

```

ClearAll["Global`*"]
SetDirectory[NotebookDirectory[]]
C:\Users\Javier\Desktop\Física\Prácticas\Mathematica\Propagación
  MB 3 niveles\MBCPRFiles\Everything in 4000 Loop Files

```

CUIDADO: GUARDAR EL PROGRAMA EN CARPETA PROPIA CON EL FICHERO CREACION DATOS Y PONER LA MISMA J(NUMERO DE ITERACIONES)

```

j = 20;
(*j is the number of loops*)
Doc = 1;
LoopsPerDoc = 4000;
i = 1;
Popu11 = {};
Popu22 = {};
Popu33 = {};

Do[
  Clear[iteration, Files];
  iteration = {};
  Files = {};
  iteration = OpenRead[StringJoin["Popu_Cohe_Rabi_", ToString[Doc], ".txt"]];
  Files = Read[iteration];
  Close[StringJoin["Popu_Cohe_Rabi_", ToString[Doc], ".txt"]];

  If[j - LoopsPerDoc * Doc > 0,

    Do[
      Popu11 = Append[Popu11, Files[[i, 1]]];
      Popu22 = Append[Popu22, Files[[i, 2]]];
      Popu33 = Append[Popu33, Files[[i, 3]]];
      i++,
      {LoopsPerDoc}];

    , (*Coma entre condicion cierta o falsa del IF*)

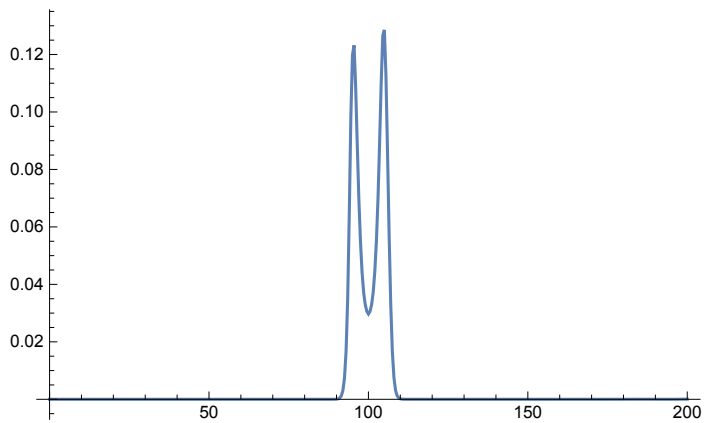
    Do[
      Popu11 = Append[Popu11, Files[[i, 1]]];
      Popu22 = Append[Popu22, Files[[i, 2]]];
      Popu33 = Append[Popu33, Files[[i, 3]]];
      i++,
      {j - LoopsPerDoc * (Doc - 1)}];
  ];

  Doc++,
  {IntegerPart[j / LoopsPerDoc] + 1}];

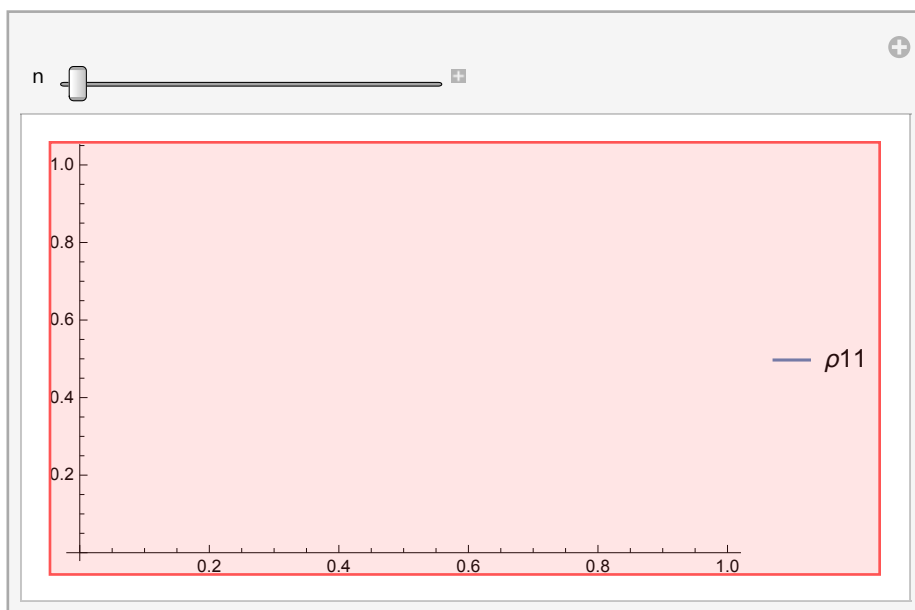
Clear[Files];

```

```
ListLinePlot[{Popu22[[20]]}, PlotRange -> All]
```



```
Manipulate[
  a = Take[Popu11[[n]], {150, 251}];
  b = Take[Popu22[[n]], {150, 251}];
  c = Take[Popu33[[n]], {150, 251}];
  ListLinePlot[{a, b, c}, PlotRange -> All,
    PlotLegends -> {" $\rho_{11}$ ", " $\rho_{22}$ ", " $\rho_{33}$ "}, {{n, 1}, 1, j, 1}]
```

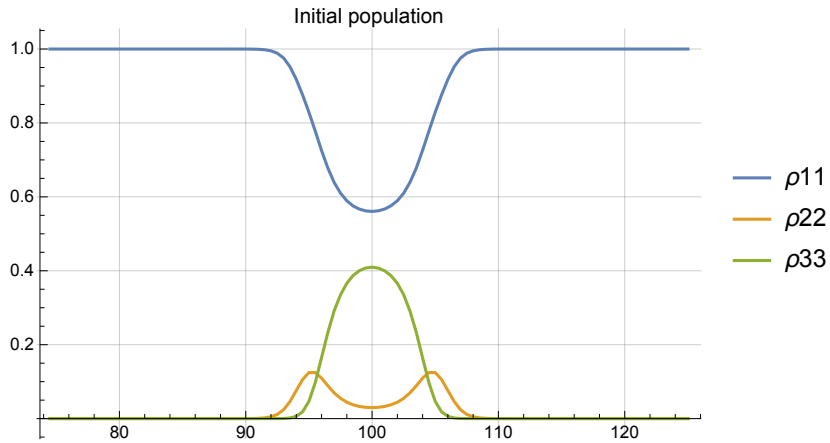


- Part: Part specification Popu11[[1]] is longer than depth of object.
- Take: Cannot take positions 150 through 251 in Popu11[[1]].
- Part: Part specification Popu22[[1]] is longer than depth of object.
- Take: Cannot take positions 150 through 251 in Popu22[[1]].
- Part: Part specification Popu33[[1]] is longer than depth of object.
- General: Further output of Part::partd will be suppressed during this calculation.
- Take: Cannot take positions 150 through 251 in Popu33[[1]].
- General: Further output of Take::take will be suppressed during this calculation.

```

a = Take[Popu11[[1]], {150, 251}];
b = Take[Popu22[[1]], {150, 251}];
c = Take[Popu33[[1]], {150, 251}];
ListLinePlot[{a, b, c}, PlotRange → All, GridLines → Automatic,
  PlotLegends → {" $\rho_{11}$ ", " $\rho_{22}$ ", " $\rho_{33}$ "}, PlotLabel → "Initial population"]

```



```

a = Take[Popu11[[j]], {150, 251}];
b = Take[Popu22[[j]], {150, 251}];
c = Take[Popu33[[j]], {150, 251}];
ListLinePlot[{a, b, c}, PlotRange → All, GridLines → Automatic,
  PlotLegends → {" $\rho_{11}$ ", " $\rho_{22}$ ", " $\rho_{33}$ "}, PlotLabel → "Final population"]

```

