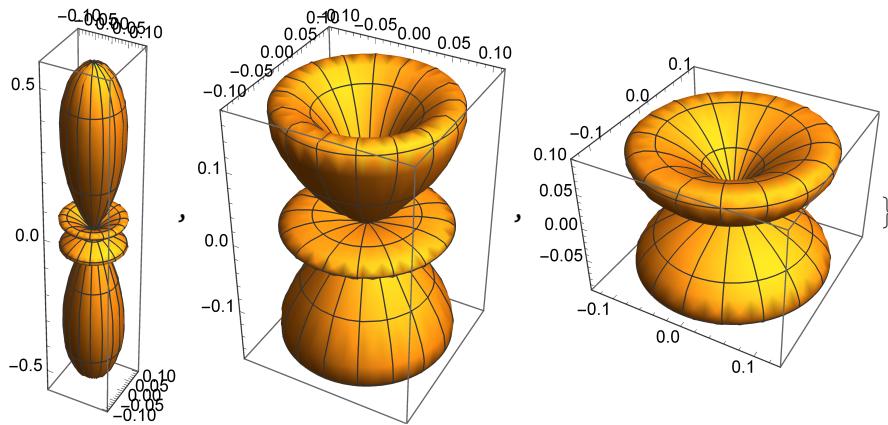
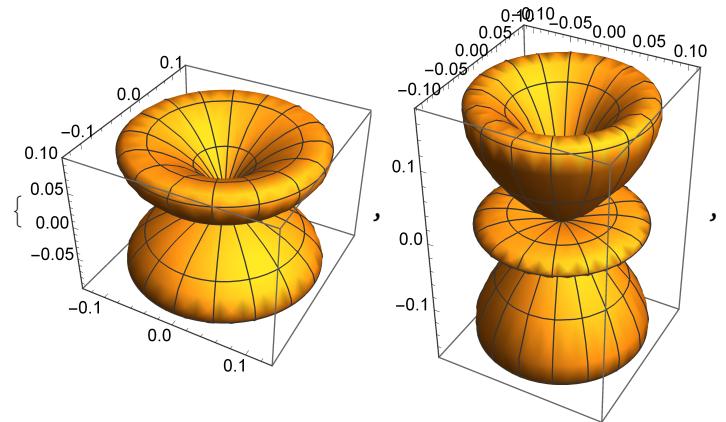


```
Table[SphericalPlot3D[Abs[SphericalHarmonicY[3, m, θ, φ]]^2, {θ, 0, π}, {φ, 0, 2*π},  
表格 三维球面图形
```

PlotRange → All, ImageSize → Small], {m, -2, 2}] (* Angular Distribution *)
绘制范围 全部 图像尺寸 小



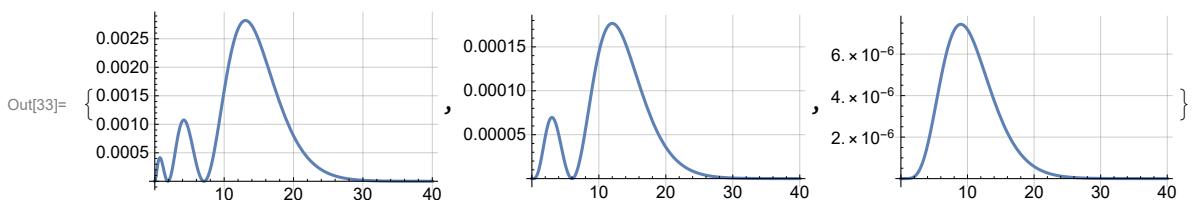
```
a = 1; (* a is the Bohr Radius *)
```

R[n_, l_, r_] := $\sqrt{\left(\frac{2}{n * a}\right)^3 \frac{\text{Factorial}[n - 1 - 1]}{2 n (\text{Factorial}[n + 1])^3}} \text{Exp}\left[\frac{-r}{n * a}\right] *$

$\left(\frac{2 * r}{n * a}\right)^l * \text{LaguerreL}[n - 1 - 1, 2 * l + 1, \frac{2 * r}{n * a}] / . n \rightarrow 3$ (* Radial PDF *)
拉盖尔函数 概率密度

```
In[33]:= Table[Plot[Abs[R[3, l, r]]^2 * r^2, {r, 0, 40},  
表格 绘图
```

PlotRange → All, ImageSize → Small, GridLines → Automatic], {l, 0, 2}]
绘制范围 全部 图像尺寸 小 网格线 自动



$F[n_, l_, m_, r_, \theta_, \phi_] := R[n, l, r] * SphericalHarmonicY[l, m, \theta, \phi]$
 球面谐函数

Table[SphericalPlot3D[Abs[F[3, 1, 0, 1/9, \theta, \phi]]^2,

表格 三维球面图形

{\theta, 0, \pi}, {\phi, 0, 2 * \pi}, ImageSize \rightarrow Medium], {1, 1, 2}]

图像尺寸 中

