

# Building synthetic models

---

## 1. **image2gerjoi.m**

True epsi and sigm:

```
epsi.mat, sigm_w.mat, sigm_dc.mat
```

## 2. **image2gerjoi.m**

Do true epsi but without top layer:

```
epsi_notop.mat
```

## 3. **smooth\_true.m** (optional)

Smooth true-epsi:

```
epsi_smooth.mat
```

## 4. **smooth\_true.m**

Smooth `epsi_notop.mat` :

```
epsi_notop_smooth.mat
```

## 5. **smooth\_boundary.m**

Put top layer on `epsi_notop_smooth.mat` and smooth again, but less.

Result is 4% less than true values.

```
epsi_top_smooth.mat
```

## 6. **smooth\_boundary\_interp.m**

Interpolate `epsi_top_smooth.mat` to make smooth sigm-w and sigm-dc:

```
sigm_w_top_smooth.mat, sigm_dc_top_smooth.mat
```

---

# True models

---

ls nature-synth/mat-synth/

epsi.mat : with top layer

sigm\_w.mat : with top layer

sigm\_dc.mat : with top layer

epsi\_notop.mat : without top layer

---

# Initial models

---

ls nature-synth/initial-guess/

epsi\_notop\_smooth.mat : without top layer but smoothed

epsi\_top\_smooth.mat : top layer added & smoothed (less smoothed)

sigm\_dc\_top\_smooth.mat : interpolated from epsi\_top\_smooth.mat

sigm\_w\_top\_smooth.mat : interpolated from epsi\_top\_smooth.mat

---

# Uploading to server

---

cd ../../

sh push\_param.sh

---