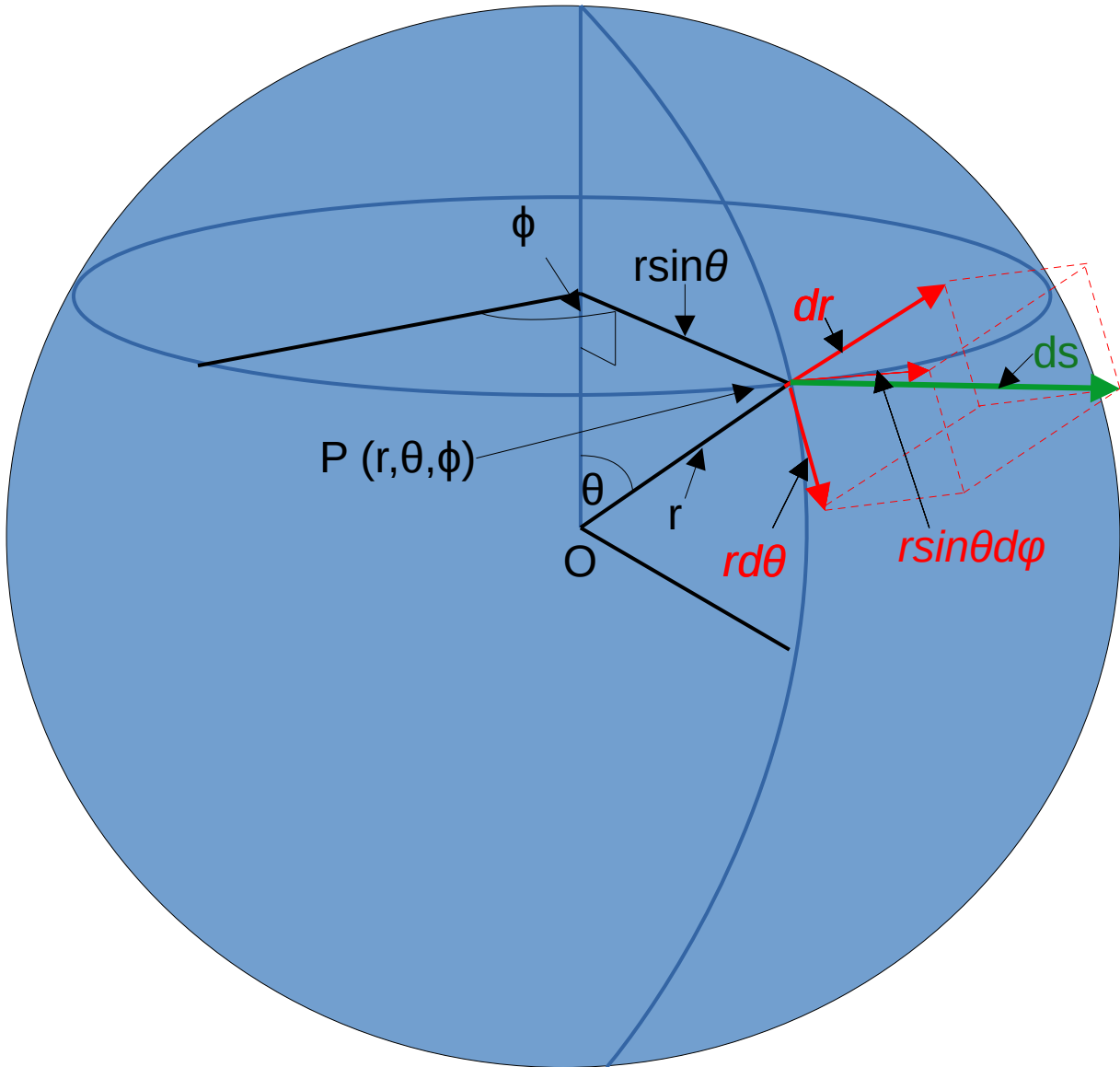


Spherical Coordinates

An infinitesimally small length ds at a point P in three dimensional space measured in spherical coordinates r, θ , and ϕ



The infinitesimally small lengths ds , dr , $rd\theta$, and $r \sin \theta d\phi$ are at the point $P (r, \theta, \phi)$

$$ds^2 = dr^2 + r^2 d\theta^2 + r^2 \sin^2 \theta d\phi^2$$

$$ds = (dr^2 + r^2 d\theta^2 + r^2 \sin^2 \theta d\phi^2)^{1/2}$$

