$$x = r \sin\theta \cos\varphi \tag{21}$$

$$y = r \sin\theta \sin\varphi \tag{22}$$

$$z = r \cos\theta \tag{23}$$

$$\nabla^2 \Phi = \frac{1}{r} \partial_r (r^2 \partial_r \Phi) + \frac{1}{r^2 \sin\theta} \partial_\theta (\sin\theta \partial_\theta \Phi) + \frac{1}{r^2 \sin^2\theta} \partial_\varphi^2 \Phi \tag{24}$$

$$\Phi(r, \theta, \varphi) = T(\theta) L(\varphi) R(r) \tag{25}$$

$$R(r) = \left\{ r^{l} r^{-(l+1} \right. \tag{26}$$

$$L(\varphi) = \left\{ e^{im\varphi} e^{-im\varphi} \right. \tag{27}$$