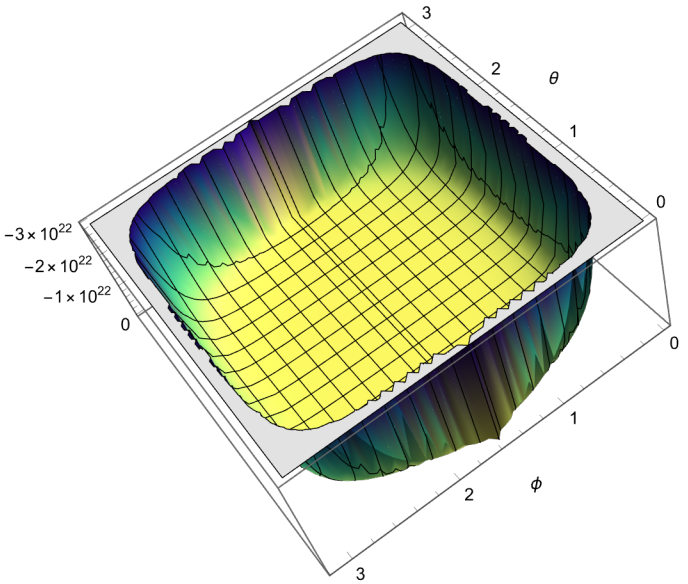
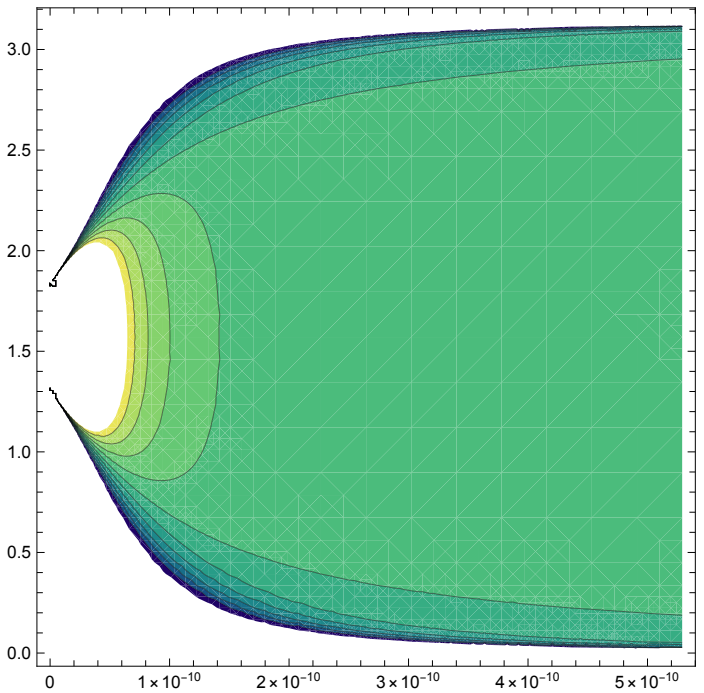
```
r = 2 × .529 * 10^-10;
Plot3D[(1 / r^2) * (1 - (Cot[ϕ]^2 / Sin[θ]^2 * (0.729 - 1 - r / (2 * .529 * 10^-10))^2)),
 {ϕ, 0, Pi}, {θ, 0, Pi}, ColorFunction → "BlueGreenYellow", AxesLabel → Automatic]
```

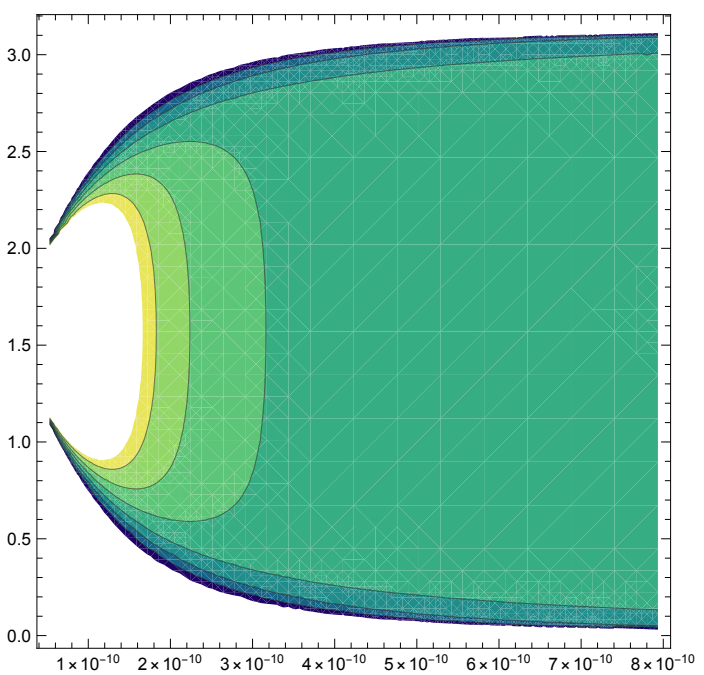



```
θ = Pi / 2;
Plot3D[(1 / r^2) * (1 - (Cot[ϕ]^2 / Sin[θ]^2 * (0.729 - 1 - r / (2 * .529 * 10^-10))^2)),
 {ϕ, 0, Pi}, {r, .529 * 10^-10, 20 * .529 * 10^-10},
 ColorFunction → "BlueGreenYellow", AxesLabel → Automatic]
```

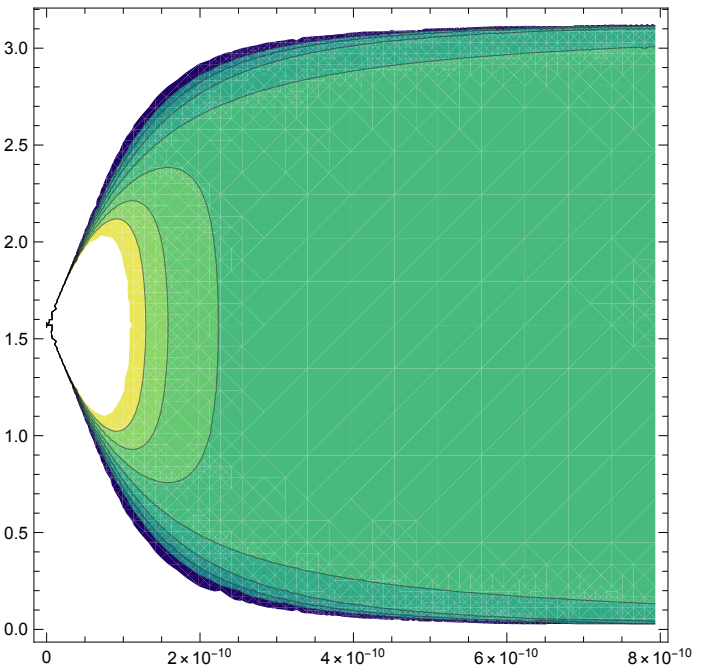
```
ContourPlot[(1 / r^2) * (1 - (Cot[theta]^2 / (.729 - 1 - r / (2 * .529 * 10^-10))^2)),
 {r, 0, 2 * 5 * .529 * 10^-10}, {theta, 0, Pi}, ColorFunction → "BlueGreenYellow"]
```



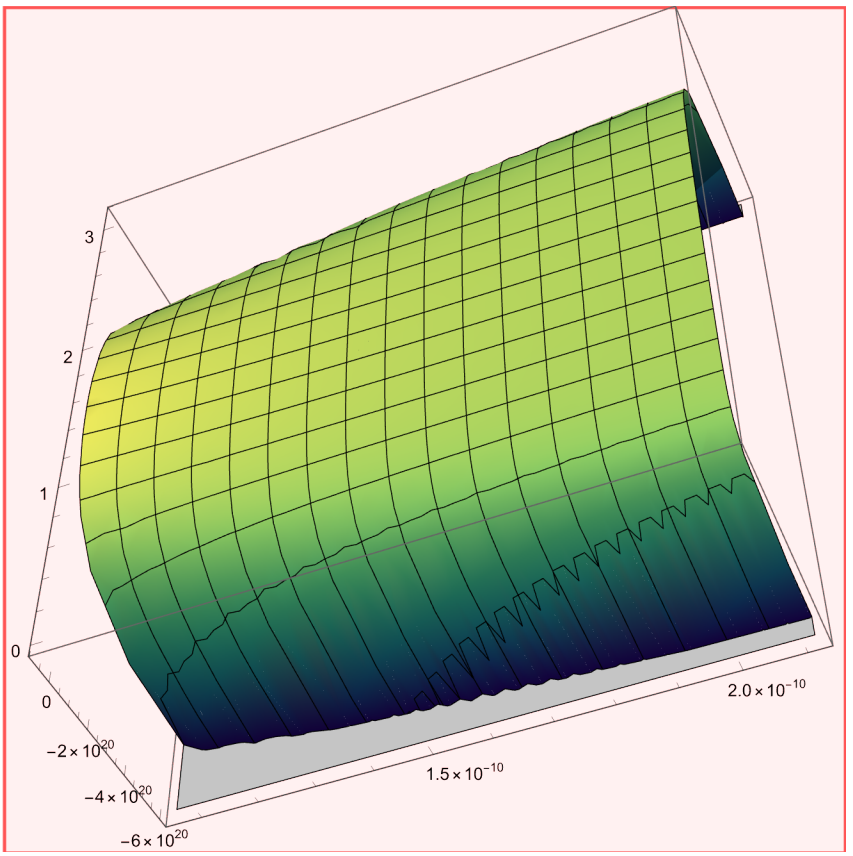

```
ContourPlot[(1 / r^2) * (1 - (Cot[theta]^2 / (0.999 - 1 - r / (2 * .529 * 10^-10))^2)),
 {r, .529 * 10^-10, 15 * .529 * 10^-10}, {theta, 0, Pi},
 ColorFunction → "BlueGreenYellow", AxesLabel → Automatic]
```



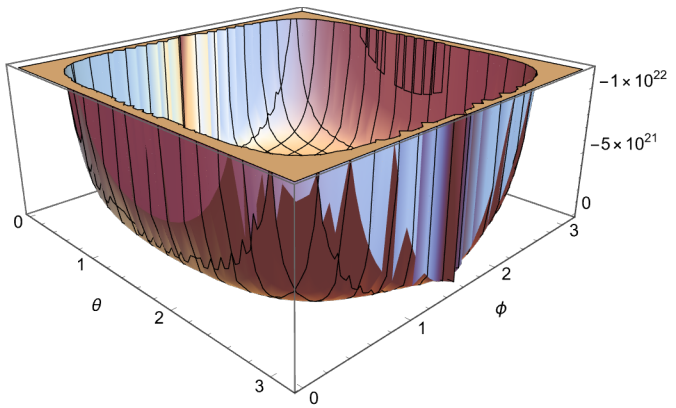
```
ContourPlot[(1 / r^2) * (1 - (Cot[theta]^2 / (0.999 - 1 - r / (2 * .529 * 10^-10))^2)),
 {r, 0, 15 * .529 * 10^-10}, {theta, 0, Pi},
 ColorFunction → "BlueGreenYellow", AxesLabel → Automatic]
```



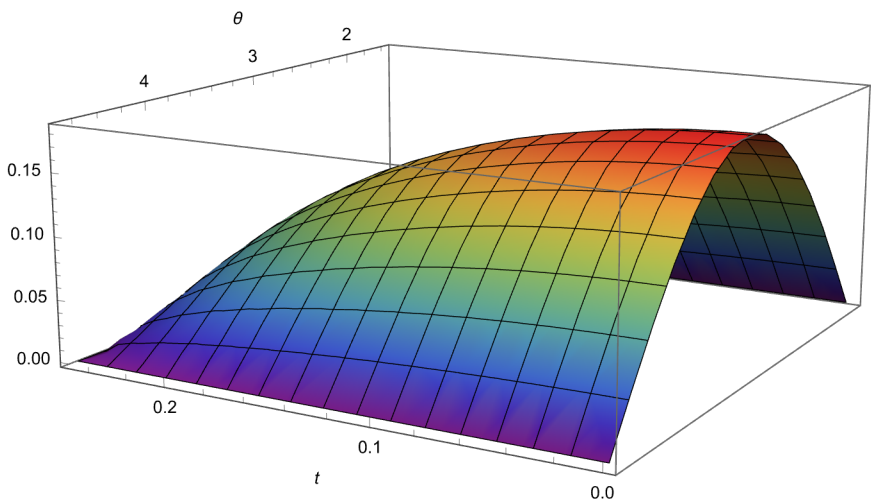
```
Plot3D[(1 / x^2) * (1 - (Cot[y]^2 / (.9999733 - 1 - x / (2 * .529 * 10^-10))^2)),
 {x, 2 * .529 * 10^-10, 4 * .529 * 10^-10},
 {y, 0, Pi}, ColorFunction → "BlueGreenYellow"]
```



```
ClearAll;
γ = 0.72999;
a = 0.529 * 10^-10;
r = 2 a; (*Fixing r*)
Plot3D[1/r^2 (1 - Cot[ϕ]^2 / (Sin[θ]^2 (γ - 1 - r/(2*a))^2)),
 {ϕ, 0, Pi}, {θ, 0, Pi}, AxesLabel → Automatic]
```



```
(*Plot of S(t) the scale factor*)
scalefactor2 := r^(2 ϒ-4) a^(4-2 ϒ) e^(-r/a) Cos[θ]^2 Sin[ϕ]^2 Cos[2 * w * t];
ClearAll;
ϒ = 0.99999;
a = a;
r = 2 a; (*Fixing r*)
T = 1;
Plot3D[Sqrt[r^(2 ϒ-4) a^(4-2 ϒ) e^(-r/a) Cos[θ]^2 Cos[(2 Pi)/T * t]], {t, 0, T / 4},
 {θ, Pi / 2, 3 Pi / 2}, AxesLabel → Automatic, ColorFunction → "Rainbow"]
```



```
(*Plot of S(t) the scale factor*)
scalefactor2 := r^(2 γ-4) a^(4-2 γ) e^(-r/a) Cos[θ]^2 Sin[ϕ]^2 Cos[2 * w * t];
ClearAll;
γ = 0.99999;
a = a;
r = 2 a; (*Fixing r*)
T = 1;
Plot3D[Sqrt[r^(2 γ-4) a^(4-2 γ) e^(-r/a) Cos[θ]^2 Cos[(2 Pi)/T * t]], {t, T / 2, 3 T / 2},
 {θ, Pi / 2, 3 Pi / 2}, AxesLabel → Automatic, ColorFunction → "Rainbow"]
```