

① Metriky indukované na podvarietu

M

$$X = x$$

$$Y = y$$

$$Z = z(x, y)$$

$$\iota: N \rightarrow M$$

$$\begin{matrix} di-2 & di-3 \\ x, y & X, Y, Z \end{matrix}$$



$$D\iota = ?$$

$$g = dx dx + dy dy + dz dz$$

$$g|_N = \iota^* g = ?$$

$$D_{\underline{x}} \iota = \frac{\partial X^m}{\partial x^m} \frac{\partial^{\underline{a}}}{\partial X^m} d_{\underline{a}} x^m$$

$$\underline{z}(x, y) = \sqrt{R_0^2 - x^2 - y^2}$$

ve sférických souřadnicích

$$X, Y, Z \rightarrow R, \theta, \phi$$

$$g = dR dR + R^2 d\theta d\theta + R^2 \sin^2 \theta d\phi d\phi$$

$$g|_N = R_0^2 (d\theta d\theta + \sin^2 \theta d\phi d\phi)$$

$$R = R_0 \leftarrow$$

$$\iota^* dR = 0$$

$$\theta = \delta$$

$$\iota^* d\theta = d\delta$$

$$\phi = \varphi$$

$$\iota^* d\phi = d\varphi$$

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