Restricted_Three_Body_Problem_2D

June 9, 2022

[ ]:
```
def gravity(r,t):
    x = r[0]
    x1 = r[1]
    y = r[2]
    y1 = r[3]

    dxdt = x1
    dydt = y1

    dx1dt = -x/((x**2+y**2)**(3/2))-mp*(x-np.cos(t))/(((x-np.cos(t))**2+(y-np.
↪sin(t))**2)**(3/2))
    dy1dt = -y/((x**2+y**2)**(3/2))-mp*(y-np.sin(t))/(((x-np.cos(t))**2+(y-np.
↪sin(t))**2)**(3/2))

    #x-position x-velocity y-position y-velocity
    ##################
    drdt = [dxdt,dx1dt,dydt,dy1dt]
    return drdt
```