

$$\begin{bmatrix} C_2 \\ C_4 \end{bmatrix} = \begin{bmatrix} \frac{2\sqrt{5}}{3\omega_1} & \frac{\sqrt{5}}{6\omega_1} \\ \frac{\sqrt{17}}{3\omega_3} & -\frac{\sqrt{17}}{6\omega_3} \end{bmatrix} \begin{bmatrix} \vec{v}_0 + \Omega \vec{p} \end{bmatrix} \quad (5.43)$$

$$= \begin{bmatrix} \frac{\sqrt{5}}{6\omega_1} (4v_{01} + v_{02}) \\ \frac{\sqrt{17}}{6\omega_3} (2v_{01} - v_{02}) \end{bmatrix} \quad (5.44)$$

$$+ \frac{\Omega F_1}{8m^2\Omega^4 - 14cm\Omega^2 + 5c^2} \begin{bmatrix} \frac{2\sqrt{5}}{3\omega_1} (6c - 8m\Omega^2) + \frac{\sqrt{5}}{6\omega_1} c \\ \frac{\sqrt{17}}{3\omega_3} (6c - 8m\Omega^2) + \frac{\sqrt{17}}{6\omega_3} c \end{bmatrix}$$