

# 1 Escaped radial configuration

This configuration is given by:

$$\hat{\mathbf{n}} = \begin{bmatrix} \cos \varphi \sin \beta \\ \sin \varphi \sin \beta \\ \cos \beta \end{bmatrix} \quad (1)$$

with

$$\beta = 2 \arctan \left( \frac{r}{R} \right) \quad (2)$$

$\varphi$  the azimuthal angle,  $r$  the radial distance from the cylinder axis, and  $R$  the cylinder radius.