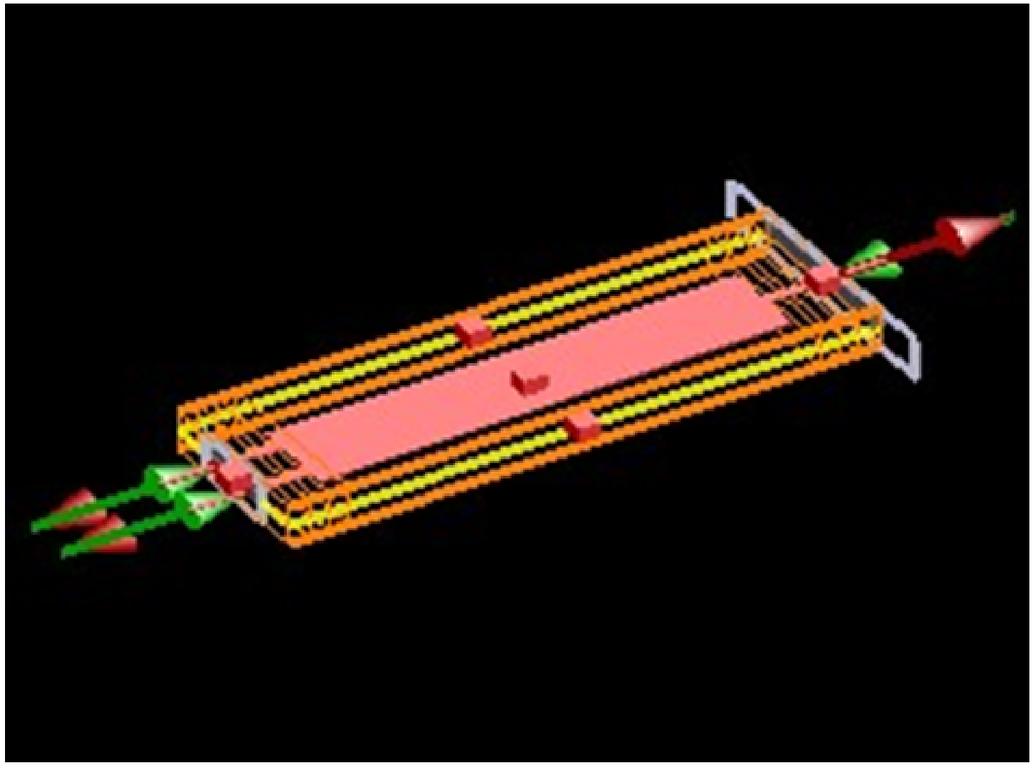
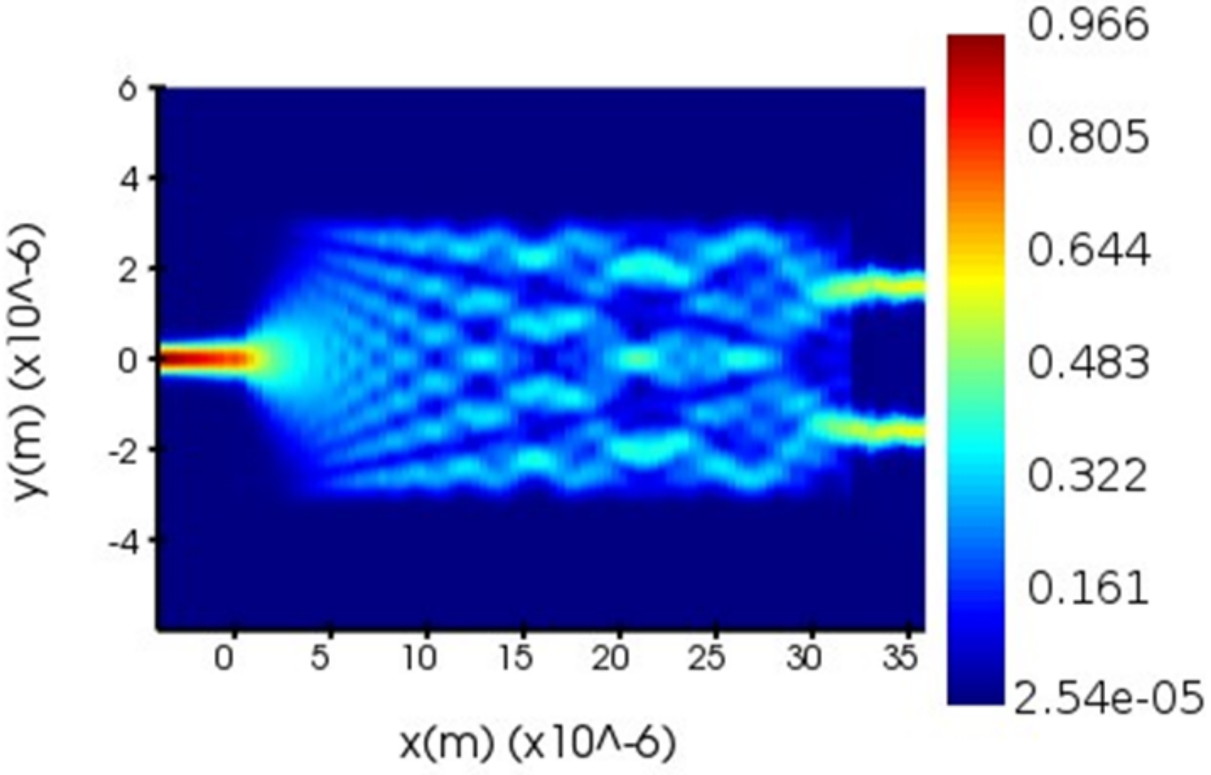
Relatório de atividade

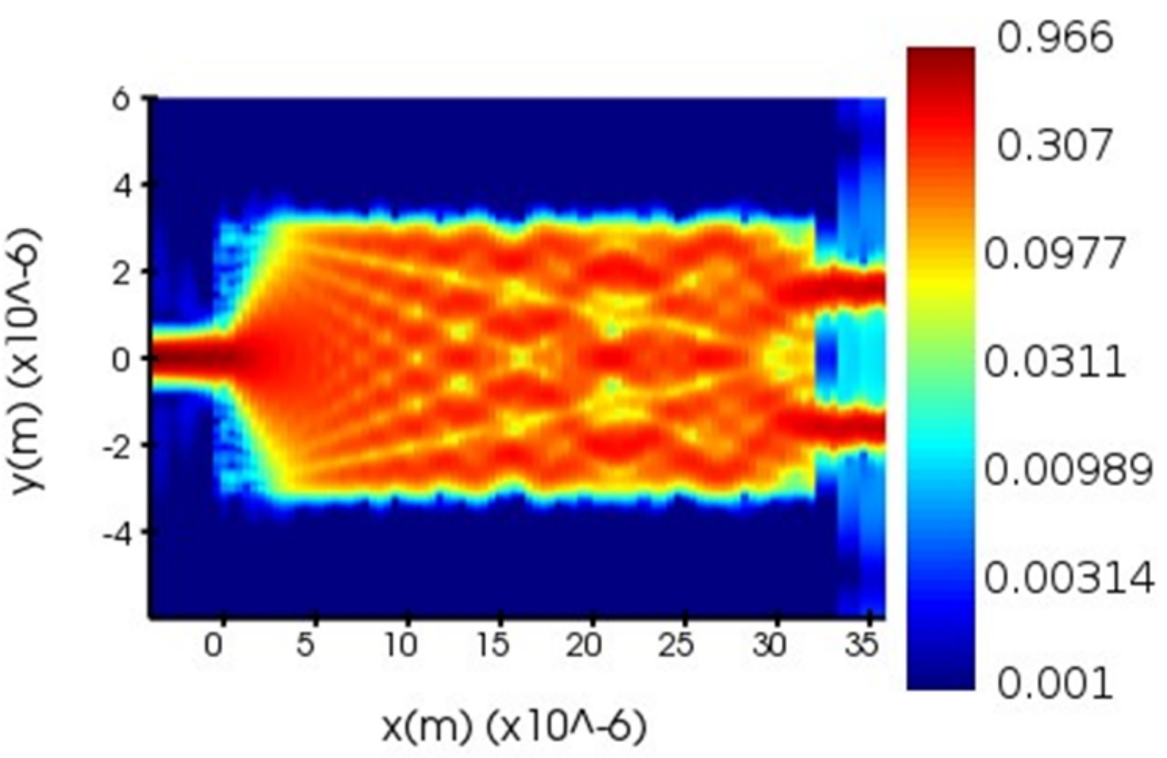
Multimode interference (MMI) coupler 1 x 2 para divisão de potência em 50/50

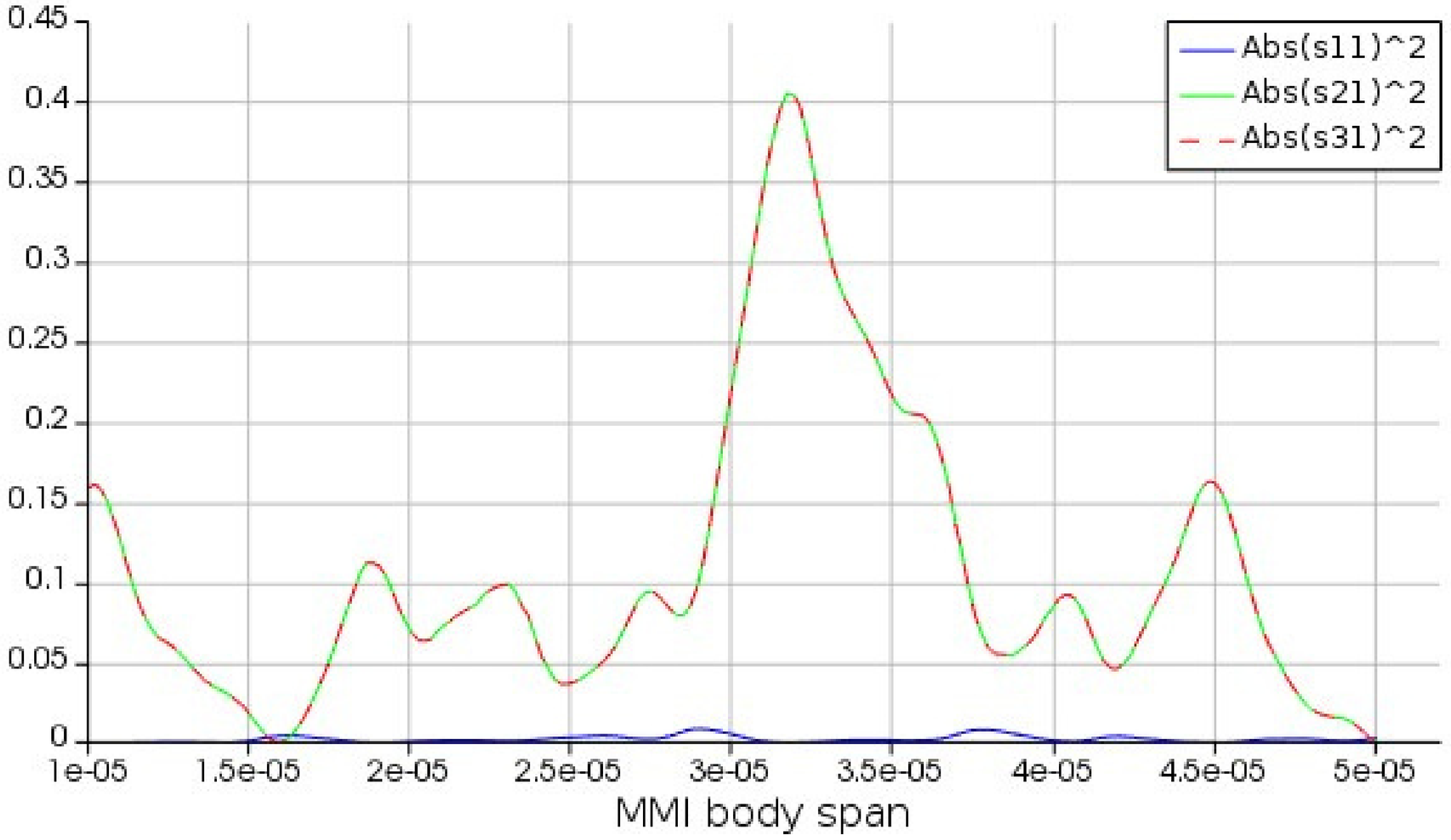
Primeira geração de simulações

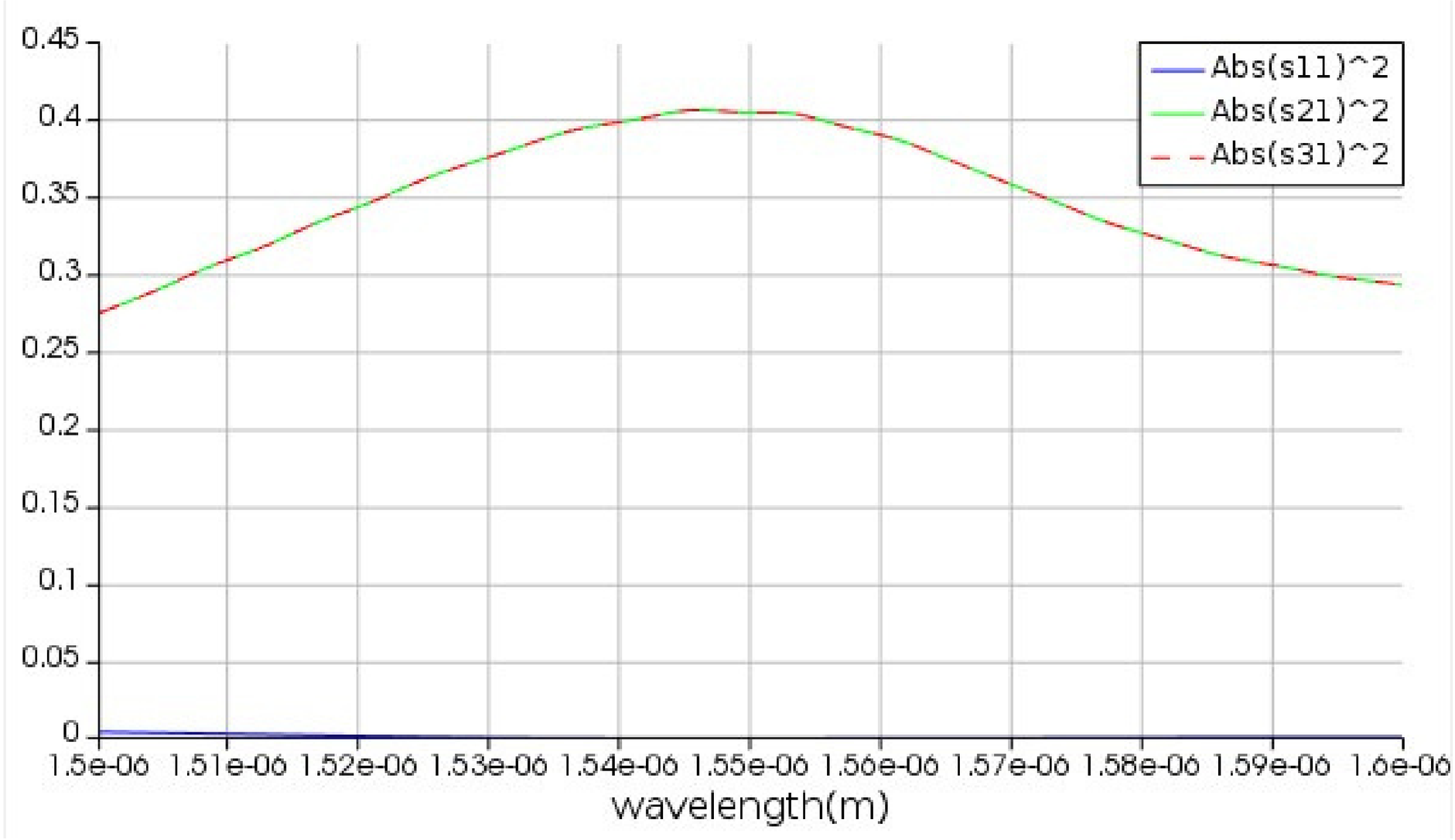
- Lambda = 1,55um
- Largura do MMI = 6um
- Comprimento = 31.8um
- Largura dos Tappers = 1um

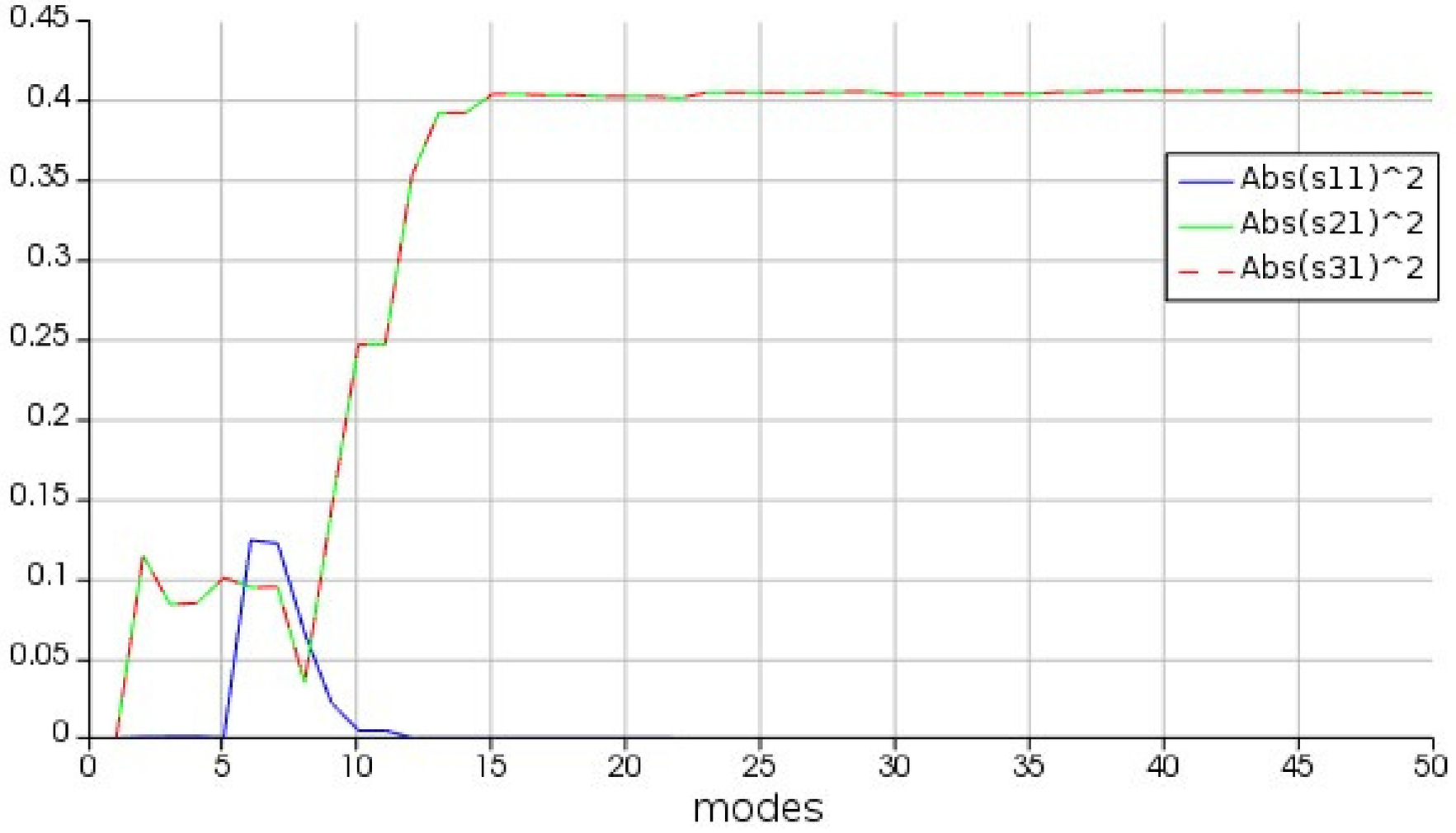



y(m) (x10^-6)
6
4
2
0
-2
-4
0
5
10
15
20
25
30
35
x(m) (x10^-6)
0.966
0.805
0.644
0.483
0.322
0.161
2.54e-05


y(m) (x10^-6)
6
4
2
0
-2
-4
0
5
10
15
20
25
30
35
x(m) (x10^-6)
0.966
0.307
0.0977
0.0311
0.00989
0.00314
0.001

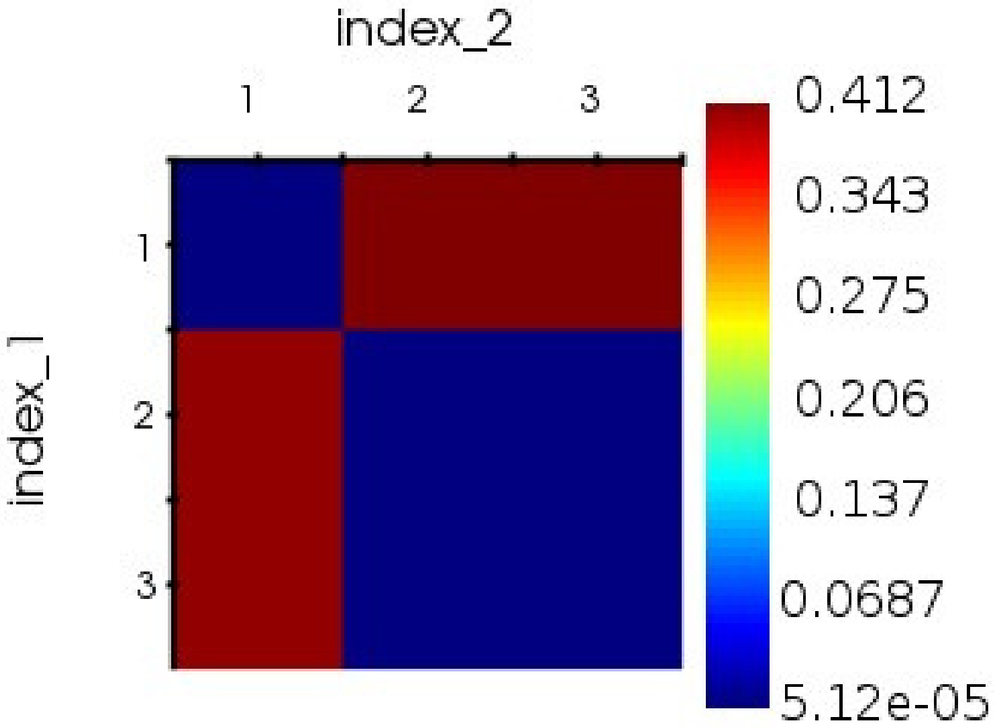

0.45
0.4
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
1e-05
1.5e-05
2e-05
2.5e-05
3e-05
3.5e-05
4e-05
4.5e-05
5e-05
MMI body span
Abs(s11)^2
Abs(s21)^2
Abs(s31)^2


0.45
0.4
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
1.5e-06
1.51e-06
1.52e-06
1.53e-06
1.54e-06
1.55e-06
1.56e-06
1.57e-06
1.58e-06
1.59e-06
1.6e-06
wavelength(m)
Abs(s11)^2
Abs(s21)^2
Abs(s31)^2

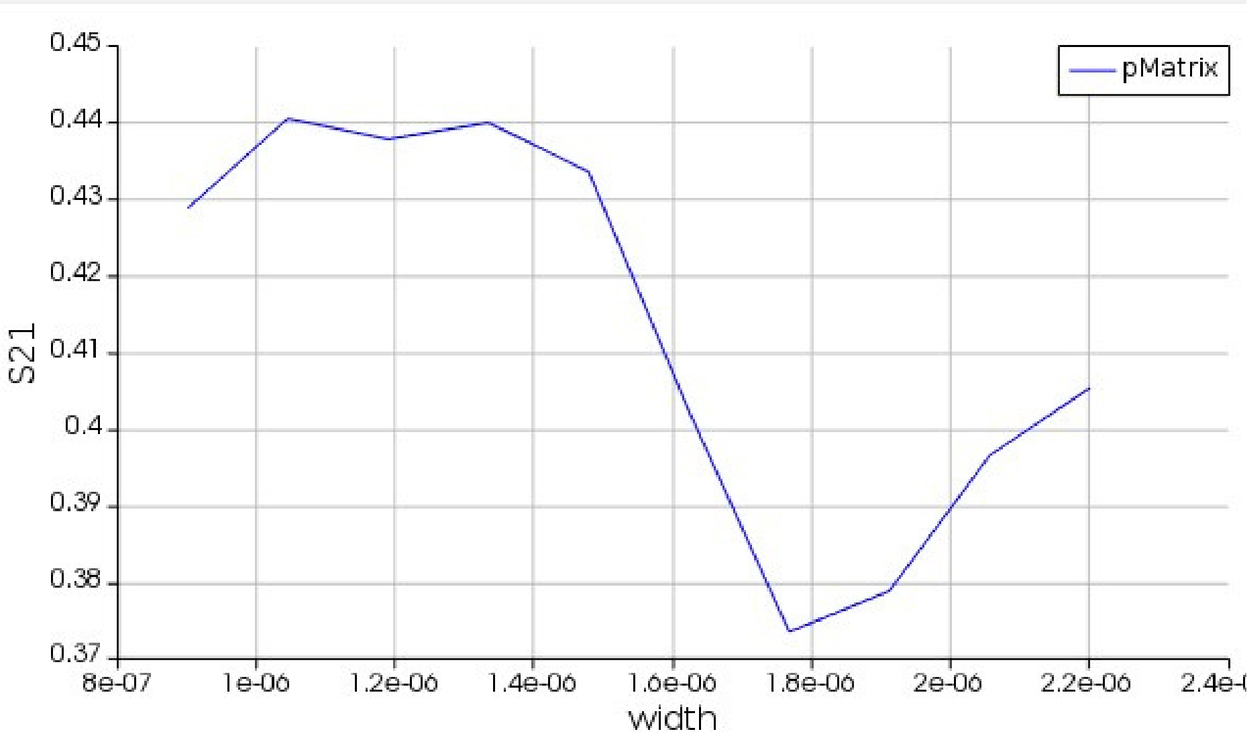

0.45
0.4
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
0
5
10
15
20
25
30
35
40
45
50
modes
Abs(s11)^2
Abs(s21)^2
Abs(s31)^2

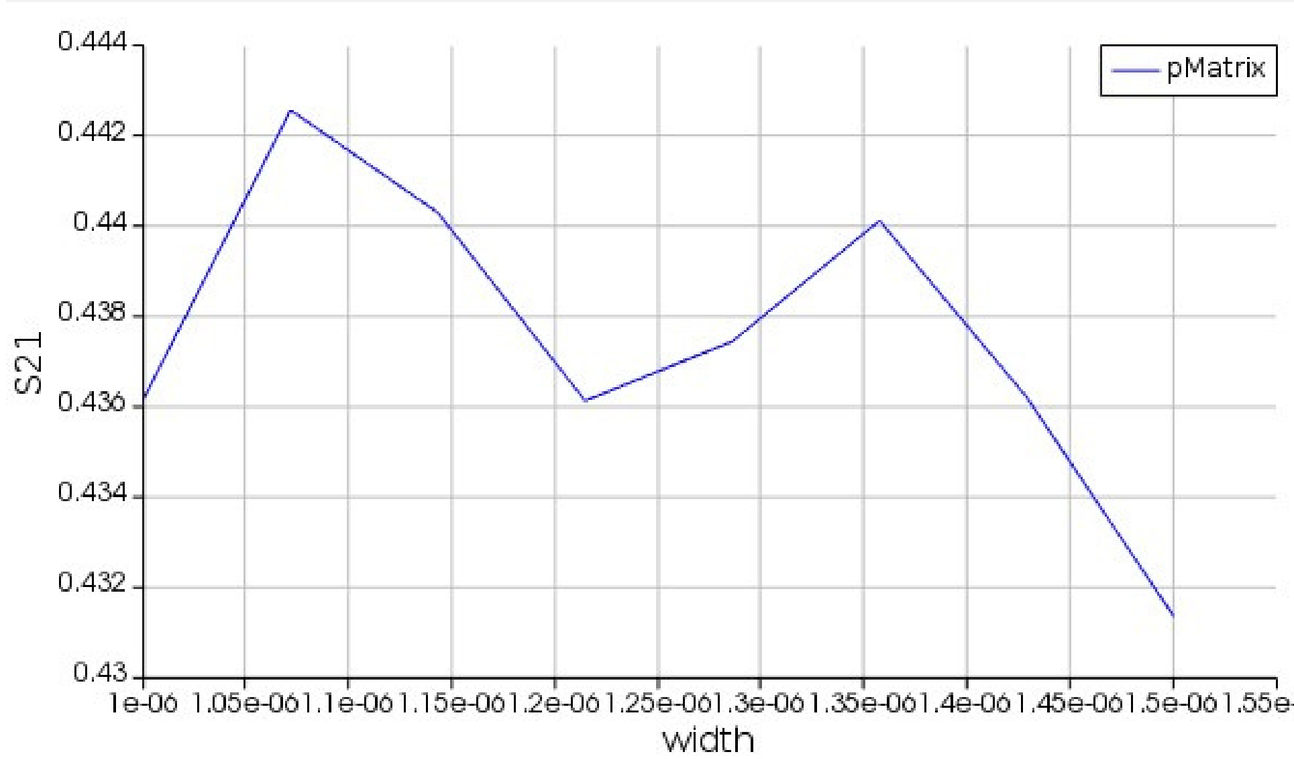
EME:user s matrix <3 x 3 double>

	1	2	3
1	5.11743e-05	0.412162	0.412162
2	0.40489	0.000134174	0.000535217
3	0.40489	0.000535217	0.000134174

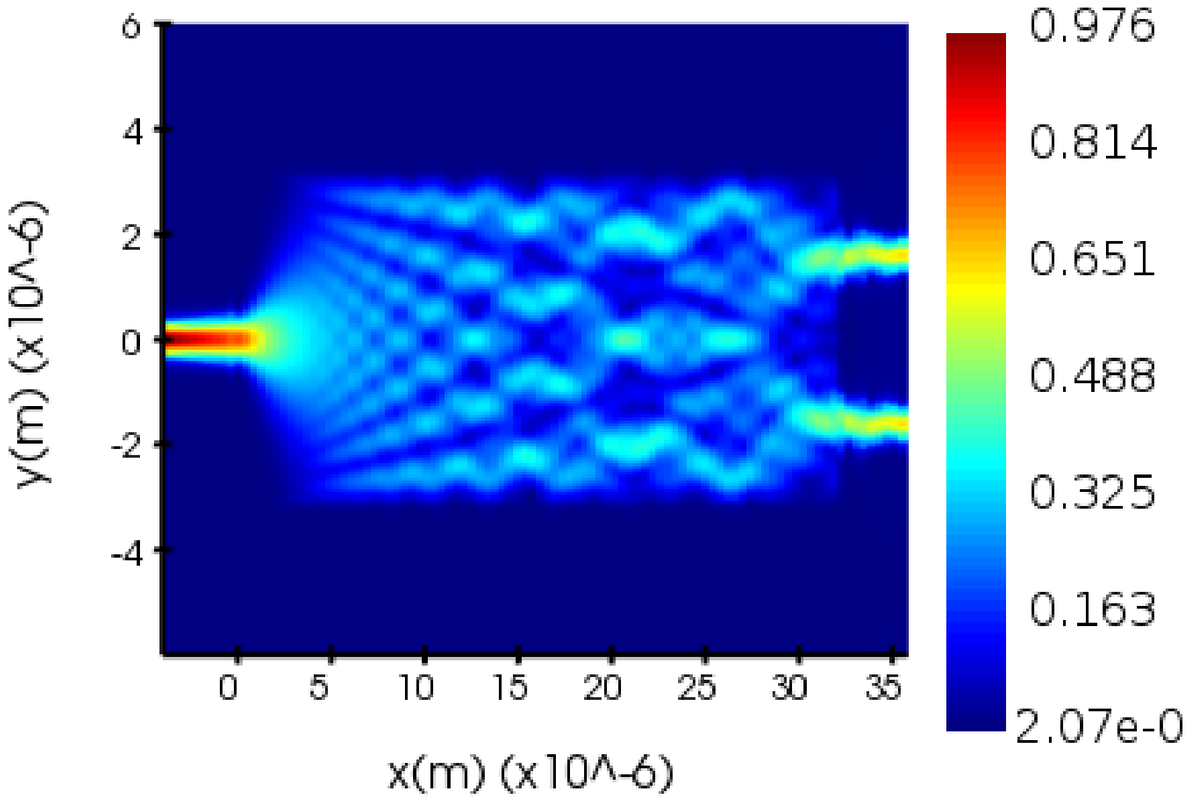


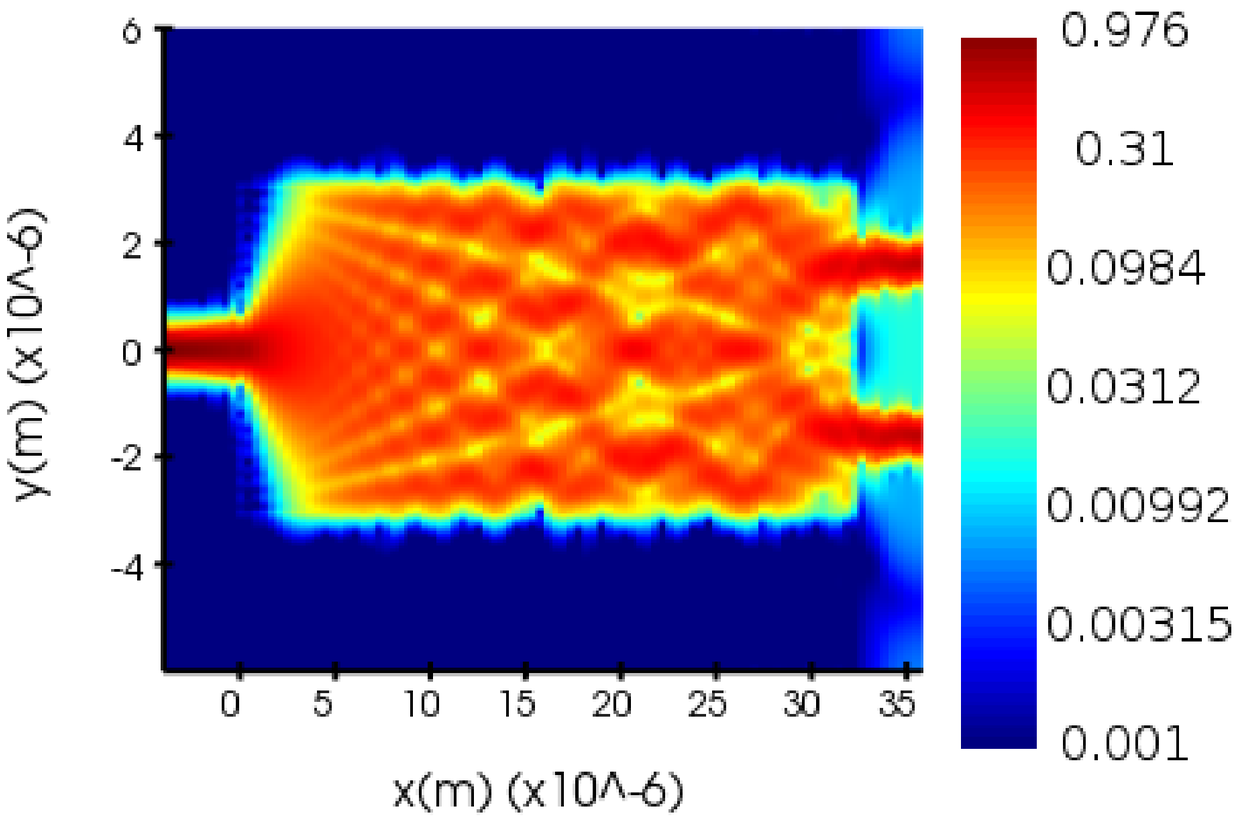
Segunda geração de simulações





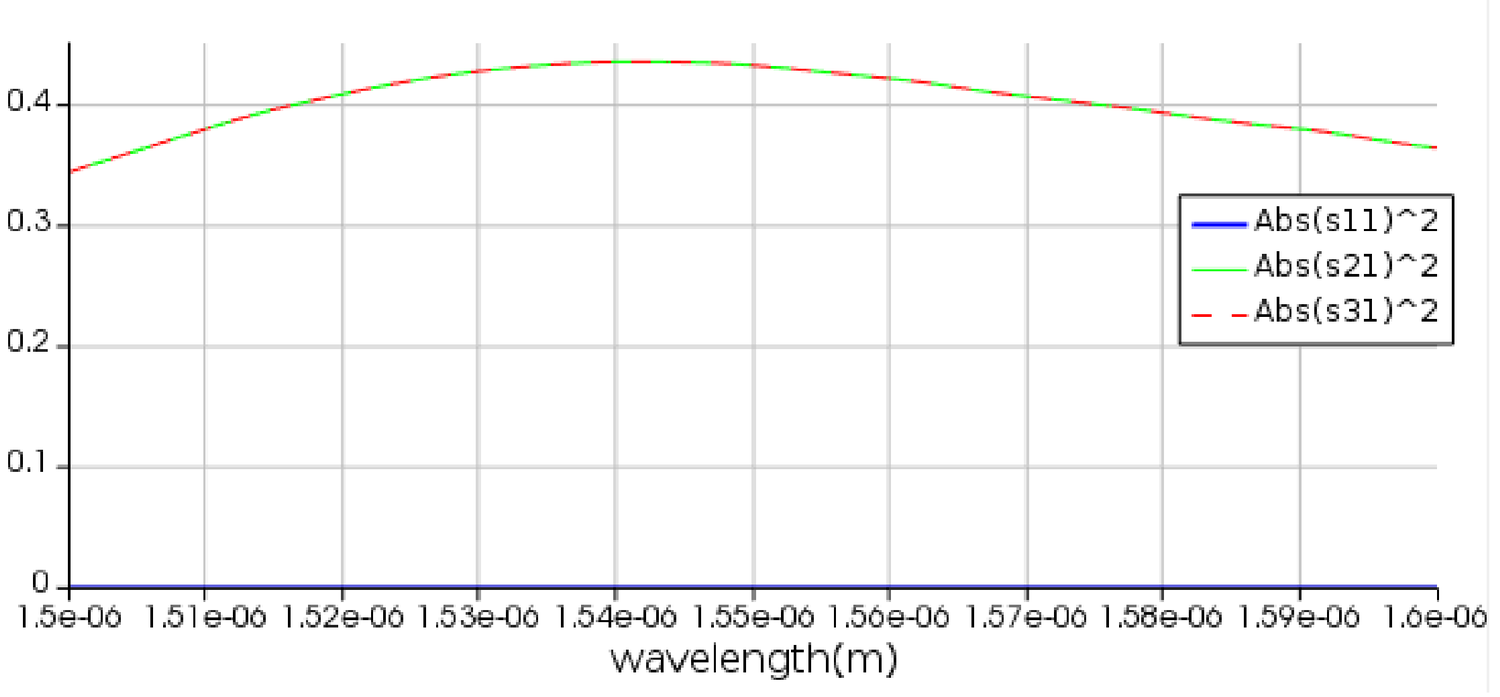
Largura ótima escolhida para os tappers: 1.1um

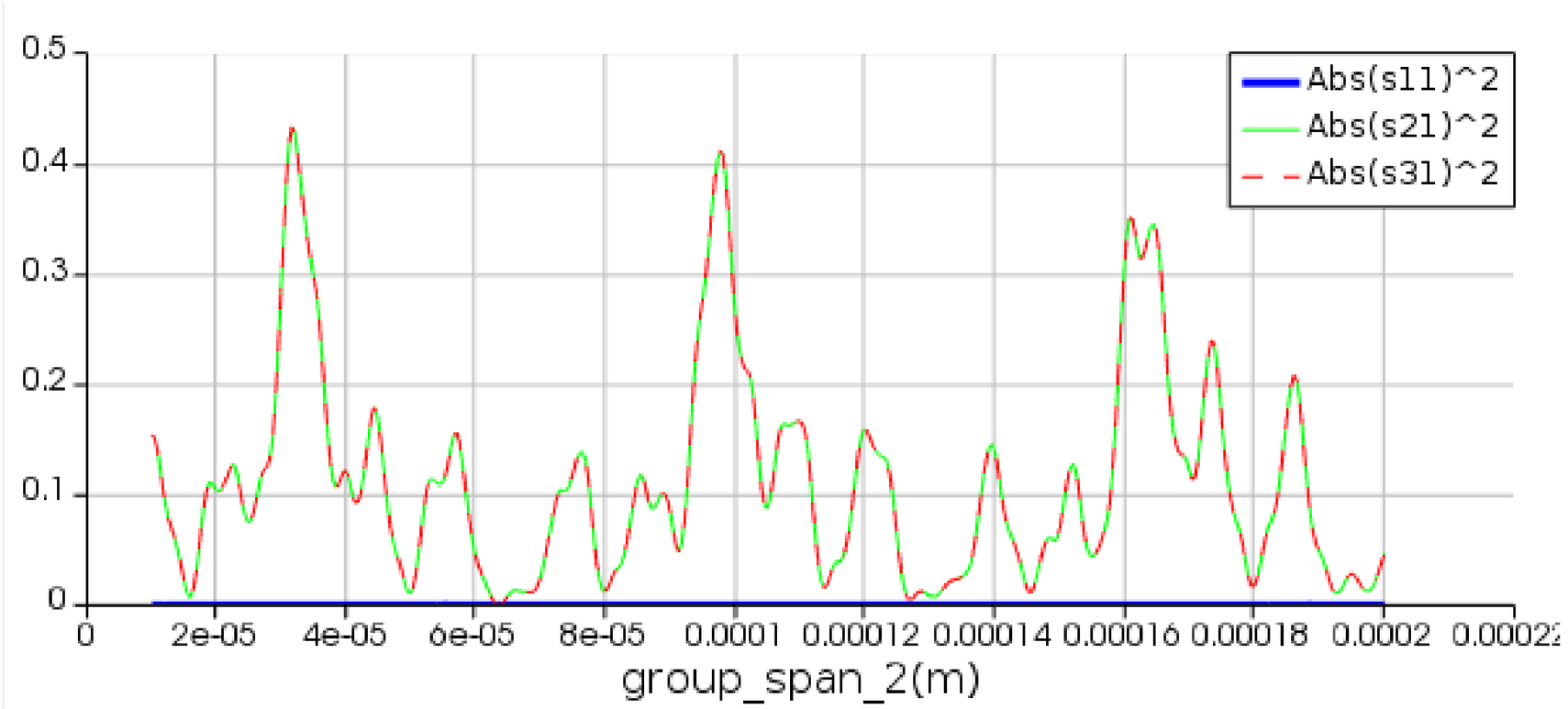

6
4
2
0
-2
-4
y(m) (x10^-6)
0
5
10
15
20
25
30
35
x(m) (x10^-6)
0.976
0.814
0.651
0.488
0.325
0.163
2.07e-0


6
4
2
0
-2
-4
y(m) (x10^-6)
0
5
10
15
20
25
30
35
x(m) (x10^-6)
0.976
0.31
0.0984
0.0312
0.00992
0.00315
0.001

EME:user s matrix <3 x 3 double>

	1	2	3
1	1.12796e-07	0.429404	0.429404
2	0.429735	0.000487448	0.000483599
3	0.429735	0.000483599	0.000487448




0.5
0.4
0.3
0.2
0.1
0
0
2e-05
4e-05
6e-05
8e-05
0.0001
0.00012
0.00014
0.00016
0.00018
0.0002
0.00022
group_span_2(m)
Abs(s11)^2
Abs(s21)^2
Abs(s31)^2

Antes

EME:user s matrix <3 x 3 double>

	1	2	3
1	5.11743e-05	0.412162	0.412162
2	0.40489	0.000134174	0.000535217
3	0.40489	0.000535217	0.000134174

Depois

EME:user s matrix <3 x 3 double>

	1	2	3
1	1.12796e-07	0.429404	0.429404
2	0.429735	0.000487448	0.000483599
3	0.429735	0.000483599	0.000487448

Mode Explorer