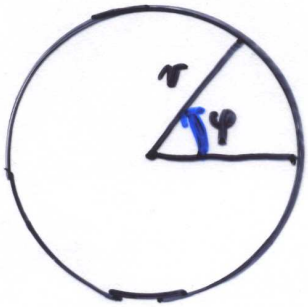
2 dim: Polarkoordinaten

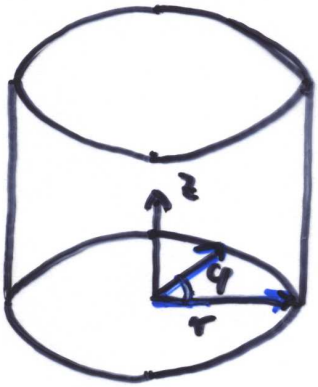


$$x = r\cos\varphi$$

$$y = r\sin\varphi$$

$$\det J(r,\varphi) = r$$

3 dim: Zylinderkoordinaten



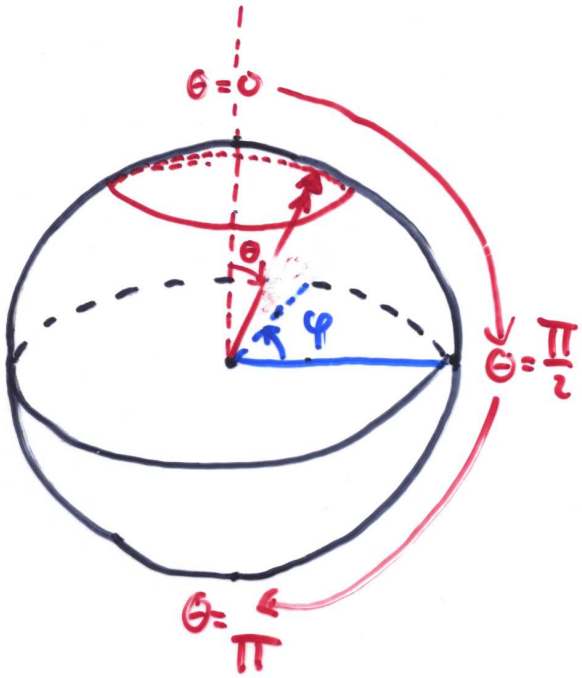
$$x = r\cos\varphi$$

$$y = r\sin\varphi$$

$$z = z$$

$$J(r,\varphi,z) = r$$

Kugelkoordinaten („sphärische Polarkoordinaten")



$$x = r\cos\varphi\sin\theta$$

$$y = r\sin\varphi\sin\theta$$

$$z = r\cos\theta$$

$$J(r,\varphi,z) = r^2\sin\theta$$