

Science Virtual Learning MPI Physics Gravity 4: Orbits April 16, 2020

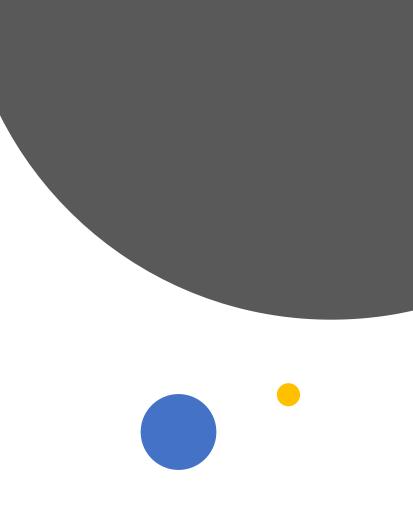


Lesson: MPI Gravity 4 - Orbits April 16, 2020

Objective: To learn how gravity causes moons and planets to orbit larger bodies

- The following video discusses how gravity acts as a centripetal force, causing smaller astronomical objects to orbit larger ones.
- <u>https://youtu.be/Q_S0jR1wjRk</u>

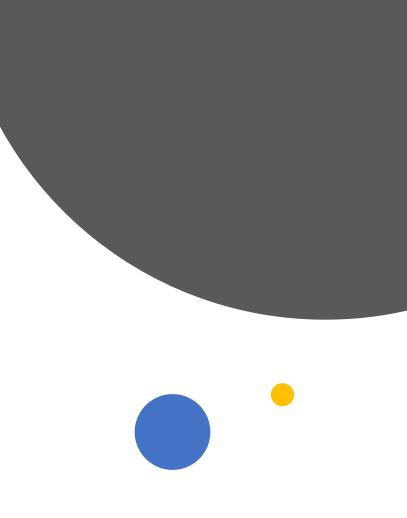
Video: Orbits



The following example is included in the video on the previous page.

 The Moon orbits the Earth (5.98*10^24 kg) at a distance of 3.84*10^8 m. Find its orbital velocity and period.

Orbits - Example



Homework

 The Starship Enterprise wants to go into a circular orbit of radius 5.00•10⁸ m above a planet of mass 1.44•10²⁵ kg. At what speed should they travel in this orbit?

- Try to solve the problem yourself, then watch the solution video:
- <u>https://youtu.be/grxSqYIaAHg</u>

That's it!