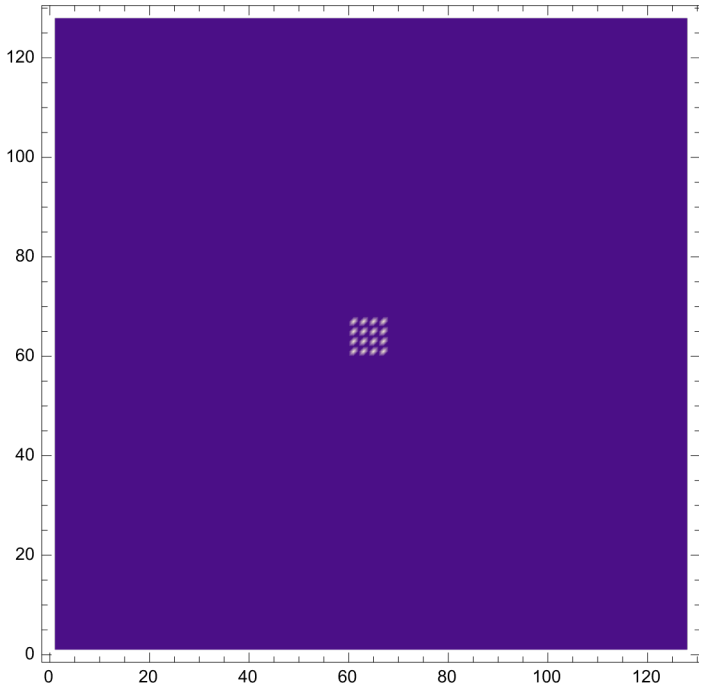
Test inverseF .. No phase difference at traps

at difference No phase traps (inverseF Test ..)

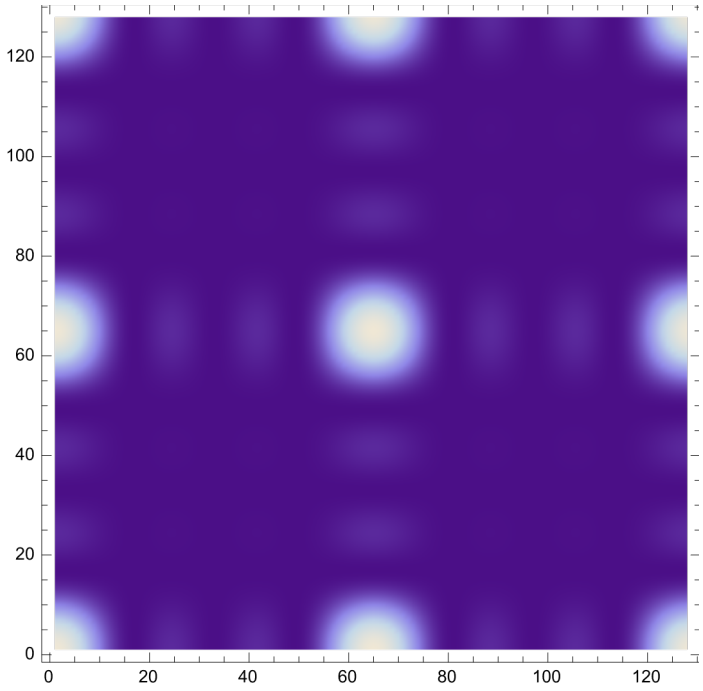
```
GridTraps[na_, nb_, Da_, Db_] := Module[{a, b}, a[i_] := -(na + 1)/2 Da + i * Da;
  b[j_] := -(nb + 1)/2 Db + j * Db;
  Table[Sum[If[(x - a[i] == 0) && (y - b[j] == 0), 1, 0], {i, 1, na}, {j, 1, nb}],
   {x, -63, 64}, {y, -63, 64}]]

a = GridTraps[4, 4, 2, 2];

ListDensityPlot[a, PlotRange → All, Mesh → False]
```




```
TrapsPlot[f_] := ListDensityPlot[Re[f * Conjugate[f]]]

PhaseTrapsPlot[f_] := ListDensityPlot[Arg[f]]

PhHg[f_] := Arg[InverseFourier[f]]

HgMa[f_] := InverseFourier[f]

PhHgPlot[f_] := Module[{u}, u = InverseFourier[f];
  ListDensityPlot[Arg[u], PlotRange → All, Mesh → False]]
```

```
HgPlot[Traps_, n_] := Module[{calcPattern, u}, u = InverseFourier[Traps];
  calcPattern = Re[u * Conjugate[u]];
  quad1 = Take[calcPattern, {1, Round[n / 2]}, {Round[n / 2] + 1, n}];
quad2 = Take[calcPattern, {1, Round[n / 2]}, {1, Round[n / 2]}];
quad3 = Take[calcPattern, {Round[n / 2] + 1, n}, {1, Round[n / 2]}];
quad4 = Take[calcPattern, {Round[n / 2] + 1, n}, {Round[n / 2] + 1, n}];
lM = Join[Flatten[quad4], Flatten[quad1]];
lftMtrx = Partition[lM, Round[n / 2]];
rM = Join[Flatten[quad3], Flatten[quad2]];
rghtMtrx = Partition[rM, Round[n / 2]];
calcPattern =
   Partition[Join[Flatten[Transpose[lftMtrx]], Flatten[Transpose[rghtMtrx]]], n];
  ListDensityPlot[calcPattern, Mesh → False, PlotRange → All]]
```

```
HgPlot[a, 128]
```




```
HgMa[a];
```

```
SumInten[f_, n_] :=
 Sum[Re[Take[f, {i}, {j}] * Conjugate[Take[f, {i}, {j}]]], {i, 1, n}, {j, 1, n}]
```

```
SumInten[a, 128]
```

```
{{16}}
```

```
SumInten[HgMa[a], 128]
```

```
{{16.}}
```