

KSIĘŻYC

d	Wsch.	Kulm.	Zach.	A _w	A _z	α	δ	D	F
	λ=0°		φ=50°			0 ^h UT			
GRUDZIEŃ 2018									
	h m	h m	h m	-°	+°	h m s	° ' "	' "	
1	0 24	7 10	13 44	101	97	11 35 15	7 10.5	31.9	-0.39
2	1 38	7 59	14 07	93	89	12 26 48	2 16.0	31.7	-0.29
3	2 52	8 47	14 31	85	81	13 17 17	-2 41.3	31.4	-0.19
4	4 05	9 35	14 55	77	74	14 07 27	-7 26.8	31.2	-0.12
5	5 16	10 23	15 22	70	67	14 57 54	-11 47.4	30.9	-0.06
6	6 26	11 12	15 52	64	62	15 49 03	-15 30.7	30.7	-0.02
7	7 32	12 02	16 28	59	58	16 41 00	-18 26.4	30.4	-0.00
8	8 33	12 53	17 10	56	55	17 33 34	-20 26.3	30.1	0.01
9	9 28	13 43	17 59	55	55	18 26 17	-21 25.7	29.9	0.03
10	10 14	14 33	18 53	56	57	19 18 30	-21 23.5	29.7	0.07
11	10 54	15 20	19 52	58	60	20 09 40	-20 22.6	29.6	0.12
12	11 26	16 07	20 54	62	64	20 59 24	-18 28.4	29.5	0.19
13	11 54	16 51	21 57	67	70	21 47 36	-15 47.8	29.5	0.27
14	12 18	17 35	23 01	73	76	22 34 27	-12 28.6	29.6	0.36
15	12 40	18 18	—	80	—	23 20 22	-8 38.1	29.8	0.45
16	13 01	19 01	0 06	87	83	0 06 00	-4 23.8	30.0	0.55
17	13 22	19 45	1 13	94	90	0 52 05	0 06.6	30.4	0.65
18	13 44	20 32	2 22	101	98	1 39 28	4 44.1	30.8	0.74
19	14 10	21 22	3 33	108	105	2 29 00	9 17.6	31.3	0.83
20	14 41	22 16	4 48	115	112	3 21 32	13 32.7	31.8	0.90
21	15 18	23 13	6 03	120	119	4 17 36	17 11.8	32.3	0.96
22	16 06	—	7 18	124	123	5 17 17	19 54.6	32.7	0.99
23	17 06	0 15	8 26	125	125	6 19 52	21 22.0	32.9	-1.00
24	18 15	1 17	9 25	123	124	7 23 53	21 21.2	33.1	-0.98
25	19 33	2 19	10 13	118	120	8 27 25	19 50.2	33.1	-0.93
26	20 52	3 19	10 52	111	114	9 28 50	16 58.9	32.9	-0.85
27	22 11	4 15	11 23	104	107	10 27 14	13 05.1	32.7	-0.76
28	23 28	5 08	11 50	96	99	11 22 34	8 29.9	32.3	-0.66
29	—	5 58	12 14	—	91	12 15 18	3 33.5	31.9	-0.55
30	0 42	6 46	12 37	87	84	13 06 14	-1 26.8	31.6	-0.44
31	1 55	7 33	13 01	79	76	13 56 13	-6 16.2	31.2	-0.33

nów:	7 XII	7 ^h 20 ^m	3 XII	18.8 ^h	Wenus	4°S
pierwsza kwadra:	15 XII	11 ^h 49 ^m	5 XII	21.2 ^h	Merkury	2°S
pełnia:	22 XII	17 ^h 49 ^m	6 XII	13.5 ^h	Jowisz	4°S
ostatnia kwadra:	26 XII	9 ^h 34 ^m	9 XII	5.4 ^h	Saturn	1°S
			14 XII	14.3 ^h	Neptun	3°N
apogeum:	12 XII	12 ^h 26 ^m	14 XII	23.4 ^h	Mars	4°N
peryeum:	24 XII	9 ^h 50 ^m	18 XII	4.1 ^h	Uran	5°N