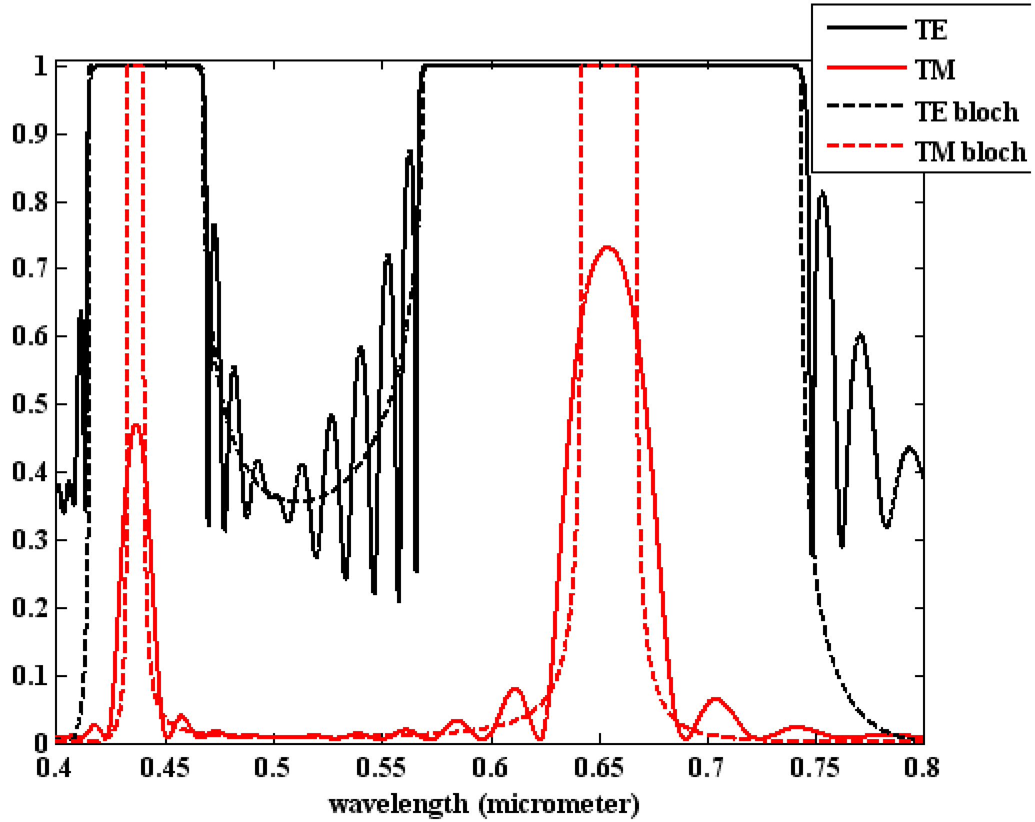
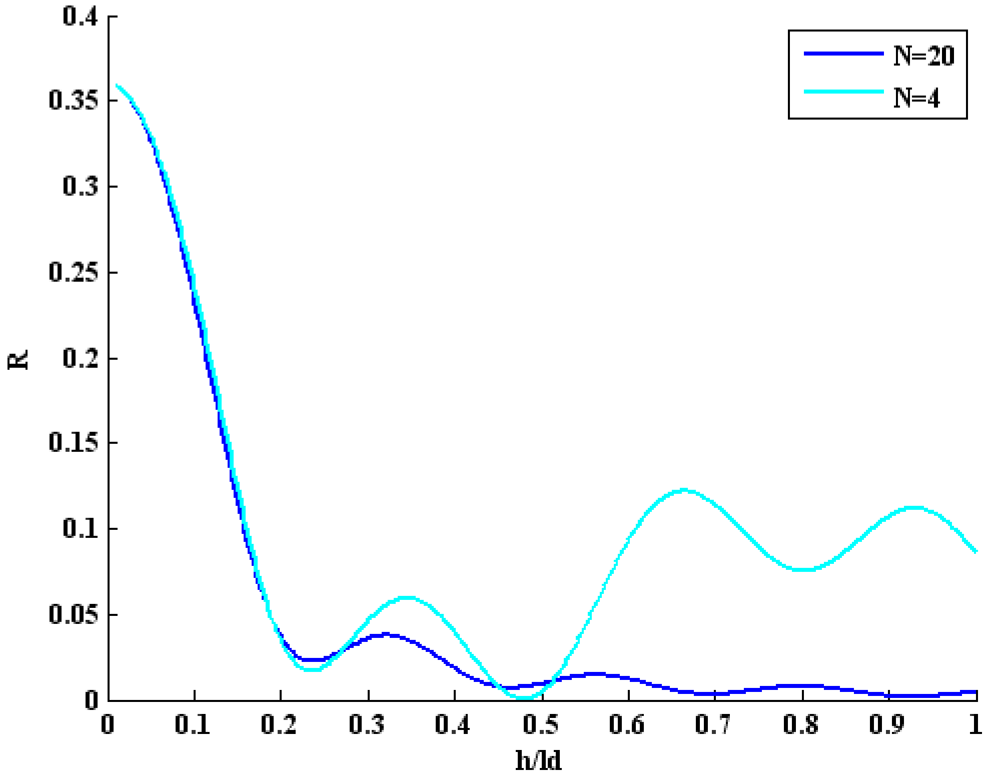
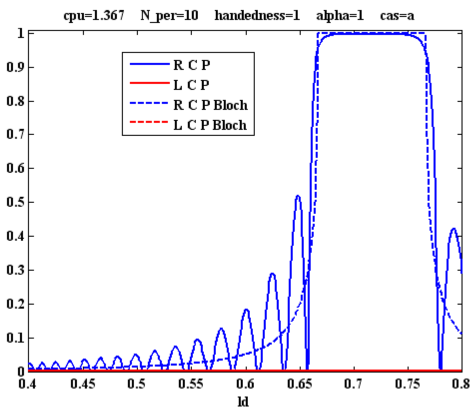
run Visu_PyLlama→ PyLlama_fig4b.m

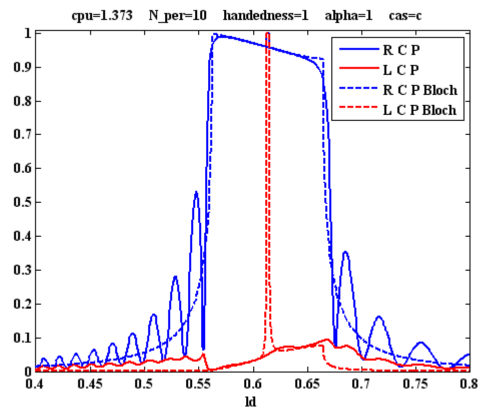


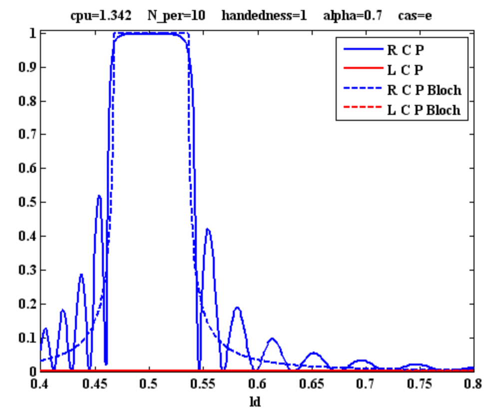
run Visu_PyLlama→ PyLlama_fig4d.m

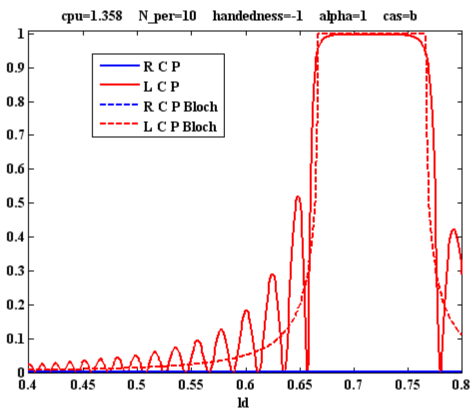


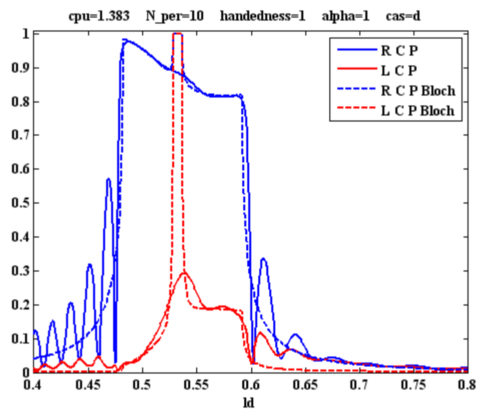
run Visu_PyLlama → PyLlama_fig5.m



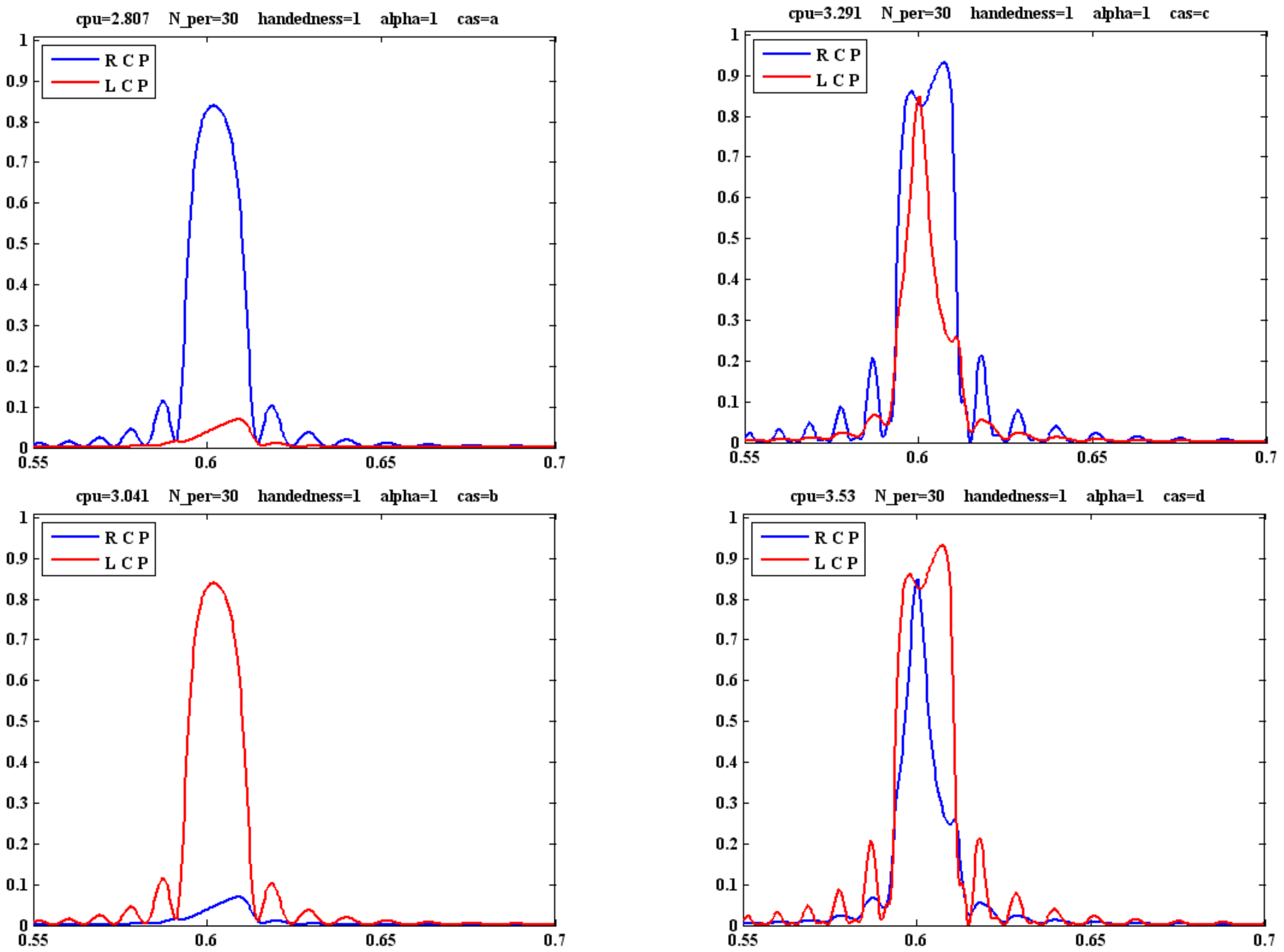




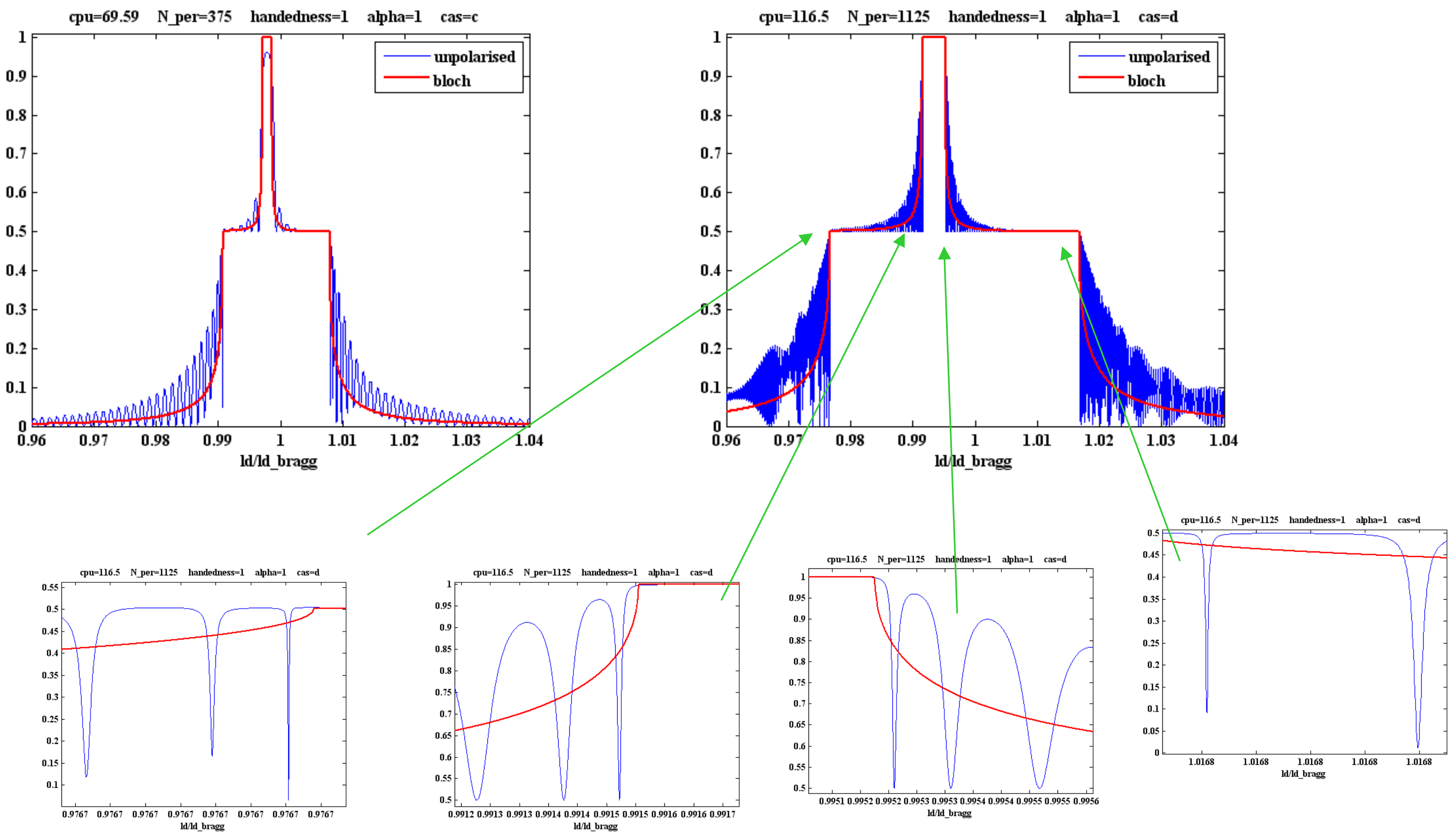




run Visu_PyLlama → PyLlama_fig6.m

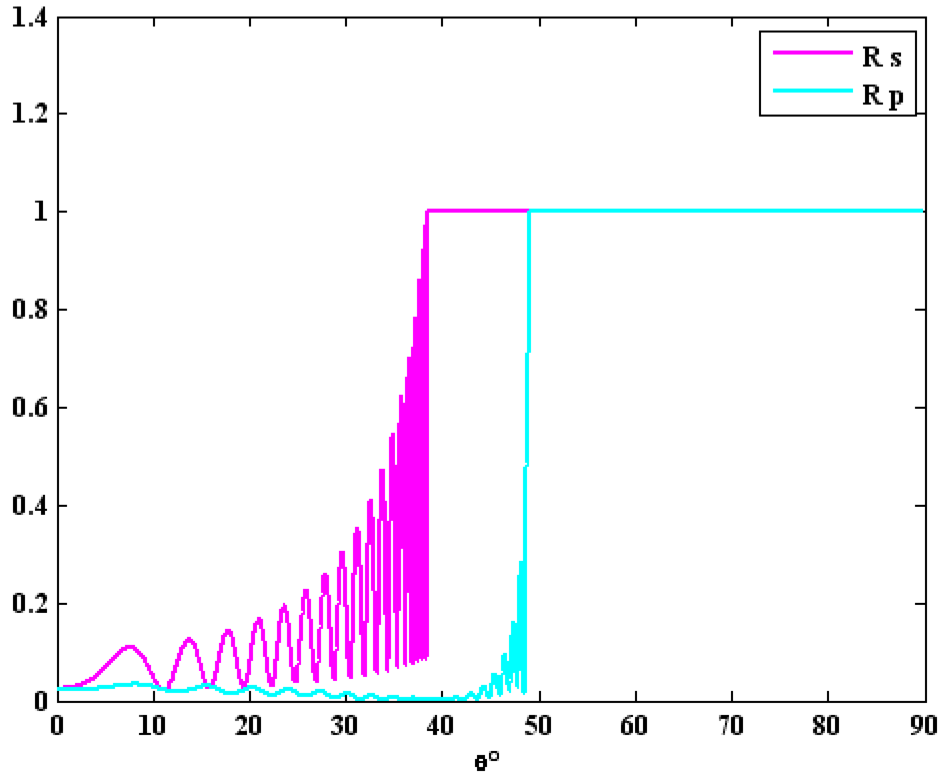


run Visu_PyLlama → PyLlama_fig7.m



To accurately sample, one needs 65000 points

run Visu_PyLlama → PyLlama_figA9.m

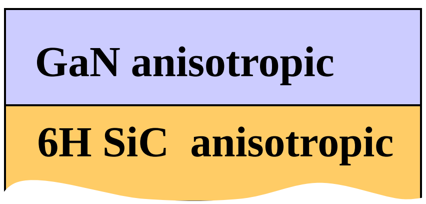


run Visu_Passler → Passler_Field_and_Losses_1D.m

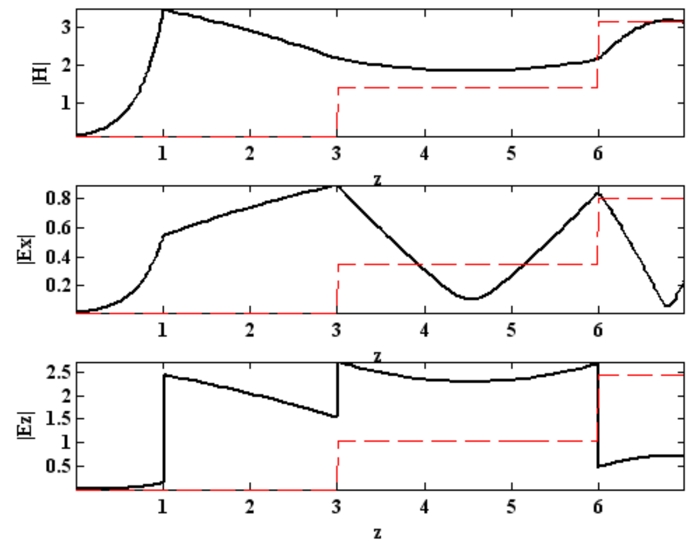
Because the substrate is anisotropic

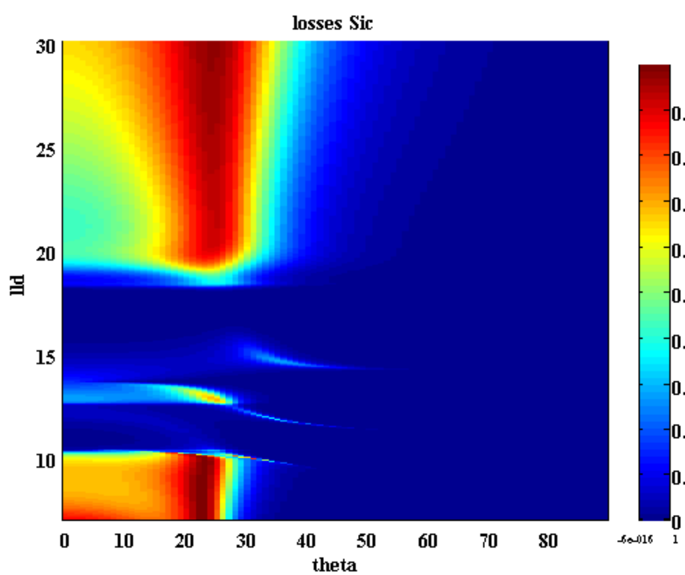
```
res0_0D(pol,k0,theta,nh,struct('option_degre',1,'angle_cut',20));
```

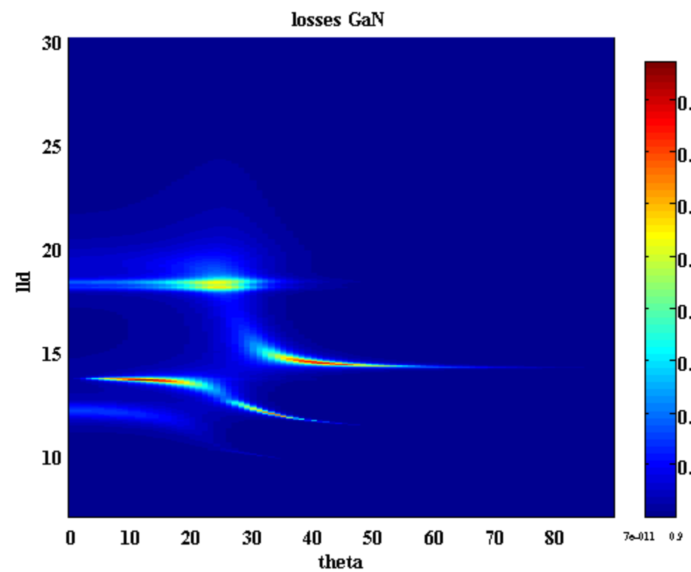
n=1 h=3



h_GaN=2





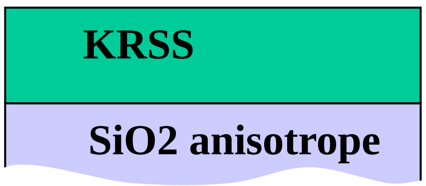


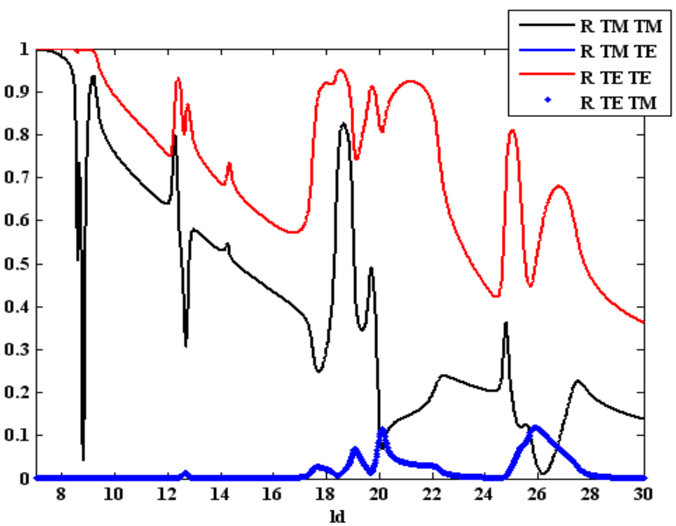
run Visu_Passler → Passler_Field_and_Losses_2D.m

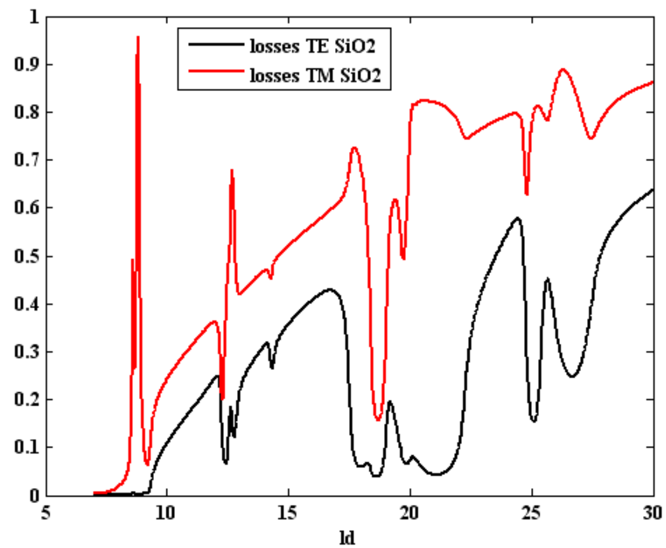
Because the substrate is anisotropic

```
res0_0D(pol,k0,theta,nh,struct('option_degre',1,'angle_cut',20));
```

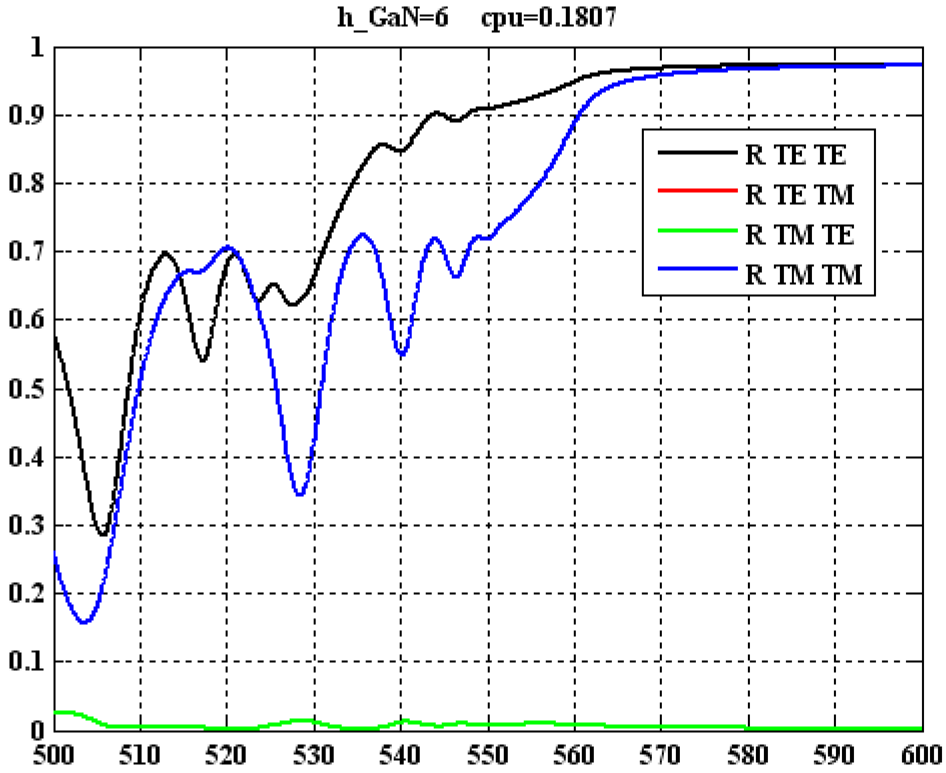
n=1

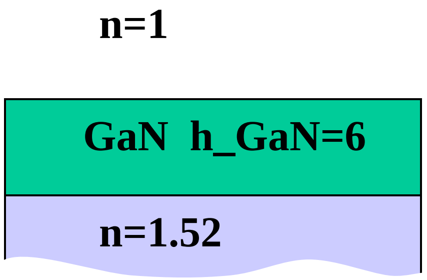


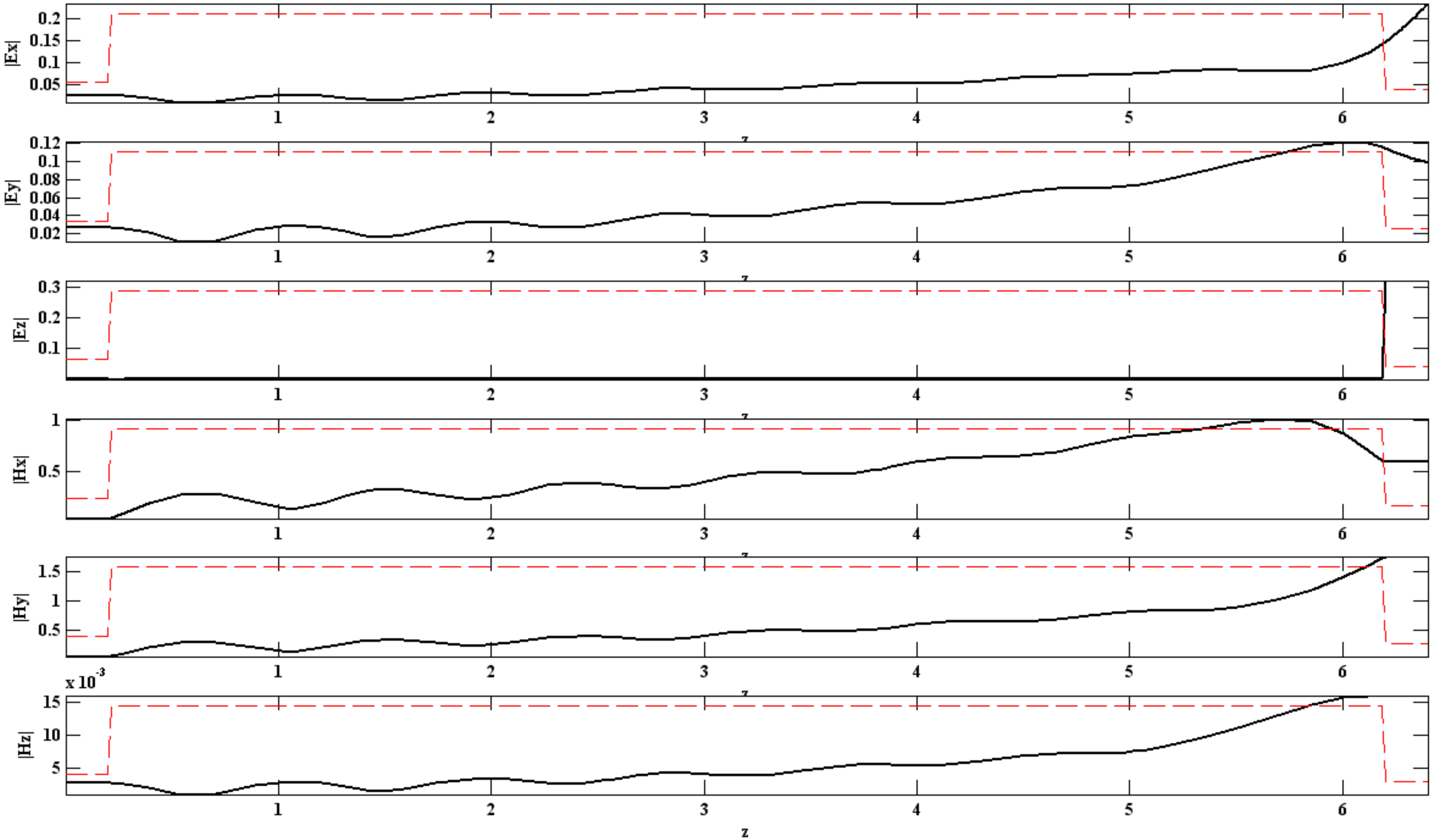




run Visu_Passler → Passler_ GaNm45.m

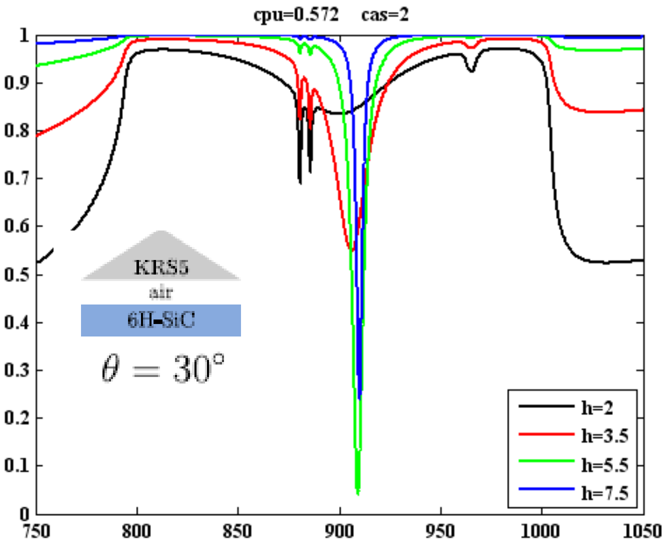


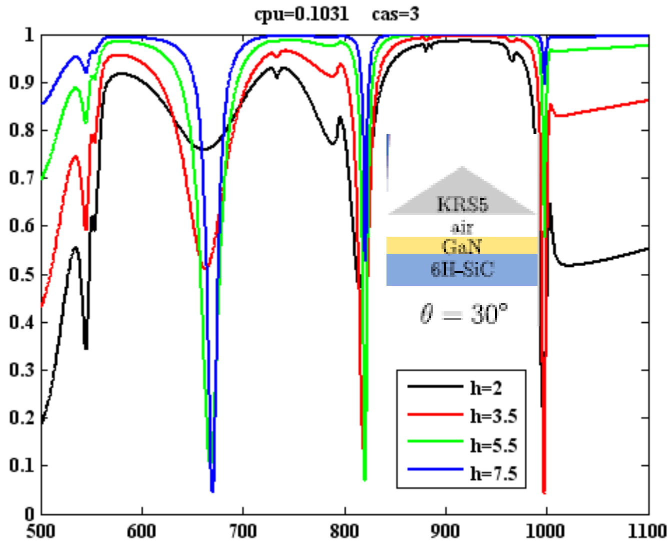


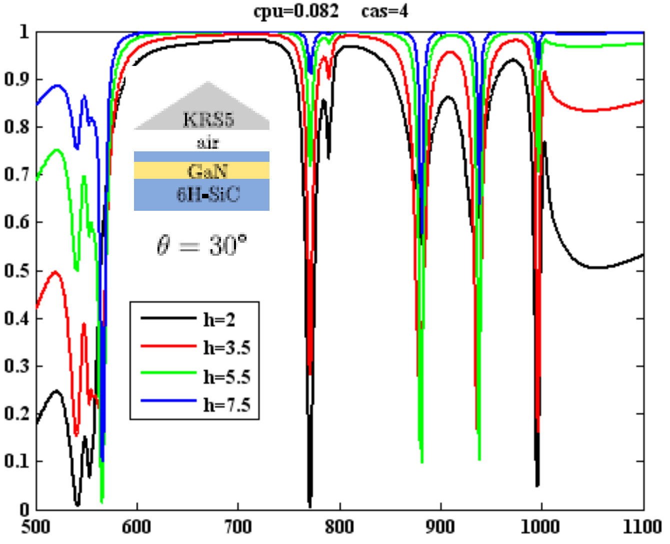


|Ex|
0.2
0.15
0.1
0.05
|Ey|
0.12
0.1
0.08
0.06
0.04
0.02
|Ez|
0.3
0.2
0.1
|Hx|
1
0.5
|Hy|
1.5
1
0.5
x 10-3
|Hz|
15
10
5
1
2
3
4
5
6
z

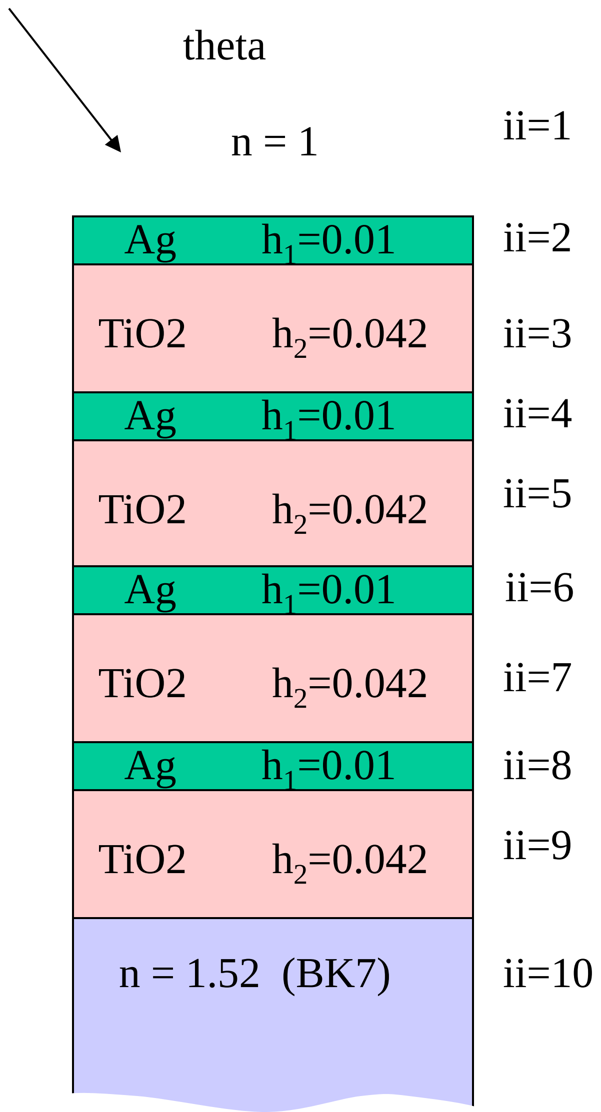
run Visu_Passler → Passler.m

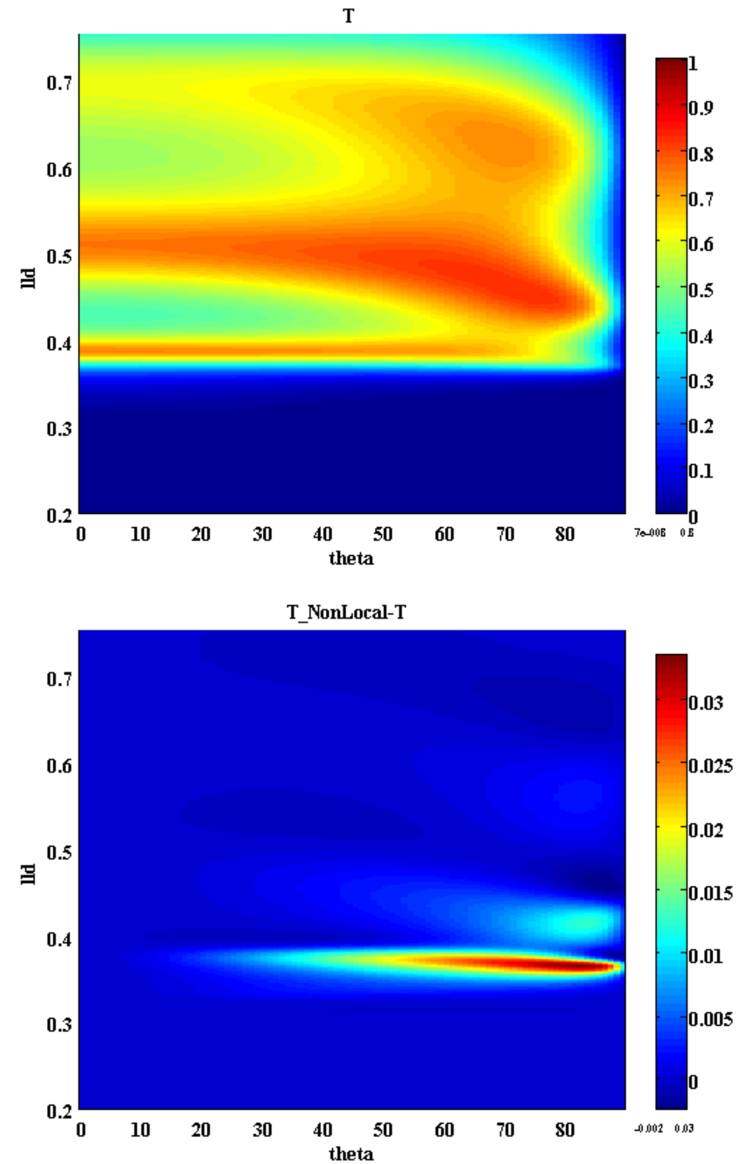


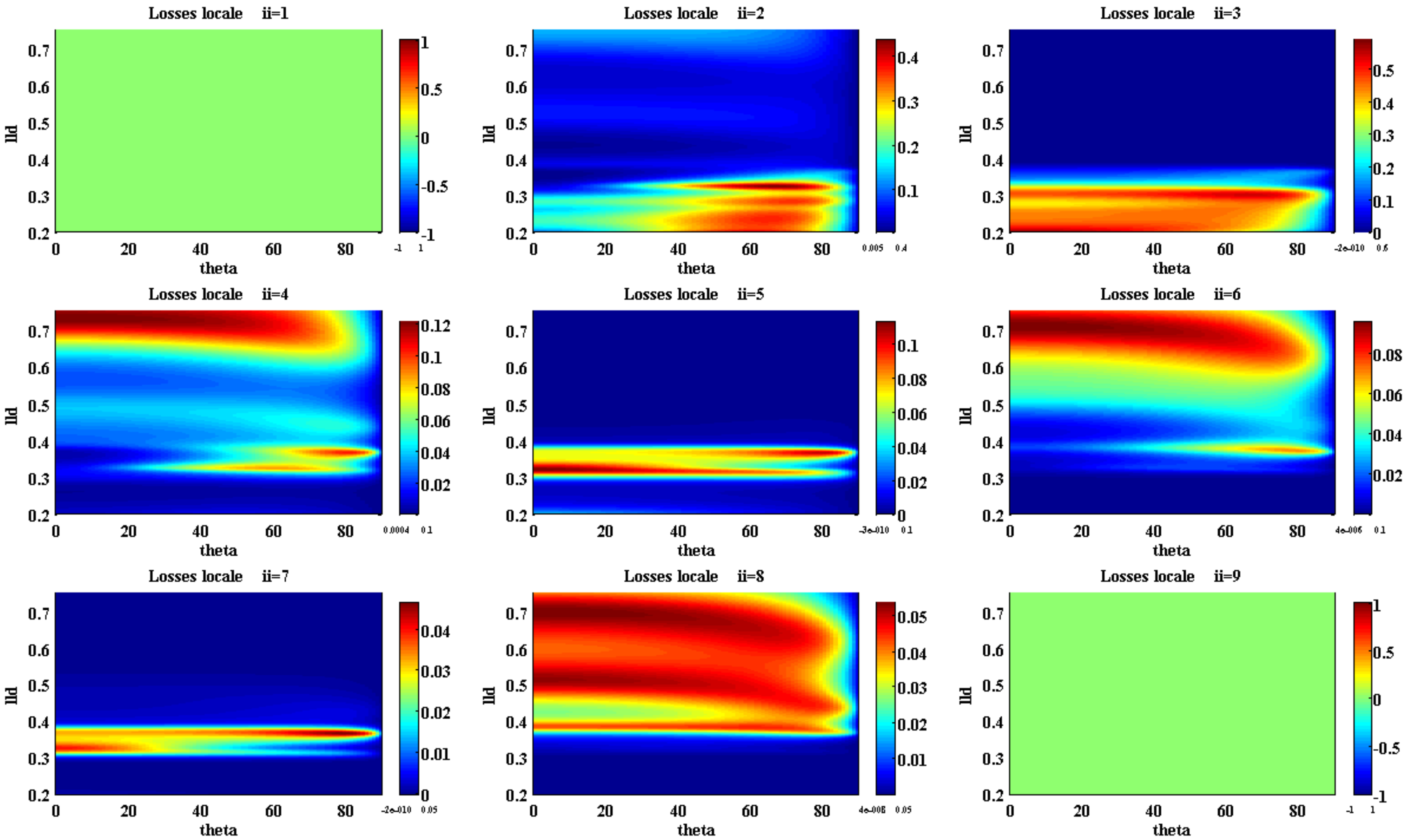


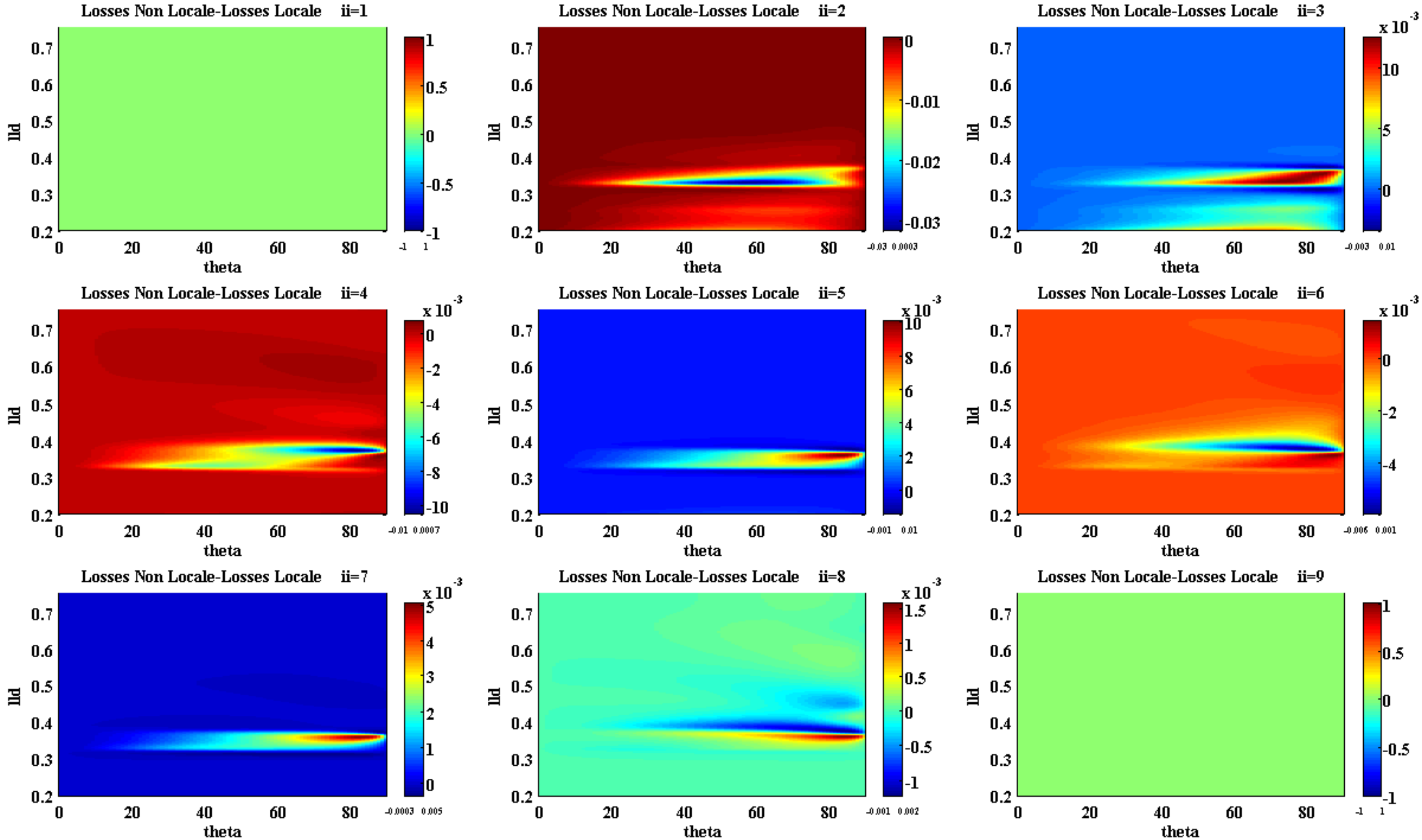


run Visu_Antoine_Moreau → Antoine_Moreau_miroir_de_bragg_non_local.m



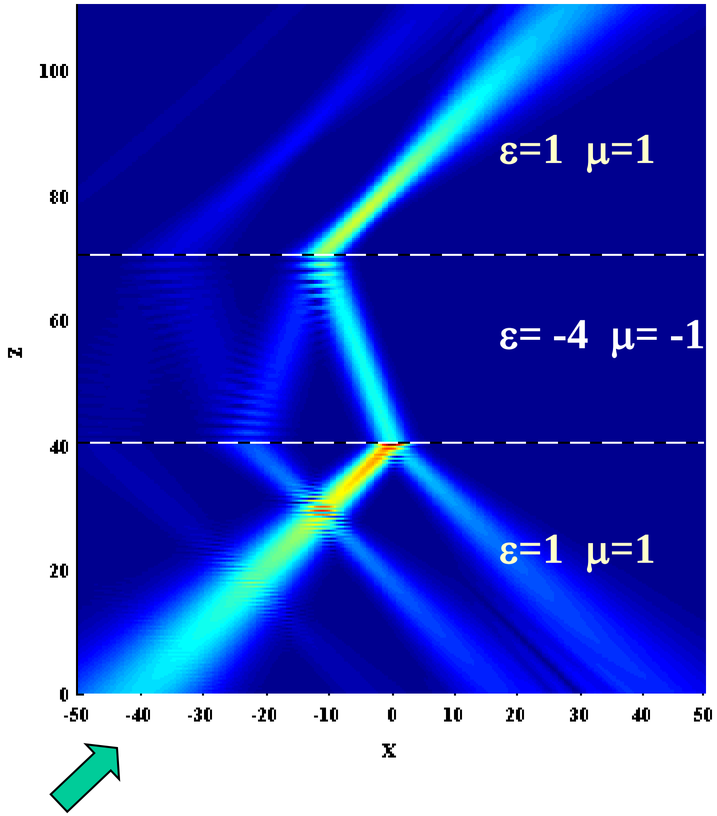



Losses locale ii=1
Losses locale ii=2
Losses locale ii=3
Losses locale ii=4
Losses locale ii=5
Losses locale ii=6
Losses locale ii=7
Losses locale ii=8
Losses locale ii=9
lld
theta

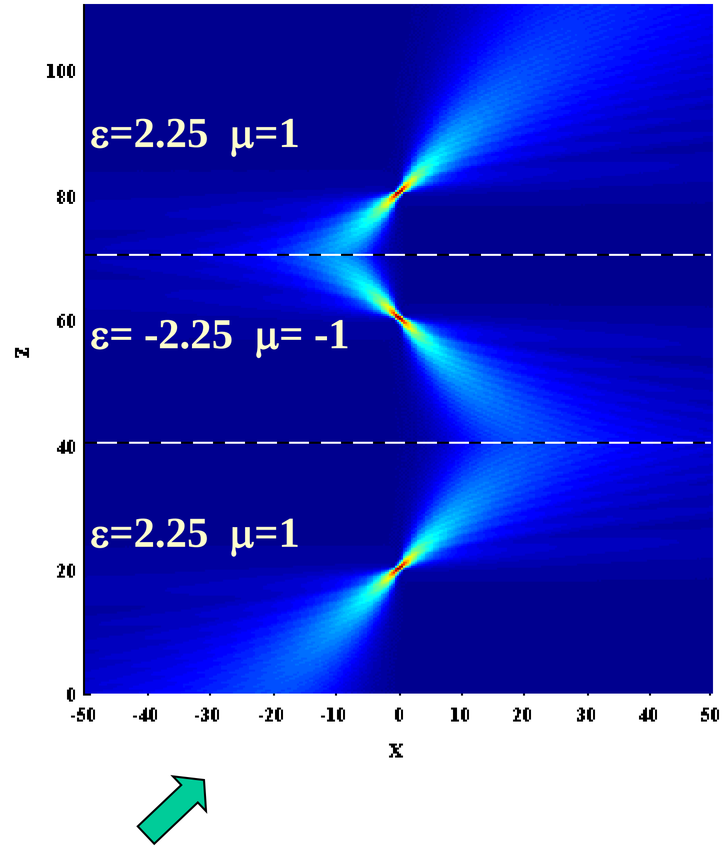

Losses Non Locale-Losses Locale ii=1
Losses Non Locale-Losses Locale ii=2
Losses Non Locale-Losses Locale ii=3
Losses Non Locale-Losses Locale ii=4
Losses Non Locale-Losses Locale ii=5
Losses Non Locale-Losses Locale ii=6
Losses Non Locale-Losses Locale ii=7
Losses Non Locale-Losses Locale ii=8
Losses Non Locale-Losses Locale ii=9
lld
theta
x 10^-3

run Visu_Antoine_Moreau → Antoine_Moreau_refraction_negative.m

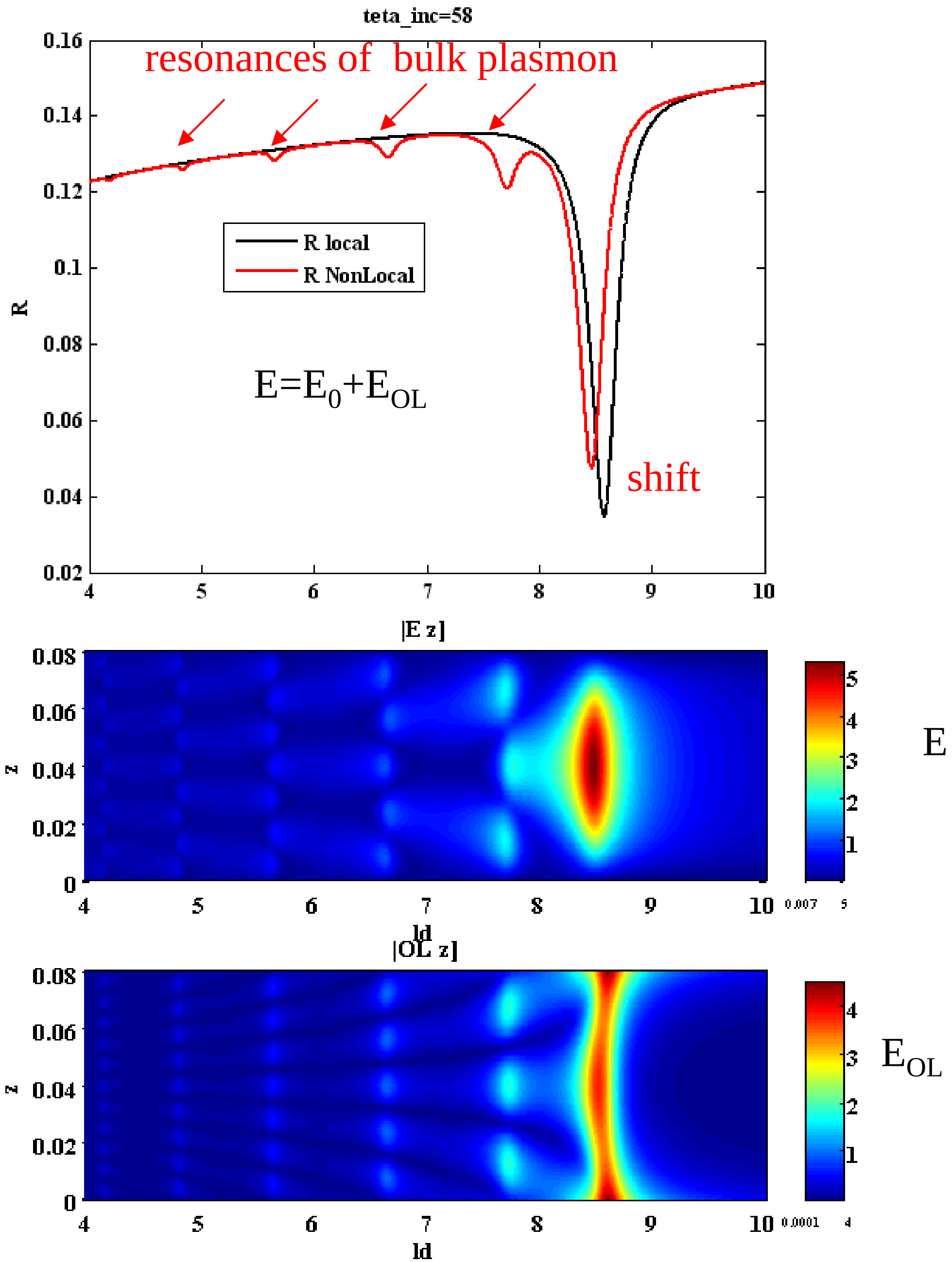
Antoine Moreau: negative refraction

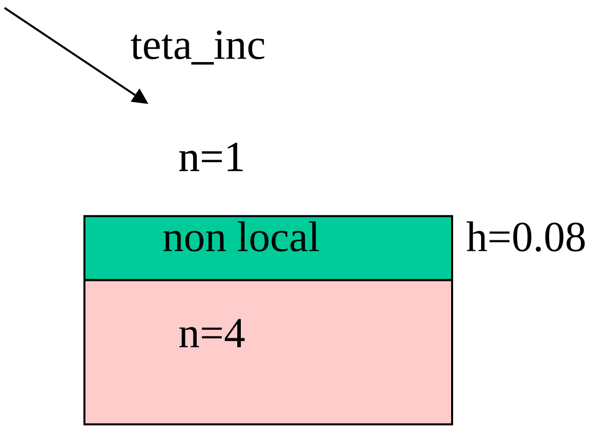


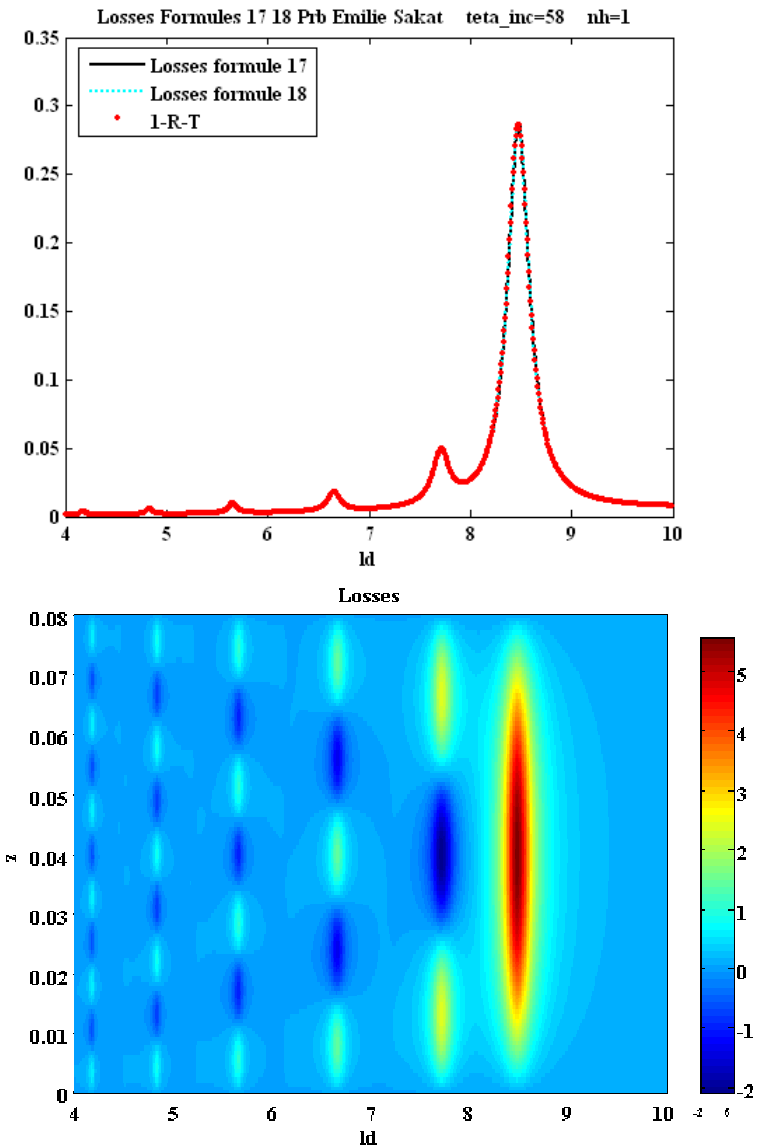
John Pendry: perfect lens



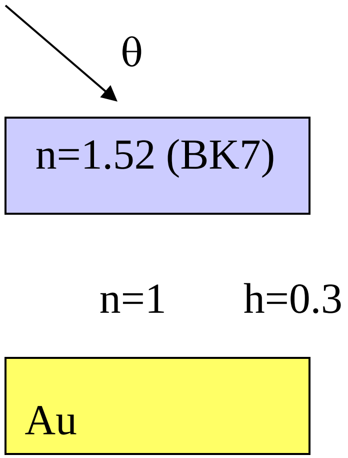
run Visu_Antoine_Moreau → Antoine_Bulk_plasmon.m

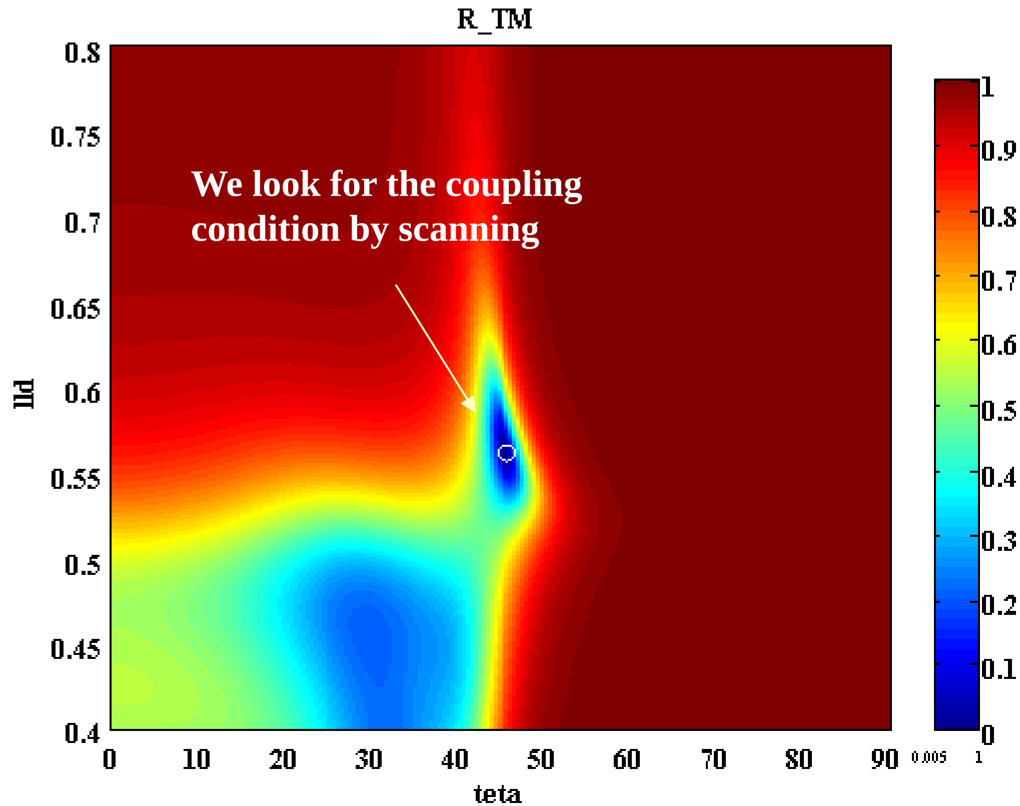


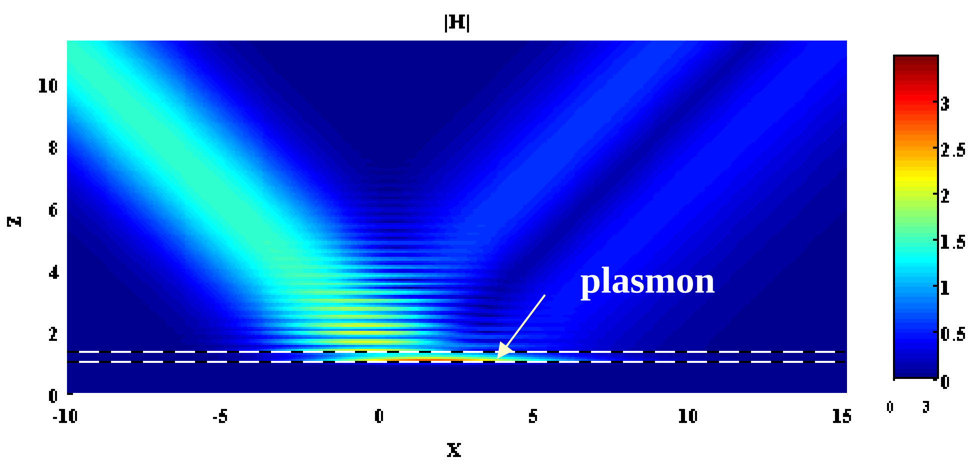



Losses Formules 17 18 Prb Emilie Sakat teta_inc=58 nh=1
Losses formule 17
Losses formule 18
1-R-T
ld
Losses
z
ld

run Visu.m → coupleur_Otto.m





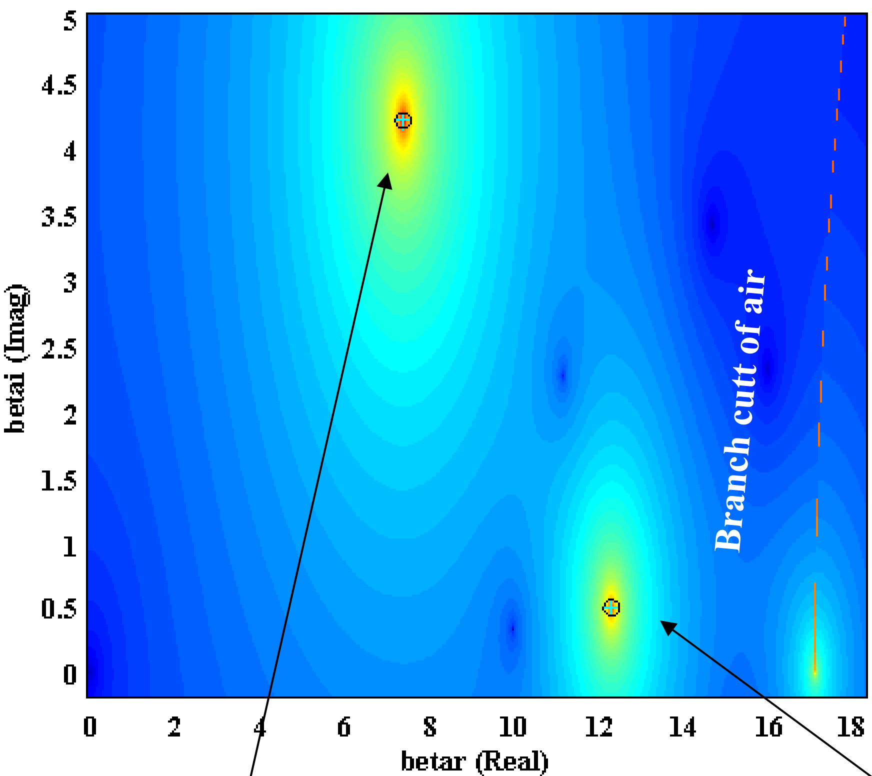


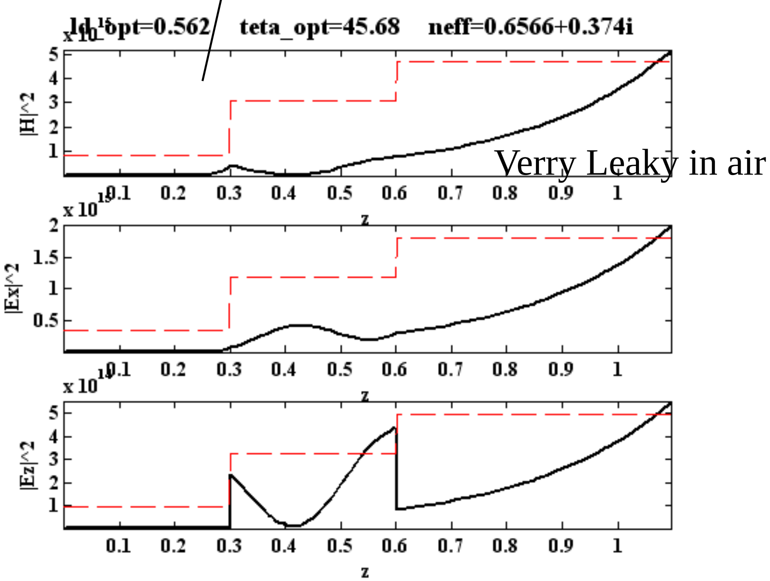
incident Gausien beam

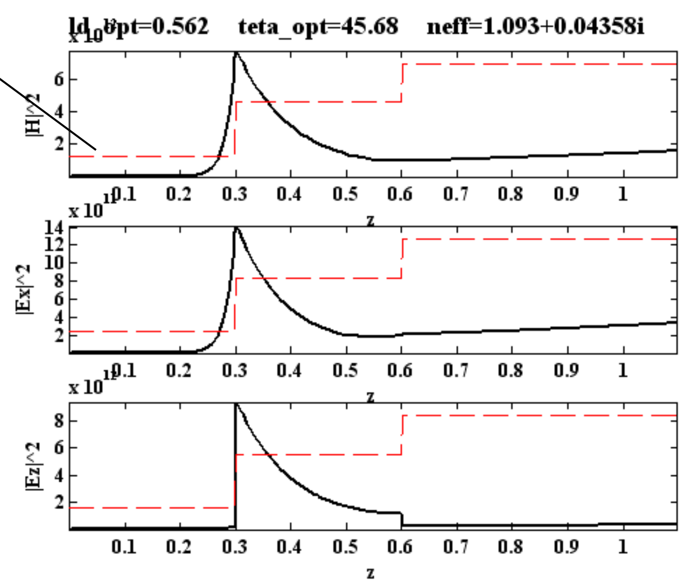
The code retcauchy.m visualises the branch cuts and approximatively finds the poles

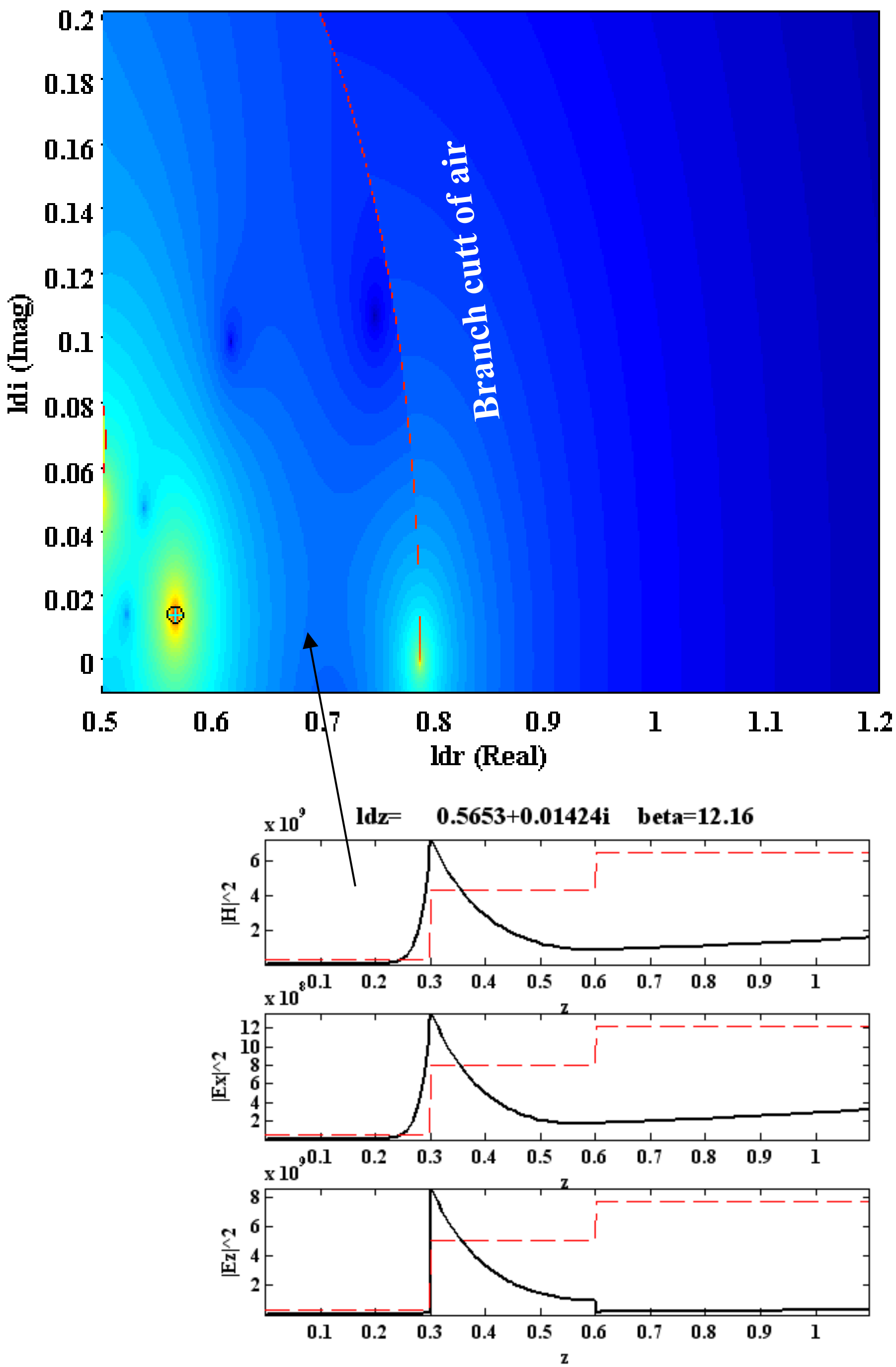
The code retcadilhac precisely computes the poles starting with the approxmative values

This example can be genaralised to fine the modes of any layered guide at real frequencies









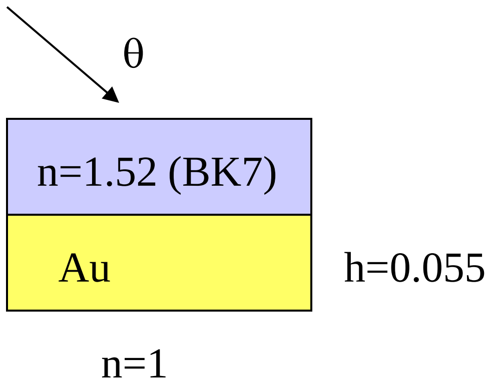
The code retcauchy.m visualises the branch cuts and approximatively finds the poles

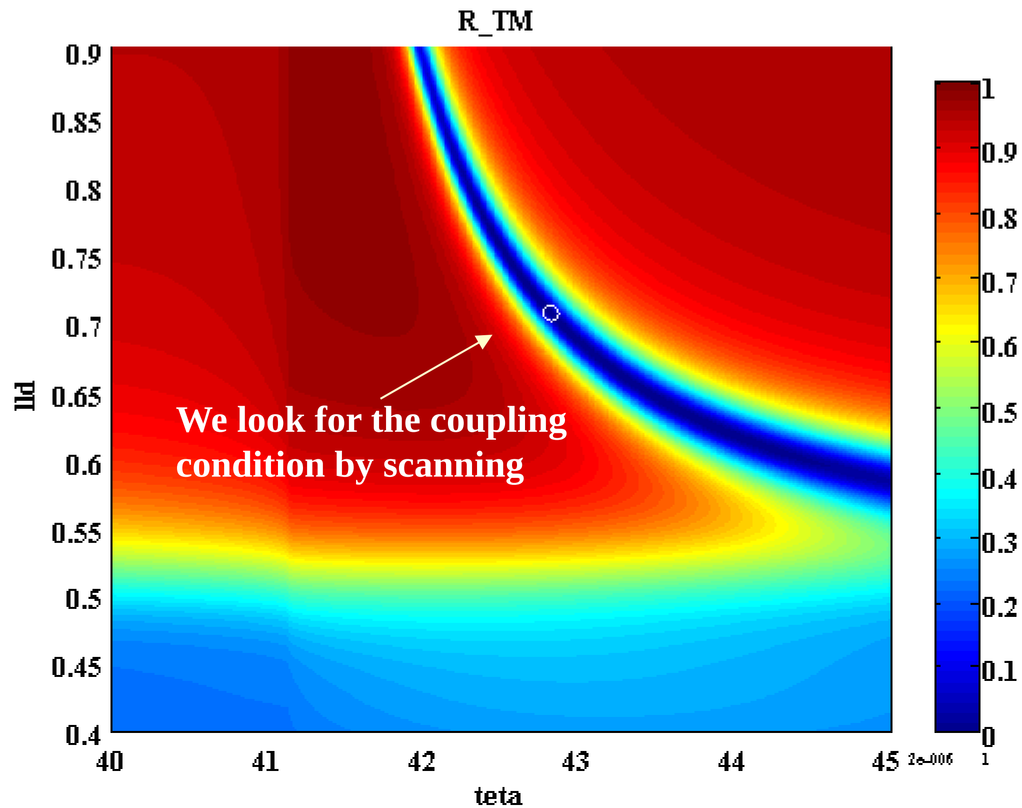
The code retcadilhac precisely computes the poles starting with the approxmative values

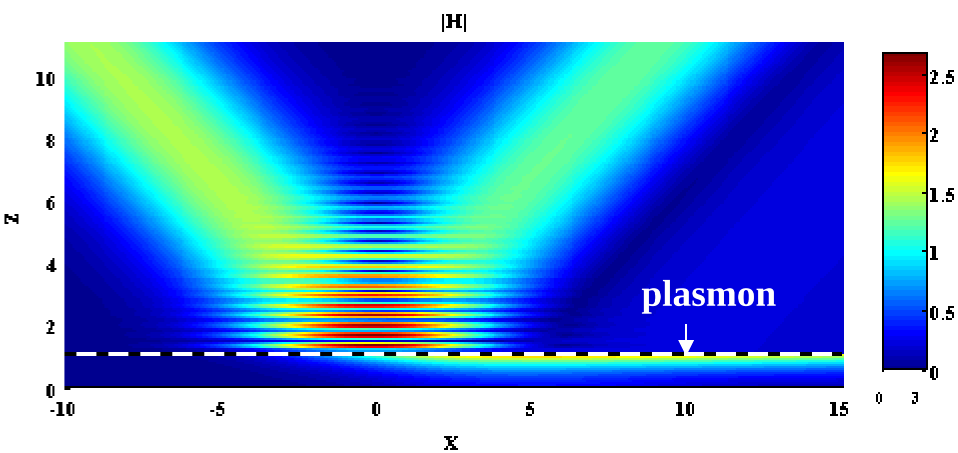
This example can be genaralised to fine the modes of any layered guide at complex frequencies

Leaky in air

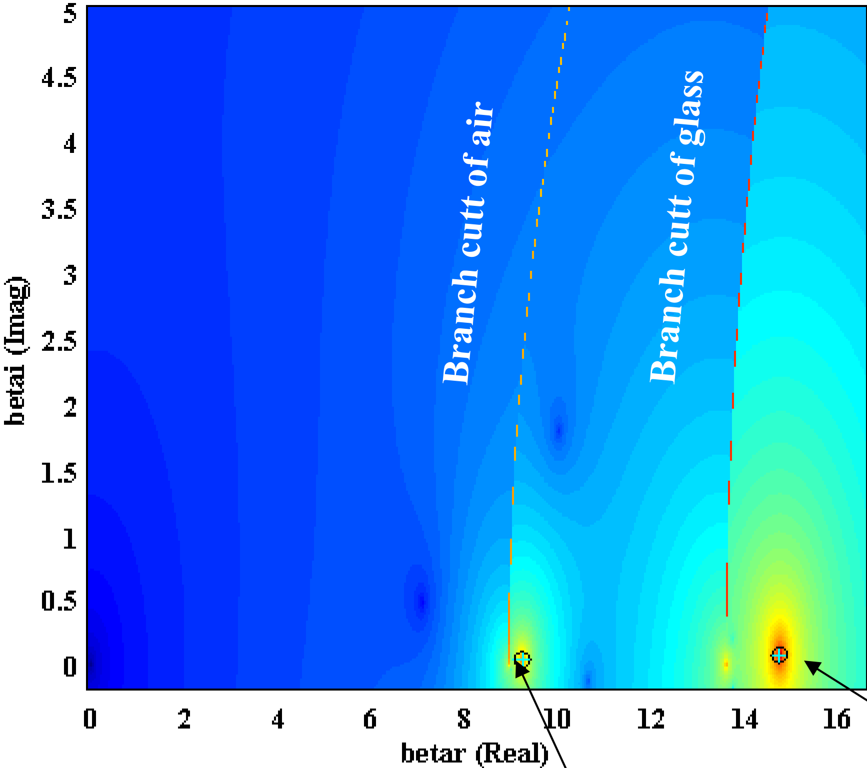
run Visu → coupleur_Kretschmann.m







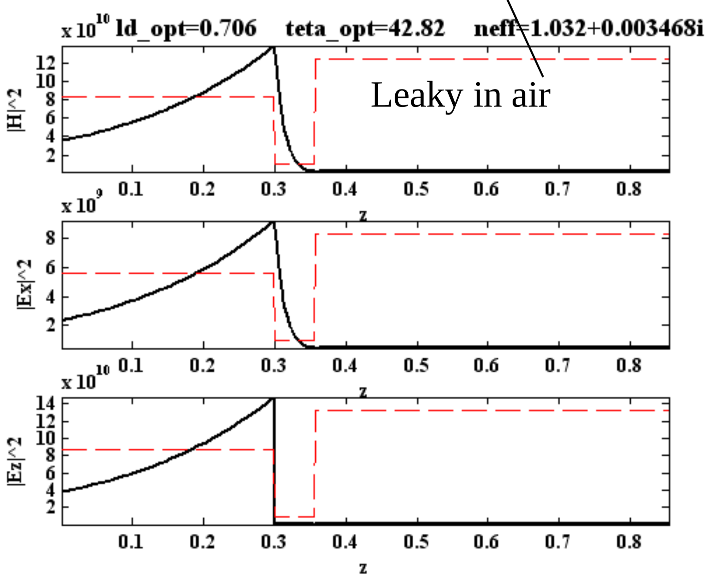
incident Gausien beam

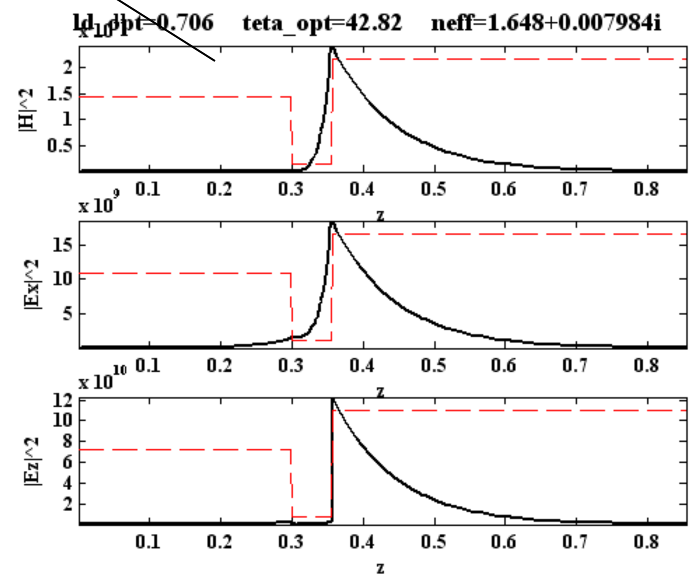


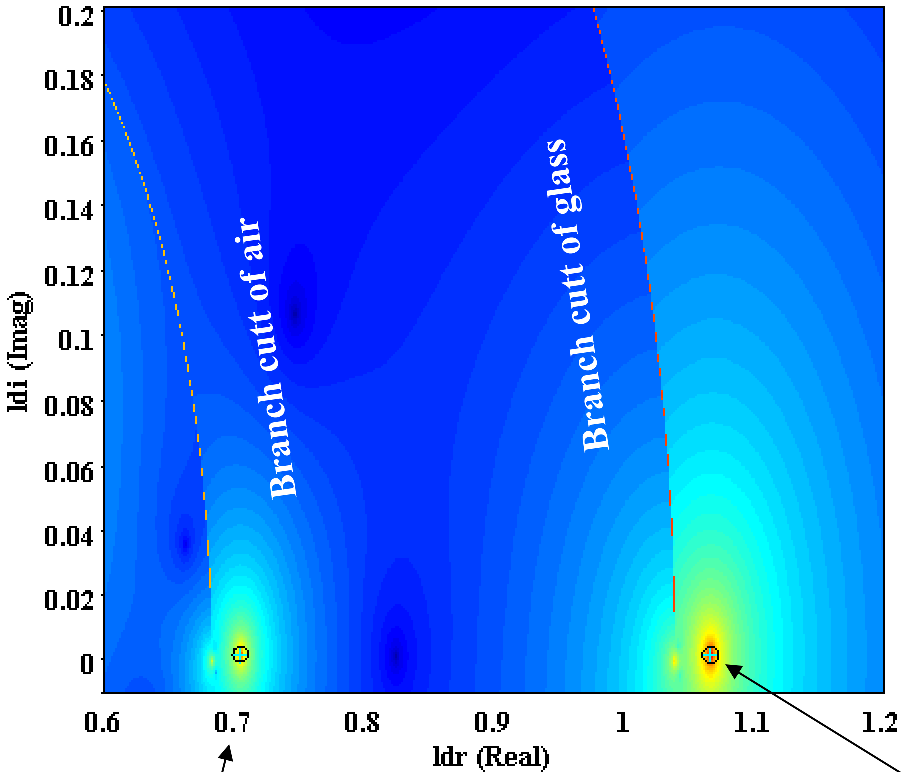
The code retcauchy.m visualises the branch cuts and approximatively finds the poles

The code retcadilhac precisely computes the poles starting with the approxmative values

This example can be genaralised to fine the modes of any layered guide at real frequencies



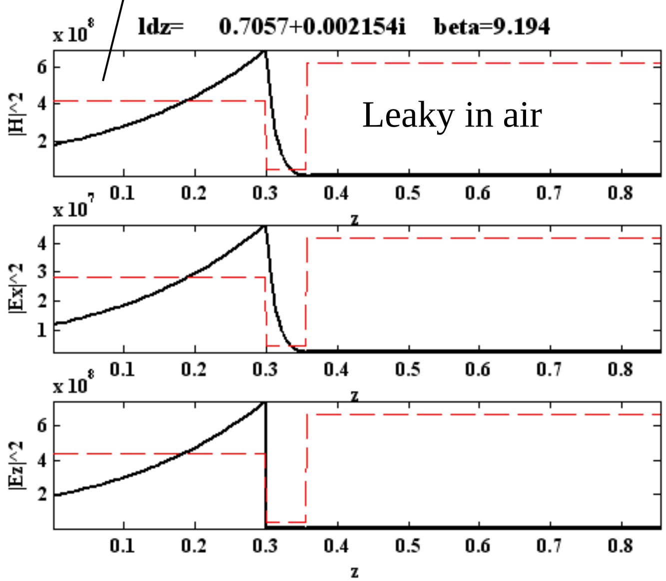


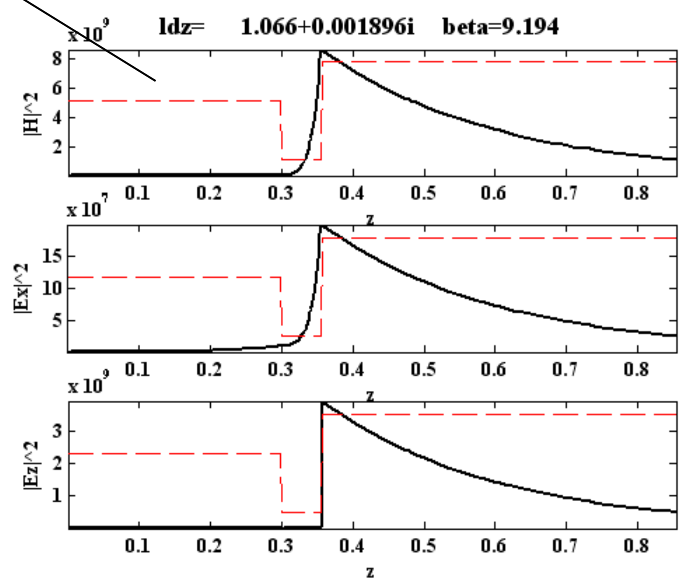


The code retcauchy.m visualises the branch cuts and approximatively finds the poles

The code retcadilhac precisely computes the poles starting with the approxmative values

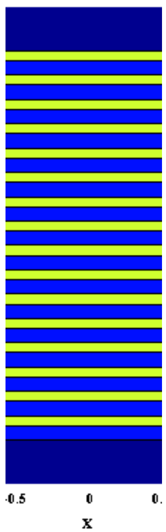
This example can be genaralised to fine the modes of any layered guide at complex frequencies



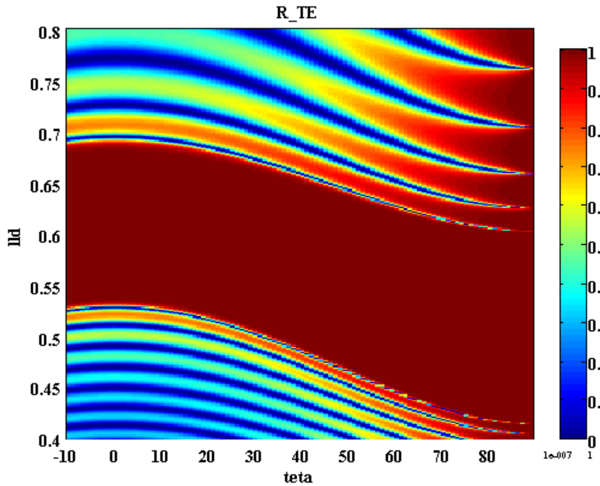


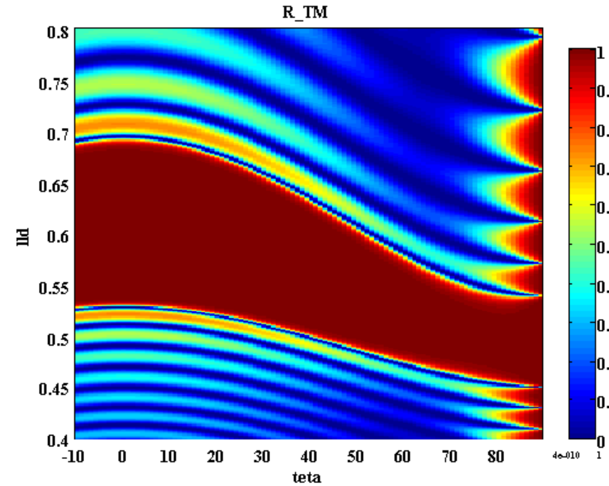
run Visu → miroir_de_bragg.m

1

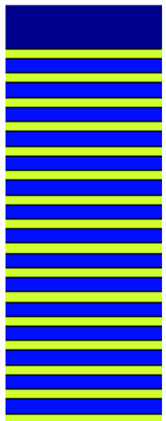


16

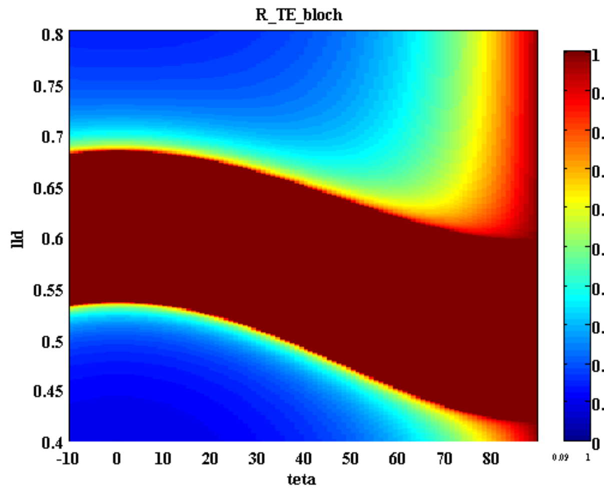


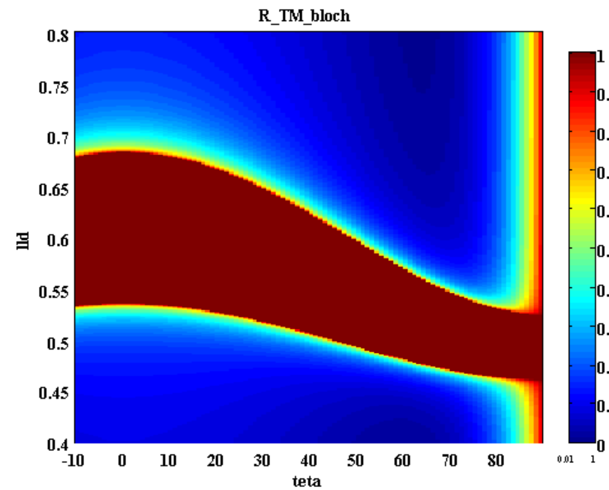


1

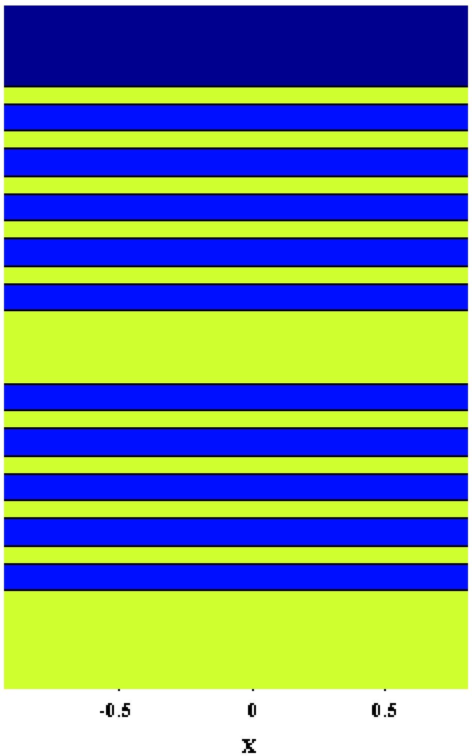


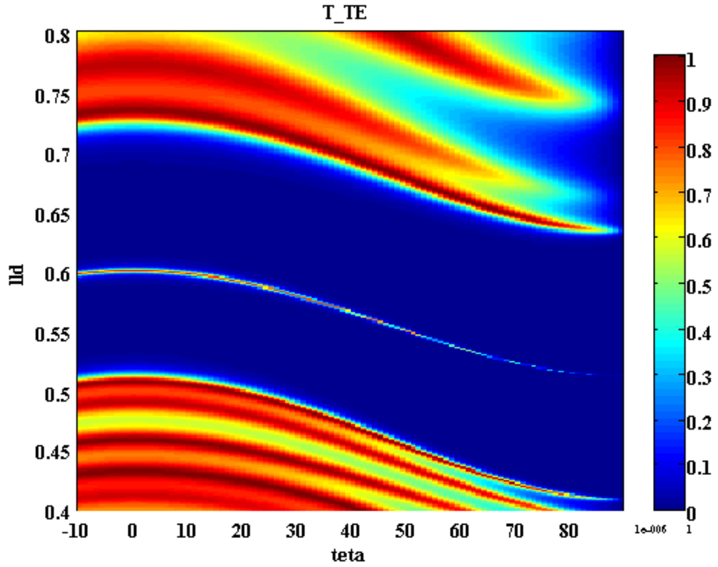
∞

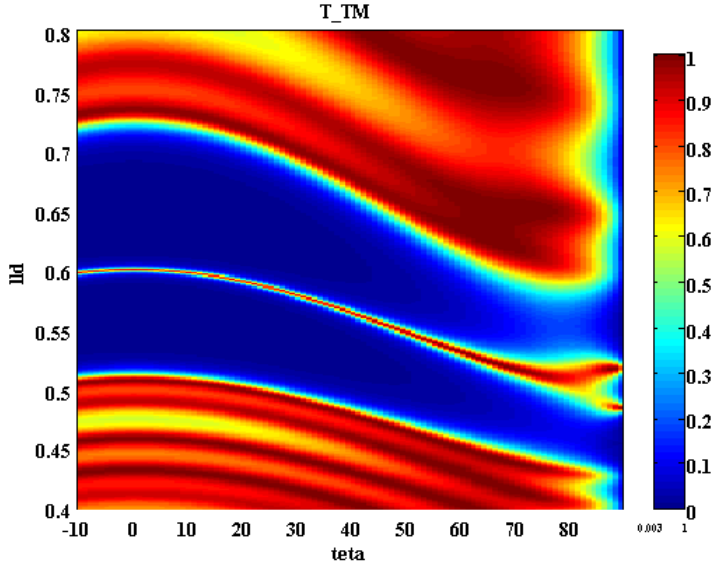




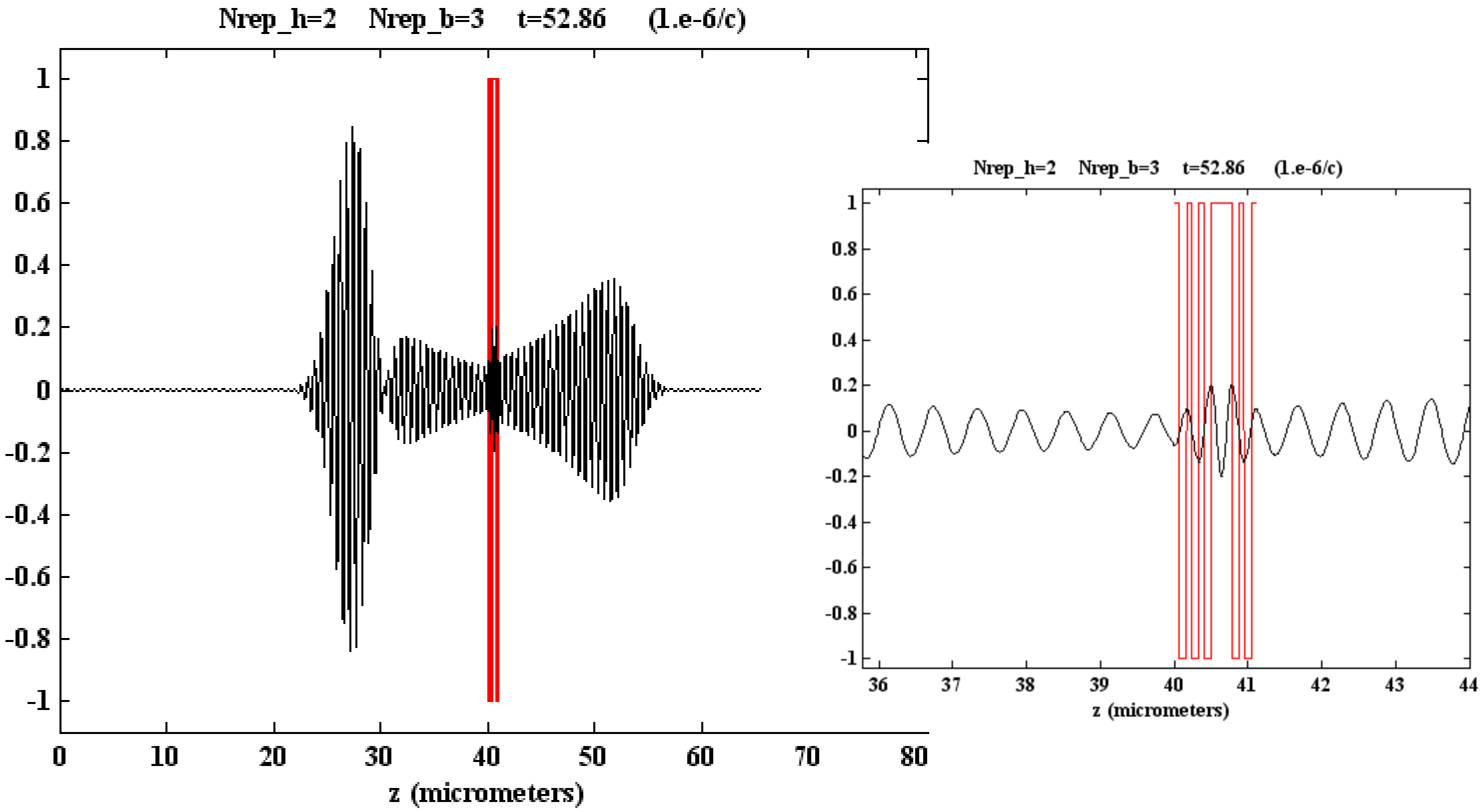
run Visu → resonateur_de_bragg.m





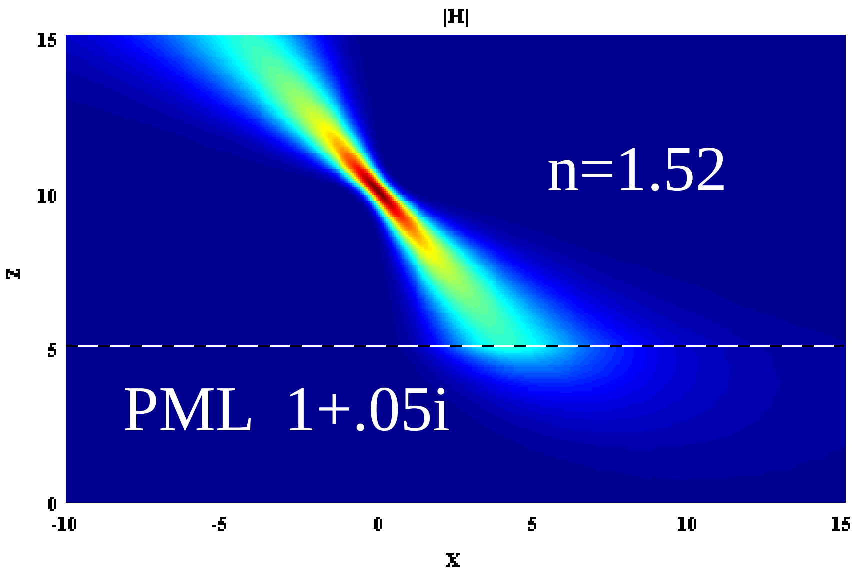


run Visu → resonateur_de_bragg_pulse_Gaussien.m



Animation in time: a gaussian pulse is incident on a Bragg resonnator

run Visu → Gaussien_beam_on_PML.m



The coefficient 1+0.05i is the PML coefficient

run Visu → MCD.m