

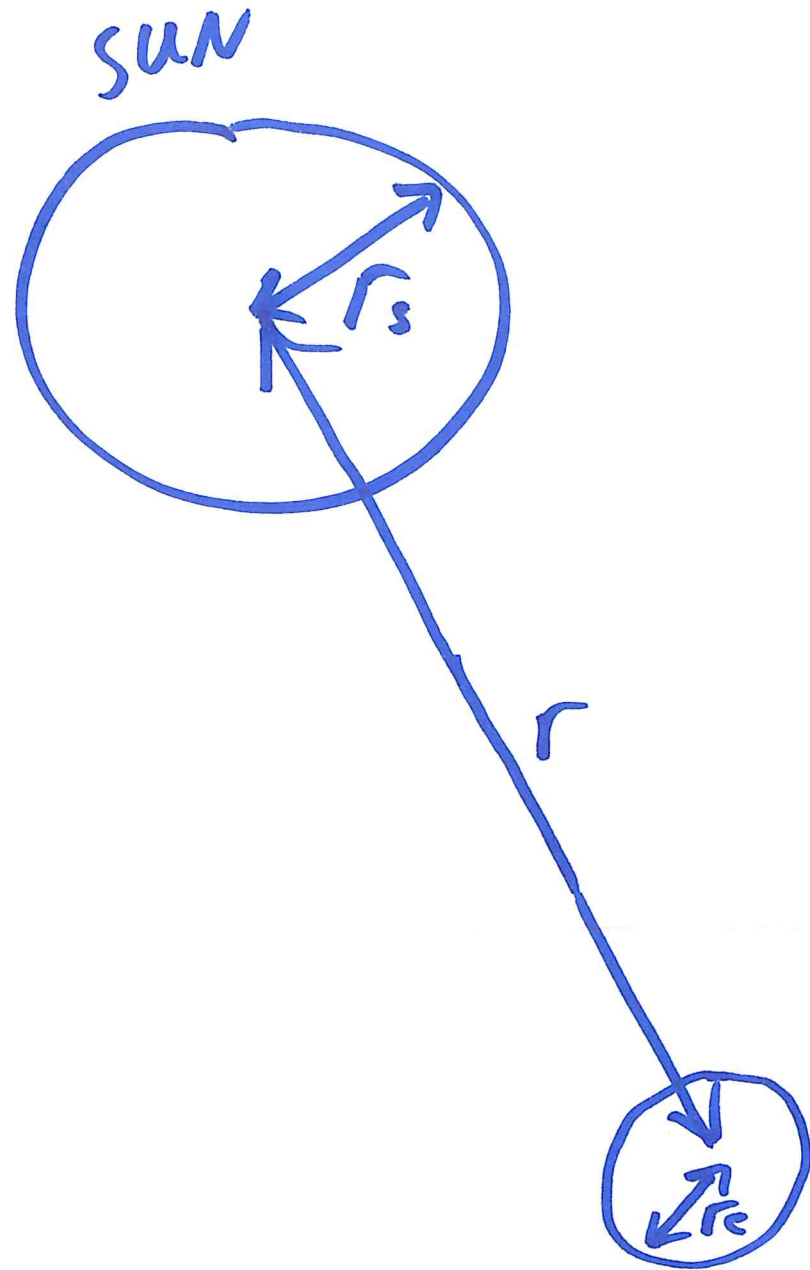
The Temperature of the Earth

① Power Output of sun:

② Intensity of Sunlight arriving at Earth:

③ Area of absorption by Earth:

④ Power absorbed by Earth:



$$r_s = 6.955 \times 10^8 \text{ m}$$

$$r_e = 6.35 \times 10^6 \text{ m}$$

$$r = 1.50 \times 10^{11} \text{ m}$$

$$T_s = 5800 \text{ K}$$

⑤ Area of emission by Earth:

⑥ Power emitted by Earth in terms of its temperature, T_E :

⑦ Using thermal equilibrium:

Temperature of the Earth:

Connect: