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ClearAll["Global`*"]
SetDirectory[NotebookDirectory[]]
C:\Users\Javier\Desktop\Física\Prácticas\Mathematica\Propagación
  MB 3 niveles\MBCPR spatial

FWHM = 10; (*mm*) (*5 to the right and 5 to the left at FWHM*)
ΩG = 20; (*ns-1*)

radios = 15; (*numero de radios que tomamos*)
j = 10;
MatrizExp2 = {};
(*CALCULAMOS UN CORTE DE LA GAUSSIANA EN LA DIRECCION X*)
i = 1;

Do[Clear[r];
  r = 0;

  Do[Clear[m, MatrizExp1];
    (*LLAMAMOS A LOS ARCHIVOS CON EL PULSO
      GENERADO POR DISTANCIA AL CENTRO DEL PULSO UNO A UNO*)
    GenerRabi = OpenRead[StringJoin["GenerPulse", ToString[r], ".txt"]];
    ListaGenerRabi = {};
    ListaGenerRabi = ReadList[GenerRabi, Expression];
    m = Max[Drop[Drop[Flatten[Take[ListaGenerRabi, {200 * (i - 1) + 1, 200 * i}]],
      {1, 600, 3}], {1, 400, 2}]];
    MatrizExp1 = {};
    MatrizExp1 = Append[MatrizExp1, r];
    MatrizExp1 = Append[MatrizExp1, m];
    MatrizExp2 = Append[MatrizExp2, MatrizExp1];
    r++,
    {radios + 1}];

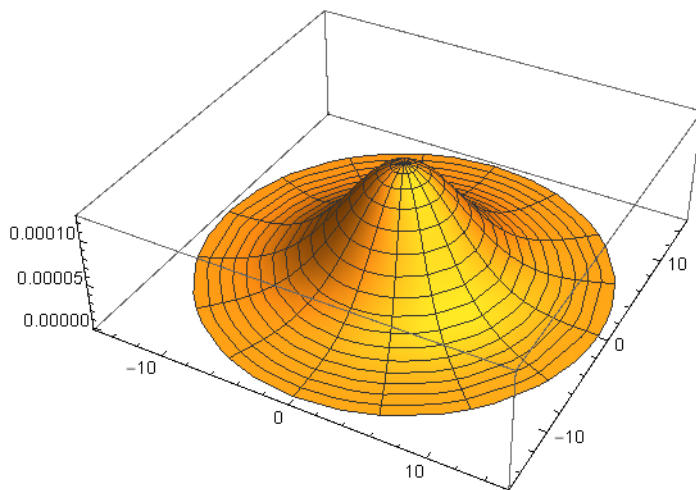
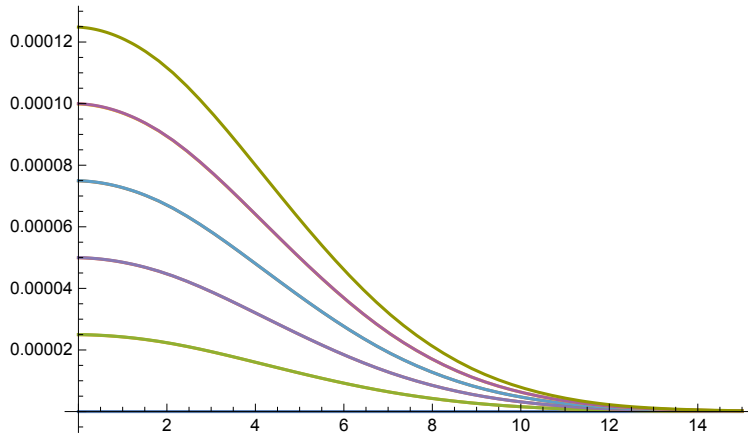
  i++,
  {j}];

```

```

Clear[r, i];
Plot[Evaluate[Table[Interpolation[Take[MatrizExp2, {16 * (i - 1) + 1, 16 * i}]] [r],
  {i, 1, 10}]], {r, 0, 15}]
(*REVOLVEMOS LA LISTA*)
i = 10;
Gaussiana = Interpolation[Take[MatrizExp2, {16 * (i - 1) + 1, 16 * i}]] [r];
RevolutionPlot3D[Gaussiana, {r, 0, 15}, RevolutionAxis -> {0, 0, 1}]

```



```

r = 0;
i = 10;
GenerRabi = OpenRead[StringJoin["GenerPulse", ToString[r], ".txt"]];
ListaGenerRabi = {};
ListaGenerRabi = ReadList[GenerRabi, Expression];
m =
  Max[Drop[Drop[Flatten[Take[ListGenerRabi, {200 * (i - 1) + 1, 200 * i}]], {1, 600, 3}],
    {1, 400, 2}]]
Pos1 = Position[Drop[Drop[Flatten[Take[ListGenerRabi, {200 * (i - 1) + 1, 200 * i}]],
  {1, 600, 3}], {1, 400, 2}], m];
Pos2 = Replace[Pos1, {x_List} -> x, {0, 1}];
mtime =
  Drop[Drop[Flatten[Take[ListGenerRabi, {200 * (i - 1) + 1, 200 * i}]], {2, 600, 3}],
    {2, 400, 2}][[Pos2]]
0.000124848
{118.6}

```

```
data = Table[Exp[-x2 - y2] Exp[-t2], {t, -2, 2, 0.1}, {y, -10, 10, 0.5}, {x, -10, 10, 0.5}]
```

{ ... 1 ... }

large output

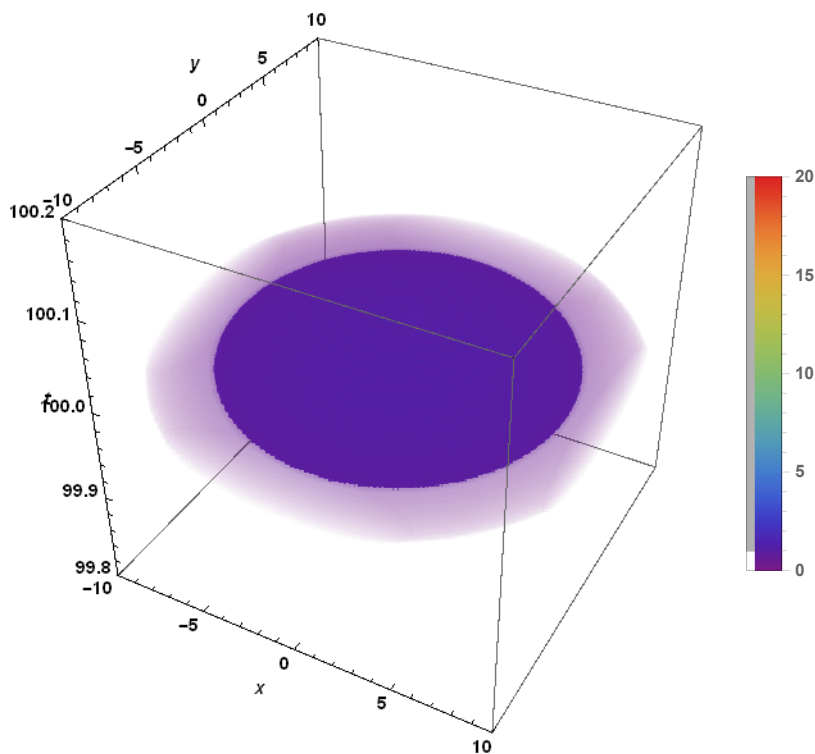
show less

show more

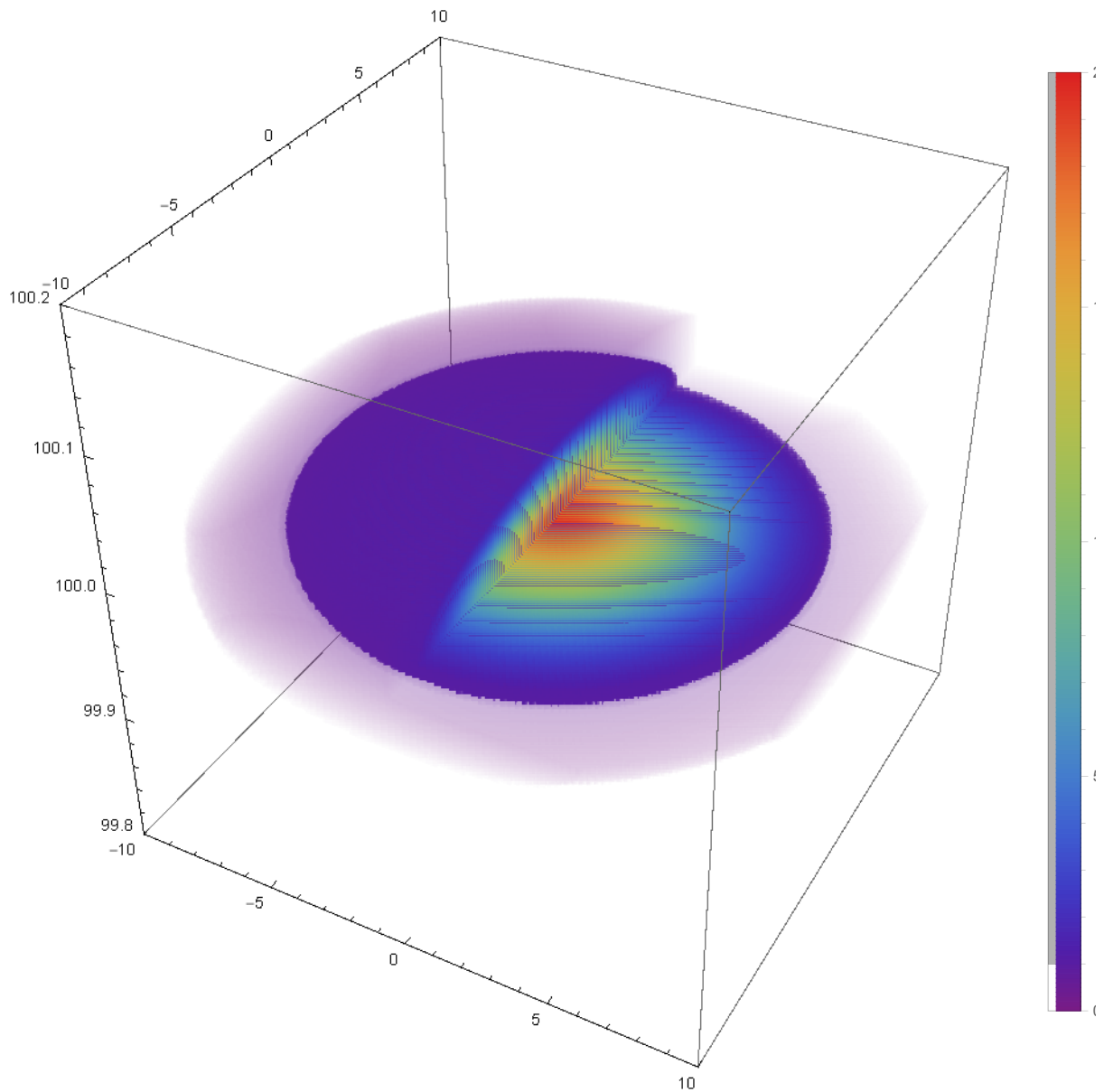
show all

set size limit...

```
data = Table[20 Exp[-(x2 + y2) / 52] Exp[-3002 (t - 100)2 / 102],  
  {t, 99.8, 100.2, 0.002}, {y, -10, 10, 0.1}, {x, -10, 10, 0.1}];  
ListDensityPlot3D[data, ColorFunction -> "Rainbow", AxesLabel -> {x, y, t},  
  LabelStyle -> Directive[Bold], PlotLegends -> Automatic,  
  DataRange -> {{-10, 10}, {-10, 10}, {99.8, 100.2}}]
```



```
ListDensityPlot3D[data, ColorFunction → "Rainbow",
  PlotLegends → Automatic, RegionFunction → Function[{x, y, t}, t <= 100 || x <= 0],
  DataRange → {{-10, 10}, {-10, 10}, {99.8, 100.2}}, ImageSize → Large]
(*ListSliceDensityPlot3D[data2, "YStackedPlanes", ColorFunction → "Rainbow",
  PlotLegends → Automatic, RegionFunction → Function[{t, x, y}, t < 100 || y < 0],
  DataRange → {{97, 103}, {-2, 2}, {-2, 2}}] *)
```



```
(*data=Table[x^2+y^2+z^2,{z,-2,2,0.1},{y,-2,2,0.1},{x,-2,2,0.1}];
ListSliceDensityPlot3D[data,"ZStackedPlanes",
  RegionFunction→Function[{x,y,z},x<0||y>0],DataRange→{{-2,2},{-2,2},{-2,2}}] *)
```