

$$\log p_{\Theta}(\vec{\mathbf{r}}_{n+1}; f_{n+1}, Z_{n+1}) = c^{(0)}(r)Y^{(0)}(\theta, \phi) + c^{(1)}(r)Y^{(1)}(\theta, \phi) + c^{(2)}(r)Y^{(2)}(\theta, \phi)$$