概要

・EMCL占有率等の推定精度についての周波数特性を始めとする種々の周波数特性を調べる.

・TOFpicker(threshold法)のキャリブレーションを各周波数について行う.

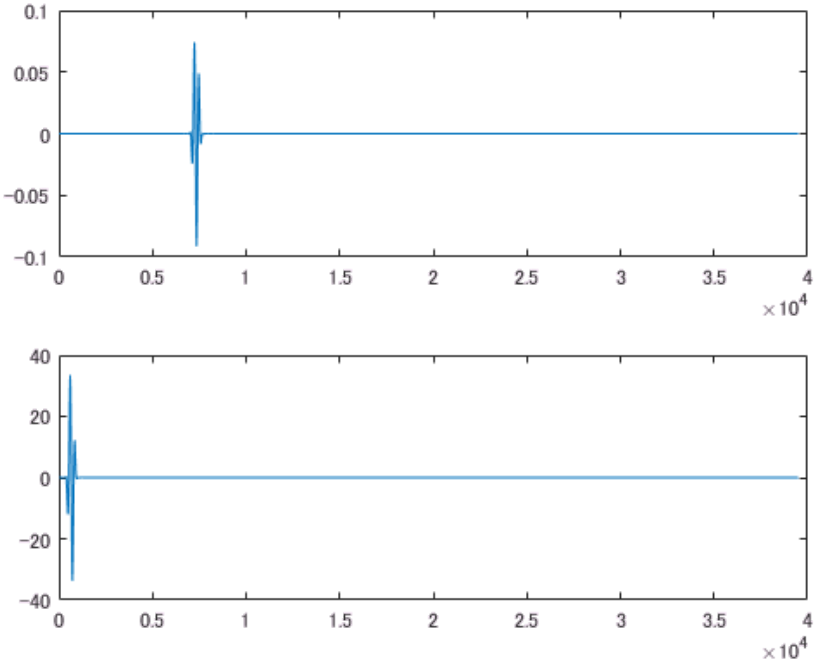
・いずれは１：自動でキャリブレーションをするような関数を作成する.

もしくは２：他の波形先頭抽出法を考える必要がありそう.

１：キャリブレーション(frq1000)

```
cd '\\Azlab-fs01\東研究室\個人work\竹内(ひ)\data\kwave\result\2018_09_11_no_object_variousFrequency\freq1000'
load rfdata.mat
load kgrid.mat
load sourse_wave.mat
```

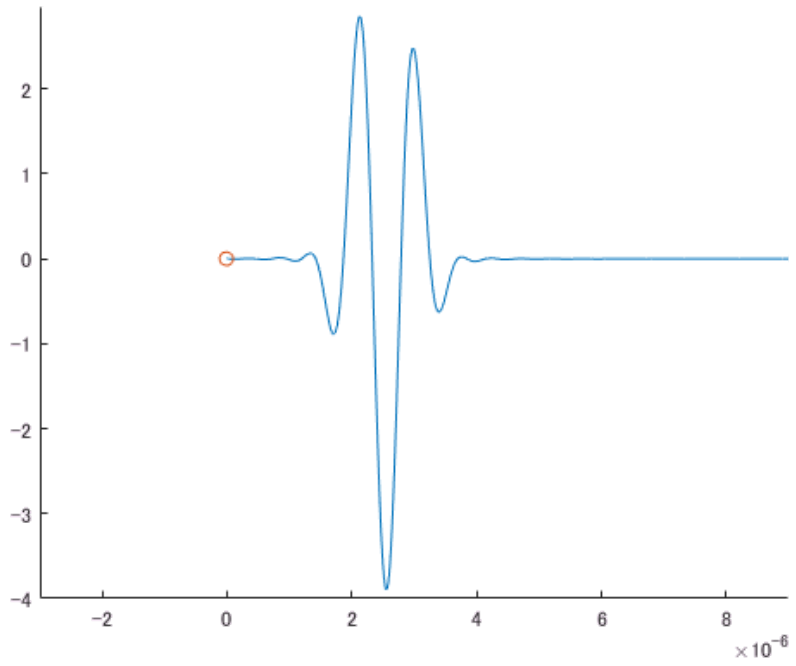
```
figure;
subplot(2,1,1)
plot(rfdata(:,101));
subplot(2,1,2)
plot(source_wave)
```




```
tof_map = threshold_picker(rfdata,kgrid,1000);
v_cal_no_object = 40e-03/tof_map(101,1)
```

```
v_cal_no_object = 1.5799e+03
```

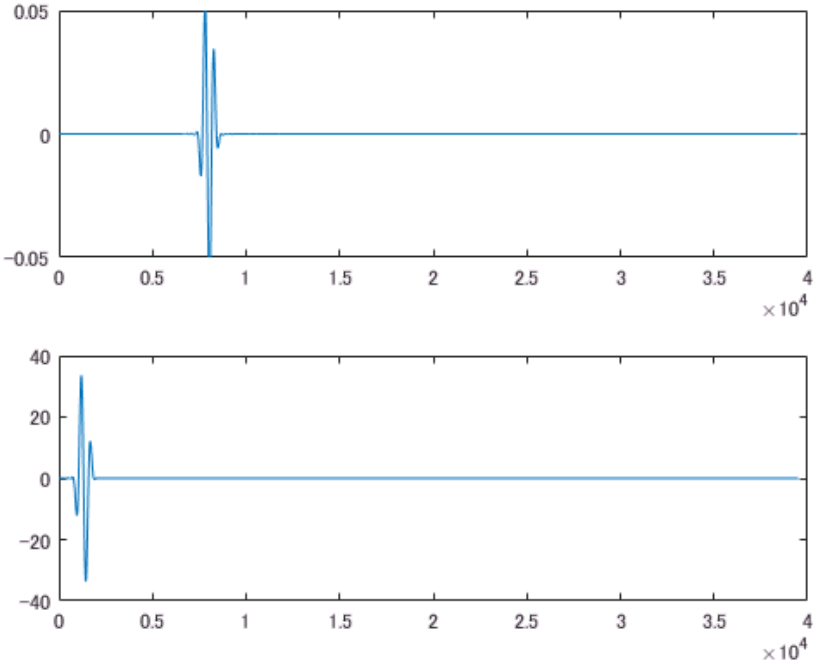
```
figure;
hold on
plot(kgrid.t_array(1,:),rfdata(:,1));
scatter(tof_map(1,1),0);
xlim([-0.000003 0.000009])
ylim([-4.00 2.97])
```



2 ：キャリブレーション(frq500)

```
cd '\\Azlab-fs01\東研究室\個人work\竹内(ひ)\data\kwave\result\2018_09_11_no_object_variousFrequency\freq500'
load rfdata.mat
load kgrid.mat
load sourse_wave.mat
```

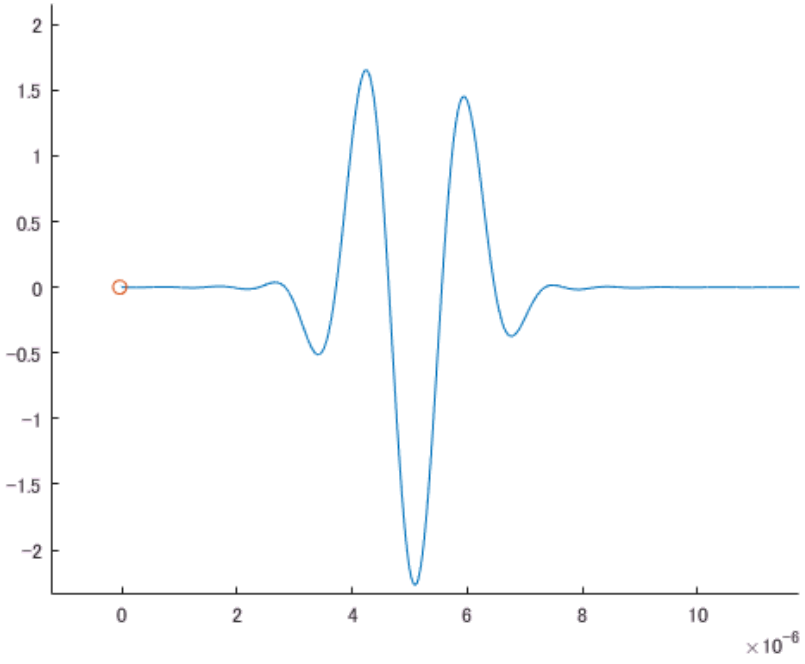
```
figure;
subplot(2,1,1)
plot(rfdata(:,101));
subplot(2,1,2)
plot(source_wave)
subplot(2,1,1)
xlim([0 40000])
ylim([-0.050 0.050])
```




```
tof_map = threshold_picker(rfdata,kgrid,500);
v_cal_no_object = 40e-03/tof_map(101,1)
```

```
v_cal_no_object = 1.5799e+03
```

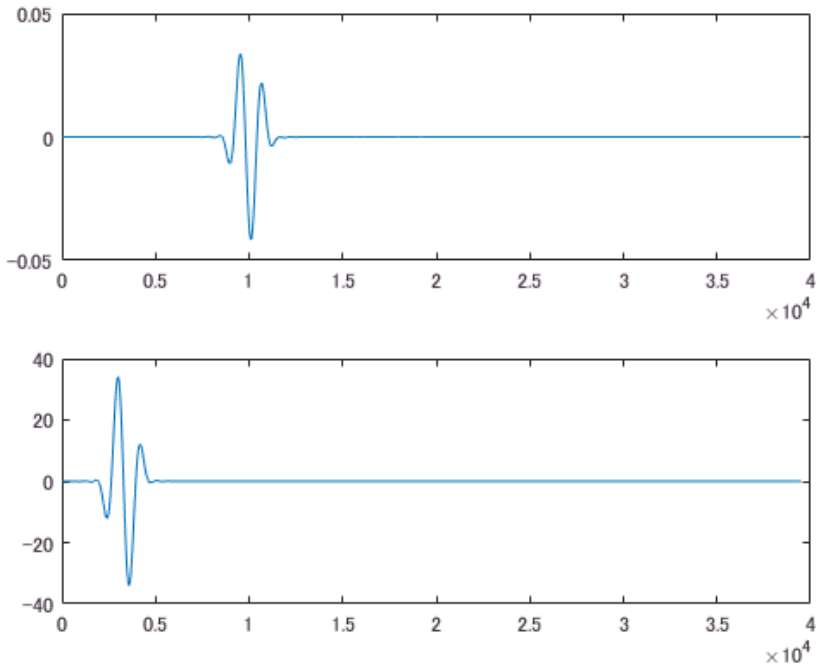
```
figure;
hold on
plot(kgrid.t_array(1,:),rfdata(:,1));
scatter(tof_map(1,1),0);
xlim([-0.00000123 0.00001177])
ylim([-2.34 2.16])
```



3：キャリブレーション(frq200)

```
cd '\\Azlab-fs01\東研究室\個人work\竹内(ひ)\data\kwave\result\2018_09_11_no_object_variousFrequency\freq200'
load rfdata.mat
load kgrid.mat
load sourse_wave.mat
```

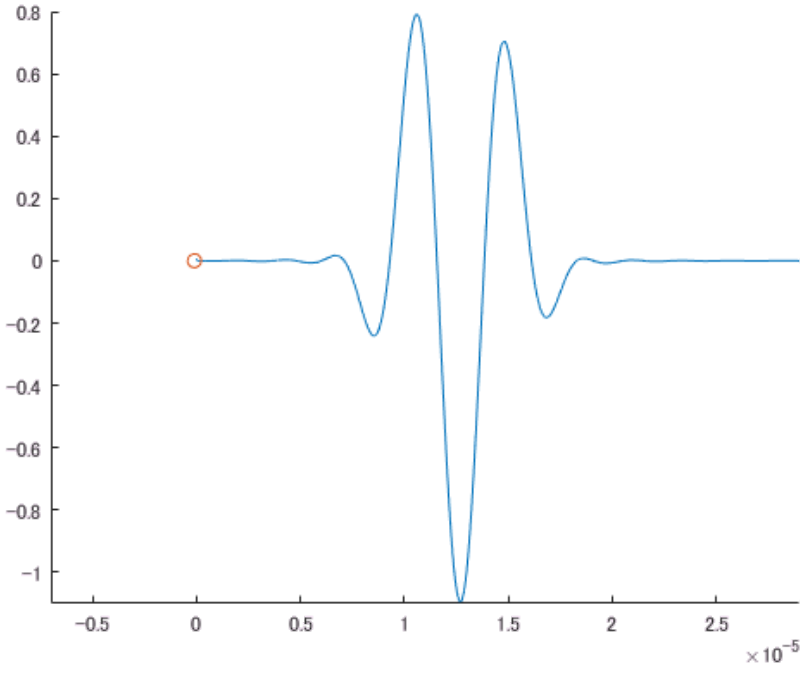
```
figure;
subplot(2,1,1)
plot(rfdata(:,101));
subplot(2,1,2)
plot(source_wave)
subplot(2,1,1)
xlim([0 40000])
ylim([-0.050 0.050])
```




```
tof_map = threshold_picker(rfdata,kgrid,200);
v_cal_no_object = 40e-03/tof_map(101,1)
```

```
v_cal_no_object = 1.5799e+03
```

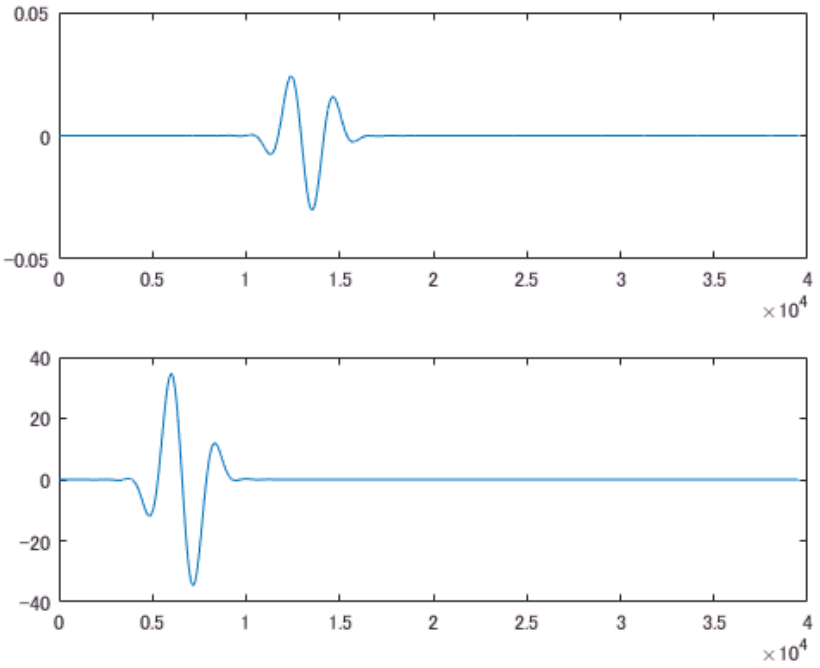
```
figure;
hold on
plot(kgrid.t_array(1,:),rfdata(:,1));
scatter(tof_map(1,1),0);
xlim([-0.000007 0.000029])
ylim([-1.10 0.80])
```



4：キャリブレーション(frq100)

```
cd '\\Azlab-fs01\東研究室\個人work\竹内(ひ)\data\kwave\result\2018_09_11_no_object_variousFrequency\freq100'
load rfdata.mat
load kgrid.mat
load sourse_wave.mat
```

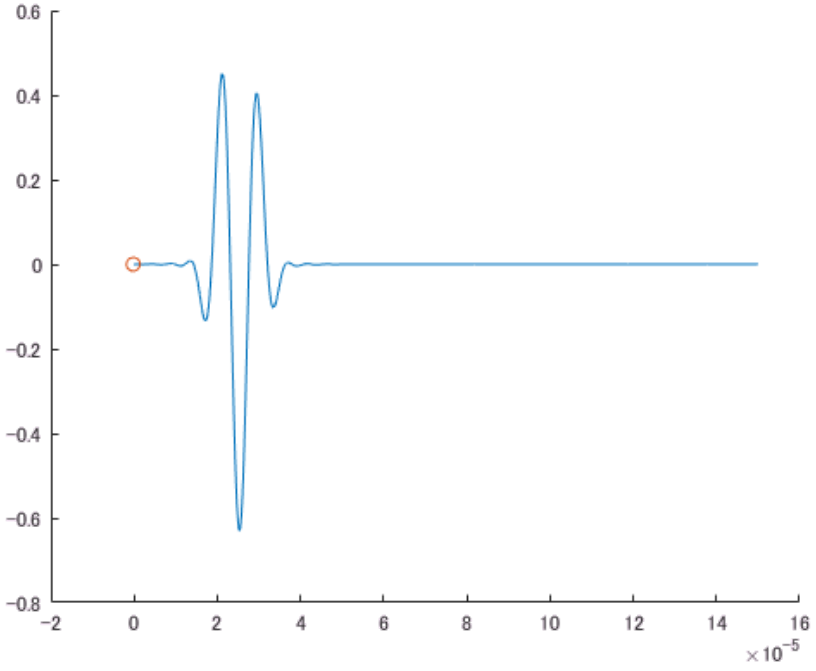
```
figure;
subplot(2,1,1)
plot(rfdata(:,101));
subplot(2,1,2)
plot(source_wave)
subplot(2,1,1)
xlim([0 40000])
ylim([-0.050 0.050])
```




```
tof_map = threshold_picker(rfdata,kgrid,100);
v_cal_no_object = 40e-03/tof_map(101,1)
```

```
v_cal_no_object = 1.5799e+03
```

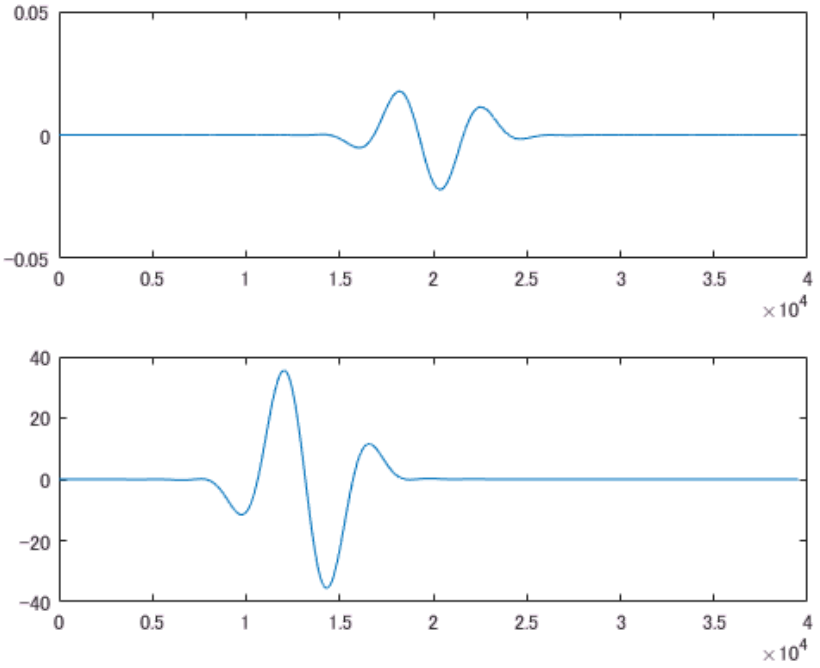
```
figure;
hold on
plot(kgrid.t_array(1,:),rfdata(:,1));
scatter(tof_map(1,1),0);
```



5 ：キャリブレーション(frq50)

```
cd '\\Azlab-fs01\東研究室\個人work\竹内(ひ)\data\kwave\result\2018_09_11_no_object_variousFrequency\freq50'
load rfdata.mat
load kgrid.mat
load sourse_wave.mat
```

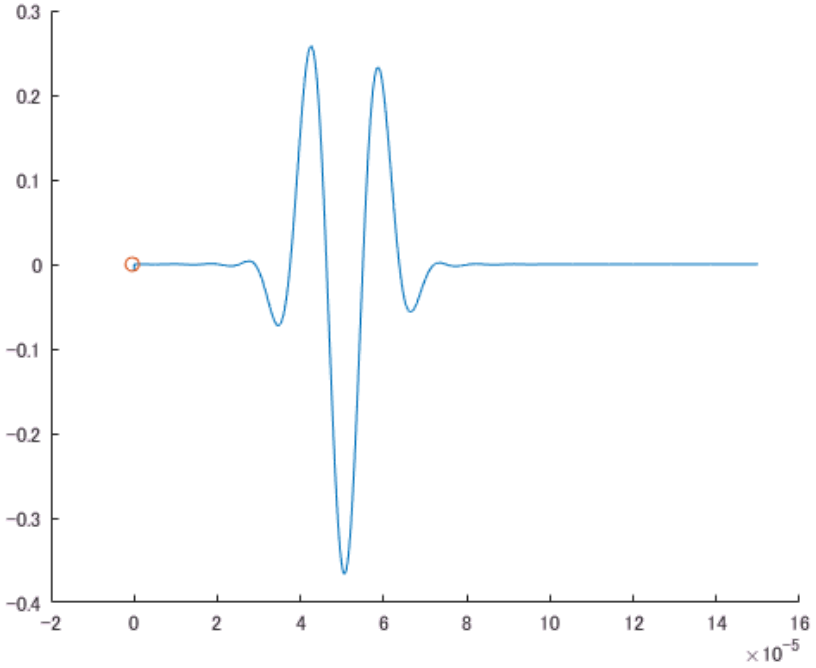
```
figure;
subplot(2,1,1)
plot(rfdata(:,101));
subplot(2,1,2)
plot(source_wave)
subplot(2,1,1)
xlim([0 40000])
ylim([-0.050 0.050])
```




```
tof_map = threshold_picker(rfdata,kgrid,50);
v_cal_no_object = 40e-03/tof_map(101,1)
```

```
v_cal_no_object = 1.5799e+03
```

```
figure;
hold on
plot(kgrid.t_array(1,:),rfdata(:,1));
scatter(tof_map(1,1),0);
```


0.3
0.2
0.1
0
−0.1
−0.2
−0.3
−0.4
−2
0
2
4
6
8
10
12
14
16
×10−5