## The Planetary Hours: The Timing

Planetary Hours: A Complete Guide, Lecture 3

## Planetary Day

A period of time from one sunrise to the next sunrise. Ruled by the planet, corresponding to the day of the week, on which the sunrise occurs.

## The length of a planetary hour is a variable, not a constant!

## Planetary Day

- 12 day hours.
- 12 night hours.
- 12 day hours are equal to each other. They start at sunrise and continue until sunset.
- 12 night hours are equal to each other. They start at sunset and continue until the next day's sunrise.
- In the winter, day hours are shorter than the night hours. In the summer, it's the reverse.


## New York <br> December 25, 2018

Planetary hours?

## 07:18

Tuesday, 25 December 2018 (GMT-5)
Sunrise in New York, NY, USA

Feedback

## Sunrise and sunset times in New York, December 2018

https://www.timeanddate.com/sun/usa/new-york?month=12
... of sunrise and sunset in New York - New York - USA for December 2018. ... 3, 7:02 am $\uparrow\left(119^{\circ}\right)$,
4:28 pm $\uparrow\left(241^{\circ}\right), 9: 26: 13,-1: 11,5: 25 \mathrm{am}, 6: 06 \mathrm{pm}, 5: 58 \ldots$

People also search for
sunset december 212018 sunset december 62018
sunrise times nyc sunset december 42018
shortest day of the year 2019 sunset december 32018

## December 2018 - Sun in New York

\& November December January •
Month: December $\vee$ Year:
2018
Go

| 2018 | Sunrise/Sunset |  | Daylength |  | Astronomical Twilight |  | Nautical Twilight |  | Civil Twilight |  | Solar Noon |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Dec | Sunrise | Sunset | Length | Difference | Start | End | Start | End | Start | End | Time | Mil. $\mathbf{k m}$ |
| $\checkmark 1$ | 07:00 ${ }^{\text {(119 }}$ ) | 16:29< (2419) | 9:28:39 | -1:18 | 05:23 | 18:06 | 05:56 | 17:33 | 06:30 | 16:59 | 11:45 (27.5 ${ }^{\circ}$ ) | 147.508 |


| - 22 | 07:17 (121 $^{\circ}$ ) | 16:32- (239 ${ }^{\circ}$ | 9:15:19 | +0:01 | 05:38 | 18:11 | 06:11 | 17:37 | 06:46 | 17:03 | 11:54 (25.9 ${ }^{\circ}$ | 147.148 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| - 23 | 07:17 (121 $^{\circ}$ ) | 16:32- (239 ${ }^{\circ}$ | 9:15:24 | +0:05 | 05:38 | 18:11 | 06:12 | 17:38 | 06:46 | 17:03 | 11:55 (25.9 ) | 147.139 |
| - 24 | 07:17 (121 $^{\circ}$ ) | 16:33-(239 ${ }^{\circ}$ | 9:15:33 | +0:09 | 05:39 | 18:12 | 06:12 | 17:38 | 06:46 | 17:04 | 11:55 (25.9 ) | 147.132 |
| - 25 | 07:18 (121 $\left.^{\circ}\right)$ | 16:34< (239 ${ }^{\circ}$ ) | 9:15:47 | +0:13 | 05:39 | 18:12 | 06:12 | 17:39 | 06:47 | 17:05 | 11:56 (25.9 ) | 147.125 |
| - 26 | 07:18 $>\left(121^{\circ}\right)$ | 16:34< (239 ${ }^{\circ}$ ) | 9:16:04 | +0:17 | 05:39 | 18:13 | 06:13 | 17:40 | 06:47 | 17:05 | 11:56 (26.0 ${ }^{\circ}$ | 147.119 |
| - 27 | 07:18 (121 $\left.^{\circ}\right)$ | 16:35< (239 ${ }^{\circ}$ | 9:16:26 | +0:21 | 05:40 | 18:14 | 06:13 | 17:40 | 06:48 | 17:06 | 11:57 (26.0 ${ }^{\circ}$ | 147.114 |
| - 28 | 07:19 ${ }^{\left(121^{\circ}\right)}$ | 16:36< (239 ${ }^{\circ}$ | 9:16:51 | +0:25 | 05:40 | 18:14 | 06:13 | 17:41 | 06:48 | 17:07 | 11:57 (26.1 ${ }^{\circ}$ ) | 147.110 |
| - 29 | $07: 19>\left(120^{\circ}\right)$ | 16:36< (240 ${ }^{\circ}$ ) | 9:17:20 | +0:29 | 05:40 | 18:15 | 06:14 | 17:42 | 06:48 | 17:07 | 11:58 (26.19) | 147.106 |

New York, December 25, 2018

- Sunrise: 07:18
- Sunset: 16:34
- Next sunrise: 07:18


## The Length of the Day

- Sunset - sunrise $=$ length of the day
- 16:34-7:18 = 9:16


## The Length of the Night

- Next day's sunrise - sunset $=$ length of the night
- 7:18 + 24:00 = 31:18
- $31: 18-16: 34=14: 44$
- The length of the day + the length of the night = close to 24 hours
- 9:16 + 14:44 = 24:00


## The Length of a Day Hour

- The length of the day $/ 12=$ the length of a day hour
- $(9 \times 60)+16=556$
- $556 / 12=46.3333$

The length of a day hour: 46 minutes.

## The Length of a Night Hour

- The length of the night / $12=$ the length of a night hour
- $(14 \times 60)+44=884$
- $884 / 12=73.6666$

The length of a night hour: 1 hour 14 minutes.

## The Timing of the Planetary Hours

|  | Day Hours |  | Night Hours |
| :--- | :--- | :--- | :--- |
| 1 | $7: 18-8: 04$ | 1 | $16: 34-17: 48$ |
| 2 | $8: 04-8: 50$ | 2 | $17: 48-19: 02$ |
| 3 | $8: 50-9: 36$ | 3 | $19: 02-20: 16$ |
| 4 | $9: 36-10: 22$ | 4 | $20: 16-21: 30$ |
| 5 | $10: 22-11: 06$ | 5 | $21: 30-22: 44$ |
| 6 | $11: 06-11: 52$ | 6 | $22: 44-23: 58$ |
| 7 | $11: 52-12: 38$ | 7 | $23: 58-1: 12$ |
| 8 | $12: 38-13: 24$ | 8 | $1: 12-2: 26$ |
| 9 | $13: 24-14: 10$ | 9 | $2: 26-3: 40$ |
| 10 | $14: 10-14: 56$ | 10 | $3: 40-4: 54$ |
| 11 | $14: 56-15: 42$ | 11 | $4: 54-6: 08$ |
| 12 | $15: 42-16: 34$ | 12 | $6: 08-7: 18$ |

