

$$V(\vec{x}_0 + \vec{\eta}) = \frac{1}{2}\vec{\eta}\mathcal{K}\vec{\eta} + \text{const}, \quad M\ddot{\vec{\eta}} = -\mathcal{K}\vec{\eta},$$
$$\frac{1}{\sqrt{M}} \text{ anwenden: } \ddot{\vec{u}} = -\frac{1}{\sqrt{M}}\mathcal{K}\frac{1}{\sqrt{M}}\vec{u} =: -H\vec{u}$$
$$H\vec{f} = \lambda\vec{f}, \quad \vec{u} = \sum_j Q_j \vec{f}_j, \quad \ddot{Q}_j = -\lambda_j Q_j.$$

$$V(\vec{x}_0 + \vec{\eta}) = \frac{1}{2}\vec{\eta}\mathcal{K}\vec{\eta} + \text{const}, \quad M\ddot{\vec{\eta}} = -\mathcal{K}\vec{\eta},$$
$$\frac{1}{\sqrt{M}} \text{ anwenden: } \ddot{\vec{u}} = -\frac{1}{\sqrt{M}}\mathcal{K}\frac{1}{\sqrt{M}}\vec{u} =: -H\vec{u}$$
$$H\vec{f} = \lambda\vec{f}, \quad \vec{u} = \sum_j Q_j \vec{f}_j, \quad \ddot{Q}_j = -\lambda_j Q_j.$$

$$V(\vec{x}_0 + \vec{\eta}) = \frac{1}{2}\vec{\eta}\mathcal{K}\vec{\eta} + \text{const}, \quad M\ddot{\vec{\eta}} = -\mathcal{K}\vec{\eta},$$
$$\frac{1}{\sqrt{M}} \text{ anwenden: } \ddot{\vec{u}} = -\frac{1}{\sqrt{M}}\mathcal{K}\frac{1}{\sqrt{M}}\vec{u} =: -H\vec{u}$$
$$H\vec{f} = \lambda\vec{f}, \quad \vec{u} = \sum_j Q_j \vec{f}_j, \quad \ddot{Q}_j = -\lambda_j Q_j.$$

$$V(\vec{x}_0 + \vec{\eta}) = \frac{1}{2}\vec{\eta}\mathcal{K}\vec{\eta} + \text{const}, \quad M\ddot{\vec{\eta}} = -\mathcal{K}\vec{\eta},$$
$$\frac{1}{\sqrt{M}} \text{ anwenden: } \ddot{\vec{u}} = -\frac{1}{\sqrt{M}}\mathcal{K}\frac{1}{\sqrt{M}}\vec{u} =: -H\vec{u}$$
$$H\vec{f} = \lambda\vec{f}, \quad \vec{u} = \sum_j Q_j \vec{f}_j, \quad \ddot{Q}_j = -\lambda_j Q_j.$$