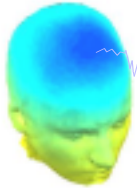


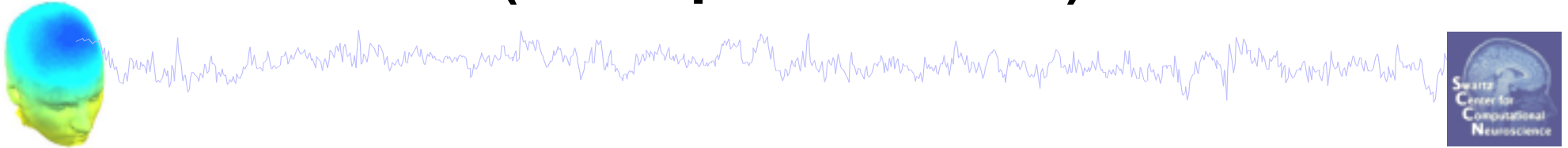
IC Evaluation Practicum (15:45 – 17:00 Day 1)



- **ALL**
 - Download then load faces_4.set, epoch on face
- **Novice, Intermediate**
 - From the GUI, open the 'Reject component by map' interface
 - Explore and classify several additional ICs: muscle, channel, brain
 - ~ Justify your classification
 - Redo the "Plot → Component ERPs → With component maps" excluding your additional artifacts. What change do you observe?
 - Pick a brain IC. Plot an ERP Image
 - ~ Try sorting by phase, is there any relationship to the IC activation pattern? What about power in a frequency band of choice?
- **Intermediate**
 - Plot ERP Image sorted by response latency
 - ~ Figure out how to realign trials to response latency instead (Hint: 'Align')
 - Plot ERSPs for selected ICs
 - ~ Explore parameter options. Why is each useful?
 - Plot component cross-coherence for pairs of ICs
- **ALL (Time permitting)**
 - Create second dataset, epoched on object
 - Examine ERP differences between the conditions using "Plot → Component ERPs → With component maps (compare)"
 - For ICs most different between conditions, compare ERP Image, ERSP



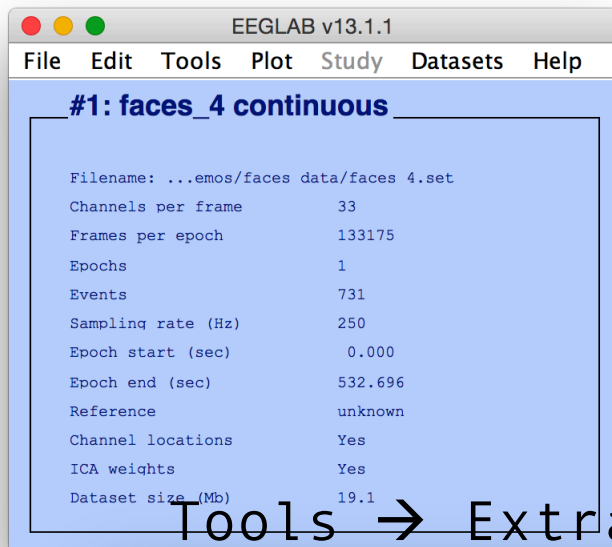
(Example Datasets)



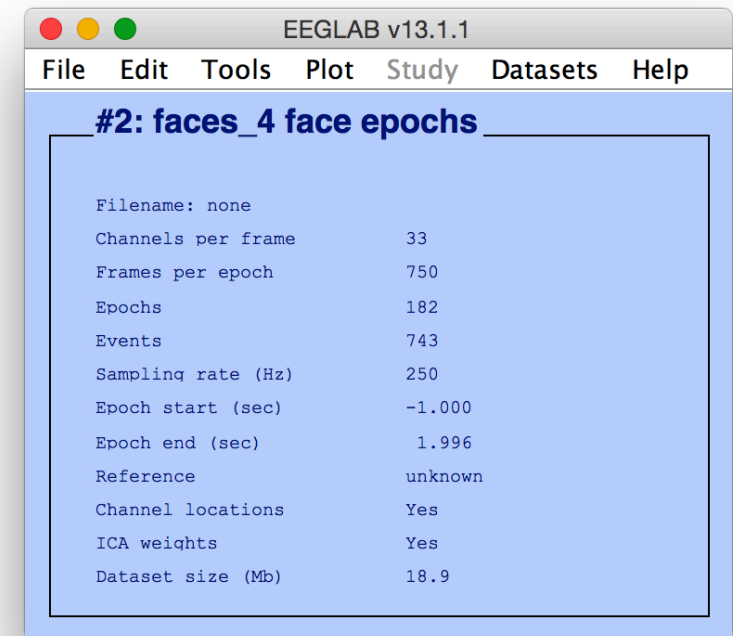
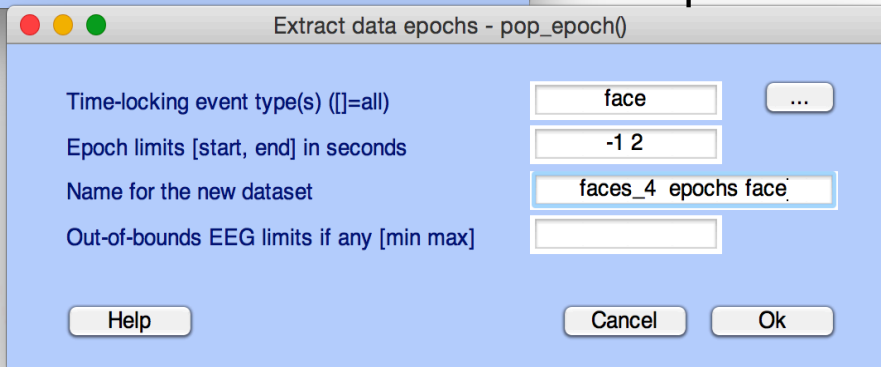
/faces continuous/faces_4.set

ftp://sccn.ucsd.edu/pub/julie/EEGLAB_Workshop/FacesData.zip

Linked from: http://sccn.ucsd.edu/wiki/Online_EEGLAB_Workshop



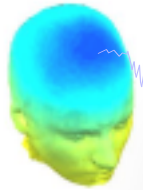
Tools → Extract Epochs



Subtract Baseline [-1000 0]

(Some examples use stern_125Hz.set)

Edit → Dataset Info → Enter Comments



Read/Enter comments -- pop_comments()

Edit comments of current dataset

Parent dataset: faces_4 continuous

Parent dataset "faces_4 continuous": -----

Data acquired by: Stefan Debener

Data acquired on: Oct 15, 2005

Data:

33 channel EEG

nose-tip reference

sampling rate: 250 Hz

filtered: .5 - 100 Hz

16 bit, BrainAmps

Task:

speeded discrimination between objects and faces

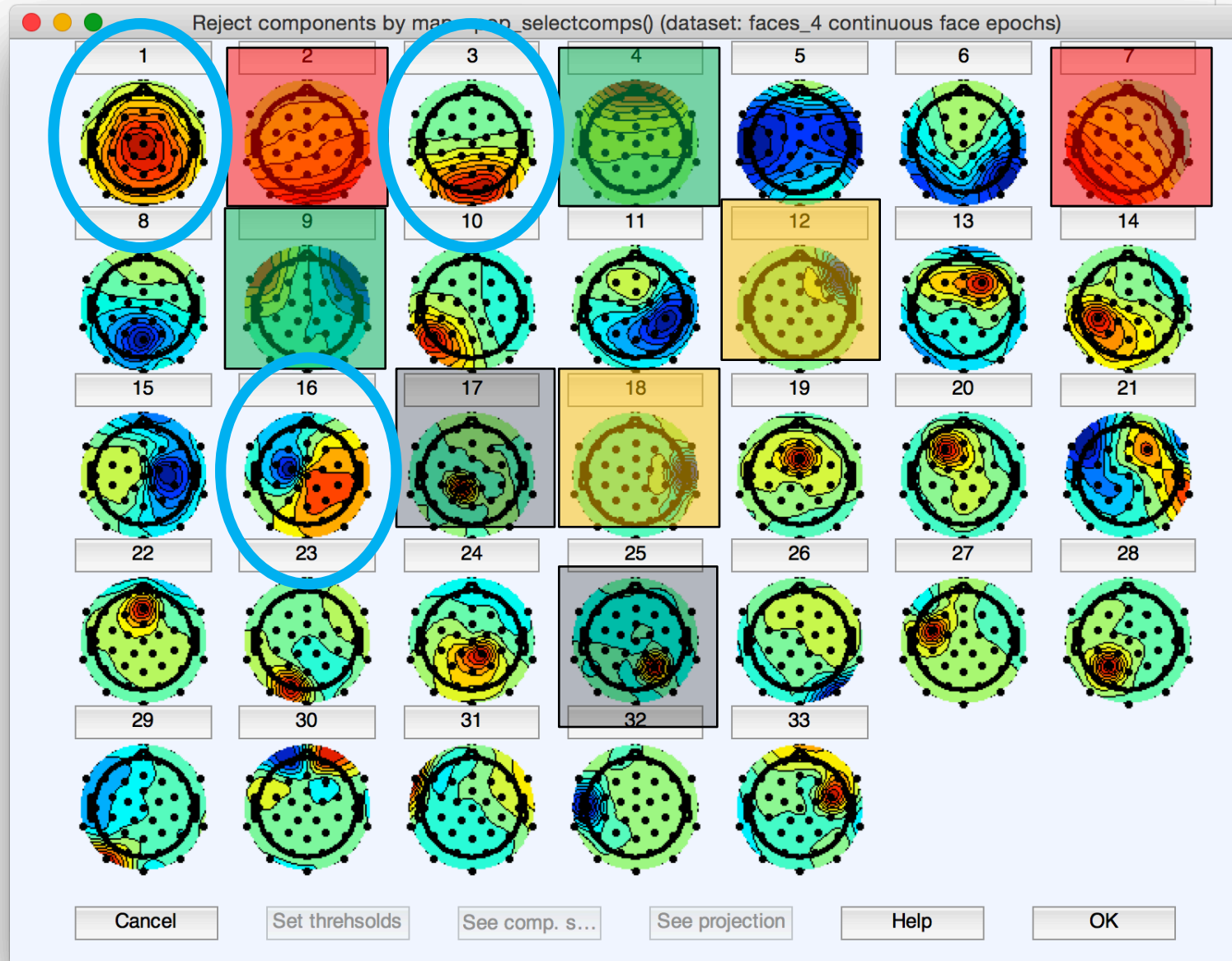
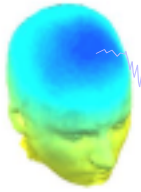
500 ms presentation duration

ISI: 500-1900 ms

362 trials

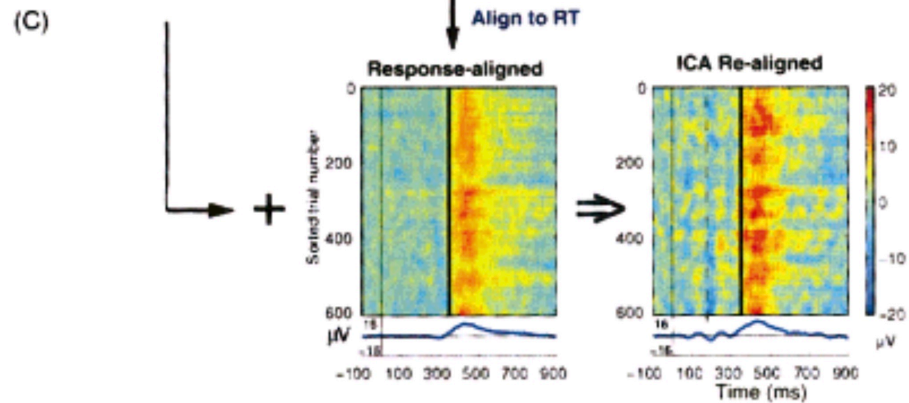
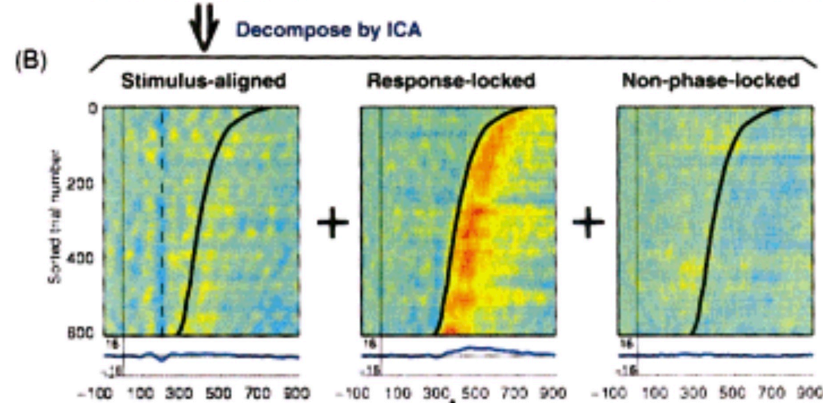
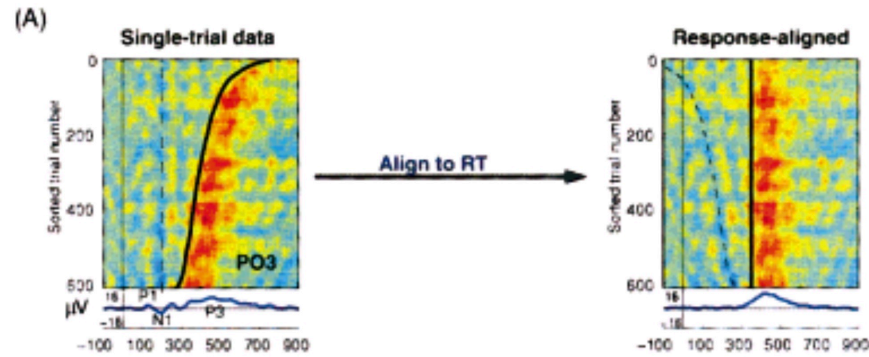
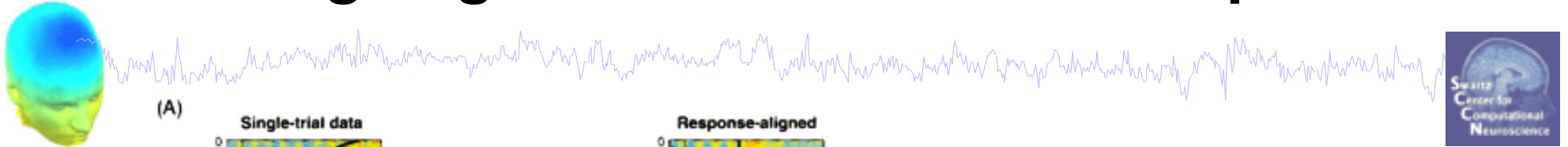
CANCEL SAVE

IC Classification...so far



Eye
Muscle
Cardiac
Badchan
Brain

Realigning Trials: Stimulus vs. Response



Jung T-P, Makeig SD, Westerfield M, Townsend J, Courchesne E, Sejnowski TJ (2001) Analysis and visualization of single-trial event-related potentials. Hum Brain Mapp 14:166–85.

Nice method for
generating
dual ERPs