Table 1: Table of Spherical Harmonics $Y_{l,m}(\theta, \phi)$ up to $l = 2$. This table uses the Condon-Shortley phase convention.

| Degree ($l$) | Order ($m$) | Formula $Y_{l,m}(\theta, \phi)$ |
|:---:|:---:|:---:|
| 0 | 0 | $\dfrac{1}{\sqrt{4\pi}}$ |
| 1 | 0 | $\sqrt{\dfrac{3}{4\pi}} \cos\theta$ |
| | 1 | $-\sqrt{\dfrac{3}{8\pi}} \sin\theta e^{i\phi}$ |
| | $-1$ | $\sqrt{\dfrac{3}{8\pi}} \sin\theta e^{-i\phi}$ |
| 2 | 0 | $\sqrt{\dfrac{5}{16\pi}}(3\cos^2\theta - 1)$ |
| | 1 | $-\sqrt{\dfrac{15}{8\pi}} \sin\theta \cos\theta e^{i\phi}$ |
| | $-1$ | $\sqrt{\dfrac{15}{8\pi}} \sin\theta \cos\theta e^{-i\phi}$ |
| | 2 | $\sqrt{\dfrac{15}{32\pi}} \sin^2\theta e^{2i\phi}$ |
| | $-2$ | $\sqrt{\dfrac{15}{32\pi}} \sin^2\theta e^{-2i\phi}$ |