

The Solar System

How do they move?

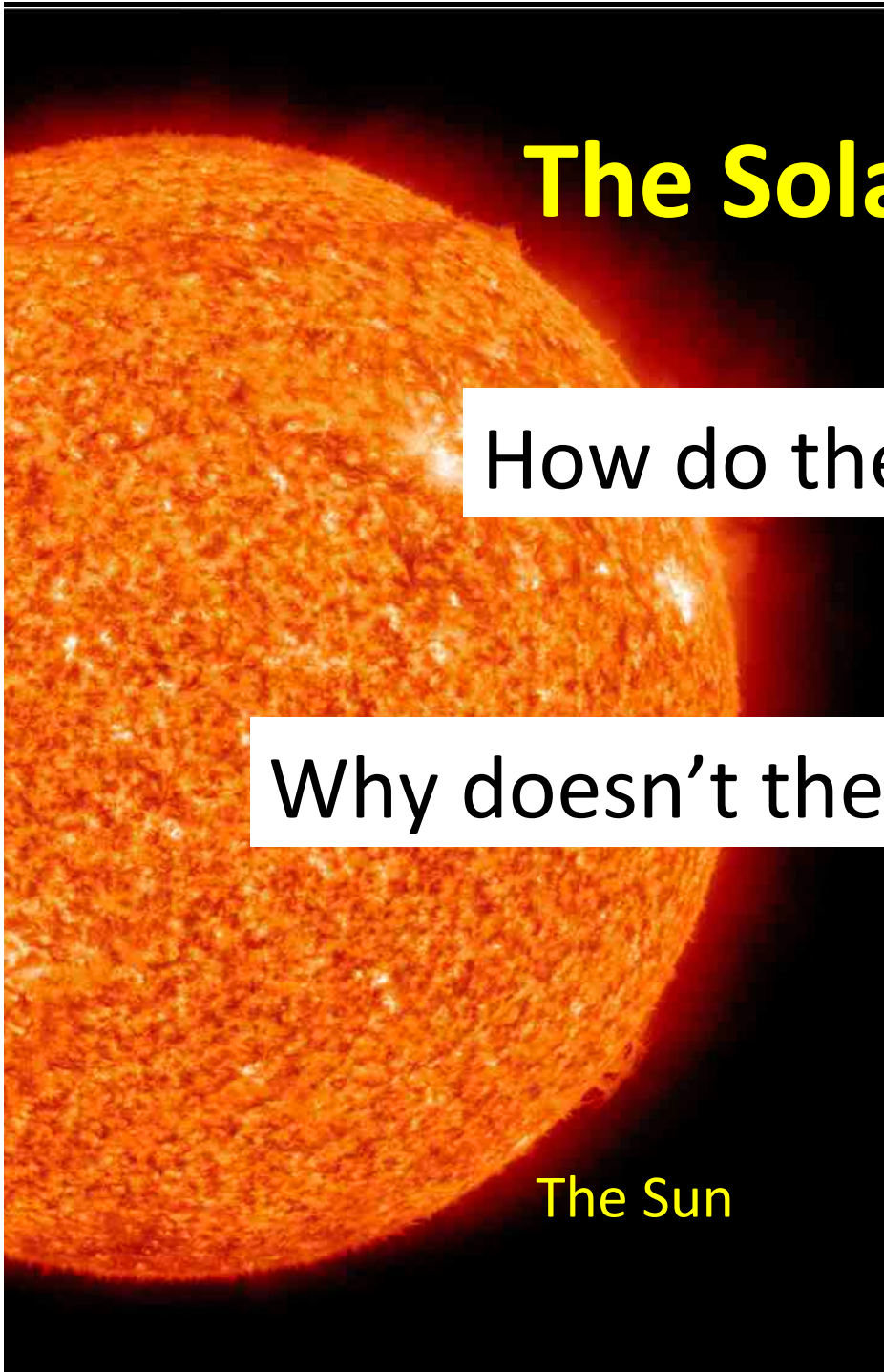
Why doesn't the Earth fly away?

The Earth



The Moon

The Sun



The Solar System

Which is stronger:

-the force of gravity between the Earth and the sun?

or

-the force of gravity between the Earth and the moon?

The Sun



The Moon

Equation of Gravity

$$F = G \frac{m_1 m_2}{r^2}$$

- F = force of gravity
- G = gravitational constant = $6.674 \times 10^{-11} \text{ Nm}^2/\text{kg}^2$
- m_1 = mass of the first thing (in kg)
- m_2 = mass of the second thing (in kg)
- r = distance between the two things (in m)

The Solar System

What is the force of gravity
between the sun and the Earth?

The Sun

The Earth



The
Moon

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Remember: There are 1000 m (or 10^3 m) in 1 km