Appendix-B

The Nonvanishing Components of intrinsic curvature and extrinsic curvature used in Chapter 3

The nonvanishing components of intrinsic curvature κ^{-}_{ij} to surface Σ are

$$\kappa^{-}_{\tau\tau} = \left(-\frac{1}{2}\frac{\nu'}{e^{(\mu+\lambda)/2}} \right)_{\Sigma},$$

$$\kappa^{-}_{\theta\theta} = \left(re^{(\mu-\lambda)/2} \right)_{\Sigma}.$$

The nonvanishing components of extrinsic curvature κ^{+}_{ij} to surface Σ are

$$\kappa^{+}_{\tau\tau} = \left(\frac{\ddot{v}}{\dot{v}} - \dot{v}\frac{m}{y^2} \right)_{\Sigma},$$

$$\kappa^{+}_{\theta\theta} = \left[\dot{v}\left(1 - \frac{2m}{y} \right) y + \dot{y}y \right]_{\Sigma}.$$