

In[1]:=

```
Clear["Global`*"]  
SetDirectory["/Users/kevin/papers/math/GRcode"]
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Out[2]= /Users/kevin/papers/math/GRcode

In[3]:= << GREAT.m

GREAT functions are: IMetric, Christoffel,  
Riemann, Ricci, SCurvature, EinsteinTensor, SqRicci, SqRiemann.  
Enter 'helpGREAT' for this list of functions

In[4]:= x = {r, theta, phi}

Out[4]= {r, theta, phi}

In[5]:= (g = {{1/(1 + (r/L)^2), 0, 0}, {0, r^2, 0}, {0, 0, r^2 Sin[theta]^2}}) // MatrixForm

Out[5]//MatrixForm=

$$\begin{pmatrix} \frac{1}{1 + \frac{r^2}{L^2}} & 0 & 0 \\ 0 & r^2 & 0 \\ 0 & 0 & r^2 \sin^2[\theta] \end{pmatrix}$$

In[6]:= SCurvature[g, x]

Out[6]=  $-\frac{6}{L^2}$