Coordinates:  $(t,r,\theta,\phi)$  with axial symmetry about the z-axis; functions have compact support in r.

## Alcubierre

Profile:  $f(r,t) = interpolated_alcubierre(r)$  (NPZ data for alcubierre with 500 points)

$$ds^{2} = -dt^{2} + (1 - f(r, t)) dr^{2} + r^{2} d\theta^{2} + r^{2} \sin^{2} \theta d\phi^{2}$$

## Natário

Profile:  $f(r,t) = interpolated_n atario(r)$  (NPZ data for natario with 500 points)

$$ds^{2} = -dt^{2} + (1 - f(r, t)) dr^{2} + r^{2} d\theta^{2} + r^{2} \sin^{2} \theta d\phi^{2}$$