

| $n$ | $m = -3$  | $m = -2$   | $m = -1$  | $m = 0$  | $m = 1$   | $m = 2$  | $m = 3$   |
|-----|---|--|---|--|---|--|---|
| 0   |   |  |   | $\frac{1}{2}$  |   |  |   |
| 1   |   |  | $\sqrt{3} \sin \theta \sin \phi$                                    | $\sqrt{3} \cos \theta$                                   | $\sqrt{3} \sin \theta \cos \phi$                                    |  |   |
| 2   |   | $\frac{1}{2} \sqrt{15} \sin^2 \theta \sin(2\phi)$              | $\sqrt{15} \sin \theta \cos \theta \sin \phi$                       | $\frac{1}{2} \sqrt{5} (3 \cos^2 \theta - 1)$             | $\sqrt{15} \sin \theta \cos \theta \cos \phi$                       | $\frac{1}{2} \sqrt{15} \sin^2 \theta \cos(2\phi)$              |   |
| 3   | $\frac{1}{2} \sqrt{35} \sin^3 \theta \sin(3\phi)$                 | $\frac{1}{2} \sqrt{105} \sin^2 \theta \cos \theta \sin(2\phi)$ | $\frac{1}{2} \sqrt{21} \sin \theta (5 \cos^2 \theta - 1) \sin \phi$ | $\frac{1}{2} \sqrt{7} (5 \cos^3 \theta - 3 \cos \theta)$ | $\frac{1}{2} \sqrt{21} \sin \theta (5 \cos^2 \theta - 1) \cos \phi$ | $\frac{1}{2} \sqrt{105} \sin^2 \theta \cos \theta \cos(2\phi)$ | $\frac{1}{2} \sqrt{35} \sin^3 \theta \cos(3\phi)$                 |
| $n$ | $m = -3$  | $m = -2$   | $m = -1$  | $m = 0$  | $m = 1$   | $m = 2$  | $m = 3$   |
| 0   |   |  |   | $\frac{1}{2}$  |   |  |   |
| 1   |   |  | $\sqrt{3} \sin \theta \sin \phi$                                    | $\sqrt{3} \cos \theta$                                   | $\sqrt{3} \sin \theta \cos \phi$                                    |  |   |
| 2   |   | $\frac{\sqrt{15}}{4} (1 - \cos(2\theta)) \sin(2\phi)$          | $\sqrt{15} \sin \phi \sin \theta \cos \theta$                       | $\frac{1}{2} \sqrt{5} (3 \cos^2 \theta - 1)$             | $\sqrt{15} \cos \phi \sin \theta \cos \theta$                       | $\frac{\sqrt{15}}{4} (1 - \cos(2\theta)) \cos(2\phi)$          |   |
| 3   | $\frac{\sqrt{35}}{4} (3 \sin \theta - \sin(3\theta)) \sin(3\phi)$ | $\frac{\sqrt{105}}{4} \sin(2\theta) \cos \theta \sin(2\phi)$   | $\frac{\sqrt{21}}{4} (3 \sin \theta - \sin(3\theta)) \sin \phi$     | $\frac{\sqrt{7}}{2} (5 \cos^3 \theta - 3 \cos \theta)$   | $\frac{\sqrt{21}}{4} (3 \sin \theta - \sin(3\theta)) \cos \phi$     | $\frac{\sqrt{105}}{4} \sin(2\theta) \cos \theta \cos(2\phi)$   | $\frac{\sqrt{35}}{4} (3 \sin \theta - \sin(3\theta)) \cos(3\phi)$ |