

# ① Souřadnice na $S^2$

$\delta \varphi$

vektorová pole

$$X = -\sin \varphi \frac{\partial}{\partial \delta} - \cos \varphi \cot \delta \frac{\partial}{\partial \varphi}$$

$$Y = \cos \varphi \frac{\partial}{\partial \delta} - \sin \varphi \cot \delta \frac{\partial}{\partial \varphi}$$

$$Z = \frac{\partial}{\partial \varphi}$$

Lineová Rávorde

$$[Y, Z] = ? \quad [X, Y] = ?$$

