1,214565E+20	1,604237E+22	2,428646E+20	1,628524E+22
2598	8,021569E+21	8,021227E+21	1,214117E+20	1,213853E+20	1,604280E+22	2,427970E+20	1,628559E+22
2599	8,021192E+21	8,021826E+21	1,214514E+20	1,214242E+20	1,604302E+22	2,428756E+20	1,628589E+22
2600	8,021773E+21	8,021579E+21	1,213862E+20	1,214353E+20	1,604335E+22	2,428215E+20	1,628617E+22
2601	8,021840E+21	8,021626E+21	1,214270E+20	1,213786E+20	1,604347E+22	2,428056E+20	1,628627E+22
2602	8,021533E+21	8,021891E+21	1,214319E+20	1,214445E+20	1,604342E+22	2,428763E+20	1,628630E+22
2603	8,021872E+21	8,021402E+21	1,213842E+20	1,214138E+20	1,604327E+22	2,427980E+20	1,628607E+22
2604	8,021264E+21	8,021513E+21	1,214548E+20	1,214015E+20	1,604278E+22	2,428563E+20	1,628563E+22
2605	8,020988E+21	8,021266E+21	1,214177E+20	1,214637E+20	1,604225E+22	2,428814E+20	1,628513E+22
2606	8,021143E+21	8,020548E+21	1,214112E+20	1,214116E+20	1,604169E+22	2,428227E+20	1,628451E+22
2607	8,020328E+21	8,020684E+21	1,214729E+20	1,214306E+20	1,604101E+22	2,429035E+20	1,628392E+22
2608	8,020387E+21	8,020239E+21	1,214144E+20	1,214666E+20	1,604063E+22	2,428809E+20	1,628351E+22
2609	8,020259E+21	8,019903E+21	1,214513E+20	1,214117E+20	1,604016E+22	2,428630E+20	1,628303E+22
2610	8,019612E+21	8,020147E+21	1,214692E+20	1,214636E+20	1,603976E+22	2,429328E+20	1,628269E+22
2611	8,019994E+21	8,019662E+21	1,214140E+20	1,214606E+20	1,603966E+22	2,428746E+20	1,628253E+22
2612	8,019773E+21	8,019817E+21	1,214685E+20	1,214158E+20	1,603959E+22	2,428843E+20	1,628247E+22
2613	8,019725E+21	8,020108E+21	1,214469E+20	1,214750E+20	1,603983E+22	2,429219E+20	1,628276E+22
2614	8,020375E+21	8,019859E+21	1,214173E+20	1,214244E+20	1,604023E+22	2,428417E+20	1,628308E+22
2615	8,020014E+21	8,020474E+21	1,214732E+20	1,214156E+20	1,604049E+22	2,428889E+20	1,628338E+22
2616	8,020388E+21	8,020599E+21	1,214212E+20	1,214694E+20	1,604099E+22	2,428906E+20	1,628388E+22
2617	8,020854E+21	8,020483E+21	1,214228E+20	1,214002E+20	1,604134E+22	2,428230E+20	1,628416E+22
2618	8,020576E+21	8,021024E+21	1,214587E+20	1,214377E+20	1,604160E+22	2,428964E+20	1,628450E+22
2619	8,021140E+21	8,020838E+21	1,213932E+20	1,214448E+20	1,604198E+22	2,428379E+20	1,628482E+22
2620	8,021100E+21	8,020897E+21	1,214380E+20	1,213927E+20	1,604200E+22	2,428308E+20	1,628483E+22
2621	8,020676E+21	8,021199E+21	1,214466E+20	1,214558E+20	1,604187E+22	2,429024E+20	1,628478E+22
2622	8,020998E+21	8,020606E+21	1,213983E+20	1,214273E+20	1,604160E+22	2,428256E+20	1,628443E+22
2623	8,020349E+21	8,020579E+21	1,214693E+20	1,214138E+20	1,604093E+22	2,428831E+20	1,628381E+22
2624	8,020148E+21	8,020354E+21	1,214322E+20	1,214747E+20	1,604050E+22	2,429068E+20	1,628341E+22
2625	8,020303E+21	8,019658E+21	1,214277E+20	1,214245E+20	1,603996E+22	2,428522E+20	1,628281E+22
2626	8,019529E+21	8,019820E+21	1,214849E+20	1,214448E+20	1,603935E+22	2,429297E+20	1,628228E+22
2627	8,019553E+21	8,019452E+21	1,214254E+20	1,214819E+20	1,603901E+22	2,429073E+20	1,628191E+22
2628	8,019388E+21	8,019088E+21	1,214625E+20	1,214309E+20	1,603848E+22	2,428934E+20	1,628137E+22
2629	8,018794E+21	8,019381E+21	1,214816E+20	1,214750E+20	1,603817E+22	2,429566E+20	1,628113E+22
2630	8,019275E+21	8,018892E+21	1,214260E+20	1,214688E+20	1,603817E+22	2,428948E+20	1,628106E+22
2631	8,019011E+21	8,019047E+21	1,214823E+20	1,214221E+20	1,603806E+22	2,429044E+20	1,628096E+22
2632	8,018988E+21	8,019430E+21	1,214618E+20	1,214834E+20	1,603842E+22	2,429452E+20	1,628136E+22
2633	8,019592E+21	8,019178E+21	1,214313E+20	1,214381E+20	1,603877E+22	2,428694E+20	1,628164E+22
2634	8,019327E+21	8,019728E+21	1,214798E+20	1,214320E+20	1,603906E+22	2,429118E+20	1,628197E+22
2635	8,019770E+21	8,019872E+21	1,214260E+20	1,214825E+20	1,603964E+22	2,429085E+20	1,628255E+22

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 $\odot$ Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
2636	8,020233E+21	8,019759E+21	1,214291E+20	1,214138E+20	1,603999E+22	2,428429E+20	1,628284E+22
2637	8,019936E+21	8,020399E+21	1,214705E+20	1,214439E+20	1,604034E+22	2,429145E+20	1,628325E+22
2638	8,020438E+21	8,020196E+21	1,214068E+20	1,214518E+20	1,604063E+22	2,428586E+20	1,628349E+22
2639	8,020222E+21	8,020151E+21	1,214543E+20	1,214045E+20	1,604037E+22	2,428588E+20	1,628323E+22
2640	8,019792E+21	8,020378E+21	1,214628E+20	1,214692E+20	1,604017E+22	2,429320E+20	1,628310E+22
2641	8,020112E+21	8,019687E+21	1,214137E+20	1,214440E+20	1,603980E+22	2,428577E+20	1,628266E+22
2642	8,019579E+21	8,019607E+21	1,214779E+20	1,214287E+20	1,603919E+22	2,429067E+20	1,628209E+22
2643	8,019383E+21	8,019477E+21	1,214423E+20	1,214869E+20	1,603886E+22	2,429292E+20	1,628179E+22
2644	8,019452E+21	8,018844E+21	1,214402E+20	1,214413E+20	1,603830E+22	2,428815E+20	1,628118E+22
2645	8,018630E+21	8,019084E+21	1,214994E+20	1,214569E+20	1,603771E+22	2,429563E+20	1,628067E+22
2646	8,018678E+21	8,018664E+21	1,214400E+20	1,214941E+20	1,603734E+22	2,429341E+20	1,628028E+22
2647	8,018489E+21	8,018231E+21	1,214770E+20	1,214420E+20	1,603672E+22	2,429190E+20	1,627964E+22
2648	8,017997E+21	8,018563E+21	1,214964E+20	1,214830E+20	1,603656E+22	2,429794E+20	1,627954E+22
2649	8,018498E+21	8,018120E+21	1,214417E+20	1,214803E+20	1,603662E+22	2,429220E+20	1,627954E+22
2650	8,018324E+21	8,018281E+21	1,214901E+20	1,214353E+20	1,603660E+22	2,429254E+20	1,627953E+22
2651	8,018311E+21	8,018739E+21	1,214696E+20	1,214984E+20	1,603705E+22	2,429681E+20	1,628002E+22
2652	8,018920E+21	8,018480E+21	1,214379E+20	1,214561E+20	1,603740E+22	2,428940E+20	1,628029E+22
2653	8,018719E+21	8,019074E+21	1,214880E+20	1,214415E+20	1,603779E+22	2,429295E+20	1,628072E+22
2654	8,019199E+21	8,019233E+21	1,214368E+20	1,214868E+20	1,603843E+22	2,429236E+20	1,628136E+22
2655	8,019518E+21	8,019101E+21	1,214436E+20	1,214194E+20	1,603862E+22	2,428630E+20	1,628148E+22
2656	8,019146E+21	8,019740E+21	1,214878E+20	1,214509E+20	1,603889E+22	2,429387E+20	1,628182E+22
2657	8,019530E+21	8,019456E+21	1,214239E+20	1,214662E+20	1,603899E+22	2,428901E+20	1,628188E+22
2658	8,019378E+21	8,019249E+21	1,214633E+20	1,214219E+20	1,603863E+22	2,428852E+20	1,628151E+22
2659	8,019015E+21	8,019464E+21	1,214709E+20	1,214844E+20	1,603848E+22	2,429553E+20	1,628143E+22
2660	8,019337E+21	8,018790E+21	1,214235E+20	1,214613E+20	1,603813E+22	2,428848E+20	1,628101E+22
2661	8,018814E+21	8,018821E+21	1,214905E+20	1,214395E+20	1,603763E+22	2,429300E+20	1,628056E+22
2662	8,018578E+21	8,018727E+21	1,214574E+20	1,214973E+20	1,603730E+22	2,429547E+20	1,628026E+22
2663	8,018489E+21	8,018039E+21	1,214577E+20	1,214564E+20	1,603653E+22	2,429142E+20	1,627944E+22
2664	8,017709E+21	8,018228E+21	1,215160E+20	1,214701E+20	1,603594E+22	2,429861E+20	1,627892E+22
2665	8,017785E+21	8,017761E+21	1,214567E+20	1,215089E+20	1,603555E+22	2,429656E+20	1,627851E+22
2666	8,017724E+21	8,017306E+21	1,214856E+20	1,214549E+20	1,603503E+22	2,429405E+20	1,627797E+22
2667	8,017283E+21	8,017751E+21	1,215053E+20	1,214945E+20	1,603503E+22	2,429999E+20	1,627803E+22
2668	8,017734E+21	8,017387E+21	1,214513E+20	1,214966E+20	1,603512E+22	2,429479E+20	1,627807E+22
2669	8,017605E+21	8,017646E+21	1,214989E+20	1,214467E+20	1,603525E+22	2,429456E+20	1,627820E+22
2670	8,017668E+21	8,018091E+21	1,214802E+20	1,215068E+20	1,603576E+22	2,429870E+20	1,627875E+22
2671	8,018223E+21	8,017817E+21	1,214502E+20	1,214631E+20	1,603604E+22	2,429134E+20	1,627895E+22
2672	8,018076E+21	8,018433E+21	1,215031E+20	1,214449E+20	1,603651E+22	2,429480E+20	1,627946E+22
2673	8,018468E+21	8,018592E+21	1,214543E+20	1,214946E+20	1,603706E+22	2,429489E+20	1,628001E+22
2674	8,018771E+21	8,018376E+21	1,214533E+20	1,214332E+20	1,603715E+22	2,428866E+20	1,628003E+22
2675	8,018368E+21	8,018968E+21	1,214974E+20	1,214686E+20	1,603734E+22	2,429659E+20	1,628030E+22
2676	8,018727E+21	8,018605E+21	1,214324E+20	1,214878E+20	1,603733E+22	2,429203E+20	1,628025E+22
2677	8,018664E+21	8,018412E+21	1,214714E+20	1,214356E+20	1,603708E+22	2,429070E+20	1,627998E+22
2678	8,018336E+21	8,018648E+21	1,214826E+20	1,214920E+20	1,603698E+22	2,429746E+20	1,627996E+22
2679	8,018496E+21	8,018004E+21	1,214404E+20	1,214711E+20	1,603650E+22	2,429116E+20	1,627941E+22
2680	8,017918E+21	8,018049E+21	1,215097E+20	1,214494E+20	1,603597E+22	2,429592E+20	1,627893E+22
2681	8,017587E+21	8,017910E+21	1,214776E+20	1,215131E+20	1,603550E+22	2,429907E+20	1,627849E+22
2682	8,017577E+21	8,017086E+21	1,214689E+20	1,214745E+20	1,603466E+22	2,429433E+20	1,627761E+22
2683	8,016883E+21	8,017285E+21	1,215253E+20	1,214846E+20	1,603417E+22	2,430099E+20	1,627718E+22
2684	8,016981E+21	8,016878E+21	1,214667E+20	1,215245E+20	1,603386E+22	2,429912E+20	1,627685E+22

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 ° Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
2685	8,016987E+21	8,016549E+21	1,214957E+20	1,214642E+20	1,603354E+22	2,429599E+20	1,627650E+22
2686	8,016574E+21	8,017071E+21	1,215178E+20	1,215025E+20	1,603364E+22	2,430204E+20	1,627667E+22
2687	8,016928E+21	8,016721E+21	1,214667E+20	1,215087E+20	1,603365E+22	2,429754E+20	1,627662E+22
2688	8,016890E+21	8,016960E+21	1,215129E+20	1,214561E+20	1,603385E+22	2,429690E+20	1,627682E+22
2689	8,016977E+21	8,017398E+21	1,214955E+20	1,215171E+20	1,603438E+22	2,430126E+20	1,627739E+22
2690	8,017583E+21	8,017078E+21	1,214579E+20	1,214730E+20	1,603466E+22	2,429309E+20	1,627759E+22
2691	8,017415E+21	8,017736E+21	1,215117E+20	1,214565E+20	1,603515E+22	2,429682E+20	1,627812E+22
2692	8,017687E+21	8,017888E+21	1,214633E+20	1,215115E+20	1,603558E+22	2,429748E+20	1,627855E+22
2693	8,018010E+21	8,017661E+21	1,214613E+20	1,214487E+20	1,603567E+22	2,429100E+20	1,627858E+22
2694	8,017676E+21	8,018183E+21	1,215068E+20	1,214801E+20	1,603586E+22	2,429869E+20	1,627885E+22
2695	8,017960E+21	8,017801E+21	1,214461E+20	1,214990E+20	1,603576E+22	2,429451E+20	1,627871E+22
2696	8,017941E+21	8,017630E+21	1,214876E+20	1,214429E+20	1,603557E+22	2,429304E+20	1,627850E+22
2697	8,017517E+21	8,017884E+21	1,215021E+20	1,215023E+20	1,603540E+22	2,430044E+20	1,627841E+22
2698	8,017616E+21	8,017173E+21	1,214540E+20	1,214873E+20	1,603479E+22	2,429413E+20	1,627773E+22
2699	8,017023E+21	8,017171E+21	1,215223E+20	1,214688E+20	1,603419E+22	2,429911E+20	1,627718E+22
2700	8,016661E+21	8,016963E+21	1,214892E+20	1,215333E+20	1,603362E+22	2,430225E+20	1,627665E+22
2701	8,016765E+21	8,016188E+21	1,214789E+20	1,214881E+20	1,603295E+22	2,429670E+20	1,627592E+22
2702	8,016142E+21	8,016435E+21	1,215370E+20	1,214911E+20	1,603258E+22	2,430281E+20	1,627560E+22
2703	8,016113E+21	8,016109E+21	1,214836E+20	1,215335E+20	1,603222E+22	2,430171E+20	1,627524E+22
2704	8,016150E+21	8,015842E+21	1,215121E+20	1,214727E+20	1,603199E+22	2,429848E+20	1,627498E+22
2705	8,015738E+21	8,016359E+21	1,215348E+20	1,215160E+20	1,603210E+22	2,430508E+20	1,627515E+22
2706	8,016197E+21	8,015941E+21	1,214757E+20	1,215229E+20	1,603214E+22	2,429985E+20	1,627514E+22
2707	8,016266E+21	8,016214E+21	1,215198E+20	1,214688E+20	1,603248E+22	2,429886E+20	1,627547E+22
2708	8,016330E+21	8,016694E+21	1,215039E+20	1,215297E+20	1,603302E+22	2,430335E+20	1,627606E+22
2709	8,016955E+21	8,016456E+21	1,214652E+20	1,214831E+20	1,603341E+22	2,429483E+20	1,627636E+22
2710	8,016762E+21	8,017097E+21	1,215214E+20	1,214661E+20	1,603386E+22	2,429875E+20	1,627685E+22
2711	8,016893E+21	8,017199E+21	1,214773E+20	1,215250E+20	1,603409E+22	2,430022E+20	1,627709E+22
2712	8,017290E+21	8,016906E+21	1,214758E+20	1,214588E+20	1,603420E+22	2,429345E+20	1,627713E+22
2713	8,016962E+21	8,017408E+21	1,215231E+20	1,214906E+20	1,603437E+22	2,430137E+20	1,627738E+22
2714	8,017237E+21	8,016975E+21	1,214581E+20	1,215098E+20	1,603421E+22	2,429679E+20	1,627718E+22
2715	8,017153E+21	8,016827E+21	1,215000E+20	1,214572E+20	1,603398E+22	2,429572E+20	1,627694E+22
2716	8,016591E+21	8,017063E+21	1,215144E+20	1,215200E+20	1,603365E+22	2,430344E+20	1,627669E+22
2717	8,016712E+21	8,016324E+21	1,214650E+20	1,215047E+20	1,603304E+22	2,429698E+20	1,627601E+22
2718	8,016183E+21	8,016269E+21	1,215341E+20	1,214805E+20	1,603245E+22	2,430145E+20	1,627547E+22
2719	8,015752E+21	8,016078E+21	1,215053E+20	1,215438E+20	1,603183E+22	2,430490E+20	1,627488E+22
2720	8,015922E+21	8,015348E+21	1,214968E+20	1,214958E+20	1,603127E+22	2,429926E+20	1,627426E+22
2721	8,015284E+21	8,015645E+21	1,215548E+20	1,215026E+20	1,603093E+22	2,430574E+20	1,627399E+22
2722	8,015267E+21	8,015290E+21	1,214959E+20	1,215501E+20	1,603056E+22	2,430460E+20	1,627360E+22
2723	8,015387E+21	8,015035E+21	1,215207E+20	1,214920E+20	1,603042E+22	2,430127E+20	1,627343E+22
2724	8,015024E+21	8,015552E+21	1,215418E+20	1,215334E+20	1,603058E+22	2,430752E+20	1,627365E+22
2725	8,015604E+21	8,015232E+21	1,214818E+20	1,215335E+20	1,603084E+22	2,430153E+20	1,627385E+22
2726	8,015702E+21	8,015566E+21	1,215279E+20	1,214736E+20	1,603127E+22	2,430014E+20	1,627427E+22
2727	8,015580E+21	8,016094E+21	1,215185E+20	1,215363E+20	1,603167E+22	2,430548E+20	1,627473E+22
2728	8,016186E+21	8,015851E+21	1,214806E+20	1,214908E+20	1,603204E+22	2,429715E+20	1,627501E+22
2729	8,015991E+21	8,016400E+21	1,215370E+20	1,214788E+20	1,603239E+22	2,430158E+20	1,627541E+22
2730	8,016164E+21	8,016388E+21	1,214879E+20	1,215378E+20	1,603255E+22	2,430257E+20	1,627558E+22
2731	8,016633E+21	8,016106E+21	1,214848E+20	1,214722E+20	1,603274E+22	2,429570E+20	1,627570E+22
2732	8,016237E+21	8,016613E+21	1,215330E+20	1,215035E+20	1,603285E+22	2,430365E+20	1,627589E+22
2733	8,016489E+21	8,016251E+21	1,214686E+20	1,215225E+20	1,603274E+22	2,429911E+20	1,627573E+22

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 ° Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
2734	8,016353E+21	8,016068E+21	1,215123E+20	1,214708E+20	1,603242E+22	2,429831E+20	1,627540E+22
2735	8,015636E+21	8,016233E+21	1,215308E+20	1,215347E+20	1,603187E+22	2,430656E+20	1,627493E+22
2736	8,015826E+21	8,015443E+21	1,214823E+20	1,215169E+20	1,603127E+22	2,429992E+20	1,627427E+22
2737	8,015325E+21	8,015362E+21	1,215511E+20	1,214924E+20	1,603069E+22	2,430435E+20	1,627373E+22
2738	8,014889E+21	8,015146E+21	1,215186E+20	1,215556E+20	1,603004E+22	2,430741E+20	1,627311E+22
2739	8,015071E+21	8,014484E+21	1,215085E+20	1,215122E+20	1,602955E+22	2,430207E+20	1,627258E+22
2740	8,014404E+21	8,014807E+21	1,215638E+20	1,215208E+20	1,602921E+22	2,430846E+20	1,627230E+22
2741	8,014515E+21	8,014508E+21	1,215045E+20	1,215667E+20	1,602902E+22	2,430712E+20	1,627209E+22
2742	8,014744E+21	8,014292E+21	1,215286E+20	1,215015E+20	1,602904E+22	2,430300E+20	1,627207E+22
2743	8,014325E+21	8,014879E+21	1,215550E+20	1,215390E+20	1,602920E+22	2,430940E+20	1,627230E+22
2744	8,014928E+21	8,014623E+21	1,214982E+20	1,215359E+20	1,602955E+22	2,430341E+20	1,627259E+22
2745	8,014964E+21	8,014970E+21	1,215443E+20	1,214817E+20	1,602993E+22	2,430261E+20	1,627296E+22
2746	8,014791E+21	8,015393E+21	1,215309E+20	1,215493E+20	1,603018E+22	2,430802E+20	1,627326E+22
2747	8,015451E+21	8,015081E+21	1,214900E+20	1,215089E+20	1,603053E+22	2,429988E+20	1,627353E+22
2748	8,015303E+21	8,015583E+21	1,215432E+20	1,214953E+20	1,603089E+22	2,430385E+20	1,627392E+22
2749	8,015575E+21	8,015628E+21	1,214951E+20	1,215494E+20	1,603120E+22	2,430445E+20	1,627425E+22
2750	8,016011E+21	8,015395E+21	1,214937E+20	1,214802E+20	1,603141E+22	2,429739E+20	1,627438E+22
2751	8,015402E+21	8,015925E+21	1,215477E+20	1,215128E+20	1,603133E+22	2,430606E+20	1,627439E+22
2752	8,015592E+21	8,015527E+21	1,214862E+20	1,215333E+20	1,603112E+22	2,430195E+20	1,627414E+22
2753	8,015436E+21	8,015240E+21	1,215298E+20	1,214870E+20	1,603068E+22	2,430168E+20	1,627369E+22
2754	8,014734E+21	8,015273E+21	1,215440E+20	1,215486E+20	1,603001E+22	2,430926E+20	1,627310E+22
2755	8,014997E+21	8,014491E+21	1,214947E+20	1,215332E+20	1,602949E+22	2,430279E+20	1,627252E+22
2756	8,014479E+21	8,014431E+21	1,215611E+20	1,215070E+20	1,602891E+22	2,430681E+20	1,627198E+22
2757	8,014091E+21	8,014318E+21	1,215290E+20	1,215704E+20	1,602841E+22	2,430994E+20	1,627151E+22
2758	8,014288E+21	8,013706E+21	1,215192E+20	1,215263E+20	1,602799E+22	2,430455E+20	1,627104E+22
2759	8,013569E+21	8,014037E+21	1,215775E+20	1,215332E+20	1,602761E+22	2,431107E+20	1,627072E+22
2760	8,013780E+21	8,013794E+21	1,215216E+20	1,215741E+20	1,602757E+22	2,430956E+20	1,627067E+22
2761	8,014037E+21	8,013610E+21	1,215445E+20	1,215089E+20	1,602765E+22	2,430534E+20	1,627070E+22
2762	8,013555E+21	8,014156E+21	1,215685E+20	1,215455E+20	1,602771E+22	2,431140E+20	1,627083E+22
2763	8,014147E+21	8,013929E+21	1,215092E+20	1,215493E+20	1,602808E+22	2,430585E+20	1,627113E+22
2764	8,014159E+21	8,014215E+21	1,215513E+20	1,214979E+20	1,602837E+22	2,430492E+20	1,627142E+22
2765	8,014129E+21	8,014641E+21	1,215375E+20	1,215646E+20	1,602877E+22	2,431020E+20	1,627187E+22
2766	8,014881E+21	8,014364E+21	1,214963E+20	1,215191E+20	1,602925E+22	2,430153E+20	1,627226E+22
2767	8,014662E+21	8,014905E+21	1,215539E+20	1,215031E+20	1,602957E+22	2,430571E+20	1,627262E+22
2768	8,014907E+21	8,015011E+21	1,215116E+20	1,215541E+20	1,602992E+22	2,430656E+20	1,627298E+22
2769	8,015232E+21	8,014756E+21	1,215103E+20	1,214924E+20	1,602999E+22	2,430027E+20	1,627299E+22
2770	8,014512E+21	8,015122E+21	1,215622E+20	1,215270E+20	1,602963E+22	2,430892E+20	1,627272E+22
2771	8,014725E+21	8,014631E+21	1,214990E+20	1,215525E+20	1,602936E+22	2,430515E+20	1,627241E+22
2772	8,014582E+21	8,014275E+21	1,215398E+20	1,215042E+20	1,602886E+22	2,430440E+20	1,627190E+22
2773	8,013976E+21	8,014349E+21	1,215540E+20	1,215615E+20	1,602833E+22	2,431155E+20	1,627144E+22
2774	8,014207E+21	8,013644E+21	1,215066E+20	1,215439E+20	1,602785E+22	2,430506E+20	1,627090E+22
2775	8,013559E+21	8,013636E+21	1,215748E+20	1,215188E+20	1,602720E+22	2,430936E+20	1,627029E+22
2776	8,013196E+21	8,013553E+21	1,215476E+20	1,215811E+20	1,602675E+22	2,431286E+20	1,626988E+22
2777	8,013431E+21	8,012936E+21	1,215364E+20	1,215401E+20	1,602637E+22	2,430765E+20	1,626944E+22
2778	8,012752E+21	8,013204E+21	1,215906E+20	1,215426E+20	1,602596E+22	2,431332E+20	1,626909E+22
2779	8,013029E+21	8,012998E+21	1,215347E+20	1,215862E+20	1,602603E+22	2,431208E+20	1,626915E+22
2780	8,013258E+21	8,012850E+21	1,215534E+20	1,215212E+20	1,602611E+22	2,430746E+20	1,626918E+22
2781	8,012848E+21	8,013442E+21	1,215762E+20	1,215597E+20	1,602629E+22	2,431359E+20	1,626943E+22
2782	8,013458E+21	8,013232E+21	1,215163E+20	1,215638E+20	1,602669E+22	2,430801E+20	1,626977E+22

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 $\odot$ Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
2783	8,013476E+21	8,013500E+21	1,215590E+20	1,215110E+20	1,602698E+22	2,430700E+20	1,627005E+22
2784	8,013547E+21	8,013977E+21	1,215512E+20	1,215713E+20	1,602752E+22	2,431225E+20	1,627065E+22
2785	8,014281E+21	8,013750E+21	1,215105E+20	1,215264E+20	1,602803E+22	2,430369E+20	1,627107E+22
2786	8,013932E+21	8,014222E+21	1,215675E+20	1,215101E+20	1,602815E+22	2,430776E+20	1,627123E+22
2787	8,014099E+21	8,014303E+21	1,215254E+20	1,215677E+20	1,602840E+22	2,430932E+20	1,627149E+22
2788	8,014344E+21	8,013941E+21	1,215208E+20	1,215103E+20	1,602829E+22	2,430311E+20	1,627132E+22
2789	8,013724E+21	8,014239E+21	1,215718E+20	1,215432E+20	1,602796E+22	2,431151E+20	1,627108E+22
2790	8,013969E+21	8,013764E+21	1,215092E+20	1,215648E+20	1,602773E+22	2,430740E+20	1,627081E+22
2791	8,013760E+21	8,013418E+21	1,215531E+20	1,215144E+20	1,602718E+22	2,430676E+20	1,627024E+22
2792	8,013145E+21	8,013572E+21	1,215731E+20	1,215685E+20	1,602672E+22	2,431415E+20	1,626986E+22
2793	8,013313E+21	8,012892E+21	1,215253E+20	1,215584E+20	1,602621E+22	2,430837E+20	1,626929E+22
2794	8,012609E+21	8,012756E+21	1,215898E+20	1,215339E+20	1,602536E+22	2,431237E+20	1,626849E+22
2795	8,012346E+21	8,012657E+21	1,215616E+20	1,215993E+20	1,602500E+22	2,431609E+20	1,626816E+22
2796	8,012625E+21	8,012050E+21	1,215463E+20	1,215554E+20	1,602468E+22	2,431016E+20	1,626778E+22
2797	8,012060E+21	8,012387E+21	1,215989E+20	1,215535E+20	1,602445E+22	2,431525E+20	1,626760E+22
2798	8,012306E+21	8,012286E+21	1,215440E+20	1,215954E+20	1,602459E+22	2,431394E+20	1,626773E+22
2799	8,012443E+21	8,012165E+21	1,215628E+20	1,215326E+20	1,602461E+22	2,430954E+20	1,626770E+22
2800	8,012112E+21	8,012780E+21	1,215907E+20	1,215692E+20	1,602489E+22	2,431599E+20	1,626805E+22
2801	8,012791E+21	8,012582E+21	1,215299E+20	1,215754E+20	1,602537E+22	2,431053E+20	1,626848E+22
2802	8,012833E+21	8,012784E+21	1,215700E+20	1,215184E+20	1,602562E+22	2,430884E+20	1,626871E+22
2803	8,012940E+21	8,013294E+21	1,215644E+20	1,215808E+20	1,602623E+22	2,431452E+20	1,626938E+22
2804	8,013563E+21	8,013083E+21	1,215209E+20	1,215377E+20	1,602665E+22	2,430586E+20	1,626970E+22
2805	8,013218E+21	8,013517E+21	1,215770E+20	1,215249E+20	1,602674E+22	2,431019E+20	1,626984E+22
2806	8,013322E+21	8,013548E+21	1,215356E+20	1,215825E+20	1,602687E+22	2,431181E+20	1,626999E+22
2807	8,013528E+21	8,013113E+21	1,215315E+20	1,215262E+20	1,602664E+22	2,430577E+20	1,626970E+22
2808	8,012976E+21	8,013412E+21	1,215883E+20	1,215521E+20	1,602639E+22	2,431404E+20	1,626953E+22
2809	8,013163E+21	8,012968E+21	1,215265E+20	1,215756E+20	1,602613E+22	2,431021E+20	1,626923E+22
2810	8,012838E+21	8,012548E+21	1,215679E+20	1,215253E+20	1,602539E+22	2,430932E+20	1,626848E+22
2811	8,012209E+21	8,012682E+21	1,215879E+20	1,215853E+20	1,602489E+22	2,431731E+20	1,626806E+22
2812	8,012356E+21	8,011980E+21	1,215374E+20	1,215778E+20	1,602434E+22	2,431152E+20	1,626745E+22
2813	8,011824E+21	8,011839E+21	1,215986E+20	1,215510E+20	1,602366E+22	2,431496E+20	1,626681E+22
2814	8,011611E+21	8,011825E+21	1,215720E+20	1,216106E+20	1,602344E+22	2,431826E+20	1,626662E+22
2815	8,011851E+21	8,011283E+21	1,215577E+20	1,215655E+20	1,602313E+22	2,431232E+20	1,626626E+22
2816	8,011302E+21	8,011710E+21	1,216147E+20	1,215597E+20	1,602301E+22	2,431744E+20	1,626619E+22
2817	8,011507E+21	8,011649E+21	1,215595E+20	1,216073E+20	1,602316E+22	2,431668E+20	1,626632E+22
2818	8,011634E+21	8,011407E+21	1,215748E+20	1,215445E+20	1,602304E+22	2,431193E+20	1,626616E+22
2819	8,011451E+21	8,012011E+21	1,216028E+20	1,215834E+20	1,602346E+22	2,431861E+20	1,626665E+22
2820	8,012158E+21	8,011860E+21	1,215398E+20	1,215867E+20	1,602402E+22	2,431265E+20	1,626714E+22
2821	8,012278E+21	8,012099E+21	1,215775E+20	1,215286E+20	1,602438E+22	2,431061E+20	1,626748E+22
2822	8,012287E+21	8,012675E+21	1,215736E+20	1,215899E+20	1,602496E+22	2,431635E+20	1,626813E+22
2823	8,012768E+21	8,012419E+21	1,215303E+20	1,215509E+20	1,602519E+22	2,430812E+20	1,626827E+22
2824	8,012441E+21	8,012809E+21	1,215921E+20	1,215360E+20	1,602525E+22	2,431282E+20	1,626838E+22
2825	8,012546E+21	8,012807E+21	1,215503E+20	1,215944E+20	1,602535E+22	2,431447E+20	1,626850E+22
2826	8,012705E+21	8,012242E+21	1,215457E+20	1,215365E+20	1,602495E+22	2,430822E+20	1,626803E+22
2827	8,012192E+21	8,012535E+21	1,216035E+20	1,215646E+20	1,602473E+22	2,431681E+20	1,626790E+22
2828	8,012281E+21	8,012115E+21	1,215399E+20	1,215909E+20	1,602440E+22	2,431308E+20	1,626753E+22
2829	8,012006E+21	8,011665E+21	1,215777E+20	1,215444E+20	1,602367E+22	2,431221E+20	1,626679E+22
2830	8,011378E+21	8,011810E+21	1,215980E+20	1,216021E+20	1,602319E+22	2,432001E+20	1,626639E+22
2831	8,011524E+21	8,011109E+21	1,215486E+20	1,215938E+20	1,602263E+22	2,431424E+20	1,626578E+22

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 ° Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
2832	8,011069E+21	8,011052E+21	1,216151E+20	1,215587E+20	1,602212E+22	2,431737E+20	1,626530E+22
2833	8,010802E+21	8,011113E+21	1,215895E+20	1,216178E+20	1,602192E+22	2,432073E+20	1,626512E+22
2834	8,010930E+21	8,010510E+21	1,215732E+20	1,215743E+20	1,602144E+22	2,431475E+20	1,626459E+22
2835	8,010443E+21	8,010906E+21	1,216285E+20	1,215739E+20	1,602135E+22	2,432024E+20	1,626455E+22
2836	8,010680E+21	8,010847E+21	1,215707E+20	1,216232E+20	1,602153E+22	2,431939E+20	1,626472E+22
2837	8,011023E+21	8,010621E+21	1,215803E+20	1,215592E+20	1,602164E+22	2,431395E+20	1,626478E+22
2838	8,010903E+21	8,011320E+21	1,216100E+20	1,215931E+20	1,602222E+22	2,432031E+20	1,626543E+22
2839	8,011544E+21	8,011247E+21	1,215488E+20	1,215960E+20	1,602279E+22	2,431448E+20	1,626594E+22
2840	8,011639E+21	8,011543E+21	1,215908E+20	1,215364E+20	1,602318E+22	2,431272E+20	1,626631E+22
2841	8,011534E+21	8,012083E+21	1,215877E+20	1,216009E+20	1,602362E+22	2,431886E+20	1,626681E+22
2842	8,011936E+21	8,011644E+21	1,215426E+20	1,215640E+20	1,602358E+22	2,431066E+20	1,626669E+22
2843	8,011710E+21	8,011939E+21	1,216051E+20	1,215506E+20	1,602365E+22	2,431557E+20	1,626680E+22
2844	8,011775E+21	8,011954E+21	1,215628E+20	1,216066E+20	1,602373E+22	2,431694E+20	1,626690E+22
2845	8,011982E+21	8,011392E+21	1,215553E+20	1,215502E+20	1,602337E+22	2,431056E+20	1,626648E+22
2846	8,011381E+21	8,011728E+21	1,216133E+20	1,215778E+20	1,602311E+22	2,431911E+20	1,626630E+22
2847	8,011376E+21	8,011291E+21	1,215515E+20	1,216078E+20	1,602267E+22	2,431592E+20	1,626583E+22
2848	8,011160E+21	8,010851E+21	1,215937E+20	1,215580E+20	1,602201E+22	2,431516E+20	1,626516E+22
2849	8,010549E+21	8,011019E+21	1,216140E+20	1,216121E+20	1,602157E+22	2,432261E+20	1,626479E+22
2850	8,010637E+21	8,010250E+21	1,215659E+20	1,216031E+20	1,602089E+22	2,431689E+20	1,626406E+22
2851	8,010228E+21	8,010204E+21	1,216319E+20	1,215696E+20	1,602043E+22	2,432015E+20	1,626363E+22
2852	8,009881E+21	8,010311E+21	1,216039E+20	1,216313E+20	1,602019E+22	2,432352E+20	1,626343E+22
2853	8,010117E+21	8,009667E+21	1,215817E+20	1,215931E+20	1,601978E+22	2,431747E+20	1,626296E+22
2854	8,009737E+21	8,010091E+21	1,216344E+20	1,215906E+20	1,601983E+22	2,432250E+20	1,626305E+22
2855	8,010051E+21	8,010086E+21	1,215784E+20	1,216375E+20	1,602014E+22	2,432159E+20	1,626335E+22
2856	8,010477E+21	8,010000E+21	1,215920E+20	1,215656E+20	1,602048E+22	2,431575E+20	1,626363E+22
2857	8,010292E+21	8,010787E+21	1,216227E+20	1,215974E+20	1,602108E+22	2,432201E+20	1,626430E+22
2858	8,010749E+21	8,010623E+21	1,215622E+20	1,216027E+20	1,602137E+22	2,431649E+20	1,626454E+22
2859	8,010857E+21	8,010833E+21	1,216040E+20	1,215493E+20	1,602169E+22	2,431534E+20	1,626484E+22
2860	8,010719E+21	8,011317E+21	1,215999E+20	1,216139E+20	1,602204E+22	2,432138E+20	1,626525E+22
2861	8,011254E+21	8,010809E+21	1,215505E+20	1,215790E+20	1,602206E+22	2,431295E+20	1,626519E+22
2862	8,011057E+21	8,011133E+21	1,216132E+20	1,215624E+20	1,602219E+22	2,431757E+20	1,626537E+22
2863	8,011033E+21	8,011179E+21	1,215736E+20	1,216190E+20	1,602221E+22	2,431926E+20	1,626540E+22
2864	8,011197E+21	8,010684E+21	1,215703E+20	1,215621E+20	1,602188E+22	2,431324E+20	1,626501E+22
2865	8,010521E+21	8,010987E+21	1,216277E+20	1,215906E+20	1,602151E+22	2,432183E+20	1,626473E+22
2866	8,010437E+21	8,010408E+21	1,215680E+20	1,216220E+20	1,602084E+22	2,431901E+20	1,626403E+22
2867	8,010326E+21	8,009923E+21	1,216103E+20	1,215732E+20	1,602025E+22	2,431835E+20	1,626343E+22
2868	8,009659E+21	8,010133E+21	1,216297E+20	1,216234E+20	1,601979E+22	2,432531E+20	1,626304E+22
2869	8,009796E+21	8,009360E+21	1,215771E+20	1,216186E+20	1,601916E+22	2,431957E+20	1,626235E+22
2870	8,009364E+21	8,009347E+21	1,216401E+20	1,215848E+20	1,601871E+22	2,432249E+20	1,626194E+22
2871	8,009016E+21	8,009469E+21	1,216128E+20	1,216485E+20	1,601848E+22	2,432613E+20	1,626175E+22
2872	8,009400E+21	8,008920E+21	1,215929E+20	1,216057E+20	1,601832E+22	2,431987E+20	1,626152E+22
2873	8,009105E+21	8,009420E+21	1,216449E+20	1,215977E+20	1,601853E+22	2,432426E+20	1,626177E+22
2874	8,009374E+21	8,009419E+21	1,215935E+20	1,216429E+20	1,601879E+22	2,432364E+20	1,626203E+22
2875	8,009827E+21	8,009367E+21	1,216063E+20	1,215731E+20	1,601919E+22	2,431794E+20	1,626237E+22
2876	8,009514E+21	8,010172E+21	1,216360E+20	1,216065E+20	1,601969E+22	2,432425E+20	1,626293E+22
2877	8,010015E+21	8,009899E+21	1,215703E+20	1,216184E+20	1,601991E+22	2,431887E+20	1,626310E+22
2878	8,010170E+21	8,010054E+21	1,216100E+20	1,215653E+20	1,602022E+22	2,431752E+20	1,626340E+22
2879	8,010052E+21	8,010531E+21	1,216083E+20	1,216274E+20	1,602058E+22	2,432357E+20	1,626382E+22
2880	8,010615E+21	8,010117E+21	1,215636E+20	1,215880E+20	1,602073E+22	2,431516E+20	1,626388E+22

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 ° Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
2881	8,010336E+21	8,010469E+21	1,216255E+20	1,215698E+20	1,602080E+22	2,431953E+20	1,626400E+22
2882	8,010131E+21	8,010412E+21	1,215899E+20	1,216296E+20	1,602054E+22	2,432195E+20	1,626376E+22
2883	8,010315E+21	8,009840E+21	1,215863E+20	1,215783E+20	1,602015E+22	2,431646E+20	1,626332E+22
2884	8,009610E+21	8,010112E+21	1,216423E+20	1,216045E+20	1,601972E+22	2,432469E+20	1,626297E+22
2885	8,009628E+21	8,009474E+21	1,215797E+20	1,216385E+20	1,601910E+22	2,432182E+20	1,626232E+22
2886	8,009533E+21	8,009034E+21	1,216211E+20	1,215881E+20	1,601857E+22	2,432092E+20	1,626178E+22
2887	8,008807E+21	8,009276E+21	1,216410E+20	1,216373E+20	1,601808E+22	2,432783E+20	1,626136E+22
2888	8,008936E+21	8,008589E+21	1,215915E+20	1,216327E+20	1,601753E+22	2,432241E+20	1,626075E+22
2889	8,008539E+21	8,008573E+21	1,216505E+20	1,215966E+20	1,601711E+22	2,432471E+20	1,626036E+22
2890	8,008199E+21	8,008628E+21	1,216277E+20	1,216597E+20	1,601683E+22	2,432874E+20	1,626011E+22
2891	8,008727E+21	8,008152E+21	1,216078E+20	1,216154E+20	1,601688E+22	2,432231E+20	1,626010E+22
2892	8,008400E+21	8,008755E+21	1,216590E+20	1,216037E+20	1,601715E+22	2,432626E+20	1,626042E+22
2893	8,008679E+21	8,008745E+21	1,216043E+20	1,216537E+20	1,601742E+22	2,432580E+20	1,626068E+22
2894	8,009087E+21	8,008699E+21	1,216129E+20	1,215872E+20	1,601779E+22	2,432000E+20	1,626099E+22
2895	8,008752E+21	8,009440E+21	1,216432E+20	1,216216E+20	1,601819E+22	2,432648E+20	1,626146E+22
2896	8,009339E+21	8,009215E+21	1,215803E+20	1,216304E+20	1,601855E+22	2,432107E+20	1,626177E+22
2897	8,009548E+21	8,009374E+21	1,216189E+20	1,215728E+20	1,601892E+22	2,431917E+20	1,626211E+22
2898	8,009340E+21	8,009798E+21	1,216240E+20	1,216347E+20	1,601914E+22	2,432587E+20	1,626240E+22
2899	8,009891E+21	8,009401E+21	1,215795E+20	1,215992E+20	1,601929E+22	2,431787E+20	1,626247E+22
2900	8,009481E+21	8,009732E+21	1,216396E+20	1,215833E+20	1,601921E+22	2,432229E+20	1,626244E+22
2901	8,009311E+21	8,009542E+21	1,216005E+20	1,216488E+20	1,601885E+22	2,432493E+20	1,626210E+22
2902	8,009535E+21	8,008929E+21	1,215949E+20	1,215980E+20	1,601846E+22	2,431929E+20	1,626166E+22
2903	8,008821E+21	8,009205E+21	1,216529E+20	1,216190E+20	1,601803E+22	2,432719E+20	1,626130E+22
2904	8,008829E+21	8,008685E+21	1,215951E+20	1,216491E+20	1,601751E+22	2,432441E+20	1,626076E+22
2905	8,008652E+21	8,008257E+21	1,216346E+20	1,215963E+20	1,601691E+22	2,432309E+20	1,626014E+22
2906	8,007806E+21	8,008415E+21	1,216585E+20	1,216478E+20	1,601622E+22	2,433063E+20	1,625953E+22
2907	8,008036E+21	8,007718E+21	1,216086E+20	1,216469E+20	1,601575E+22	2,432555E+20	1,625901E+22
2908	8,007699E+21	8,007748E+21	1,216637E+20	1,216080E+20	1,601545E+22	2,432716E+20	1,625872E+22
2909	8,007514E+21	8,007810E+21	1,216391E+20	1,216727E+20	1,601532E+22	2,433118E+20	1,625864E+22
2910	8,008074E+21	8,007439E+21	1,216167E+20	1,216278E+20	1,601551E+22	2,432444E+20	1,625876E+22
2911	8,007697E+21	8,008091E+21	1,216672E+20	1,216152E+20	1,601579E+22	2,432825E+20	1,625907E+22
2912	8,007957E+21	8,008153E+21	1,216156E+20	1,216658E+20	1,601611E+22	2,432814E+20	1,625939E+22
2913	8,008383E+21	8,008048E+21	1,216205E+20	1,215978E+20	1,601643E+22	2,432183E+20	1,625965E+22
2914	8,008041E+21	8,008678E+21	1,216564E+20	1,216319E+20	1,601672E+22	2,432884E+20	1,626001E+22
2915	8,008714E+21	8,008491E+21	1,215949E+20	1,216400E+20	1,601721E+22	2,432349E+20	1,626044E+22
2916	8,008859E+21	8,008698E+21	1,216318E+20	1,215810E+20	1,601756E+22	2,432128E+20	1,626077E+22
2917	8,008625E+21	8,009048E+21	1,216354E+20	1,216477E+20	1,601767E+22	2,432831E+20	1,626096E+22
2918	8,009109E+21	8,008643E+21	1,215881E+20	1,216166E+20	1,601775E+22	2,432047E+20	1,626096E+22
2919	8,008675E+21	8,008897E+21	1,216484E+20	1,216001E+20	1,601757E+22	2,432485E+20	1,626082E+22
2920	8,008536E+21	8,008753E+21	1,216139E+20	1,216614E+20	1,601729E+22	2,432753E+20	1,626056E+22
2921	8,008765E+21	8,008143E+21	1,216077E+20	1,216067E+20	1,601691E+22	2,432144E+20	1,626012E+22
2922	8,007930E+21	8,008348E+21	1,216721E+20	1,216268E+20	1,601628E+22	2,432989E+20	1,625958E+22
2923	8,007904E+21	8,007858E+21	1,216149E+20	1,216606E+20	1,601576E+22	2,432754E+20	1,625904E+22
2924	8,007658E+21	8,007411E+21	1,216503E+20	1,216107E+20	1,601507E+22	2,432609E+20	1,625833E+22
2925	8,006926E+21	8,007447E+21	1,216700E+20	1,216667E+20	1,601437E+22	2,433367E+20	1,625771E+22
2926	8,007279E+21	8,006812E+21	1,216173E+20	1,216660E+20	1,601409E+22	2,432833E+20	1,625737E+22
2927	8,007010E+21	8,006919E+21	1,216712E+20	1,216218E+20	1,601393E+22	2,432930E+20	1,625722E+22
2928	8,006847E+21	8,007155E+21	1,216516E+20	1,216827E+20	1,601400E+22	2,433343E+20	1,625734E+22
2929	8,007348E+21	8,006833E+21	1,216258E+20	1,216351E+20	1,601418E+22	2,432609E+20	1,625744E+22

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 ° Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
2930	8,006869E+21	8,007393E+21	1,216809E+20	1,216246E+20	1,601426E+22	2,433055E+20	1,625757E+22
2931	8,007203E+21	8,007444E+21	1,216298E+20	1,216765E+20	1,601465E+22	2,433063E+20	1,625795E+22
2932	8,007666E+21	8,007345E+21	1,216320E+20	1,216074E+20	1,601501E+22	2,432394E+20	1,625825E+22
2933	8,007443E+21	8,007911E+21	1,216672E+20	1,216439E+20	1,601535E+22	2,433111E+20	1,625866E+22
2934	8,008113E+21	8,007792E+21	1,216044E+20	1,216533E+20	1,601591E+22	2,432577E+20	1,625916E+22
2935	8,008171E+21	8,008004E+21	1,216398E+20	1,215948E+20	1,601618E+22	2,432346E+20	1,625941E+22
2936	8,007895E+21	8,008391E+21	1,216469E+20	1,216615E+20	1,601629E+22	2,433084E+20	1,625959E+22
2937	8,008349E+21	8,007906E+21	1,215977E+20	1,216282E+20	1,601626E+22	2,432259E+20	1,625948E+22
2938	8,007856E+21	8,008052E+21	1,216652E+20	1,216105E+20	1,601591E+22	2,432757E+20	1,625918E+22
2939	8,007726E+21	8,007941E+21	1,216336E+20	1,216696E+20	1,601567E+22	2,433032E+20	1,625897E+22
2940	8,007842E+21	8,007340E+21	1,216257E+20	1,216175E+20	1,601518E+22	2,432432E+20	1,625843E+22
2941	8,006996E+21	8,007415E+21	1,216860E+20	1,216429E+20	1,601441E+22	2,433289E+20	1,625774E+22
2942	8,006967E+21	8,006916E+21	1,216252E+20	1,216817E+20	1,601388E+22	2,433069E+20	1,625719E+22
2943	8,006791E+21	8,006454E+21	1,216573E+20	1,216298E+20	1,601324E+22	2,432871E+20	1,625653E+22
2944	8,006195E+21	8,006622E+21	1,216804E+20	1,216807E+20	1,601282E+22	2,433612E+20	1,625618E+22
2945	8,006601E+21	8,006087E+21	1,216282E+20	1,216741E+20	1,601269E+22	2,433023E+20	1,625599E+22
2946	8,006256E+21	8,006210E+21	1,216875E+20	1,216288E+20	1,601247E+22	2,433163E+20	1,625578E+22
2947	8,006065E+21	8,006518E+21	1,216697E+20	1,216907E+20	1,601258E+22	2,433604E+20	1,625594E+22
2948	8,006508E+21	8,006173E+21	1,216394E+20	1,216469E+20	1,601268E+22	2,432864E+20	1,625597E+22
2949	8,006144E+21	8,006561E+21	1,216906E+20	1,216398E+20	1,601271E+22	2,433304E+20	1,625604E+22
2950	8,006569E+21	8,006670E+21	1,216377E+20	1,216916E+20	1,601324E+22	2,433294E+20	1,625657E+22
2951	8,007070E+21	8,006620E+21	1,216383E+20	1,216189E+20	1,601369E+22	2,432573E+20	1,625695E+22
2952	8,006838E+21	8,007296E+21	1,216780E+20	1,216537E+20	1,601413E+22	2,433317E+20	1,625747E+22
2953	8,007420E+21	8,007195E+21	1,216139E+20	1,216610E+20	1,601462E+22	2,432750E+20	1,625789E+22
2954	8,007361E+21	8,007281E+21	1,216541E+20	1,216059E+20	1,601464E+22	2,432600E+20	1,625790E+22
2955	8,007101E+21	8,007644E+21	1,216633E+20	1,216710E+20	1,601474E+22	2,433343E+20	1,625808E+22
2956	8,007527E+21	8,007137E+21	1,216126E+20	1,216398E+20	1,601466E+22	2,432523E+20	1,625792E+22
2957	8,007069E+21	8,007143E+21	1,216793E+20	1,216249E+20	1,601421E+22	2,433042E+20	1,625752E+22
2958	8,006892E+21	8,007075E+21	1,216456E+20	1,216863E+20	1,601397E+22	2,433319E+20	1,625730E+22
2959	8,006943E+21	8,006445E+21	1,216352E+20	1,216366E+20	1,601339E+22	2,432718E+20	1,625666E+22
2960	8,006141E+21	8,006536E+21	1,216962E+20	1,216615E+20	1,601268E+22	2,433577E+20	1,625603E+22
2961	8,006173E+21	8,006035E+21	1,216347E+20	1,216957E+20	1,601221E+22	2,433304E+20	1,625554E+22
2962	8,006010E+21	8,005580E+21	1,216722E+20	1,216408E+20	1,601159E+22	2,433130E+20	1,625490E+22
2963	8,005452E+21	8,005886E+21	1,216989E+20	1,216867E+20	1,601134E+22	2,433856E+20	1,625472E+22
2964	8,005759E+21	8,005425E+21	1,216462E+20	1,216823E+20	1,601118E+22	2,433285E+20	1,625451E+22
2965	8,005406E+21	8,005433E+21	1,217008E+20	1,216418E+20	1,601084E+22	2,433427E+20	1,625418E+22
2966	8,005238E+21	8,005734E+21	1,216796E+20	1,217067E+20	1,601097E+22	2,433863E+20	1,625436E+22
2967	8,005747E+21	8,005364E+21	1,216455E+20	1,216620E+20	1,601111E+22	2,433074E+20	1,625442E+22
2968	8,005544E+21	8,005846E+21	1,216981E+20	1,216517E+20	1,601139E+22	2,433498E+20	1,625474E+22
2969	8,006007E+21	8,006028E+21	1,216467E+20	1,216979E+20	1,601203E+22	2,433445E+20	1,625538E+22
2970	8,006415E+21	8,005997E+21	1,216520E+20	1,216261E+20	1,601241E+22	2,432781E+20	1,625569E+22
2971	8,006134E+21	8,006721E+21	1,216937E+20	1,216614E+20	1,601285E+22	2,433552E+20	1,625621E+22
2972	8,006622E+21	8,006553E+21	1,216281E+20	1,216733E+20	1,601317E+22	2,433014E+20	1,625648E+22
2973	8,006621E+21	8,006427E+21	1,216651E+20	1,216227E+20	1,601305E+22	2,432878E+20	1,625634E+22
2974	8,006382E+21	8,006798E+21	1,216732E+20	1,216863E+20	1,601318E+22	2,433596E+20	1,625654E+22
2975	8,006763E+21	8,006294E+21	1,216219E+20	1,216545E+20	1,601306E+22	2,432764E+20	1,625633E+22
2976	8,006285E+21	8,006342E+21	1,216907E+20	1,216393E+20	1,601263E+22	2,433300E+20	1,625596E+22
2977	8,006028E+21	8,006263E+21	1,216562E+20	1,216980E+20	1,601229E+22	2,433541E+20	1,625564E+22
2978	8,006015E+21	8,005553E+21	1,216504E+20	1,216508E+20	1,601157E+22	2,433012E+20	1,625487E+22

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 ☉ Years	0° - 90°	90° - 180°	180° - 270°	270° - 360°	0° - 180°	180° - 360°	0° - 360°
2979	8,005289E+21	8,005688E+21	1,217126E+20	1,216710E+20	1,601098E+22	2,433837E+20	1,625436E+22
2980	8,005340E+21	8,005246E+21	1,216527E+20	1,217063E+20	1,601059E+22	2,433590E+20	1,625395E+22
2981	8,005223E+21	8,004714E+21	1,216883E+20	1,216535E+20	1,600994E+22	2,433418E+20	1,625328E+22
2982	8,004630E+21	8,005110E+21	1,217123E+20	1,216999E+20	1,600974E+22	2,434122E+20	1,625315E+22
2983	8,004885E+21	8,004647E+21	1,216558E+20	1,216988E+20	1,600953E+22	2,433546E+20	1,625289E+22
2984	8,004613E+21	8,004640E+21	1,217087E+20	1,216586E+20	1,600925E+22	2,433673E+20	1,625262E+22
2985	8,004540E+21	8,004955E+21	1,216866E+20	1,217172E+20	1,600949E+22	2,434038E+20	1,625290E+22
2986	8,005088E+21	8,004618E+21	1,216572E+20	1,216710E+20	1,600971E+22	2,433282E+20	1,625303E+22
2987	8,004934E+21	8,005230E+21	1,217123E+20	1,216566E+20	1,601016E+22	2,433688E+20	1,625353E+22
2988	8,005311E+21	8,005471E+21	1,216620E+20	1,217061E+20	1,601078E+22	2,433681E+20	1,625415E+22
2989	8,005680E+21	8,005287E+21	1,216628E+20	1,216401E+20	1,601097E+22	2,433029E+20	1,625427E+22
2990	8,005402E+21	8,005981E+21	1,217018E+20	1,216765E+20	1,601138E+22	2,433783E+20	1,625476E+22
2991	8,005890E+21	8,005767E+21	1,216345E+20	1,216878E+20	1,601166E+22	2,433223E+20	1,625498E+22
2992	8,005968E+21	8,005662E+21	1,216741E+20	1,216367E+20	1,601163E+22	2,433108E+20	1,625494E+22
2993	8,005692E+21	8,006055E+21	1,216843E+20	1,216936E+20	1,601175E+22	2,433779E+20	1,625512E+22
2994	8,005930E+21	8,005531E+21	1,216384E+20	1,216657E+20	1,601146E+22	2,433041E+20	1,625477E+22
2995	8,005410E+21	8,005584E+21	1,217076E+20	1,216498E+20	1,601099E+22	2,433574E+20	1,625435E+22
2996	8,005108E+21	8,005433E+21	1,216735E+20	1,217121E+20	1,601054E+22	2,433856E+20	1,625393E+22
2997	8,005163E+21	8,004581E+21	1,216648E+20	1,216676E+20	1,600974E+22	2,433324E+20	1,625308E+22
2998	8,004504E+21	8,004791E+21	1,217245E+20	1,216850E+20	1,600929E+22	2,434095E+20	1,625270E+22
2999	8,004501E+21	8,004403E+21	1,216655E+20	1,217202E+20	1,600890E+22	2,433857E+20	1,625229E+22