

Wschody i zachody Słońca w Krakowie - Styczeń 2018

| Data    | Ws<br>h m | Za<br>h m | Dług.<br>Dnia<br>h m | Dłuższy<br>od<br>Najkrot | Krótszy<br>od<br>Najdluz | Fazy Księżyca<br>Przew. akt. Słońca<br>(m, s, d, bd) | h       |
|---------|-----------|-----------|----------------------|--------------------------|--------------------------|--|---------|
| 1. Pon  | 07 38     | 15 49     | 08 11                | 0 06                     | 8 12                     | m Ks. w perygeum                                     | 23      |
| 2. Wto  | 07 38     | 15 50     | 08 12                | 0 07                     | 8 11                     | m Pelnia   | 03 24   |
| 3. Sro  | 07 38     | 15 51     | 08 13                | 0 08                     | 8 10                     | m Ziemia w peryhelium                                |         |
| 4. Czw  | 07 38     | 15 52     | 08 14                | 0 09                     | 8 09                     | m - mala   |         |
| 5. Pia  | 07 38     | 15 53     | 08 15                | 0 10                     | 8 08                     | m  |         |
| 6. Sob  | 07 38     | 15 54     | 08 16                | 0 11                     | 8 07                     | m  |         |
| 7. Nie  | 07 37     | 15 55     | 08 18                | 0 13                     | 8 05                     | m  | h m     |
| 8. Pon  | 07 37     | 15 57     | 08 20                | 0 15                     | 8 03                     | m Ostat. kwad.                                       | 23 25   |
| 9. Wto  | 07 36     | 15 58     | 08 22                | 0 17                     | 8 01                     | m  |         |
| 10. Sro | 07 36     | 15 59     | 08 23                | 0 18                     | 8 00                     | m  |         |
| 11. Czw | 07 36     | 16 01     | 08 25                | 0 20                     | 7 58                     | m  |         |
| 12. Pia | 07 35     | 16 02     | 08 27                | 0 22                     | 7 56                     | m  |         |
| 13. Sob | 07 34     | 16 03     | 08 29                | 0 24                     | 7 54                     | m  |         |
| 14. Nie | 07 33     | 16 05     | 08 32                | 0 27                     | 7 51                     | m  | h       |
| 15. Pon | 07 33     | 16 07     | 08 34                | 0 29                     | 7 49                     | m Ks. w apogeum                                      | 03      |
| 16. Wto | 07 32     | 16 08     | 08 36                | 0 31                     | 7 47                     | m  | h m     |
| 17. Sro | 07 31     | 16 10     | 08 39                | 0 34                     | 7 44                     | m Now  | 03 17   |
| 18. Czw | 07 30     | 16 11     | 08 41                | 0 36                     | 7 42                     | m  |         |
| 19. Pia | 07 29     | 16 12     | 08 43                | 0 38                     | 7 40                     | m  |         |
| 20. Sob | 07 28     | 16 14     | 08 46                | 0 41                     | 7 37                     | m  |         |
| 21. Nie | 07 27     | 16 16     | 08 49                | 0 44                     | 7 34                     | m  |         |
| 22. Pon | 07 26     | 16 17     | 08 51                | 0 46                     | 7 32                     | m  |         |
| 23. Wto | 07 25     | 16 19     | 08 54                | 0 49                     | 7 29                     | m  | h m     |
| 24. Sro | 07 24     | 16 21     | 08 57                | 0 52                     | 7 26                     | m I kwadra   | 23 20   |
| 25. Czw | 07 23     | 16 22     | 08 59                | 0 54                     | 7 24                     | m  |         |
| 26. Pia | 07 22     | 16 24     | 09 02                | 0 57                     | 7 21                     | m  |         |
| 27. Sob | 07 20     | 16 25     | 09 05                | 1 00                     | 7 18                     | m  |         |
| 28. Nie | 07 19     | 16 27     | 09 08                | 1 03                     | 7 15                     | m  |         |
| 29. Pon | 07 18     | 16 29     | 09 11                | 1 06                     | 7 12                     | m  | h       |
| 30. Wto | 07 16     | 16 31     | 09 15                | 1 10                     | 7 08                     | m Ks. w perygeum                                     | 11      |
| 31. Sro | 07 15     | 16 33     | 09 18                | 1 13                     | 7 05                     | m Pelnia   | 14 27 - |

zaczemienie

Dane wyznaczone na podstawie:

The American Ephemeris and Nautical Almanac \* 2018  
w Staniatkach, dnia 10 grudnia 2017 <Adam Michalec>