$$T(\cos\theta) = P_l(\cos\theta) \tag{28}$$

P_l: "Legendre polynomials

$$\Phi(r,\theta,\varphi) = \left\{ r^l r^{-(l+1)} \right\} \times Y_l^m(\theta,\varphi) \tag{29}$$

$$Y_l^m(\theta,\varphi) = \sqrt{\frac{2l+1}{4\pi}\frac{(l-m)!}{(l+m)!}} P_l^m(\cos\theta) e^{im\varphi} \tag{30}$$

$$Y_l^m \equiv (-1)^m Y_l^{(-m)*} \tag{31}$$