

$$A = - \frac{mg \cos \alpha \sin \alpha}{M + m \sin^2 \alpha}$$

$$a_y = \operatorname{tg} \alpha A - \operatorname{tg} \alpha a = - \frac{(m+M) g \sin^2 \alpha}{M + m \sin^2 \alpha}$$

$$R_t = Mg + \frac{Mm}{M + m \sin^2 \alpha} g \cos^2 \alpha$$

$$= \frac{M^2 g + Mm g}{M + m \sin^2 \alpha} = Mg \frac{m+M}{M + m \sin^2 \alpha}$$

Traiettorie:

M: moto rettilineo unif. accelerato lungo $-\hat{x}$,

$$m: \quad x_m(t) = + \frac{1}{2} a t^2$$

$$y_m(t) = l_0 \sin \alpha - \frac{1}{2} a_y t^2$$

$$x_m(t) = \frac{1}{2} a t^2$$

$$(y_m - l_0 \sin \alpha) = - \frac{1}{2} a_y t^2$$

$$y_m - l_0 \sin \alpha = - \frac{a_y}{a} x_m$$

$$y_m = l_0 \sin \alpha - \frac{(m+M) g \sin^2 \alpha}{M g \cos \alpha \sin \alpha} x_m$$

$$y = l_0 \sin \alpha - \frac{m+M}{M} \operatorname{tg} \alpha x$$