

将以上条件代入(5)得,

$$\begin{aligned}\vec{F}_R &= -\frac{11}{10}mr\dot{c}\left[\frac{1}{r}g - \left(\frac{1}{3r}g(1-\cos\theta) - \frac{25u^2}{36r^2}\right)\hat{e}_r + \frac{1}{6r}g\sin\theta\hat{e}_\theta\right] \\ &= \frac{1}{30}mg\left[(1-34\cos\theta - \frac{25u^2}{12rg})\hat{e}_r + \frac{65}{2}\sin\theta\hat{e}_\theta\right]\end{aligned}$$