

### SŁOŃCE

Data 2020	0 <sup>h</sup> UT			Data 2020	0 <sup>h</sup> UT					
	X <sub>2000</sub>	Y <sub>2000</sub>	Z <sub>2000</sub>		X <sub>2000</sub>	Y <sub>2000</sub>	Z <sub>2000</sub>			
I	1	0.16635	-0.88917	-0.38546	II	16	0.82356	-0.50030	-0.21688	
	2	0.18356	-0.88629	-0.38421		17	0.83322	-0.48701	-0.21112	
	3	0.20071	-0.88315	-0.38285		18	0.84262	-0.47356	-0.20529	
	4	0.21780	-0.87972	-0.38136		19	0.85177	-0.45997	-0.19940	
	5	0.23482	-0.87602	-0.37976		20	0.86065	-0.44624	-0.19345	
	6	0.25177	-0.87205	-0.37804		21	0.86927	-0.43236	-0.18743	
	7	0.26863	-0.86781	-0.37620		22	0.87762	-0.41836	-0.18136	
	8	0.28541	-0.86330	-0.37424		23	0.88571	-0.40422	-0.17523	
	9	0.30211	-0.85853	-0.37217		24	0.89352	-0.38996	-0.16905	
	10	0.31870	-0.85349	-0.36999		25	0.90105	-0.37558	-0.16282	
	11	0.33520	-0.84818	-0.36769		26	0.90831	-0.36109	-0.15654	
	12	0.35160	-0.84261	-0.36527		27	0.91529	-0.34649	-0.15021	
	13	0.36789	-0.83678	-0.36274		28	0.92199	-0.33178	-0.14383	
	14	0.38406	-0.83069	-0.36010		29	0.92841	-0.31697	-0.13741	
	15	0.40012	-0.82435	-0.35735		III	1	0.93455	-0.30206	-0.13095
	16	0.41605	-0.81775	-0.35449			2	0.94040	-0.28707	-0.12445
	17	0.43186	-0.81089	-0.35152			3	0.94596	-0.27198	-0.11791
	18	0.44753	-0.80378	-0.34844			4	0.95123	-0.25682	-0.11133
	19	0.46307	-0.79642	-0.34525			5	0.95622	-0.24158	-0.10473
	20	0.47846	-0.78881	-0.34195			6	0.96092	-0.22627	-0.09809
	21	0.49370	-0.78095	-0.33854			7	0.96532	-0.21089	-0.09142
	22	0.50880	-0.77285	-0.33503			8	0.96944	-0.19545	-0.08473
	23	0.52373	-0.76451	-0.33142			9	0.97326	-0.17995	-0.07801
	24	0.53850	-0.75593	-0.32770			10	0.97679	-0.16440	-0.07127
	25	0.55311	-0.74712	-0.32388			11	0.98003	-0.14880	-0.06450
	26	0.56754	-0.73807	-0.31996			12	0.98297	-0.13315	-0.05772
	27	0.58179	-0.72879	-0.31593		13	0.98562	-0.11746	-0.05092	
	28	0.59587	-0.71929	-0.31181		14	0.98798	-0.10173	-0.04410	
	29	0.60975	-0.70956	-0.30760		15	0.99003	-0.08598	-0.03727	
	30	0.62345	-0.69961	-0.30328	16	0.99179	-0.07019	-0.03043		
	31	0.63695	-0.68944	-0.29888	17	0.99325	-0.05439	-0.02358		
II	1	0.65025	-0.67907	-0.29438	18	0.99442	-0.03856	-0.01672		
	2	0.66335	-0.66848	-0.28979	19	0.99528	-0.02272	-0.00985		
	3	0.67625	-0.65769	-0.28511	20	0.99584	-0.00688	-0.00299		
	4	0.68893	-0.64669	-0.28034	21	0.99611	0.00897	0.00388		
	5	0.70140	-0.63550	-0.27549	22	0.99608	0.02482	0.01075		
	6	0.71366	-0.62411	-0.27055	23	0.99574	0.04066	0.01762		
	7	0.72569	-0.61253	-0.26553	24	0.99511	0.05649	0.02448		
	8	0.73750	-0.60076	-0.26043	25	0.99418	0.07230	0.03134		
	9	0.74908	-0.58881	-0.25525	26	0.99295	0.08809	0.03818		
	10	0.76044	-0.57668	-0.24999	27	0.99143	0.10385	0.04501		
	11	0.77156	-0.56437	-0.24465	28	0.98960	0.11958	0.05183		
	12	0.78244	-0.55189	-0.23924	29	0.98749	0.13528	0.05864		
	13	0.79309	-0.53924	-0.23376	30	0.98507	0.15093	0.06542		
	14	0.80349	-0.52642	-0.22820	31	0.98237	0.16654	0.07219		
	15	0.81365	-0.51344	-0.22258	IV	1	0.97937	0.18209	0.07893	

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IV	2	0.97608	0.19759	0.08565	V	18	0.54730	0.78053	0.33835
	3	0.97251	0.21303	0.09235		19	0.53304	0.78902	0.34203
	4	0.96864	0.22841	0.09901		20	0.51861	0.79729	0.34562
	5	0.96449	0.24372	0.10565		21	0.50404	0.80533	0.34910
	6	0.96006	0.25895	0.11225		22	0.48933	0.81314	0.35249
	7	0.95535	0.27411	0.11883		23	0.47447	0.82071	0.35577
	8	0.95036	0.28919	0.12536		24	0.45948	0.82805	0.35896
	9	0.94508	0.30418	0.13186		25	0.44436	0.83516	0.36204
	10	0.93954	0.31908	0.13832		26	0.42911	0.84202	0.36501
	11	0.93371	0.33389	0.14474		27	0.41374	0.84864	0.36789
	12	0.92761	0.34861	0.15112		28	0.39825	0.85502	0.37065
	13	0.92124	0.36322	0.15745		29	0.38265	0.86116	0.37331
	14	0.91460	0.37773	0.16374		30	0.36694	0.86705	0.37587
	15	0.90770	0.39213	0.16998		31	0.35113	0.87269	0.37831
	16	0.90052	0.40641	0.17618	VI	1	0.33522	0.87809	0.38065
	17	0.89308	0.42058	0.18232		2	0.31922	0.88323	0.38288
	18	0.88538	0.43463	0.18840		3	0.30313	0.88813	0.38500
	19	0.87742	0.44855	0.19444		4	0.28695	0.89277	0.38702
	20	0.86920	0.46233	0.20042		5	0.27070	0.89717	0.38892
	21	0.86072	0.47599	0.20633		6	0.25437	0.90131	0.39072
	22	0.85199	0.48950	0.21219		7	0.23796	0.90520	0.39240
	23	0.84302	0.50287	0.21799		8	0.22149	0.90883	0.39397
	24	0.83379	0.51610	0.22372		9	0.20496	0.91221	0.39544
	25	0.82433	0.52917	0.22939		10	0.18837	0.91533	0.39679
	26	0.81462	0.54209	0.23499		11	0.17172	0.91819	0.39803
	27	0.80467	0.55485	0.24052		12	0.15503	0.92079	0.39916
	28	0.79449	0.56745	0.24598		13	0.13828	0.92314	0.40017
	29	0.78409	0.57988	0.25137		14	0.12150	0.92522	0.40108
	30	0.77345	0.59214	0.25669		15	0.10468	0.92704	0.40187
V	1	0.76259	0.60423	0.26193		16	0.08784	0.92860	0.40254
	2	0.75151	0.61614	0.26710		17	0.07096	0.92990	0.40311
	3	0.74022	0.62787	0.27218		18	0.05406	0.93094	0.40356
	4	0.72871	0.63943	0.27719		19	0.03715	0.93171	0.40389
	5	0.71700	0.65079	0.28212		20	0.02023	0.93221	0.40411
	6	0.70508	0.66197	0.28697		21	0.00330	0.93246	0.40422
	7	0.69296	0.67297	0.29173		22	-0.01363	0.93243	0.40421
	8	0.68064	0.68376	0.29641		23	-0.03056	0.93215	0.40409
	9	0.66813	0.69437	0.30101		24	-0.04748	0.93160	0.40385
	10	0.65542	0.70477	0.30552		25	-0.06438	0.93078	0.40349
	11	0.64253	0.71497	0.30994		26	-0.08126	0.92971	0.40303
	12	0.62945	0.72497	0.31427		27	-0.09812	0.92837	0.40245
	13	0.61619	0.73476	0.31852		28	-0.11495	0.92676	0.40175
	14	0.60275	0.74435	0.32267		29	-0.13175	0.92490	0.40095
	15	0.58914	0.75372	0.32673		30	-0.14851	0.92278	0.40003
	16	0.57536	0.76287	0.33070	VII	1	-0.16522	0.92040	0.39899
	17	0.56141	0.77181	0.33457		2	-0.18188	0.91776	0.39785

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VII	3	-0.19850	0.91486	0.39659	VIII	18	-0.83161	0.52957	0.22957
	4	-0.21506	0.91171	0.39523		19	-0.84102	0.51658	0.22394
	5	-0.23155	0.90830	0.39375		20	-0.85019	0.50344	0.21824
	6	-0.24798	0.90464	0.39216		21	-0.85912	0.49016	0.21249
	7	-0.26435	0.90073	0.39046		22	-0.86781	0.47674	0.20667
	8	-0.28064	0.89656	0.38865		23	-0.87624	0.46318	0.20079
	9	-0.29685	0.89214	0.38674		24	-0.88442	0.44949	0.19486
	10	-0.31298	0.88747	0.38471		25	-0.89234	0.43567	0.18887
	11	-0.32902	0.88255	0.38258		26	-0.90001	0.42173	0.18282
	12	-0.34497	0.87738	0.38034		27	-0.90742	0.40767	0.17673
	13	-0.36083	0.87197	0.37799		28	-0.91457	0.39349	0.17058
	14	-0.37658	0.86630	0.37554		29	-0.92145	0.37921	0.16439
	15	-0.39223	0.86040	0.37298		30	-0.92808	0.36481	0.15815
	16	-0.40777	0.85425	0.37031		31	-0.93443	0.35031	0.15186
	17	-0.42320	0.84786	0.36754	IX	1	-0.94052	0.33572	0.14553
	18	-0.43851	0.84123	0.36467		2	-0.94634	0.32102	0.13916
	19	-0.45369	0.83435	0.36169		3	-0.95189	0.30624	0.13275
	20	-0.46875	0.82725	0.35861		4	-0.95716	0.29136	0.12631
	21	-0.48367	0.81991	0.35543		5	-0.96216	0.27641	0.11982
	22	-0.49846	0.81233	0.35215		6	-0.96688	0.26137	0.11330
	23	-0.51311	0.80453	0.34876		7	-0.97133	0.24625	0.10675
	24	-0.52761	0.79649	0.34528		8	-0.97550	0.23107	0.10017
	25	-0.54195	0.78824	0.34170		9	-0.97938	0.21581	0.09356
	26	-0.55615	0.77976	0.33803		10	-0.98298	0.20049	0.08692
	27	-0.57018	0.77106	0.33426		11	-0.98630	0.18512	0.08025
	28	-0.58405	0.76214	0.33039		12	-0.98933	0.16968	0.07356
	29	-0.59776	0.75301	0.32643		13	-0.99207	0.15420	0.06685
	30	-0.61129	0.74367	0.32238		14	-0.99453	0.13867	0.06012
	31	-0.62466	0.73411	0.31824		15	-0.99669	0.12310	0.05337
VIII	1	-0.63784	0.72436	0.31401		16	-0.99857	0.10749	0.04660
	2	-0.65085	0.71439	0.30969		17	-1.00015	0.09185	0.03982
	3	-0.66367	0.70423	0.30528		18	-1.00144	0.07619	0.03303
	4	-0.67630	0.69387	0.30079		19	-1.00243	0.06050	0.02623
	5	-0.68874	0.68332	0.29622		20	-1.00313	0.04479	0.01942
	6	-0.70099	0.67257	0.29156		21	-1.00354	0.02907	0.01261
	7	-0.71305	0.66163	0.28681		22	-1.00365	0.01335	0.00579
	8	-0.72490	0.65050	0.28199		23	-1.00346	-0.00238	-0.00103
	9	-0.73654	0.63919	0.27709		24	-1.00298	-0.01810	-0.00785
	10	-0.74798	0.62770	0.27210		25	-1.00221	-0.03382	-0.01466
	11	-0.75921	0.61602	0.26704		26	-1.00115	-0.04953	-0.02147
	12	-0.77023	0.60417	0.26191		27	-0.99979	-0.06522	-0.02827
	13	-0.78102	0.59215	0.25670		28	-0.99814	-0.08089	-0.03507
	14	-0.79159	0.57996	0.25141		29	-0.99619	-0.09654	-0.04185
	15	-0.80194	0.56760	0.24606		30	-0.99396	-0.11216	-0.04862
	16	-0.81206	0.55508	0.24063	X	1	-0.99143	-0.12774	-0.05538
	17	-0.82195	0.54240	0.23513		2	-0.98861	-0.14329	-0.06211

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X	3	-0.98550	-0.15879	-0.06884	18	-0.55534	-0.75031	-0.32526	
	4	-0.98210	-0.17425	-0.07554	19	-0.54074	-0.75900	-0.32903	
	5	-0.97842	-0.18966	-0.08221	20	-0.52597	-0.76746	-0.33269	
	6	-0.97444	-0.20501	-0.08887	21	-0.51104	-0.77568	-0.33626	
	7	-0.97018	-0.22030	-0.09550	22	-0.49595	-0.78367	-0.33972	
	8	-0.96563	-0.23553	-0.10210	23	-0.48071	-0.79141	-0.34307	
	9	-0.96079	-0.25069	-0.10867	24	-0.46533	-0.79890	-0.34632	
	10	-0.95567	-0.26578	-0.11521	25	-0.44980	-0.80616	-0.34947	
	11	-0.95026	-0.28079	-0.12172	26	-0.43414	-0.81316	-0.35250	
	12	-0.94457	-0.29572	-0.12819	27	-0.41835	-0.81991	-0.35543	
	13	-0.93860	-0.31056	-0.13462	28	-0.40243	-0.82641	-0.35825	
	14	-0.93234	-0.32531	-0.14101	29	-0.38638	-0.83266	-0.36096	
	15	-0.92581	-0.33996	-0.14737	30	-0.37022	-0.83865	-0.36355	
	16	-0.91900	-0.35451	-0.15367	XII	1	-0.35394	-0.84439	-0.36604
	17	-0.91191	-0.36895	-0.15994		2	-0.33756	-0.84986	-0.36841
	18	-0.90455	-0.38329	-0.16615		3	-0.32107	-0.85508	-0.37067
	19	-0.89691	-0.39750	-0.17231		4	-0.30448	-0.86003	-0.37282
	20	-0.88901	-0.41160	-0.17842		5	-0.28780	-0.86472	-0.37485
	21	-0.88084	-0.42557	-0.18448		6	-0.27102	-0.86914	-0.37677
	22	-0.87240	-0.43942	-0.19048		7	-0.25416	-0.87329	-0.37857
	23	-0.86371	-0.45313	-0.19643		8	-0.23723	-0.87718	-0.38025
	24	-0.85475	-0.46670	-0.20231		9	-0.22021	-0.88079	-0.38182
	25	-0.84554	-0.48013	-0.20813		10	-0.20313	-0.88413	-0.38326
	26	-0.83608	-0.49341	-0.21389		11	-0.18598	-0.88719	-0.38459
	27	-0.82636	-0.50655	-0.21959		12	-0.16877	-0.88998	-0.38580
	28	-0.81640	-0.51953	-0.22522		13	-0.15151	-0.89249	-0.38689
	29	-0.80619	-0.53236	-0.23078		14	-0.13420	-0.89473	-0.38786
	30	-0.79574	-0.54502	-0.23627		15	-0.11685	-0.89668	-0.38871
	31	-0.78505	-0.55753	-0.24169		16	-0.09946	-0.89836	-0.38944
XI	1	-0.77413	-0.56986	-0.24703		17	-0.08204	-0.89975	-0.39004
	2	-0.76297	-0.58202	-0.25230		18	-0.06460	-0.90086	-0.39052
	3	-0.75158	-0.59401	-0.25750		19	-0.04714	-0.90170	-0.39088
	4	-0.73996	-0.60582	-0.26262		20	-0.02966	-0.90225	-0.39112
	5	-0.72812	-0.61744	-0.26766		21	-0.01218	-0.90252	-0.39124
	6	-0.71606	-0.62888	-0.27261		22	0.00531	-0.90251	-0.39124
	7	-0.70378	-0.64013	-0.27749		23	0.02279	-0.90222	-0.39111
	8	-0.69129	-0.65119	-0.28228		24	0.04026	-0.90165	-0.39086
	9	-0.67858	-0.66205	-0.28699		25	0.05772	-0.90080	-0.39049
	10	-0.66567	-0.67271	-0.29161		26	0.07516	-0.89967	-0.39000
	11	-0.65255	-0.68316	-0.29614		27	0.09258	-0.89826	-0.38939
	12	-0.63924	-0.69341	-0.30058		28	0.10997	-0.89657	-0.38866
	13	-0.62572	-0.70344	-0.30493		29	0.12732	-0.89461	-0.38781
	14	-0.61201	-0.71326	-0.30919		30	0.14463	-0.89236	-0.38684
	15	-0.59812	-0.72286	-0.31335		31	0.16190	-0.88985	-0.38574
	16	-0.58404	-0.73224	-0.31742					
	17	-0.56978	-0.74139	-0.32139					