

KSIEŹYC

| d | Wsch. | Kulm. | Zach. | A _w | A _z | α | δ | D | F |
|-------------------------|-------|-------|-------|----------------|----------------|-------------------|----------|------|-------|
| | λ=0° | | φ=50° | | | 0 ^h UT | | | |
| PAZDZIERNIK 2018 | | | | | | | | | |
| | h m | h m | h m | -° | +° | h m s | ° ' | ' | |
| 1 | 21 40 | 4 48 | 12 51 | 123 | 123 | 5 16 03 | 19 30.7 | 31.8 | -0.66 |
| 2 | 22 38 | 5 46 | 13 53 | 124 | 124 | 6 14 50 | 20 50.4 | 32.1 | -0.55 |
| 3 | 23 45 | 6 44 | 14 47 | 121 | 122 | 7 15 00 | 20 53.8 | 32.3 | -0.43 |
| 4 | — | 7 43 | 15 32 | — | 119 | 8 15 27 | 19 37.5 | 32.5 | -0.32 |
| 5 | 0 59 | 8 40 | 16 10 | 117 | 113 | 9 15 07 | 17 05.4 | 32.6 | -0.22 |
| 6 | 2 16 | 9 36 | 16 42 | 110 | 106 | 10 13 15 | 13 28.4 | 32.6 | -0.13 |
| 7 | 3 35 | 10 30 | 17 09 | 103 | 99 | 11 09 32 | 9 02.6 | 32.6 | -0.06 |
| 8 | 4 54 | 11 21 | 17 35 | 95 | 90 | 12 04 06 | 4 06.9 | 32.4 | -0.02 |
| 9 | 6 11 | 12 12 | 18 00 | 86 | 82 | 12 57 19 | - 0 59.0 | 32.1 | -0.00 |
| 10 | 7 27 | 13 02 | 18 26 | 78 | 75 | 13 49 43 | - 5 56.4 | 31.8 | 0.01 |
| 11 | 8 40 | 13 51 | 18 54 | 71 | 68 | 14 41 45 | -10 29.2 | 31.4 | 0.04 |
| 12 | 9 51 | 14 41 | 19 24 | 65 | 63 | 15 33 45 | -14 23.7 | 31.0 | 0.10 |
| 13 | 10 57 | 15 31 | 20 00 | 60 | 59 | 16 25 54 | -17 29.9 | 30.6 | 0.17 |
| 14 | 11 58 | 16 21 | 20 41 | 57 | 56 | 17 18 07 | -19 41.1 | 30.2 | 0.25 |
| 15 | 12 53 | 17 10 | 21 28 | 56 | 56 | 18 10 13 | -20 53.7 | 29.9 | 0.34 |
| 16 | 13 39 | 17 59 | 22 21 | 56 | 57 | 19 01 50 | -21 07.0 | 29.7 | 0.43 |
| 17 | 14 19 | 18 47 | 23 19 | 59 | 60 | 19 52 40 | -20 22.8 | 29.6 | 0.52 |
| 18 | 14 53 | 19 33 | — | 62 | — | 20 42 28 | -18 44.9 | 29.6 | 0.62 |
| 19 | 15 22 | 20 19 | 0 20 | 67 | 64 | 21 31 13 | -16 18.5 | 29.6 | 0.71 |
| 20 | 15 47 | 21 03 | 1 23 | 73 | 69 | 22 19 00 | -13 09.4 | 29.8 | 0.79 |
| 21 | 16 10 | 21 48 | 2 29 | 80 | 76 | 23 06 09 | - 9 24.7 | 30.0 | 0.86 |
| 22 | 16 32 | 22 32 | 3 36 | 87 | 83 | 23 53 07 | - 5 12.0 | 30.3 | 0.92 |
| 23 | 16 55 | 23 18 | 4 44 | 94 | 90 | 0 40 25 | - 0 40.6 | 30.6 | 0.97 |
| 24 | 17 18 | — | 5 54 | 101 | 98 | 1 28 42 | 3 58.9 | 30.9 | 0.99 |
| 25 | 17 44 | 0 05 | 7 06 | 108 | 105 | 2 18 34 | 8 33.6 | 31.2 | -1.00 |
| 26 | 18 14 | 0 55 | 8 20 | 115 | 112 | 3 10 36 | 12 48.7 | 31.5 | -0.98 |
| 27 | 18 51 | 1 48 | 9 33 | 120 | 118 | 4 05 09 | 16 27.7 | 31.8 | -0.94 |
| 28 | 19 36 | 2 43 | 10 44 | 123 | 122 | 5 02 13 | 19 14.1 | 32.0 | -0.87 |
| 29 | 20 31 | 3 41 | 11 49 | 124 | 124 | 6 01 22 | 20 53.2 | 32.1 | -0.79 |
| 30 | 21 35 | 4 40 | 12 46 | 123 | 124 | 7 01 40 | 21 15.3 | 32.2 | -0.69 |
| 31 | 22 46 | 5 38 | 13 33 | 119 | 121 | 8 01 56 | 20 17.1 | 32.3 | -0.58 |

| | | | | | | |
|------------------|------|---------------------------------|------|-------------------|---------|-----|
| ostatnia kwadra: | 2 X | 9 ^h 45 ^m | 10 X | 0.6 ^h | Merkury | 6°S |
| nów: | 9 X | 3 ^h 47 ^m | 11 X | 21.4 ^h | Jowisz | 4°S |
| pierwsza kwadra: | 16 X | 18 ^h 02 ^m | 15 X | 2.8 ^h | Saturn | 2°S |
| pełnia: | 24 X | 16 ^h 45 ^m | 18 X | 13.2 ^h | Mars | 2°S |
| ostatnia kwadra: | 31 X | 16 ^h 40 ^m | 20 X | 22.3 ^h | Neptun | 3°N |
| | | | 24 X | 12.6 ^h | Uran | 5°N |
| | | | | | | |
| perygeum: | 5 X | 22 ^h 28 ^m | | | | |
| apogeum: | 17 X | 19 ^h 19 ^m | | | | |
| perygeum: | 31 X | 20 ^h 27 ^m | | | | |