

$$\mathbb{S}^d=O_{+d}/O_d=\frac{x=x^0\cdots x^d}{^2x^0+\cdots+^2x^d=1}$$

$$L^2\left(\mathbb{S}^d\right)=\sum_m^{\mathbb{N}}L_m^2\left(\mathbb{S}^d\right)$$

$$L_m^2\left(\mathbb{S}^d\right)=\mathbb{C}\frac{\overline{a|x}^m}{a\in\mathbb{C}^{+d}:~a|\bar{a}=0}=(O\left(+d\right))_m$$

$$\overline{a|x}^m:~a\in\mathbb{C}^{+d}$$

$$i\in +d=0:1:\cdots d$$

$$\partial_i\overline{a|x}^m=m\overline{a|x}^{m-}\underbrace{a|e_i}$$

$$\partial_i^2\overline{a|x}^m=m\left(m-\right)\overline{a|x}^{m-2}\underbrace{a|e_i}\underbrace{a|e_i}$$

$$\sum_i^{+d}\partial_i^2\overline{a|x}^m=m\left(m-\right)\overline{a|x}^{m-2}\sum_i^{+d}\underbrace{a|e_i}\underbrace{a|e_i}=m\left(m-\right)\overline{a|x}^{m-2}\underbrace{a|\bar{a}}$$

$$\Omega_m\left(x\right)=\overline{x^0+ix^1}^m$$