$$egin{aligned} rac{d}{dt} \left\{ egin{pmatrix} \partial_{v_x} \ \partial_{v_x} \ \partial_{v_x} \end{pmatrix} K
ight\} igothermindsymbol{igwedge} m rac{dv_y}{dt} = -rac{\partial U}{\partial y} \ m rac{dv_z}{dt} = -rac{\partial U}{\partial z} \end{aligned} egin{pmatrix} \partial_x \ \partial_y \ \partial_z \end{pmatrix} (-U)$$