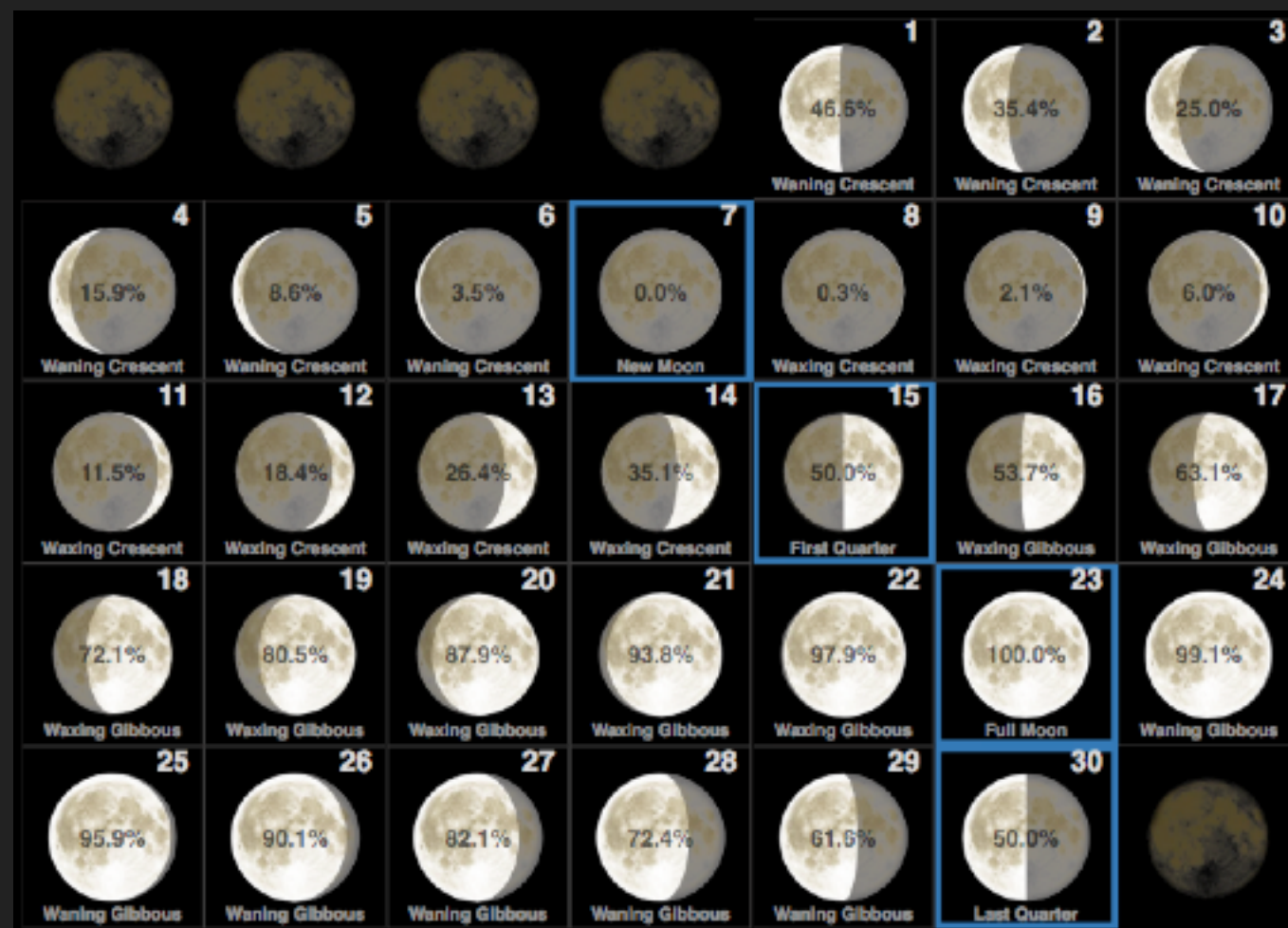


## MOON PHASES

- ▶ Solar [model](#) was not known to ancient people.
- ▶ Difficult to determine [phase](#) transitions, e.g. 0% visibility for New Moon.
- ▶ Transitions occurs during various times of the day, for example during midday
- ▶ Everyone must agree on the exact time by observing. To this date, Islamic calendar is based on the authorized sighting and the next phase is not set (known) in advanced.



### 2018 New Moon times GMT timezone

17 Jan	02:17
15 Feb	21:05
17 Mar	13:11
16 Apr	02:57
15 May	12:47
13 Jun	20:43
13 Jul	03:47
11 Aug	10:57
9 Sep	19:01
9 Oct	04:46
7 Nov	16:01
7 Dec	07:20

# TIME KEEPING BASICS

## MOON QUIZ

- ▶ Compare two moon images captured at the same time on February 4th, 2016 by NASA Lunar Reconnaissance Orbiter.
- ▶ What does each image tell you about the observer location?

