

Answer on Question#55025, Physics – Astronomy, Astrophysics

If the Earth were a volley ball what would be the diameter of the Sun? What object matches this size?

Answer

The diameter of the Earth is $2 * 6400 \text{ km} = 1.28 * 10^7 \text{ m}$.

The diameter of the Sun is $2 * 695\,500 \text{ km} = 1.391 * 10^9 \text{ m}$.

The diameter of a volley ball is around $20 \text{ cm} = 0.2 \text{ m}$.

$$\frac{d_{ball}}{x} = \frac{d_{Earth}}{d_{Sun}} \rightarrow x = \frac{d_{ball} * d_{Sun}}{d_{Earth}} \approx \mathbf{22 \text{ m}}$$

If the Earth were a volley ball, the Sun's diameter would be 22 m. It is around the height of 4 - 5 storeys building.