Spherical Shape of Planets

Source: TH

The spherical shape of planets is largely attributed to the interplay of gravity **and geometry.**

- **Gravity** is the primary force shaping planets, compelling them into a spherical form due to their **massive size.**
- A **sphere** offers the **most compact three-dimensional shape, minimising surface area for a given volume.**
- While commonly referred to as spherical, planets and stars **are actually oblate spheroids**, slightly flattened at the poles due to **centrifugal force** from rotation.
- **Rotation** creates a centrifugal force, resulting in a slight bulge at the equator, **making gravity weaker** in this region compared to the poles.
- **Gravity tends to shape celestial bodies into spheres,** while smaller bodies such as **comets** and **asteroids** maintain irregular shapes due to stronger **electromagnetic forces.**

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