Wednesday Reading Assessment: Unit 6, Circular Motion

Prof. Jordan C. Hanson

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1 Memory Bank

- $\vec{F}_G = G\frac{m_1 m_2}{r^2}\hat{r}$
- $G = 6.674 \times 10^{-11}$ N kg^{-2} m^2

2 Newton's Law of Gravity

Figure 1: The tides of the Earth as they relate to the position of the Moon.

1. Explain in your own words why the high tides of the Earth's oceans orient themselves as in Fig. 1. Recall that Newton's Law of Gravity depends on $1/r^2$.

2. The spring tides are the highest high tides, and the neap tides are the lowest high tides. Explain why this is the case using Fig. 2 and Newton's Law of Gravity.

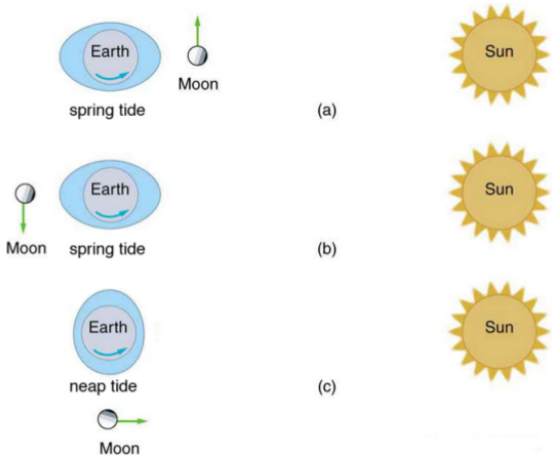

Figure 2: The spring and neap tides as they relate to the orientation of the Earth, Moon, and Sun.