4th order Force Constants

$$\Phi_{ijkl}^{\alpha\beta\gamma\delta} = \frac{F_i^\alpha\left[\Delta r_j^\beta, \Delta r_k^\gamma, \Delta r_l^\delta\right] - F_i^\alpha\left[\Delta r_j^\beta, \Delta r_k^\gamma\right] - F_i^\alpha\left[\Delta r_k^\gamma, \Delta r_l^\delta\right] - F_i^\alpha\left[\Delta r_l^\delta, \Delta r_j^\beta\right] + F_i^\alpha\left[\Delta r_j^\beta\right] + F_i^\alpha\left[\Delta r_k^\gamma\right] + F_i^\alpha\left[\Delta r_l^\delta\right] - F_i^{\alpha,eq}}{\Delta r_j^\beta \Delta r_k^\gamma \Delta r_l^\delta}$$