

Grid 6. The Sun as seen from Saturn

It is known that: the distance Saturn - Sun is 9.54 times greater than the distance Earth - Sun; the angular diameter of the Sun's disk, seen from Earth, is $32'$.

The angular diameter of the Sun seen from Saturn, is:

- a) $\alpha_{\text{Sun-Saturn}} \approx 0.001$ radiani; b) $\alpha_{\text{Sun-Saturn}} \approx 0.002$ radiani;
c) $\alpha_{\text{Sun-Saturn}} \approx 0.003$ radiani; d) $\alpha_{\text{Sun-Saturn}} \approx 0.004$ radiani.

Solution

Since the distance between Saturn and the Sun is 9.54 times greater than the distance from Earth to the Sun, it turns out that the angular diameter of the Sun's disk, observed from Saturn, is 9.54 times smaller than the angular diameter of the Sun, observed from Earth. so that, using the drawing in Figure 1, it results:

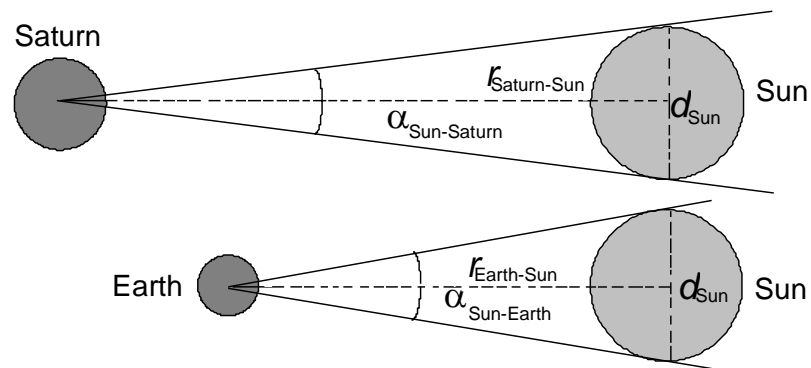


Fig. 1

representing the angular diameter of the Sun seen from Saturn.