Coordonatele sferice

```
In[•]:= x1First[spin_, theta_] := spin * Cos[theta];
        x2First[spin_, theta_, fi_] := spin * Sin[theta] * Cos[fi];
        x3First[spin_, theta_, fi_] := spin * Sin[theta] * Sin[fi];
```

Functia de energie H'

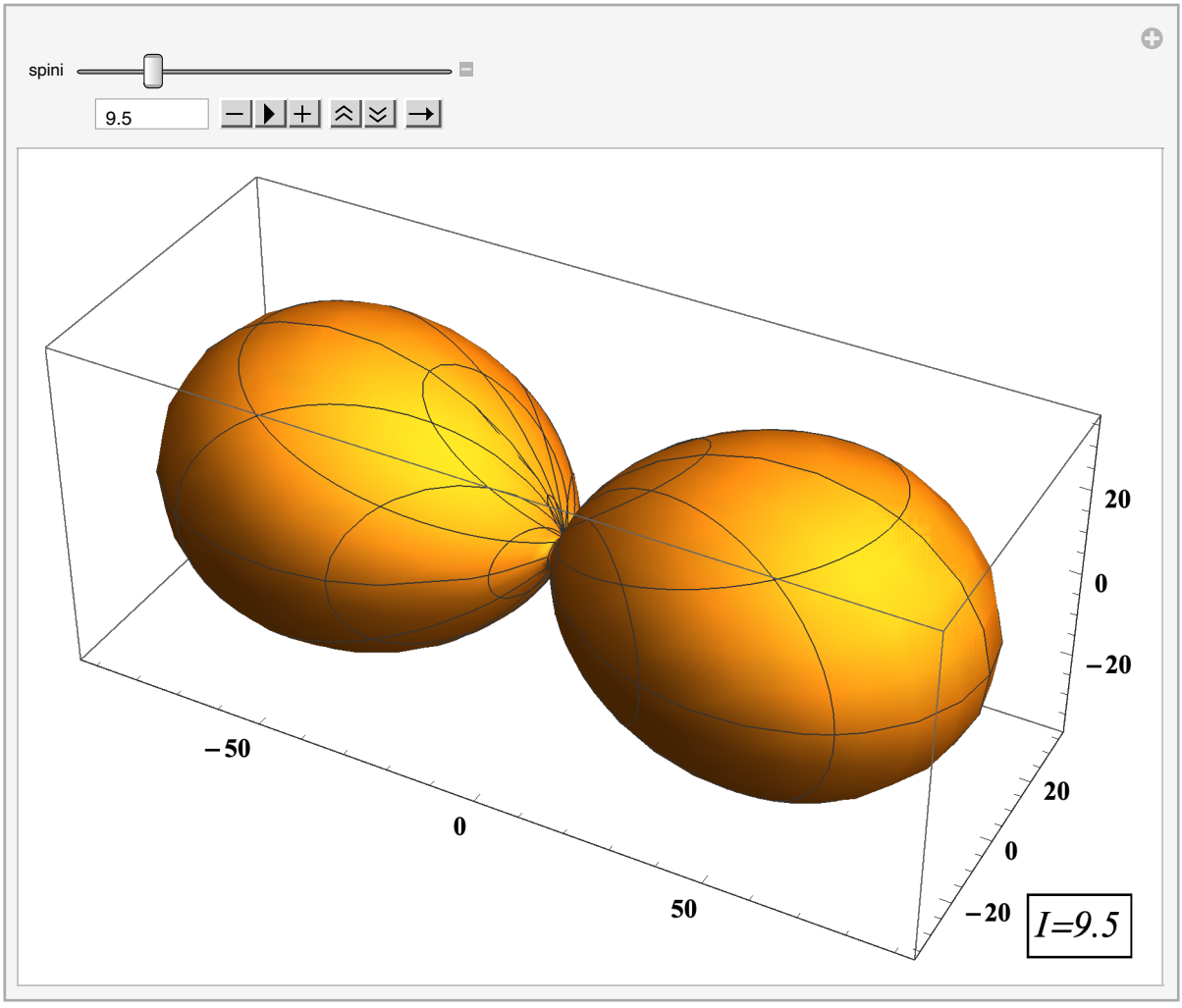
expresie analitica

```
In[•]:= EnHA[spin_, theta_, fi_] :=
          (Cos[fi]^2 + u[spin] * Sin[fi]^2) * (spin^2 - x1First[spin, theta]^2) +
           2 * v0[spin] * x1First[spin, theta];
```

plot θ [-π,π]

In[30]:=
```
Manipulate[Show[SphericalPlot3D[EnHA[spini, x, y], {x, -π, π}, {y, 0, 2 π}],
  MaxRecursion → 10, ImageSize -> Large, Mesh -> Full, Mesh -> None,
  Epilog → Inset[Framed[Style[StringTemplate["I=``"][spini], 20,
      Italic, Black, FontFamily → "Times New Roman"], Background → None],
    {Right, Bottom}, {Right, Bottom}], LabelStyle →
   {14, Bold, Black, FontFamily → "Times New Roman"}], {spini, 1, 50, 1.5}]
```

Out[30]=



plot θ [0,π]

In[31]:=
```
Manipulate[Show[SphericalPlot3D[EnHA[spini, x, y], {x, 0, π}, {y, 0, 2 π}],
  MaxRecursion → 10, ImageSize -> Large, Mesh -> Full, Mesh -> None,
  Epilog → Inset[Framed[Style[StringTemplate["I=``"][spini], 20,
      Italic, Black, FontFamily → "Times New Roman"], Background → None],
    {Right, Bottom}, {Right, Bottom}], LabelStyle →
   {14, Bold, Black, FontFamily → "Times New Roman"}], {spini, 1, 50, 1.5}]
```

Out[31]=