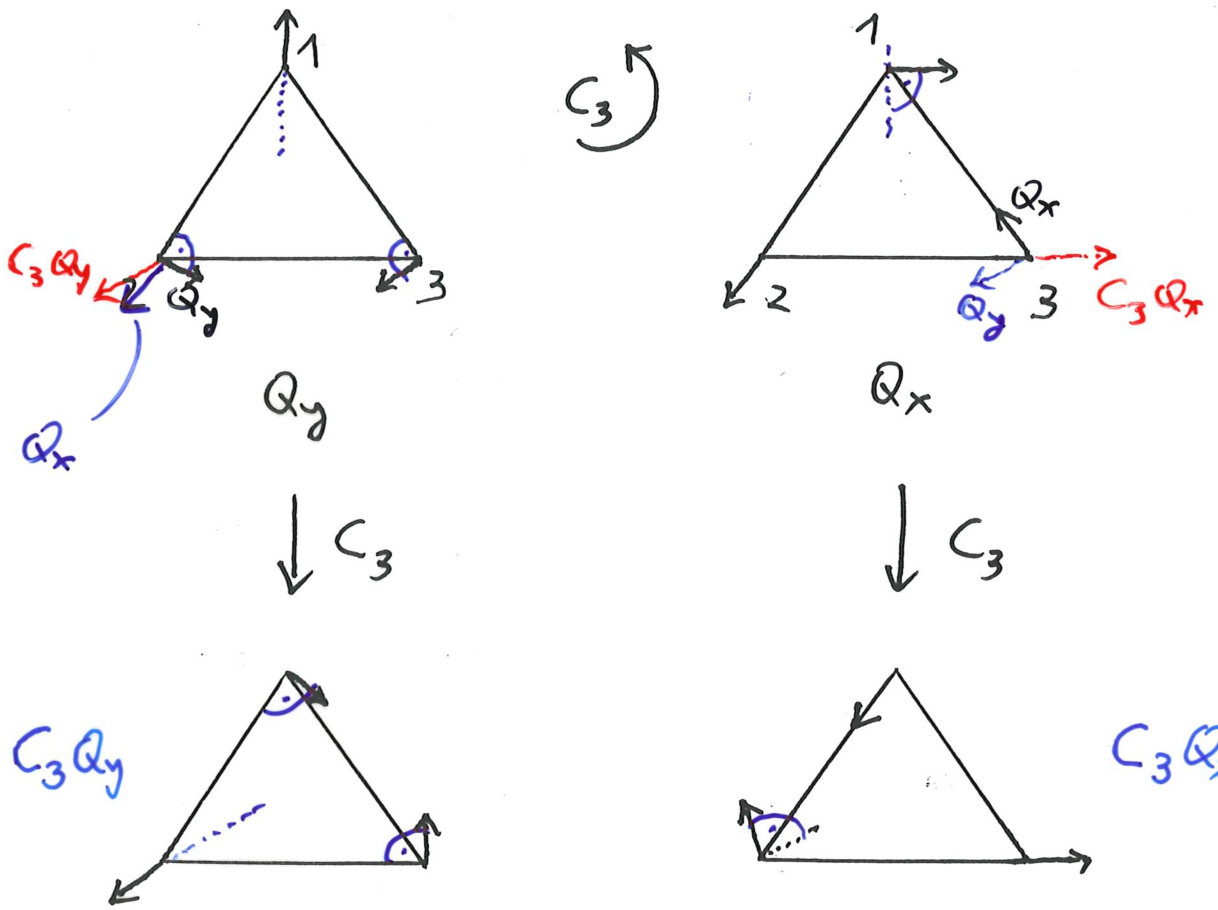
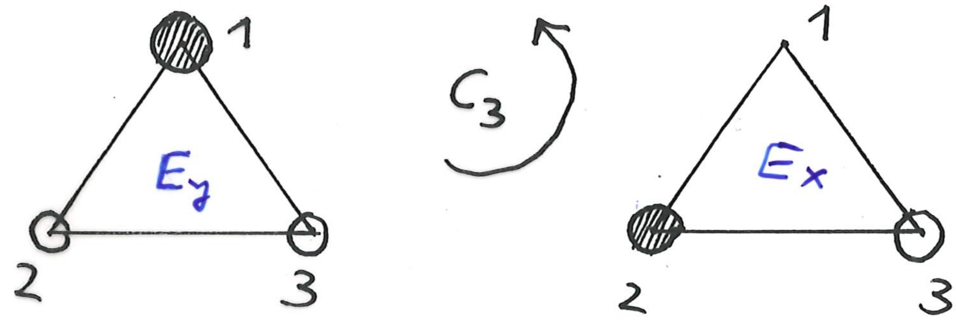
Symmetriegerechte Kernkoord. des Dreizentren-P.



$$\begin{cases} C_3 Q_y = \frac{1}{2}\sqrt{3}\, Q_x - \frac{1}{2}\, Q_y \\ C_3 Q_x = -\frac{1}{2}\sqrt{3}\, Q_y - \frac{1}{2}\, Q_x \end{cases}$$

(geometrische Überlegungen)

Symmetriegerechte el. WF des Dreizentren-Problems



$$\begin{cases} |E_y\rangle = \frac{1}{\sqrt{6}}\left(2|1\rangle - |2\rangle - |3\rangle\right) \\ |E_x\rangle = \frac{1}{\sqrt{2}}\left(|2\rangle - |3\rangle\right) \end{cases}$$

$$\Rightarrow \begin{cases} C_3|E_y\rangle = \frac{1}{\sqrt{6}}\left(2|2\rangle - |3\rangle - |1\rangle\right) \\ C_3|E_x\rangle = \frac{1}{\sqrt{2}}\left(|3\rangle - |1\rangle\right) \end{cases}$$

$$\Rightarrow \quad \underbrace{-\frac{1}{2}|E_x\rangle} - \underbrace{\frac{\sqrt{3}}{2}|E_y\rangle} =$$

$$= -\frac{1}{2\sqrt{2}}|2\rangle + \frac{1}{2\sqrt{2}}|3\rangle - \frac{1}{\sqrt{2}}|1\rangle + \frac{1}{2\sqrt{2}}|2\rangle + \frac{1}{2\sqrt{2}}|3\rangle$$

$$= \frac{1}{\sqrt{2}}|3\rangle - \frac{1}{\sqrt{2}}|1\rangle = C_3|E_x\rangle$$

und analog für $C_3|E_y\rangle$:

$$-\frac{1}{2}|E_y\rangle + \frac{\sqrt{3}}{2}|E_x\rangle = C_3|E_y\rangle$$