KSIĘŻYC

d	Wsch.	Kulm.	Zach.	A_W	A_Z	α	δ	D	F
	λ=0°		φ=50°			0^{h}UT			
GRUDZIEŃ 2009									
	h m	h m	h m	–°	+°	h m s	° '	'	
1	14 58	23 27	6 50	129	128	3 11 14	22 27.6	32.1	0.98
2	15 49	——	8 05	132	132	4 12 28	24 55.3	32.4	1.00
3	16 56	0 30	9 11	131	132	5 16 38	25 46.4	32.7	-0.99
4	18 15	1 34	10 02	127	129	6 21 32	24 50.5	32.9	-0.96
5	19 40	2 35	10 40	120	123	7 24 50	22 11.5	32.9	-0.90
6	21 05	3 33	11 08	111	115	8 24 54	18 06.4	32.8	-0.82
7	22 28	4 27	11 31	102	106	9 21 17	12 58.9	32.6	-0.72
8	23 48	5 17	11 50	92	97	10 14 23	7 13.7	32.3	-0.61
9	——	6 05	12 08	—	87	11 05 11	1 13.0	32.0	-0.50
10	1 06	6 52	12 25	82	78	11 54 46	- 4 44.4	31.7	-0.39
11	2 23	7 40	12 44	73	69	12 44 14	-10 22.0	31.4	-0.29
12	3 40	8 28	13 06	64	61	13 34 29	-15 25.2	31.1	-0.20
13	4 55	9 18	13 33	57	55	14 26 08	-19 40.2	30.8	-0.12
14	6 07	10 10	14 07	51	50	15 19 24	-22 54.5	30.5	-0.06
15	7 13	11 02	14 50	48	48	16 13 56	-24 58.3	30.3	-0.02
16	8 08	11 55	15 43	47	48	17 08 55	-25 45.6	30.0	-0.00
17	8 53	12 46	16 44	49	50	18 03 18	-25 16.0	29.8	0.00
18	9 28	13 36	17 50	53	55	18 56 01	-23 34.7	29.7	0.02
19	9 55	14 22	18 58	59	61	19 46 26	-20 50.9	29.5	0.06
20	10 16	15 06	20 06	65	68	20 34 22	-17 16.1	29.5	0.11
21	10 34	15 48	21 13	73	76	21 20 06	-13 01.8	29.5	0.17
22	10 49	16 29	22 20	80	84	22 04 12	- 8 18.5	29.5	0.25
23	11 04	17 09	23 27	88	93	22 47 27	- 3 15.8	29.7	0.34
24	11 19	17 50	——	97	—	23 30 47	1 57.5	29.9	0.43
25	11 35	18 33	0 36	105	101	0 15 12	7 12.3	30.3	0.53
26	11 54	19 20	1 48	113	110	1 01 48	12 17.9	30.7	0.63
27	12 17	20 11	3 03	121	118	1 51 39	17 00.8	31.1	0.72
28	12 49	21 07	4 21	127	125	2 45 42	21 03.1	31.7	0.81
29	13 32	22 08	5 38	131	130	3 44 21	24 03.1	32.2	0.89
30	14 30	23 12	6 50	132	132	4 47 08	25 37.8	32.7	0.95
31	15 45	24 14	7 49	130	131	5 52 26	25 28.9	33.0	0.99

pełnia:	2 XII	7^{h}30^m
III kwadra:	9 XII	0^{h}13^m
nów:	16 XII	12^{h}02^m
I kwadra:	24 XII	17^{h}36^m
pełnia:	31 XII	19^{h}13^m
perygeum	4 XII	14^{h}13^m
apogeum	20 XII	14^{h}55^m

7 XII	2.8^h	Mars	6ºN
10 XII	10.7^h	Saturn	8ºN
15 XII	23.0^h	Wenus	3ºN
18 XII	8.3^h	Merkury	1ºS
21 XII	14.6^h	Neptun	4ºS
21 XII	15.1^h	Jowisz	4ºS
24 XII	2.4^h	Uran	6ºS