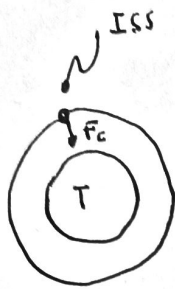


El període de l'ISS és $T = 90 \text{ min} = 90 \cdot 60 = 5400 \text{ s}$.



$$F_c = \frac{GM_T M}{r^2} = m \omega^2 \cdot r$$

$$\omega^2 \cdot r^3 = GM_T$$

$$r = \sqrt[3]{\frac{GM_T}{\omega^2}} = \sqrt[3]{\frac{GM_T \cdot T^2}{4\pi^2}} = \sqrt[3]{\frac{6,67 \times 10^{-11} \cdot 5,98 \times 10^{24} \cdot (5400)^2}{4\pi^2}}$$

$$r = 6,65 \times 10^6 \text{ m} \quad (\text{radi de l'òrbita})$$

La altura sobre la superfície de la Terra:

$$h = r - R_T = 6,65 \times 10^6 - 6,37 \times 10^6$$

$$h = 280000 \text{ m.}$$

La velocitat orbital serà

$$v = \frac{2\pi r}{T} = \frac{2\pi \cdot 6,65 \times 10^6}{5400} = 7738 \text{ m/s}$$