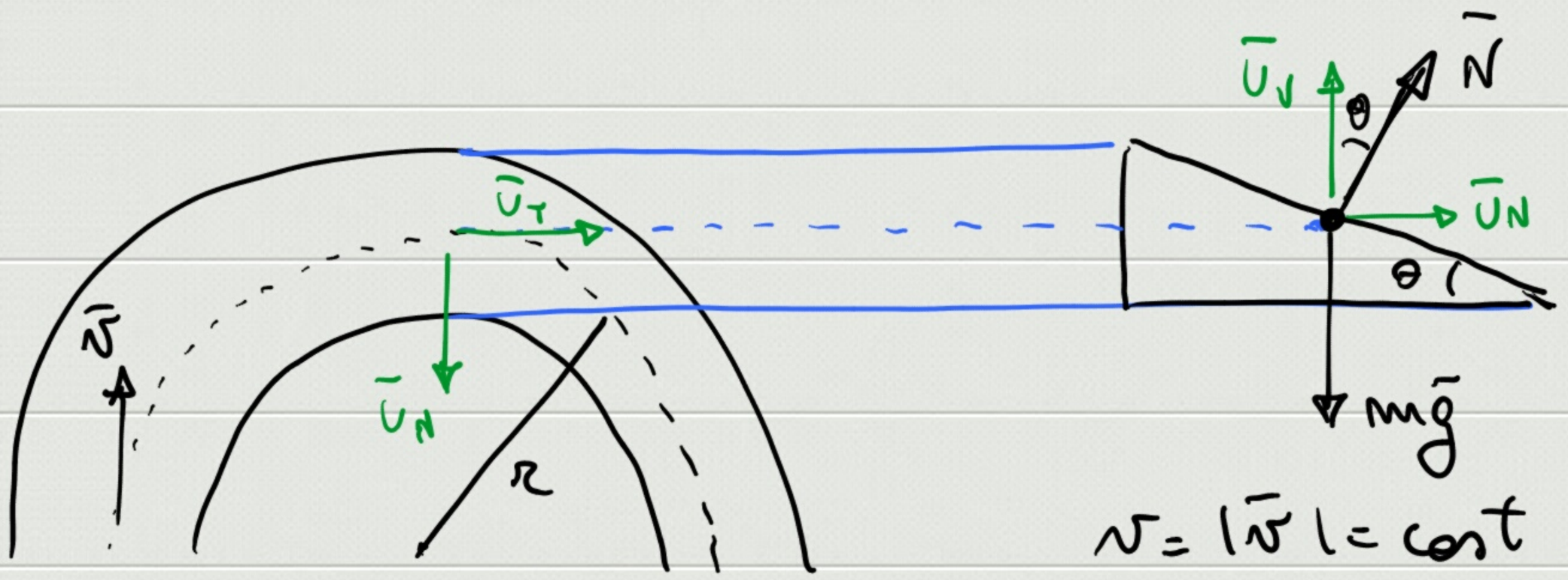
$$\bar{F} = m\bar{a} = m\bar{a}_T + m\bar{a}_N = \underbrace{m\frac{dv}{dt}}_{F_T}\bar{u}_T + \underbrace{m\frac{v^2}{R}}_{F_N}\bar{u}_N$$



$v = |\bar{v}| = \text{cost}$

liscio

moto circolare uniforme: $a_T = 0 \quad a_N \neq 0$

$$m\bar{g} + \bar{N} = m\bar{a} = m\bar{a}_N$$

$$\bar{u}_N: \; N\sin\theta = m\frac{v^2}{r}$$

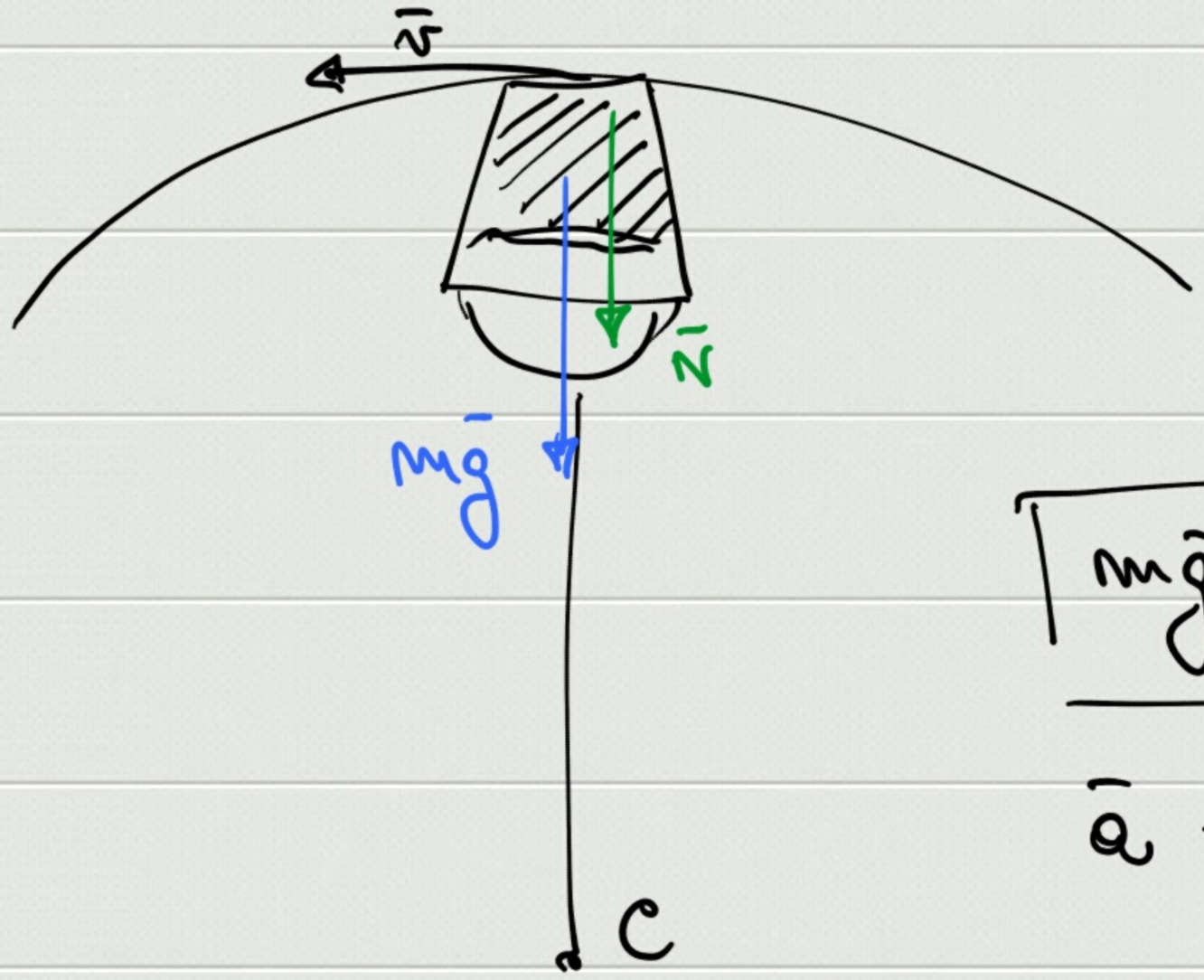
$$\bar{u}_T: \; N\cos\theta - mg = 0 \Rightarrow N = \frac{mg}{\cos\theta}$$

$\Rightarrow$

$$\Rightarrow \cancel{m}g\,\mathrm{tg}\,\theta = \cancel{m}\frac{v^2}{r} \Rightarrow \boxed{\mathrm{tg}\,\theta = \frac{v^2}{rg}}$$

$v = 120\ \text{km/h} = 33.3\ \text{m/s} \qquad r \sim 20\ \text{m}$

$\Rightarrow \quad \theta = 80°$

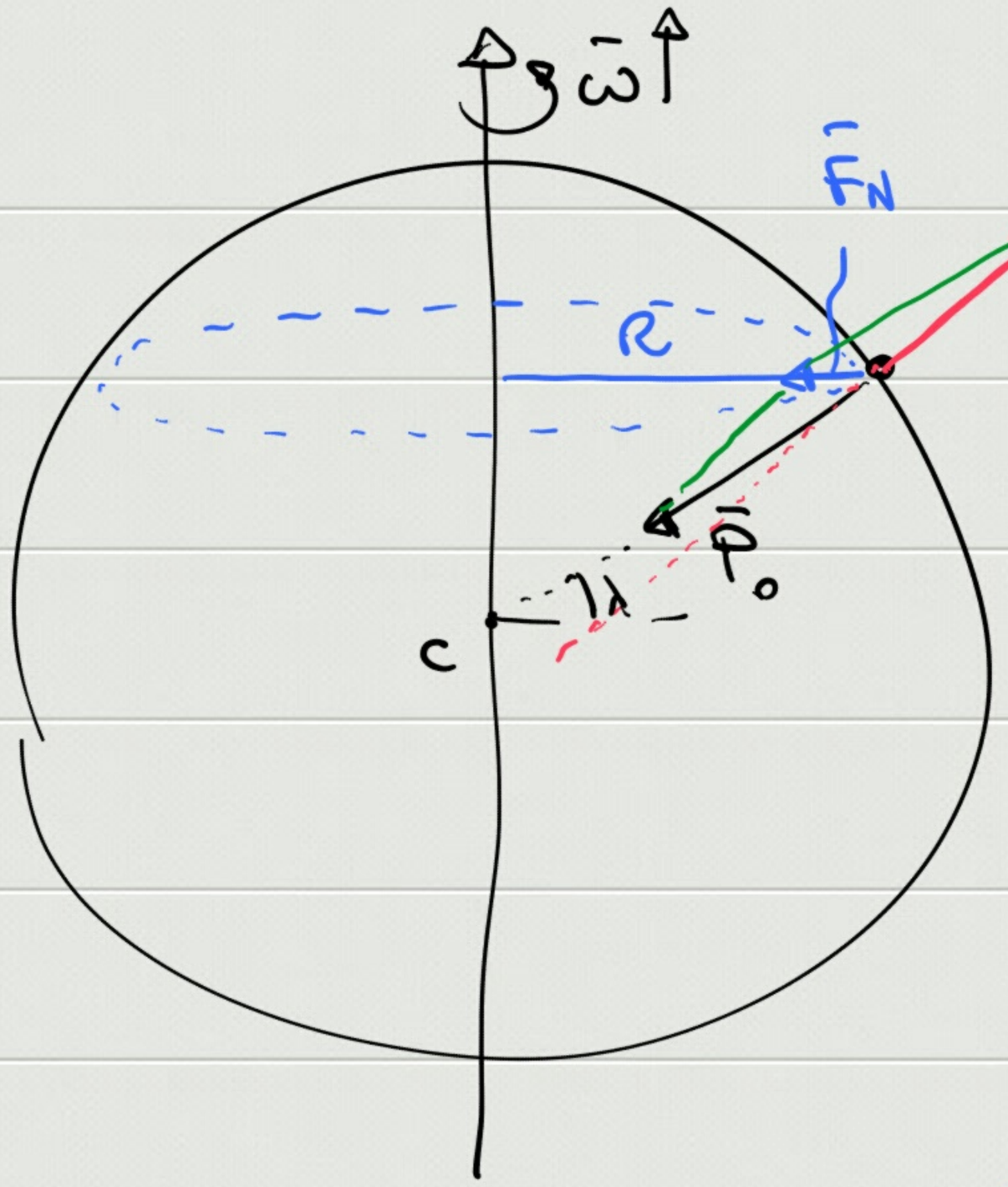


$$\boxed{m\vec{g} + \vec{N} = m\vec{a}}$$

$$\vec{a} = \vec{a}_N$$

$$mg + N = m\frac{v^2}{R} \Rightarrow N = m\left(\frac{v^2}{R} - g\right) > 0$$

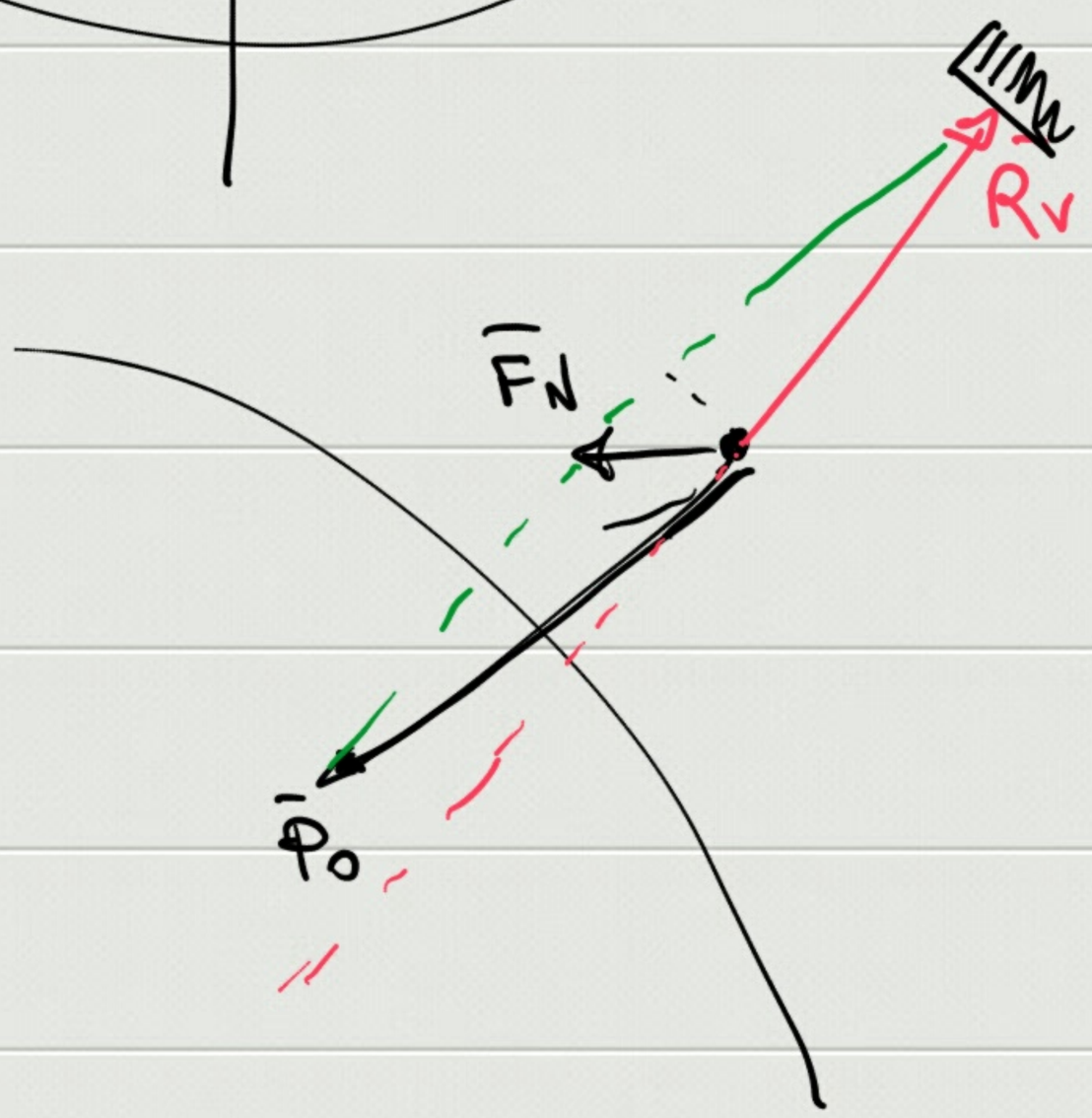
$$v^2 > gR \Rightarrow v > \sqrt{gR} = v_{min}$$



$$\bar{\rho}_0 + \bar{R}_V = m\bar{a}_N$$

$$\bar{F}_N$$

$$\boxed{\bar{\rho} = -\bar{N}}$$



$$a_N = \omega^2 R = \frac{2\pi}{24h} R_T \cos\lambda \simeq 0.034 \cos\lambda \ m/s^2$$