

Plotting spherical harmonics in Gnuplot

Plot the s-function

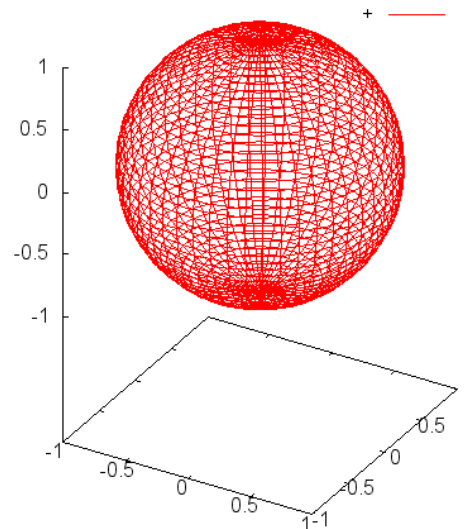
```
set parametric
set vrange [-pi/2:pi/2]
set urange [0:2*pi]
```

```
set isosamples 50, 50
set view equal xyz
set xrange [-1:1]
set yrange [-1:1]
```

```
x(u,v) = cos(v)*cos(u)
y(u,v) = cos(v)*sin(u)
z(u,v) = sin(v)
```

```
r(u,v)=1 # s
```

```
splot r(u,v)*x(u,v), r(u,v)*y(u,v), r(u,v)*z(u,v) title "+"
```



Plot the py or pz-function

```
r(u,v)=y(u,v) # py or r(u,v)=z(u,v) # pz
```

```
splot r(u,v)*x(u,v), r(u,v)*y(u,v), r(u,v)*z(u,v) title "+", \
      -r(u,v)*x(u,v), -r(u,v)*y(u,v), -r(u,v)*z(u,v) title "-"
```

