# Before experiment:

Channel index: Take a picture of channel inserted in the box right next to the reference coils.

The convention should be:

1: left eye

5: right eye

2: left head

3: right head

# Post-processing:

## DataLoad.m

1. insert the correct channel index,
2. input session name and folder name

## objectProcess.m

1. Assign correct index to each rigid object
2. For helmet: define markers corresponding to left and right head coils.
3. For headrest: (1) define ‘headRestFrame’, the samples when headrest is mounted on the table; (2) redefine the orders of markers: first 3 markers are in the same vertical plane.
4. For eyeProbe: (1) define ‘eyeProbeFrames’, the samples when the eyeProbe touches the eye lid. (2) redefine the orders of the 4 markers: first the 3 markers are in the bottom; the last index is marker at the end of the probe.
5. For 9-point grid: redefine the orders of the 9 markers: order of left to right, top to bottom.
6. For table grid: redefine the orders of the 7 markers: clockwise starting from top left.

## head\_eye\_process.m

## timProcess.m

1. input onset sample and offset sample of every trial.
2. Find out onset and offset sample of each fixation of 9-point grid and table grid.

## NinePtGrid\_eyeCalib.m:

estimate a linear transformation that convert raw eye coil reading to line of sight based on 9-point grid measurement

## TableGrid\_eyeCalib.m

estimate a linear transformation that convert raw eye coil reading to line of sight based on markers on the table