Predicting Rising, Transiting, and Setting Times for a First Quarter Moon

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Sun is Transiting

Sun is Setting

Sun is Rising

Sun is below the horizon

Wall Clock Sun Clock

• Fill in numbers for a traditional wall clock

• Fill in numbers for the proposed sun clock (assume standard time for rising, transiting and setting during an equinox)

• How is a Sun Clock different from a wall clock?

• Draw a stick figure in the middle of the diameter with arms pointing at a First Quarter Moon and at the Sun:

Rising First Quarter Moon Transiting First Quarter Moon Setting First Quarter Moon

• About what time will a First Quarter Moon rise, transit, and set?

• When is a good time to look for a First Quarter Moon?

To predict when a particular Phase of the Moon will rise, transit and set:

• Draw three circles, each with a horizontal diameter.

• Label the circles Rising Phase of Moon, Transiting Phase of Moon, Setting Phase of Moon

• Draw a stick figure on the middle of the diameter within each circle.

• In the left circle, draw an arm pointing at this Phase of the Moon when it is rising

• In the middle circle, draw an arm pointing at this Phase of the Moon when it is transiting

• In the right circle, draw an arm pointing at this Phase of the Moon when it is setting.

• What angle is formed by pointing one arm at this Phase of the Moon and the other arm at the Sun?

• Use that angle to draw an arm pointing at the Sun in each circle.

• What time will the Sun seem to “be” at each of these positions on the Sun Clock?

• What time do you predict this Phase of the Moon will rise, transit, and set?

• When is a good time to look for this Phase of the Moon?