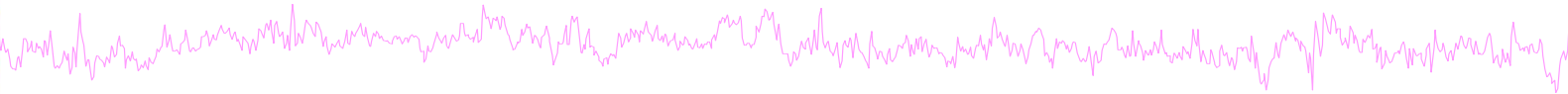
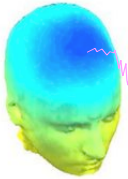


STUDY design and plotting overview



STEP 1

Build a STUDY

STEP 2

Build design(s)

STEP 3

Precompute the data

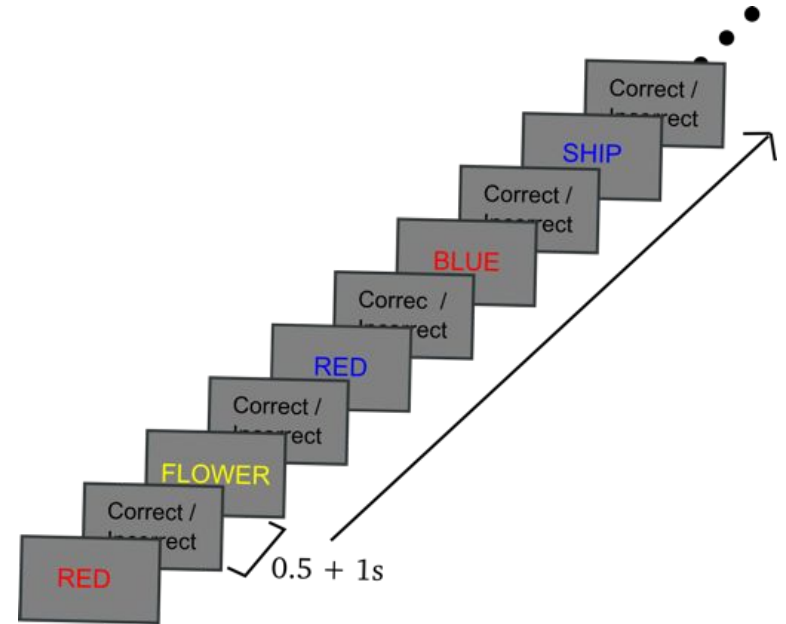
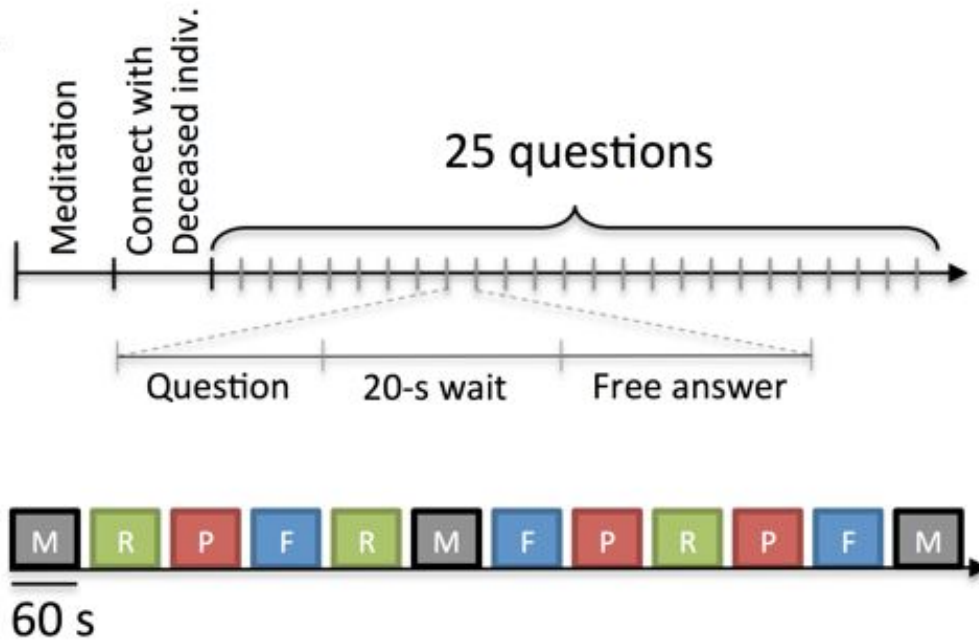
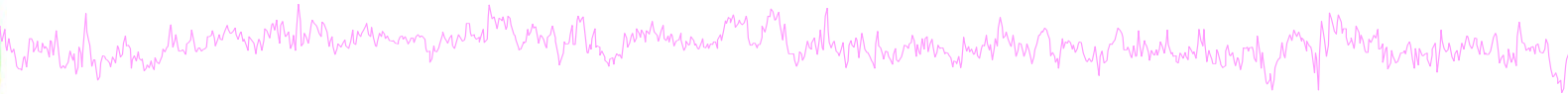
STEP 4

Plot the data

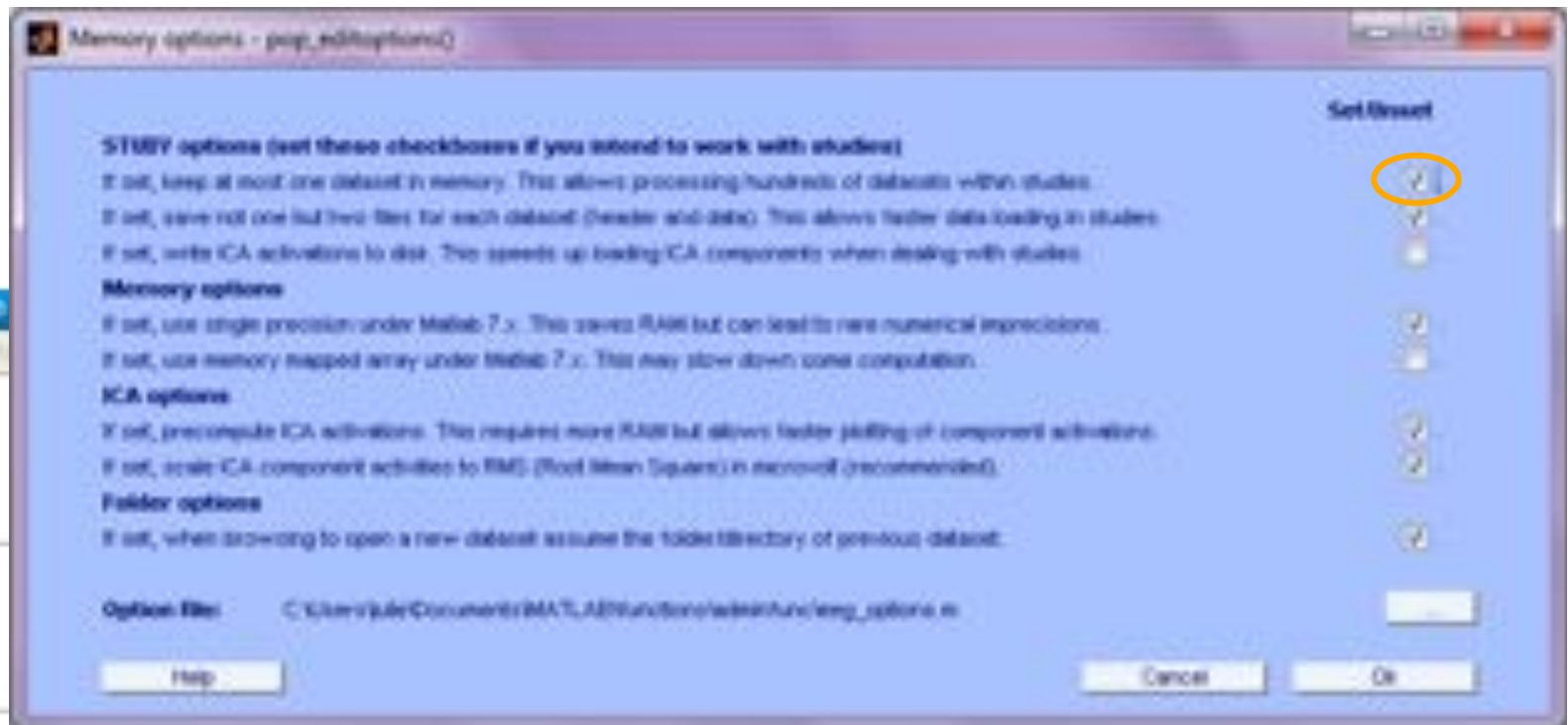
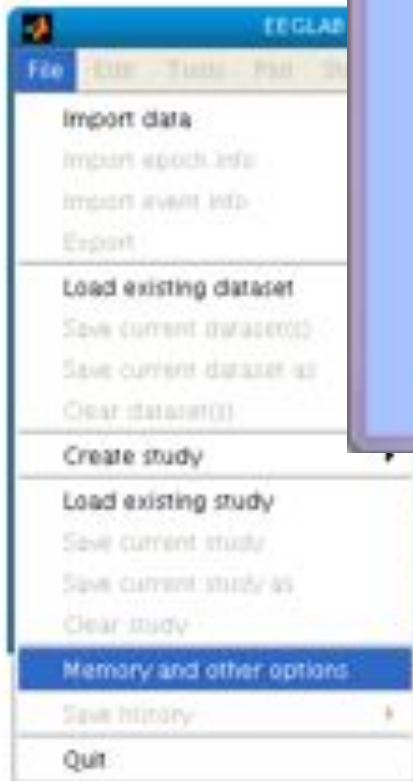
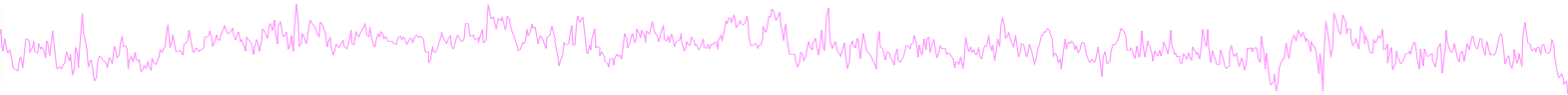
Exercise...



Formalizing experimental protocols

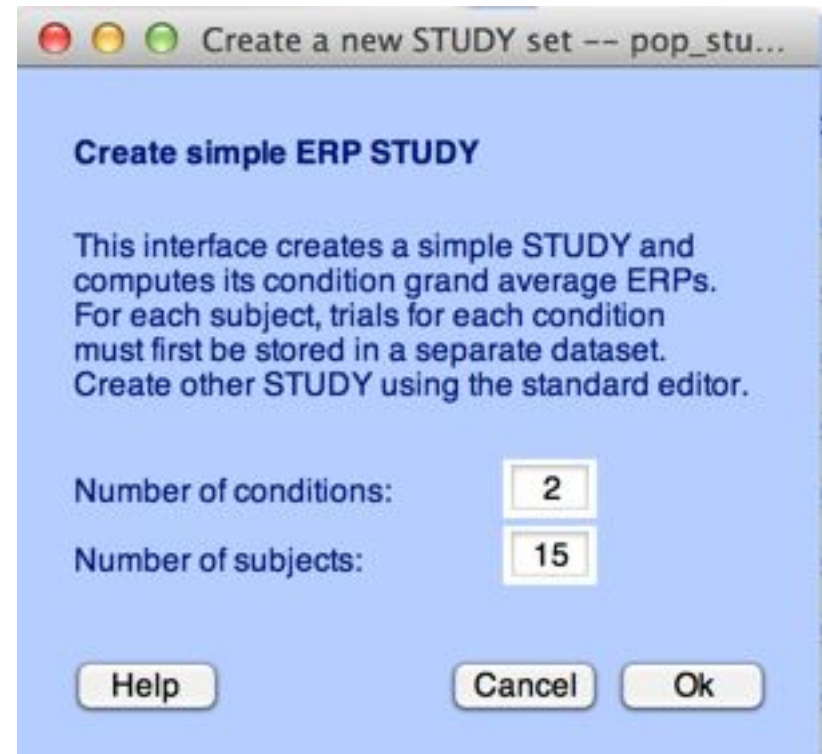
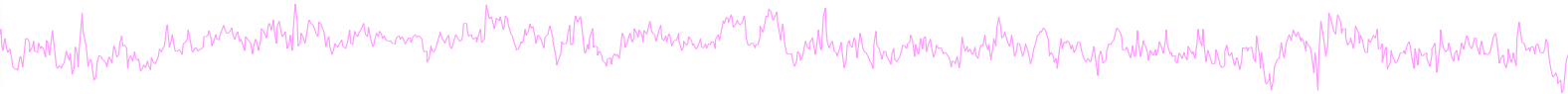


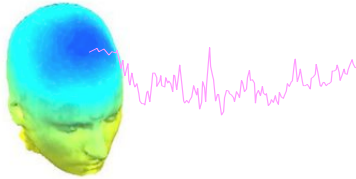
Memory options



Memory options should change when using STUDY vs single dataset

Create simple ERP STUDY





Create a new STUDY set -- pop_studyerp()

Create simple ERP STUDY

STUDY set name:

Condition 1 name: Condition 2 name:

Condition 1 datasets

<input type="text" value="/data/STUDY/S01/ignore.set"/>	...
<input type="text" value="/data/STUDY/S02/ignore.set"/>	...
<input type="text" value="/data/STUDY/S03/ignore.set"/>	...
<input type="text"/>	...
<input type="text"/>	...
<input type="text"/>	...
<input type="text"/>	...
<input type="text"/>	...
<input type="text"/>	...
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<input type="text"/>	...
<input type="text"/>	...

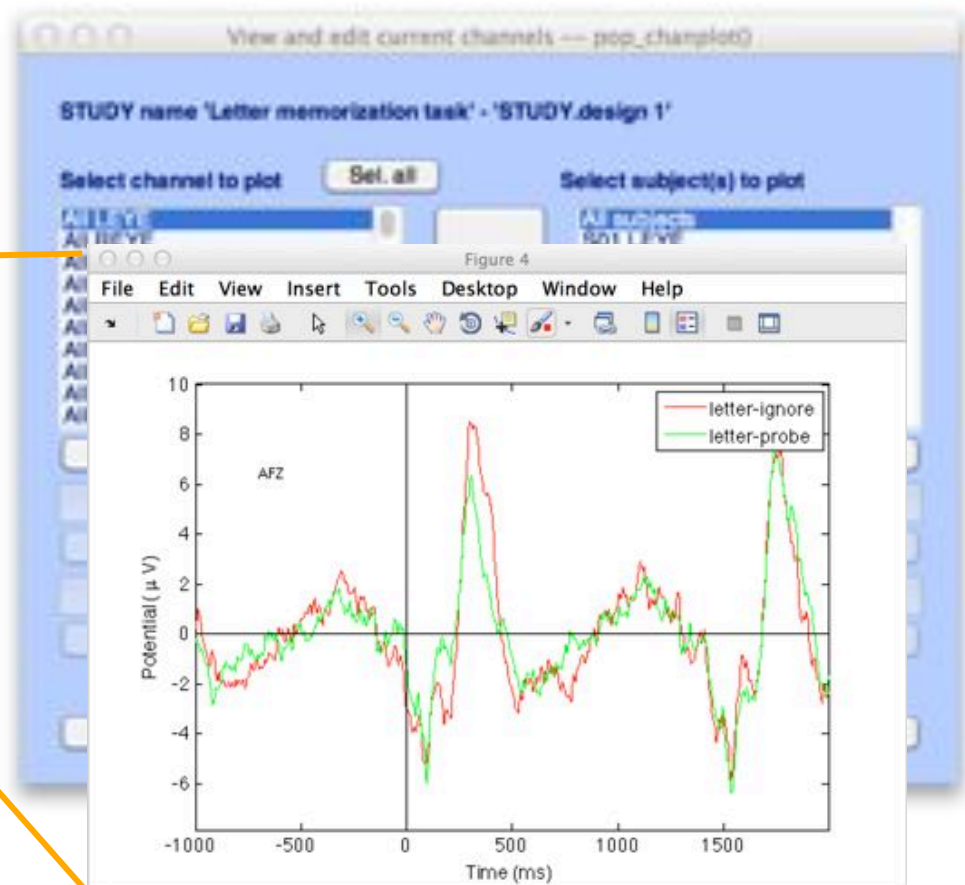
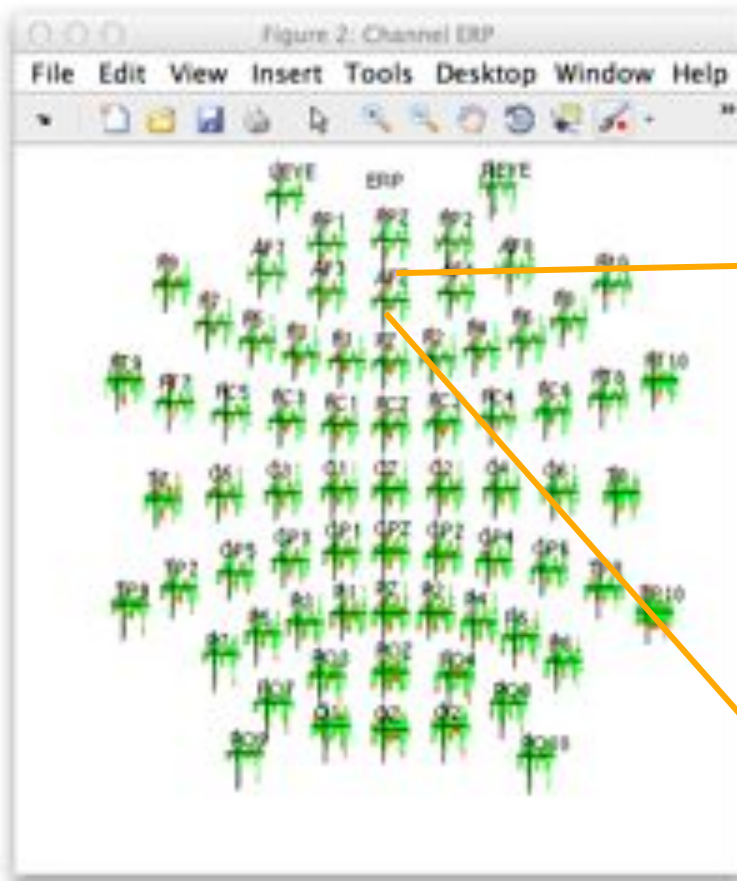
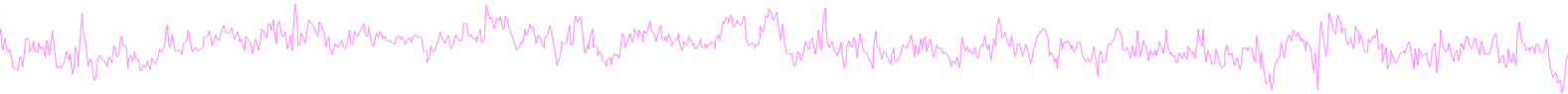
Condition 2 datasets

<input type="text" value="/data/STUDY/S01/Memorize.set"/>	...
<input type="text" value="/data/STUDY/S02/Memorize.set"/>	...
<input type="text" value="/data/STUDY/S03/Memorize.set"/>	...
<input type="text"/>	...
<input type="text"/>	...
<input type="text"/>	...
<input type="text"/>	...
<input type="text"/>	...
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<input type="text"/>	...
<input type="text"/>	...

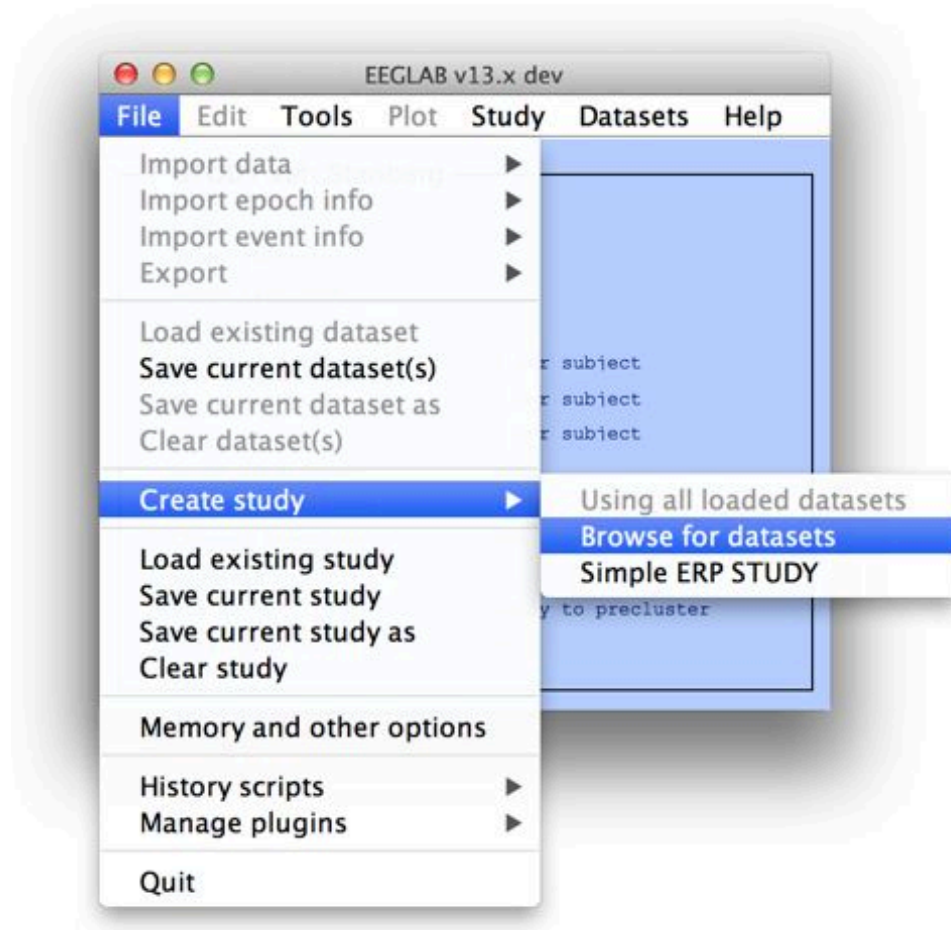
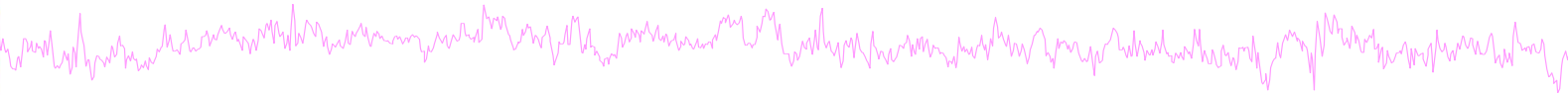
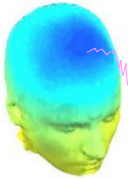
When using more than 1 condition, datasets on each line must correspond to the same subject.



Create simple ERP STUDY



Build a STUDY



Build a STUDY, cont'd



Create a new STUDY set -- pop_study()

Create a new STUDY set

STUDY set name:

STUDY set test name:

STUDY set notes:

dataset filename	browse	subject	session	condition	group
1	...				
2	...				
3	...				
4	...				
5	...				
6	...				
7	...				
8	...				
9	...				
10	...				

Important note: Removed datasets will not be saved before being deleted from [ECLAB] memory.

Page 1

Update dataset info - datasets stored on disk will be overwritten (unless = new study info is present)

Delete cluster information for slow loading new datasets, set new components for clustering

Help

Choose dataset to add to STUDY -- pop_study()

Link in: S01

Name	Date modified	Type
Ignore.set	11/8/2009 7:06 PM	SET File
Memorize.set	11/8/2009 7:06 PM	SET File
Probe.set	11/12/2009 10:02 ...	SET File

Recent Places

Desktop

Libraries

Computer

Network

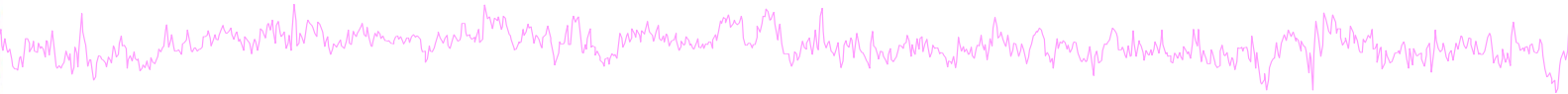
File name:

Files of type: (*.set; *.SET)

Open

Cancel

Edit dataset info



Create a new STUDY set -- pop_study0

EdR STUDY set information - remember to save changes

STUDY set name:

STUDY set task name:

STUDY set notes:

	dataset filename	browse	subject	session	condition	group	Select by r.v.	
1	/Volumes/donnees/data/STUI:	--	S01	<input type="checkbox"/>	memorize		All comp.	Clear
2	/Volumes/donnees/data/STUI:	--	S01	<input type="checkbox"/>	ignore		All comp.	Clear
3	/Volumes/donnees/data/STUI:	--	S01	<input type="checkbox"/>	probe		All comp.	Clear
4	/Volumes/donnees/data/STUI:	--	S02	<input type="checkbox"/>	memorize		All comp.	Clear
5	/Volumes/donnees/data/STUI:	--	S02	<input type="checkbox"/>	ignore		All comp.	Clear
6	/Volumes/donnees/data/STUI:	--	S02	<input type="checkbox"/>	probe		All comp.	Clear
7	/Volumes/donnees/data/STUI:	--	S03	<input type="checkbox"/>	memorize		All comp.	Clear
8	/Volumes/donnees/data/STUI:	--	S03	<input type="checkbox"/>	ignore		All comp.	Clear
9	/Volumes/donnees/data/STUI:	--	S03	<input type="checkbox"/>	probe		All comp.	Clear
10	/Volumes/donnees/data/STUI:	--	S04	<input type="checkbox"/>	memorize		All comp.	Clear

Important note: Removed datasets will not be saved before being deleted from EEGLAB memory

< Page 1 >

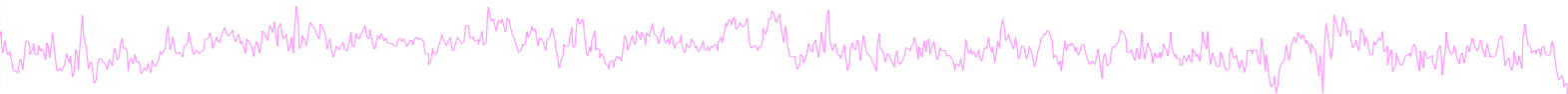
Dataset info (condition, group, ...) differs from study info. [set] = Overwrite dataset info.

Delete cluster information (to allow loading new datasets, set new components for clustering, etc.)

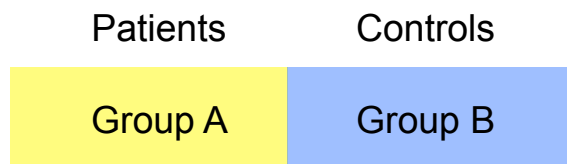
Help Cancel Ok



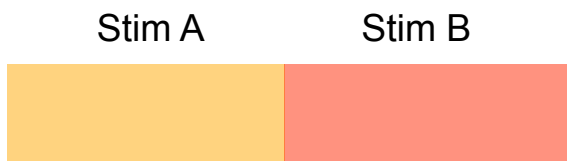
Experimental design



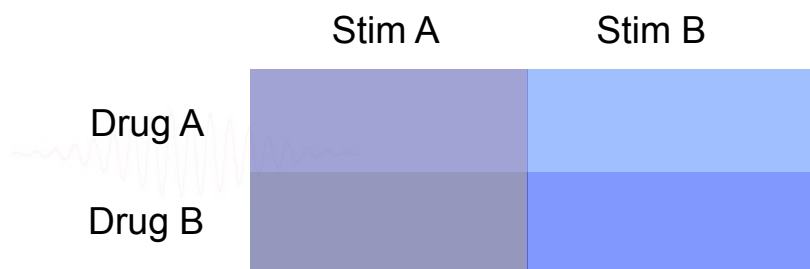
1x2 unpaired



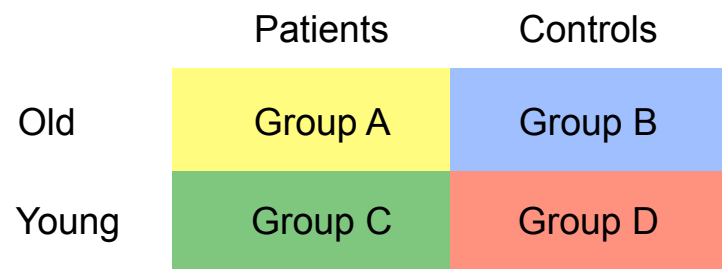
1x2 paired



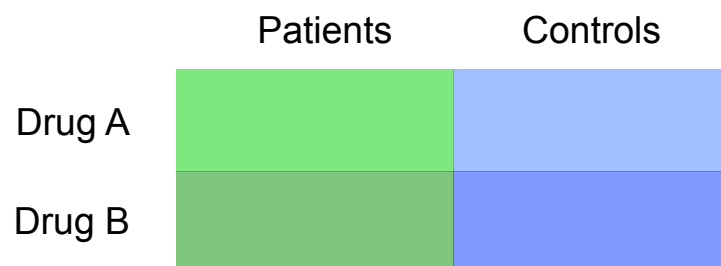
2x2 paired



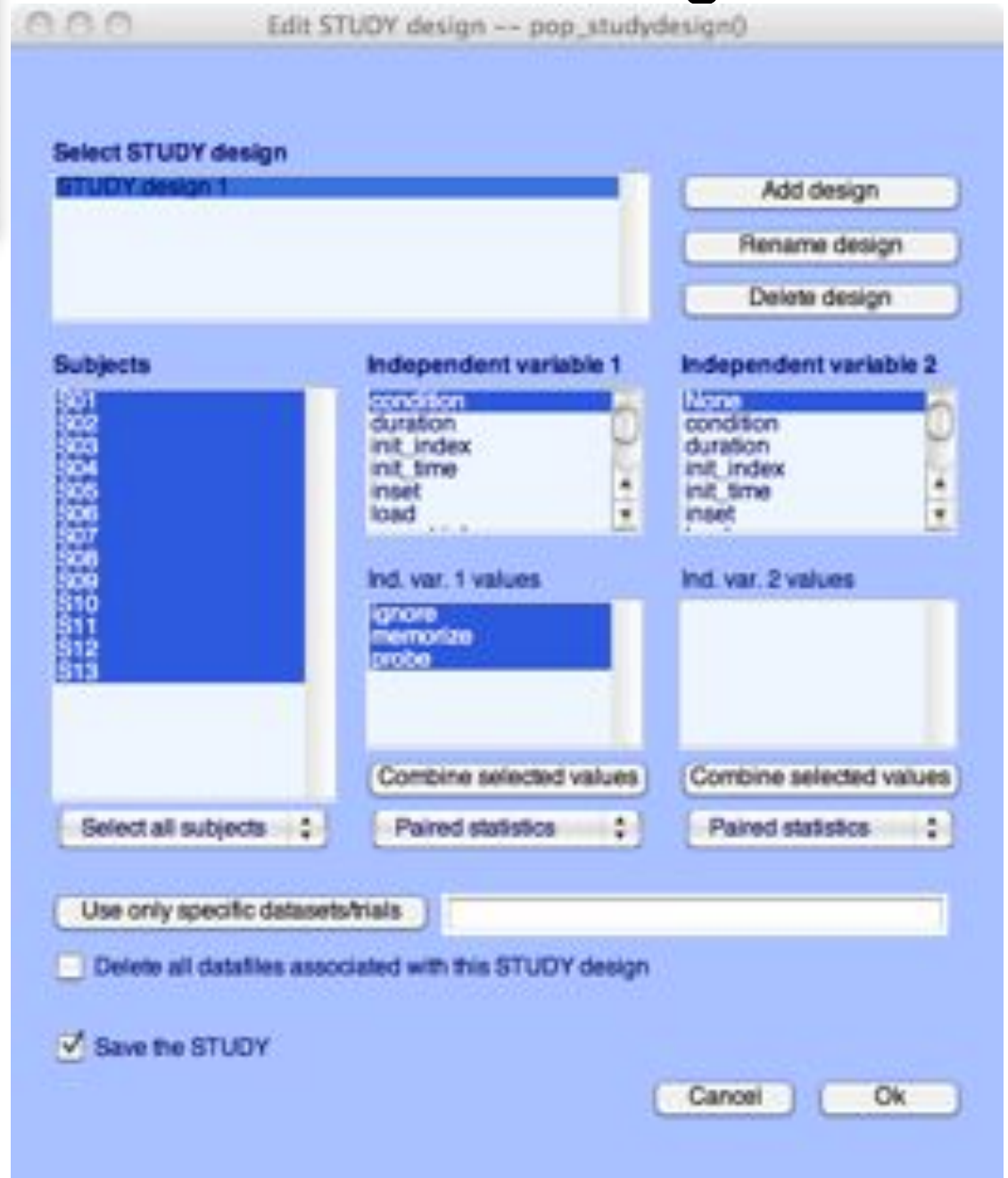
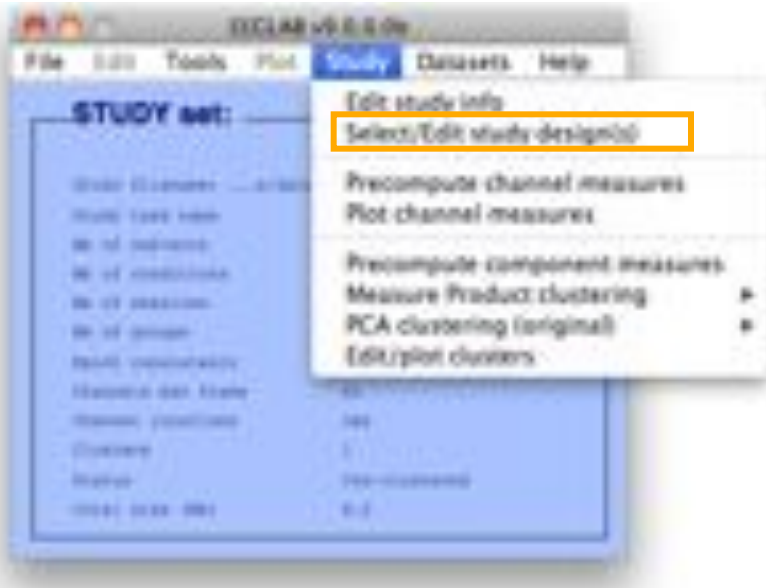
2x2 unpaired



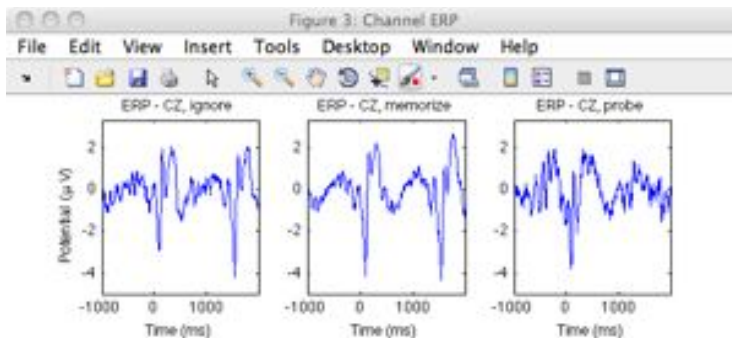
2x2 paired & unpaired



Create design



1x3 design



EEGLAB v7.1.7.18b

File Edit Tools Plot Study Datasets Help

Dataset info
Event fields
Event values
About this dataset
Channel locations
Select data
Select data using events
Select epochs or events
Copy current dataset
Append datasets
Delete dataset(s)
ICA weights
Dataset size (Mb)

Continuous -- Rere...

70
610133
1
1303
250
0.000
2440 528
Yes
Yes
Yes
348

Edit event values -- pop_edeventval0

Edit event field values (currently 1303 events)

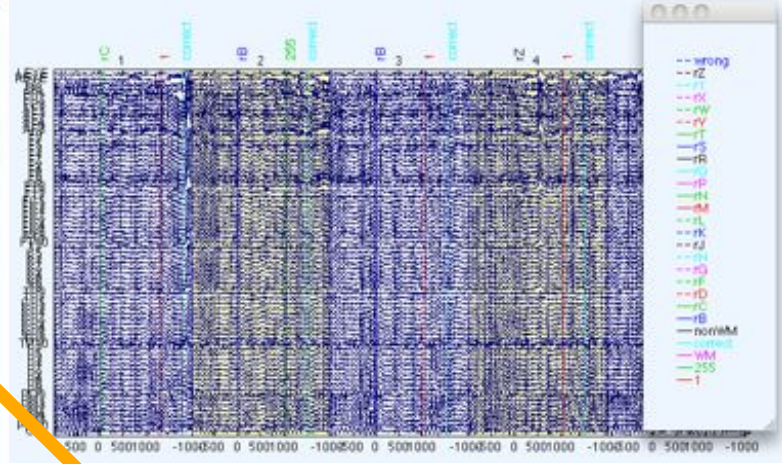
Trial	1
Event_Type	Picture
Type	nonRM
Latency (sec)	3.112
Time	0
Uncertainty	2
Duration	50283
Uncertainty2	3
ReqTime	0
ReqDur	50000
init_index	1
init_time	0.0227
Duration (sec)	0
Load	

Number of event fields is unlimited

Event items
Insert event << < 1 > >> Append event

Re-order events (for review only)
Main sorting field: No field selected
Secondary sorting field: No field selected

Cancel Help Ok



Create a new STUDY set -- pop_study0

Edit STUDY set information - remember to save changes

STUDY set name: Sternberg
STUDY set task name: Sternberg
STUDY set notes:

dataset file name	subject	session	condition	group	Select by row
C:\Users\guler\Documents\1\No...	S01		memorize		Comp. 3 8 Clear
C:\Users\guler\Documents\1\No...	S01		ignore		Comp. 3 5 Clear
C:\Users\guler\Documents\1\No...	S01		probe		Comp. 3 6 Clear
C:\Users\guler\Documents\1\No...	S02		memorize		Comp. 5 6 Clear
C:\Users\guler\Documents\1\No...	S02		ignore		Comp. 5 8 Clear
C:\Users\guler\Documents\1\No...	S02		probe		Comp. 5 6 Clear
C:\Users\guler\Documents\1\No...	S02		memorize		Comp. 6 7 Clear
C:\Users\guler\Documents\1\No...	S02		ignore		Comp. 6 7 Clear
C:\Users\guler\Documents\1\No...	S03		probe		Comp. 6 7 Clear
C:\Users\guler\Documents\1\No...	S04		memorize		Comp. 1 2 Clear

Important note: Removed datasets will not be saved before being deleted from EEGLAB memory

Page 1

Dataset info (condition, group, ...) differs from study info (set) = Overwrites dataset info
Delete cluster information (to allow loading new datasets, set new components for clustering, etc.)

help Cancel Ok

Edit STUDY design -- pop_studydesign0

Select STUDY design
STUDY design 1
Add design
Rename design
Delete design

Subjects
S01
S02
S03
S04
S05
S06
S07
S08
S09
S10
S11
S12
S13

Independent variable 1
duration
init_index
init_time
inset
load

Independent variable 2
None
condition
duration
init_index
init_time
inset

Ind. var. 1 values
ignore
memorize
probe

Ind. var. 2 values

Combine selected values
Combine selected values

Select all subjects
Paired statistics
Paired statistics

Use only specific datasets/trials

Delete all datasets associated with this STUDY design

Save the STUDY

Cancel Ok

Build a STUDY, alternative method



Create a new STUDY set -- pop_study0

Create a new STUDY set

STUDY set name:

STUDY set task name:

STUDY set notes:

dataset filename	browse	subject	session	condition	group	Select by r.v.	
<input type="text"/>	--	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	Clear
<input type="text"/>	--	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	Clear
<input type="text"/>	--	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	Cl
<input type="text"/>	--	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	Cl
<input type="text"/>	--	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	Cl
<input type="text"/>	--	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	Cl
<input type="text"/>	--	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	Cl
<input type="text"/>	--	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	Cl
<input type="text"/>	--	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	Cl
<input type="text"/>	--	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	Cl

Important note: Removed datasets will not be saved before being deleted from EEG-AB memory

< Page 1 >

Update dataset info - datasets stored on disk will be overwritten (unset = Keep study info separate).

Delete cluster information (to allow loading new datasets, set new components for clustering, etc.)

Help Cancel Ok

Choose dataset to add to STUDY -- pop_study0

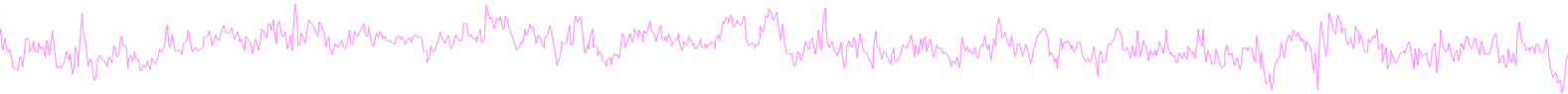
S01

Name	Date Modified
Memorize.icatpec	Thursday, November 12, 2009 9:04 PM
Memorize.katopo	Monday, November 16, 2009 9:43 PM
Memorize.set	Sunday, November 8, 2009 8:06 AM
Probe.daterp	Monday, June 14, 2010 11:43 PM
Probe.fdt	Thursday, November 12, 2009 11:02 AM
Probe.icaerp	Monday, November 16, 2009 10:01 PM
Probe.icaersp	Tuesday, November 17, 2009 12:05 PM
Probe.icalt	Tuesday, November 17, 2009 12:05 PM
Probe.icaspec	Thursday, November 12, 2009 9:09 PM
Probe.ikatopo	Monday, November 16, 2009 9:44 PM
Probe.set	Thursday, November 12, 2009 11:02 AM
S01.fdt	Tuesday, November 9, 2010 12:05 PM
S01.set	Tuesday, November 9, 2010 12:05 PM

File Format: (*.set, *.SET)

Cancel Open

Edit dataset info



Create a new STUDY set -- pop_study0

EdR STUDY set information - remember to save changes

STUDY set name:

STUDY set task name:

STUDY set notes:

	dataset filename	browse	subject	session	condition	group	Select by r.v.	
1	/Volumes/donnees/data/STU...	--	S01				Comp.: 1 2...	Clear
2	/Volumes/donnees/data/STU...	--	S02				Comp.: 1 2...	Clear
3	/Volumes/donnees/data/STU...	--	S03				Comp.: 1 2...	Clear
4	/Volumes/donnees/data/STU...	--	S04				Comp.: 1 2...	Clear
5	/Volumes/donnees/data/STU...	--	S05				Comp.: 1 2...	Clear
6	/Volumes/donnees/data/STU...	--	S06				Comp.: 1 2...	Clear
7	/Volumes/donnees/data/STU...	--	S07				Comp.: 1 2...	Clear
8	/Volumes/donnees/data/STU...	--	S08				Comp.: 1 2...	Clear
9	/Volumes/donnees/data/STU...	--	S09				Comp.: 1 2...	Clear
10	/Volumes/donnees/data/STU...	--	S10				Comp.: 1 2...	Clear

Important note: Removed datasets will not be saved before being deleted from EEGLAB memory

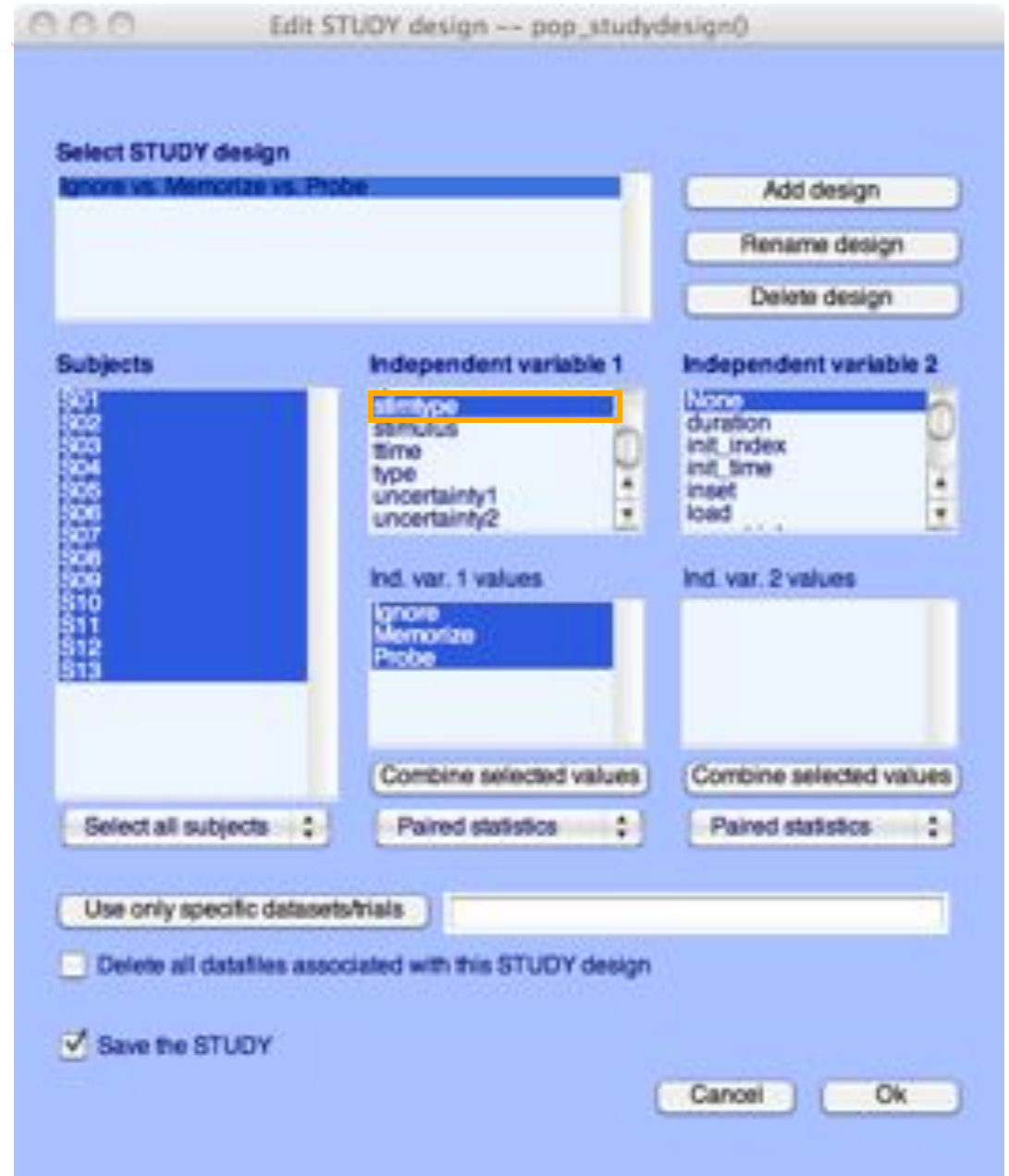
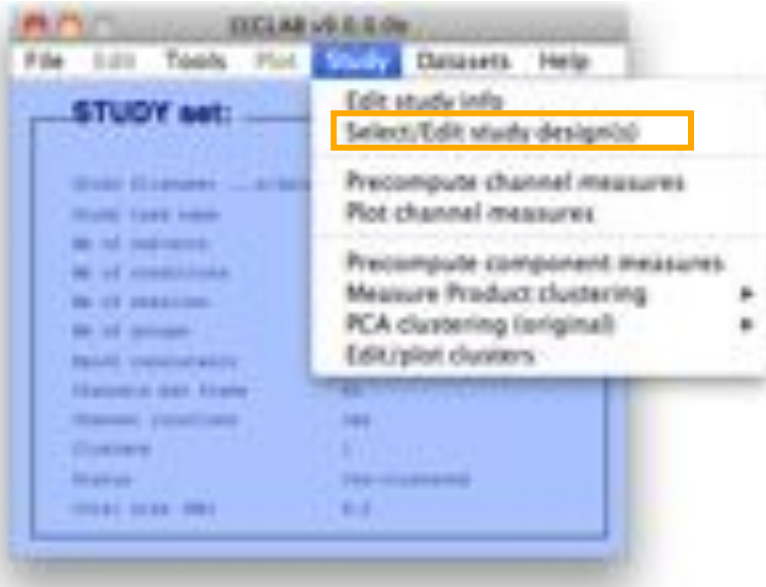
< Page 1 >

Update dataset info - datasets stored on disk will be overwritten (unset = Keep study info separate).

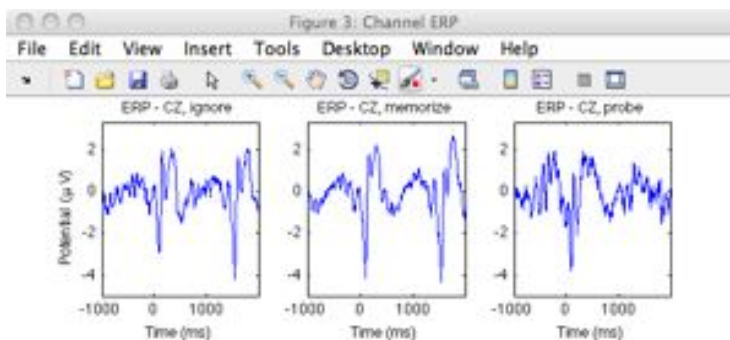
Delete cluster information (to allow loading new datasets, set new components for clustering, etc.)

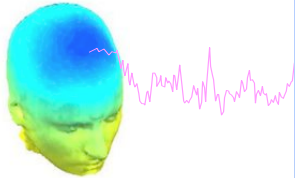
Help Cancel Ok

Create design



1x3 design





Edit STUDY design -- pop_studydesign()

Select STUDY design

Audio versus light all subjects
All stimulus type - non dual subjects only
Blank versus other stimulus type - non dual subjects only
Audio preceded by different stimulus types
Audio versus light across sessions - non dual subjects only
Audio versus light across presentation - non dual subjects only

Add design
Rename design
Delete design

Subjects

None group stimulus type presentation session prevent

Independent variable 1

None group stimulus type presentation session prevent

Independent variable 2

None group stimulus type presentation session prevent

Ind. var. 1 values: audio, blank, both, light, audio - light

Ind. var. 2 values: control, nondual

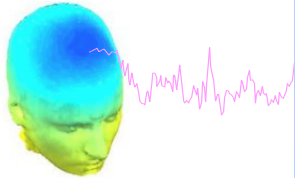
Combine selected values
Unpaired statistics

Use only specific datasets/trials

Delete all datafiles associated with this STUDY design

Save the STUDY

Cancel Ok



Edit STUDY design -- pop_studydesign()

Select STUDY design

Audio versus light all subjects
All stimulus type - non dual subjects only
Blank versus other stimulus type - non dual subjects only
Audio preceded by different stimulus types
Audio versus light across sessions - non dual subjects only
Audio versus light across presentation - non dual subjects only

Add design
Rename design
Delete design

Subjects

ct
c1
c2
c3
c4
c5
c6
c7
c8
c9
nd1
nd2
nd3
nd4
nd5
nd6
nd7
nd8

Select all subjects

Independent variable 1

None
group
stimulusType
presentation
session
preevent

Ind. var. 1 values

audio
blank
both
light
audio - light

Combine selected values
Unpaired statistics

Independent variable 2

None
group
stimulusType
presentation
session
preevent

Ind. var. 2 values

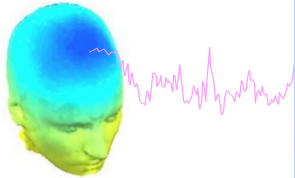
Combine selected values
Unpaired statistics

Use only specific datasets/trials

Delete all datafiles associated with this STUDY design

Save the STUDY

Cancel Ok



Edit STUDY design -- pop_studydesign()

Select STUDY design

Audio versus light all subjects
All stimulus type - non dual subjects only
Blank versus other stimulus type - non dual subjects only
Audio preceded by different stimulus types
Audio versus light across sessions - non dual subjects only
Audio versus light across presentation - non dual subjects only

Add design
Rename design
Delete design

Subjects

ct
c1
c2
c3
c4
c5
c6
c7
c8
c9
c10
c11
c12
c13
c14
c15
c16
c17
c18
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c84
c85
c86
c87
c88
c89
c90
c91
c92
c93
c94
c95
c96
c97
c98
c99
c100

Select all subjects

Independent variable 1

None
group
stimulus type
presentation
session
preevent

Ind. var. 1 values

audio
blank
both
light
audio - light

Combine selected values
Unpaired statistics

Independent variable 2

stimulus type
group
stimulusType
presentation
session
preevent

Ind. var. 2 values

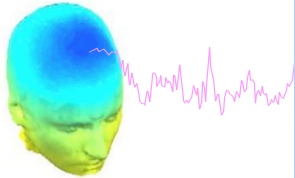
Combine selected values
Unpaired statistics

Use only specific datasets/trials

Delete all datafiles associated with this STUDY design

Save the STUDY

Cancel Ok



Edit STUDY design -- pop_studydesign0

Select STUDY design

Audio versus light all subjects
All stimulus type - non dual subjects only
Blank versus other stimulus type - non dual subjects only
Audio preceded by different stimulus types
Audio versus light across sessions - non dual subjects only
Audio versus light across presentation - non dual subjects only

Add design
Rename design
Delete design

Subjects

c1
c2
c3
c4
c5
c6
c7
c8
ind1
ind2
ind3
ind4
ind5
ind6
ind7
ind8

Select all subjects

Independent variable 1

None
group
stimulusType
presentation
session
prevent

Ind. var. 1 values

audio
blank
both
light

Combine selected values
Unpaired statistics

Independent variable 2

None
group
stimulusType
presentation
session
prevent

Ind. var. 2 values

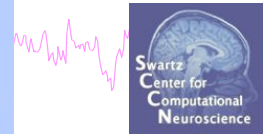
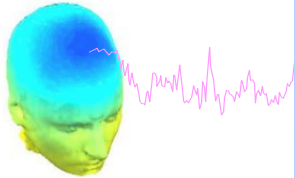
Combine selected values
Unpaired statistics

Use only specific datasets/trials: 'stimulusType',('audio')

Delete all datafiles associated with this STUDY design

Save the STUDY

Cancel Ok



Edit STUDY design -- pop_studydesign()

Select STUDY design

Audio versus light all subjects
All stimulus type - non dual subjects only
Blank versus other stimulus type - non dual subjects only
Audio preceded by different stimulus types
Audio versus light across sessions - non dual subjects only
Audio versus light across presentation - non dual subjects only

Add design
Rename design
Delete design

Subjects

nd1	nd2	nd3	nd4	nd5	nd6	nd7	nd8	nd9	nd10	nd11	nd12	nd13	nd14	nd15	nd16	nd17	nd18	nd19	nd20	nd21	nd22	nd23	nd24	nd25	nd26	nd27	nd28	nd29	nd30	nd31	nd32	nd33	nd34	nd35	nd36	nd37	nd38	nd39	nd40	nd41	nd42	nd43	nd44	nd45	nd46	nd47	nd48	nd49	nd50	nd51	nd52	nd53	nd54	nd55	nd56	nd57	nd58	nd59	nd60	nd61	nd62	nd63	nd64	nd65	nd66	nd67	nd68	nd69	nd70	nd71	nd72	nd73	nd74	nd75	nd76	nd77	nd78	nd79	nd80	nd81	nd82	nd83	nd84	nd85	nd86	nd87	nd88	nd89	nd90	nd91	nd92	nd93	nd94	nd95	nd96	nd97	nd98	nd99	nd100
-----	-----	-----	-----	-----	-----	-----	-----	-----	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	-------

Select all subjects

Independent variable 1

None
group
stimulusType
presentation
session
preevent

Ind. var. 1 values

audio
blank
both
light
audio - light

Combine selected values
Unpaired statistics

Independent variable 2

None
group
stimulusType
presentation
session
preevent

Ind. var. 2 values

1
2

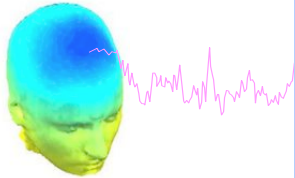
Combine selected values
Unpaired statistics

Use only specific datasets/trials

Delete all datafiles associated with this STUDY design

Save the STUDY

Cancel Ok



Edit STUDY design -- pop_studydesign()

Select STUDY design

Audio versus light all subjects
All stimulus type - non dual subjects only
Blank versus other stimulus type - non dual subjects only
Audio preceded by different stimulus types
Audio versus light across sessions - non dual subjects only
Audio versus light across presentation - non dual subjects only

Add design
Rename design
Delete design

Subjects

ct
c1
c2
c3
c4
c5
c6
c7
c8
c9
nd1
nd2
nd3
nd4
nd5
nd6
nd7
nd8

Select all subjects

Independent variable 1

None
group
stimulusType
presentation
session
preevent

Ind. var. 1 values

audio
blank
both
light
audio - light

Combine selected values
Unpaired statistics

Independent variable 2

None
group
stimulusType
presentation
session
preevent

Ind. var. 2 values

evoked
spontaneous

Combine selected values
Unpaired statistics

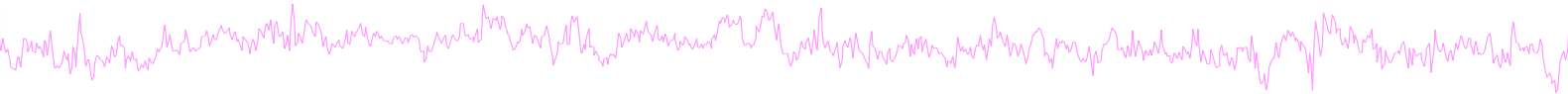
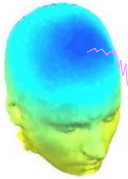
Use only specific datasets/trials

Delete all datafiles associated with this STUDY design

Save the STUDY

Cancel Ok

Exercises

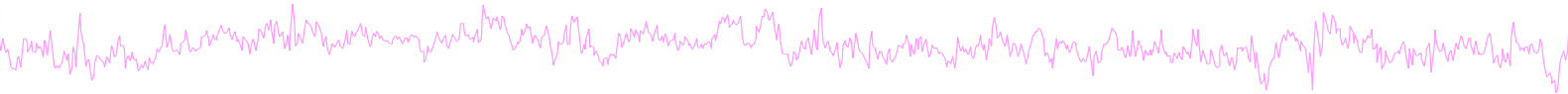
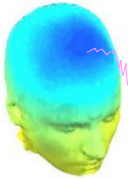


Suggestion for exercise

1. From the GUI, select “File > Create STUDY > Simple ERP STUDY”
2. Enter 2 conditions “letter-ignore” and “letter-memorize”
3. In the column for “letter-ignore” select datasets “ignore.set” for 3 subjects S01, S02, S03 (in the STUDY folder)
4. In the column for “letter-memorize” select datasets “probe.set” for 3 subjects S01, S02, S03 (in the STUDY folder)
5. Press OK.



STUDY design and plotting overview



STEP 1

Build a STUDY

STEP 2

Build design(s)

STEP 3

Precompute the data

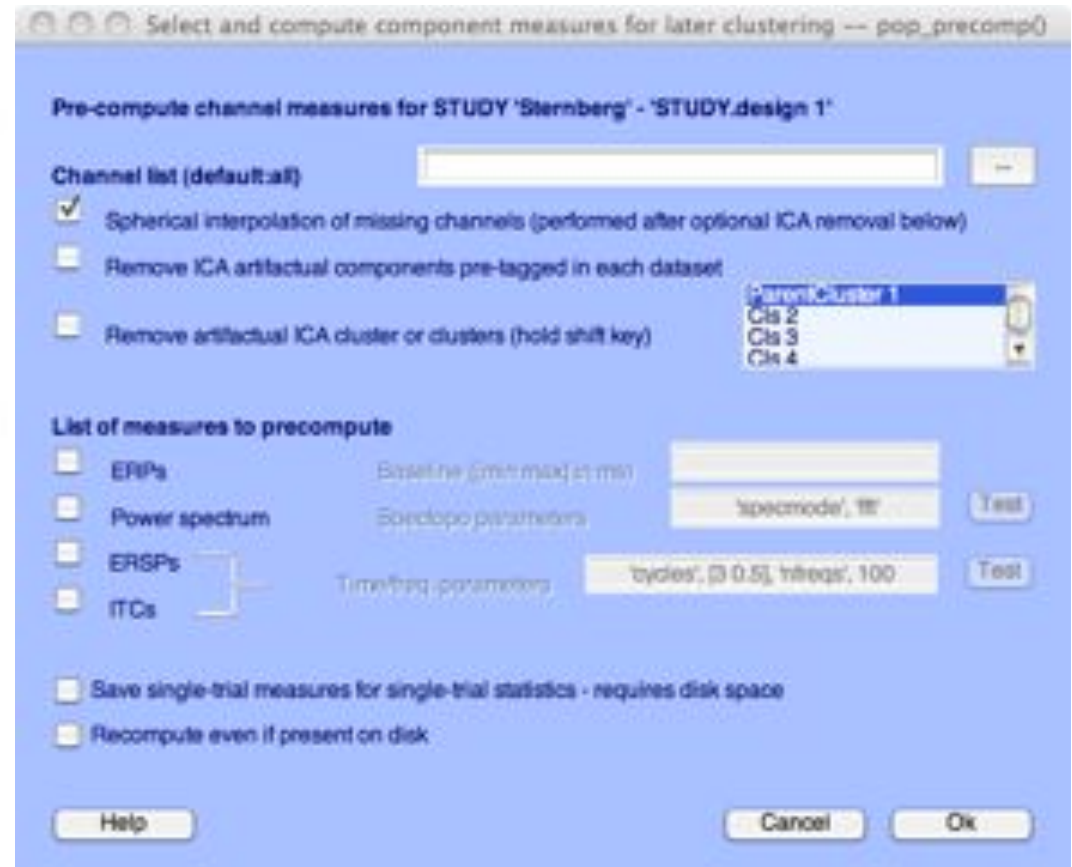
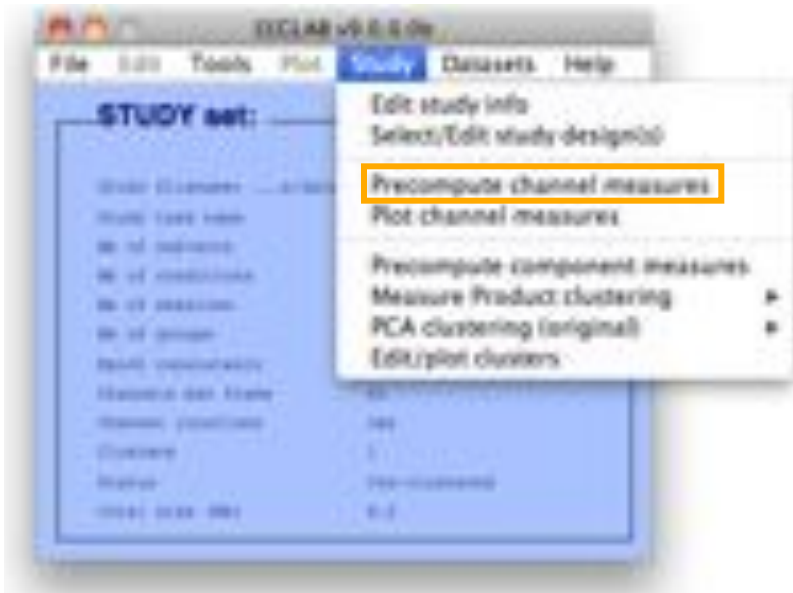
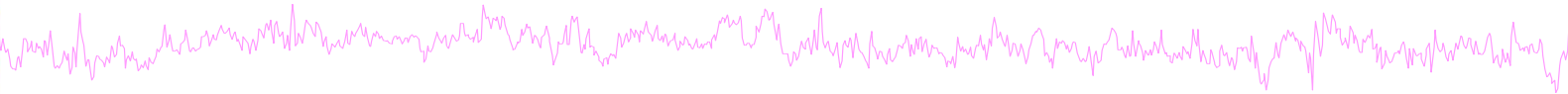
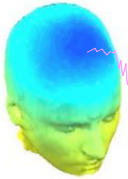
STEP 4

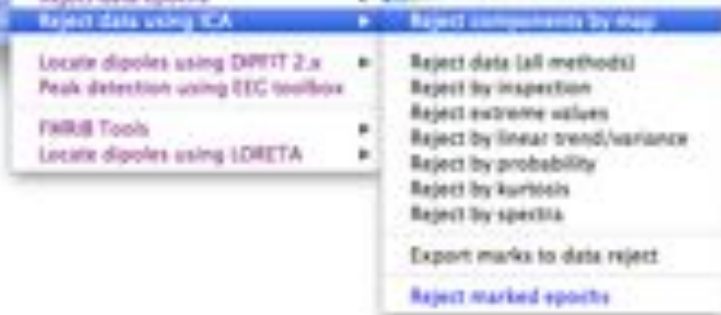
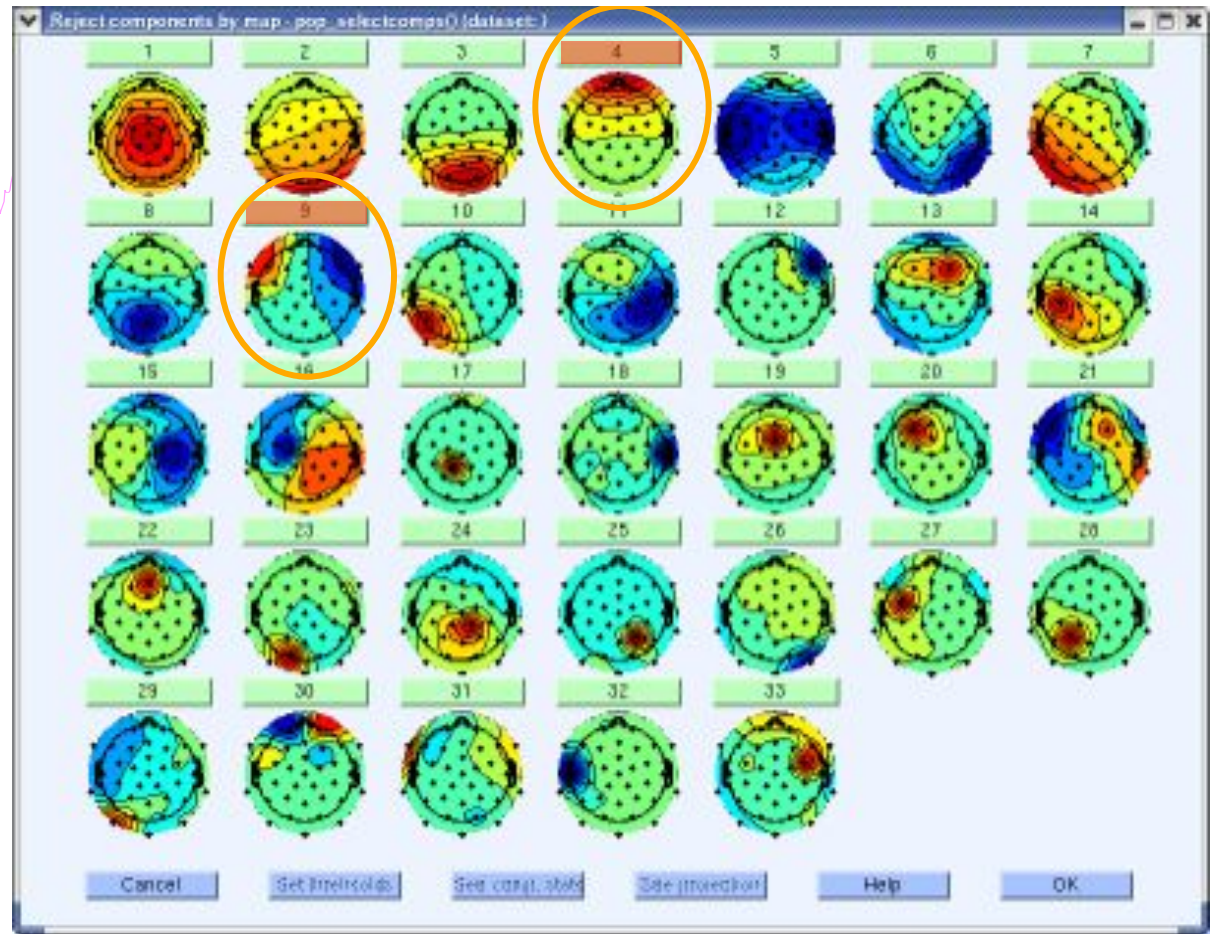
Plot the data

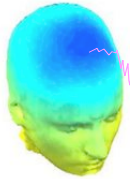
Exercise...



Precompute data measures







Choose which channel

View and edit current channels -- pop_chanplot()

STUDY name 'Sternberg' - 'Comparing conditions'

Select channel to plot **sel all**

Select subject(s) to plot

STATS

Params

Plot ERPs

Plot spectra

Plot ERPImage

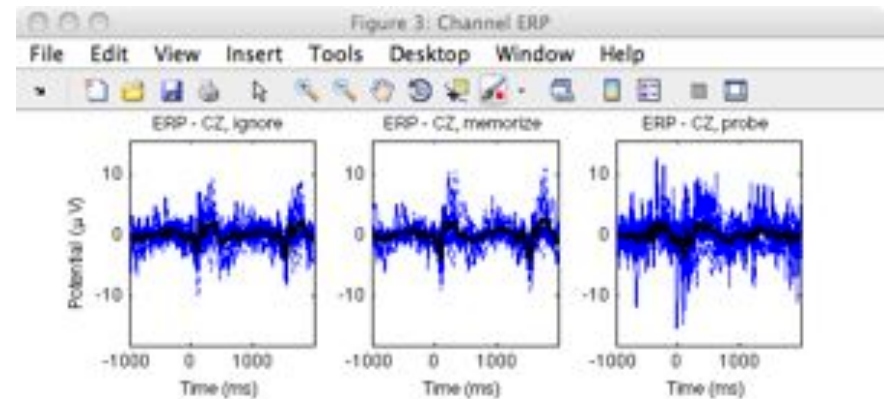
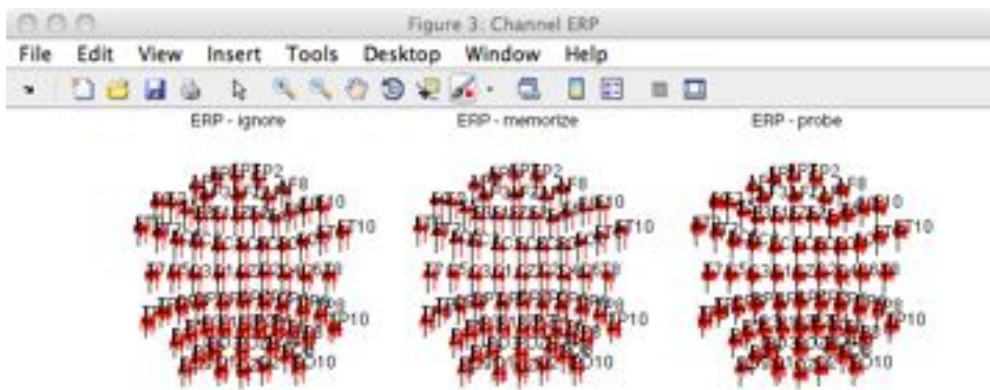
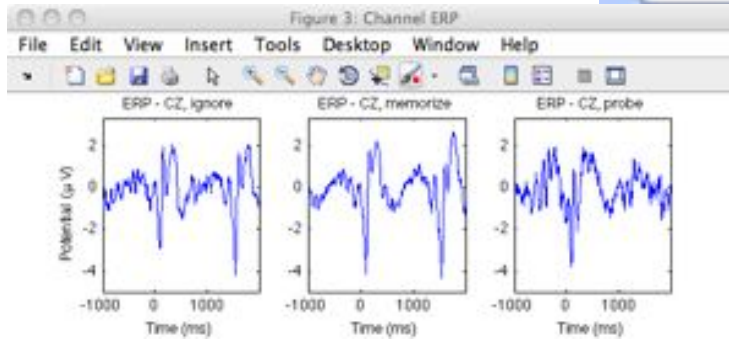
Plot ERSPs

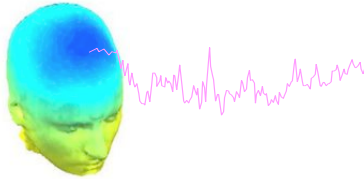
Plot ITCs

Cancel

OK

Choose which subject





View and edit current channels -- pop_chanplot0

STUDY name 'Sternberg' - 'Comparing conditions'

Select channel to plot Sel. all Select subject(s) to plot

All C2 All C4 All C6 All T8 All TP9 All TP7 All CP5 All CP3 All CP1	STATS Params Params Params	S01 CZ S02 CZ S03 CZ S04 CZ S05 CZ S06 CZ S07 CZ S08 CZ S09 CZ
---	---	--

Plot ERPs
Plot spectra
Plot ERP image

Plot ERPs
Plot spectra
Plot ERP image

Plot ERPs
Plot spectra
Plot ERP image

Cancel Ok

ERP plotting options -- pop_errpar...

ERP plotting options

Time limits (ms) [low high]

Plot limits [low high]

Lowpass plotted data [Hz]

ERP plotting format

Plot first variable on the same panel

Plot second variable on the same panel

Multiple channels selection

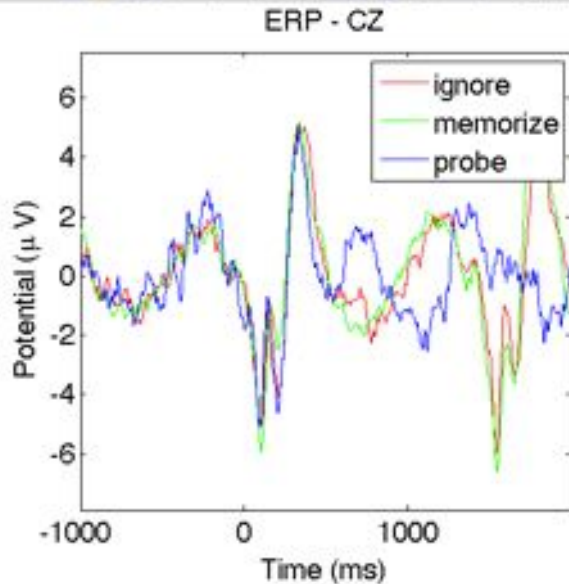
Plot channels in scalp array

Plot topography at time (ms)

Average selected channels

Cancel Ok

Figure 4: Channel ERP





ERP - ignore, 200-300ms ERP - memorize, 200-300ms ERP - probe, 200-300ms

View and edit current channels -- pop_chanp...

STUDY name 'Sternberg' - 'Comparing conditions'

Select channel to plot

- All P6
- All P8
- All PO9
- All PO7
- All PO3
- All PO2
- All PO4
- All PO8
- All PO10
- All O1

Select subject(s)

- S01 All
- S02 All
- S03 All
- S04 All
- S05 All
- S06 All
- S07 All
- S08 All
- S09 All

ERP plotting options -- pop_erppar...

ERP plotting options

Time limits (ms) [low high]

Plot limits [low high]

Lowpass plotted data [Hz]

ERP plotting format

Plot first variable on the same panel

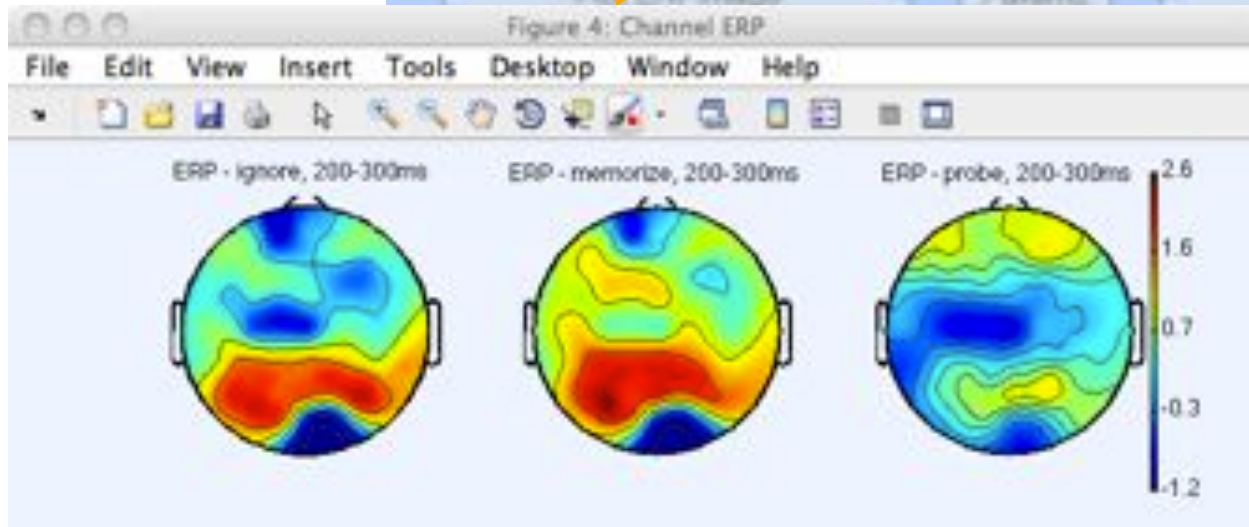
Plot second variable on the same panel

Multiple channels selection

Plot channels in scalp array

Plot topography at time (ms)

Average selected channels





View and edit current channels -- pop_chanp...

STUDY name 'Sternberg' - 'Comparing conditions'

Select channel to plot

- All P6
- All P8
- All PO9
- All PO7
- All PO3
- All PO2
- All PO4
- All PO8
- All PO10
- All O1

Select subject(s)

- S01 All
- S02 All
- S03 All
- S04 All
- S05 All
- S06 All
- S07 All
- S08 All
- S09 All

STATS

ERP plotting options

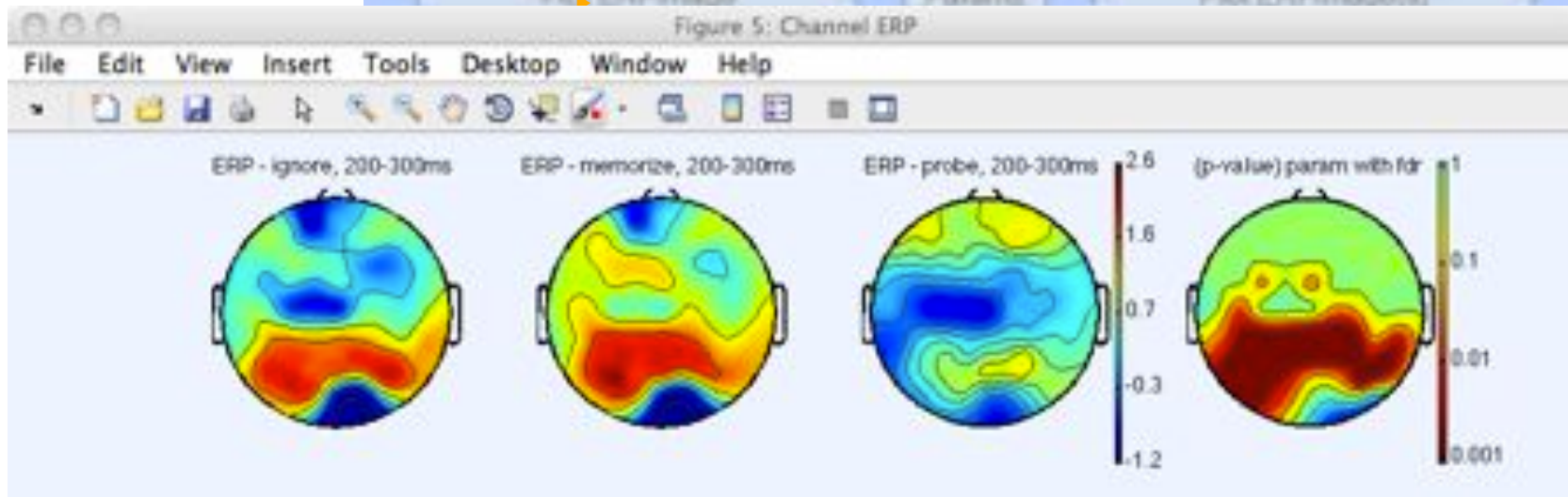
- Time limits (ms) [low high]
- Plot limits [low high]
- Lowpass plotted data [Hz]

ERP plotting format

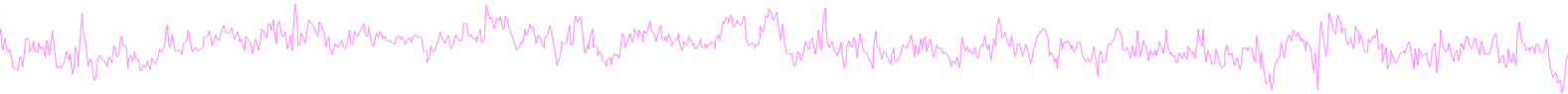
- Plot first variable on the same panel
- Plot second variable on the same panel

Multiple channels selection

- Plot channels in scalp array
- Plot topography at time (ms)
- Average selected channels



Computing Spectrum



Select and compute component measures for later clustering -- pop_precomp0

Pre-compute channel measures for STUDY 'Sternberg' - 'STUDY.design 1'

Channel list (default:all)

- Spherical interpolation of missing channels (performed after optional ICA removal below)
- Remove ICA artifactual components pre-tagged in each dataset
- Remove artifactual ICA cluster or clusters (hold shift key)

Paronic-Cluster 1
Cls 2
Cls 3
Cls 4

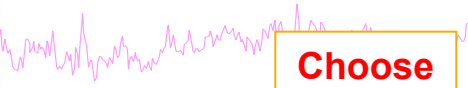
List of measures to precompute

- ERPs Baseline (min-max) at min
- Power spectrum Spectopo parameters
- ERSPs Time/freq parameters
- ITCs

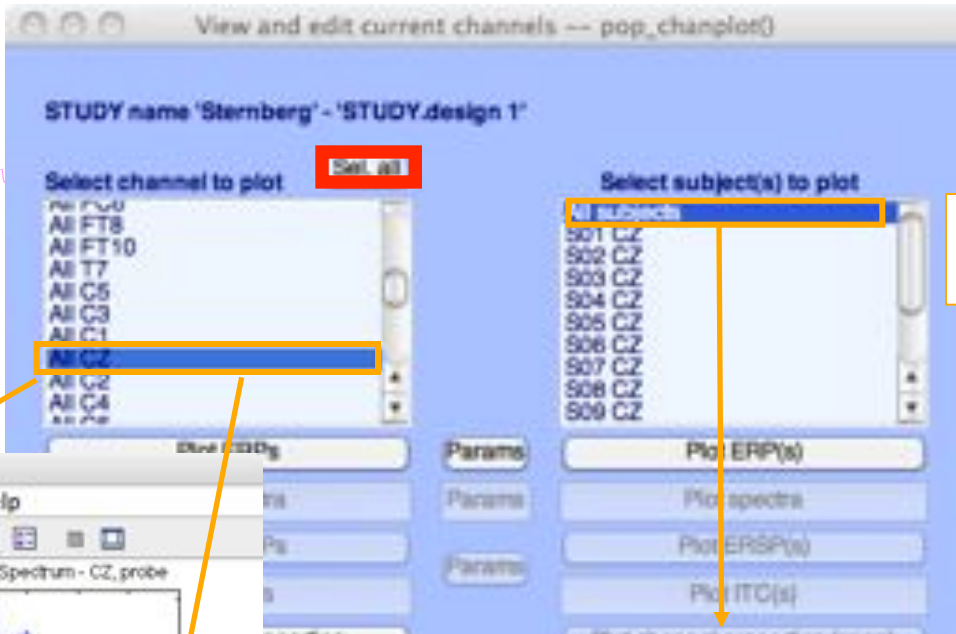
Save single-trial measures for single-trial statistics - requires disk space

Recompute even if present on disk

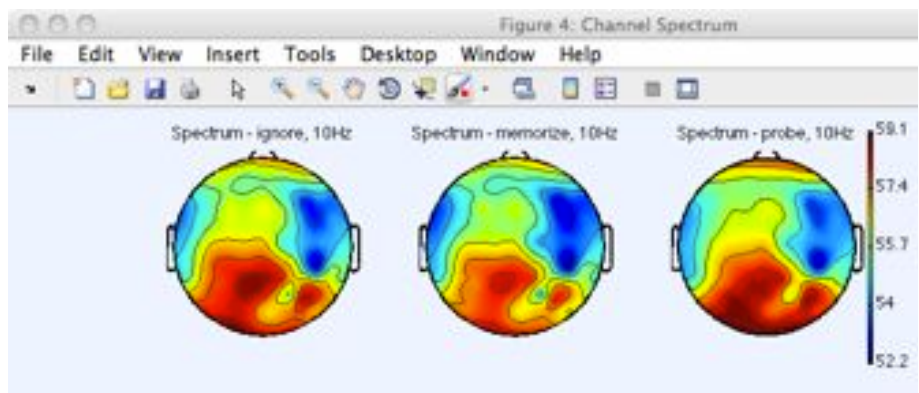
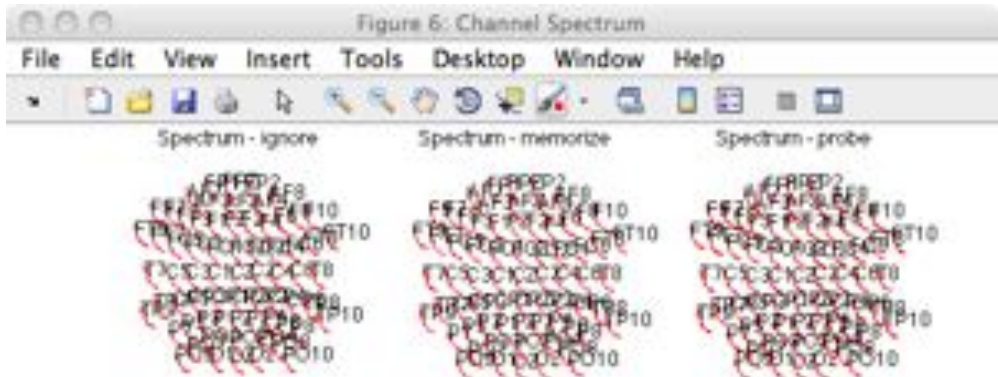
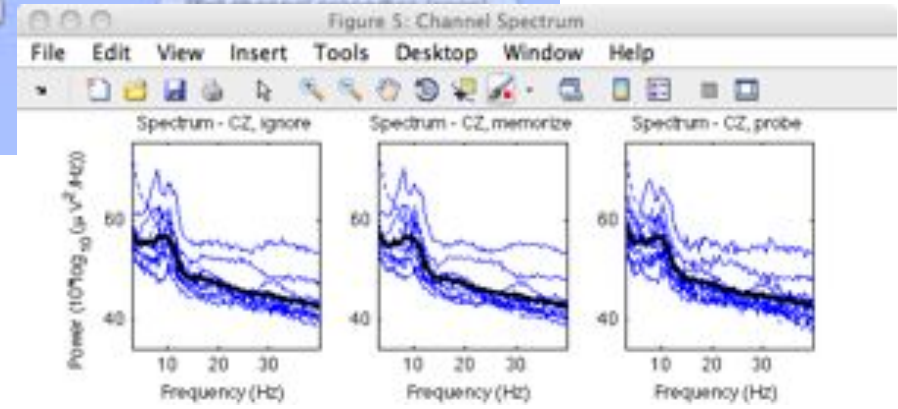
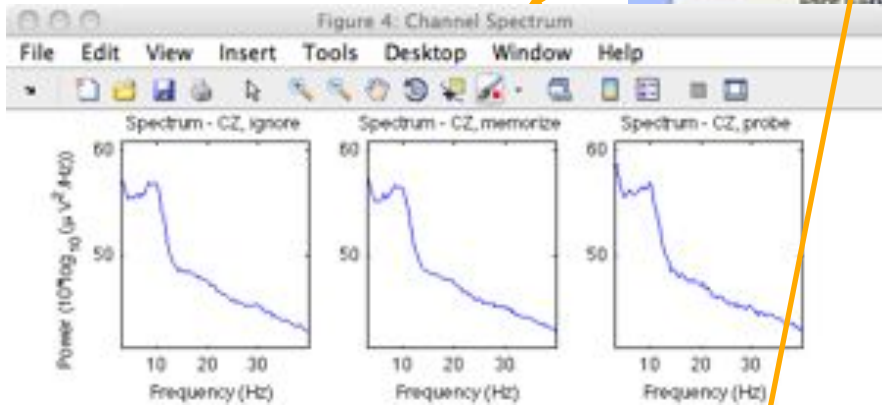




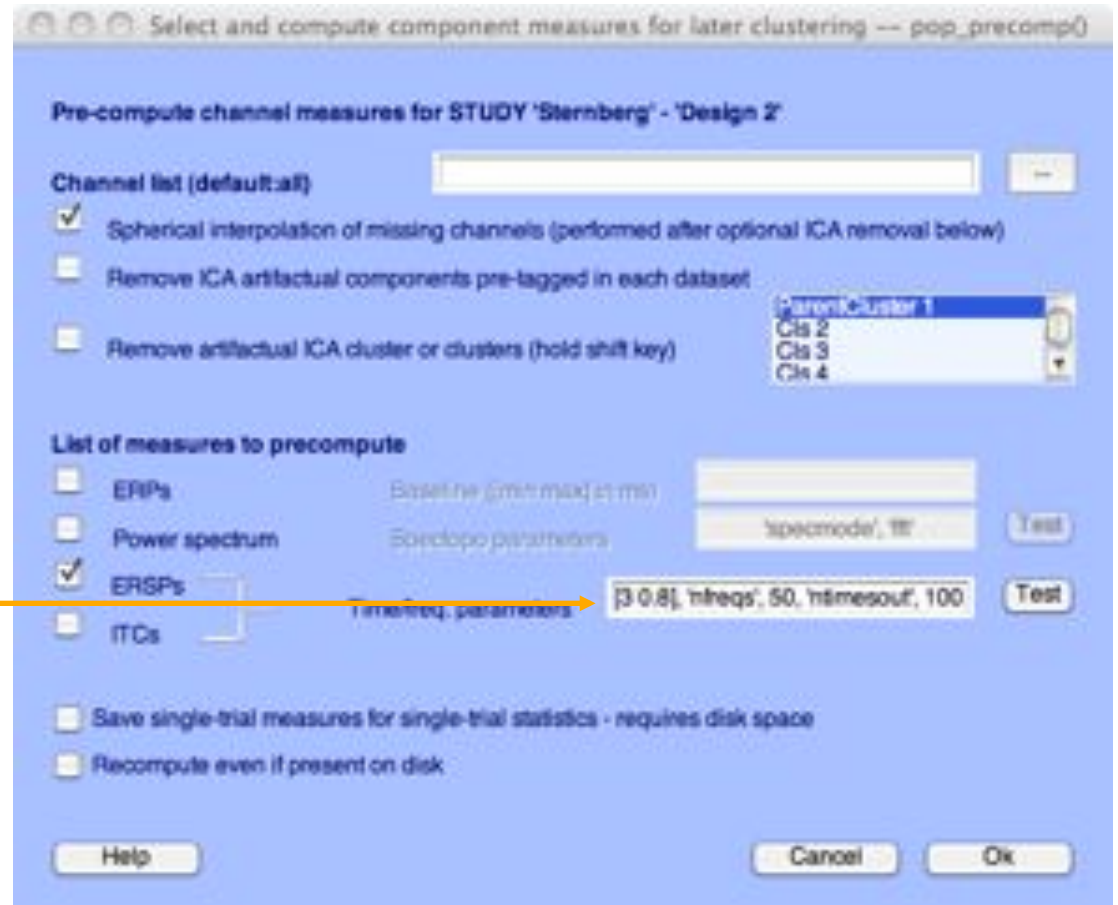
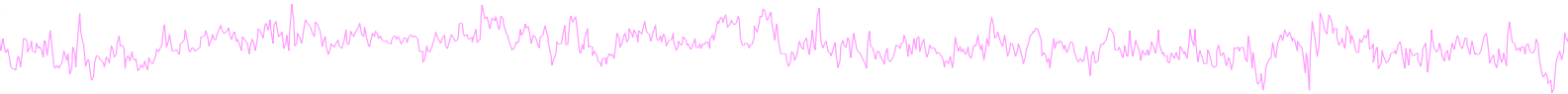
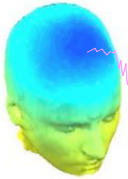
Choose which channel



Choose which subject

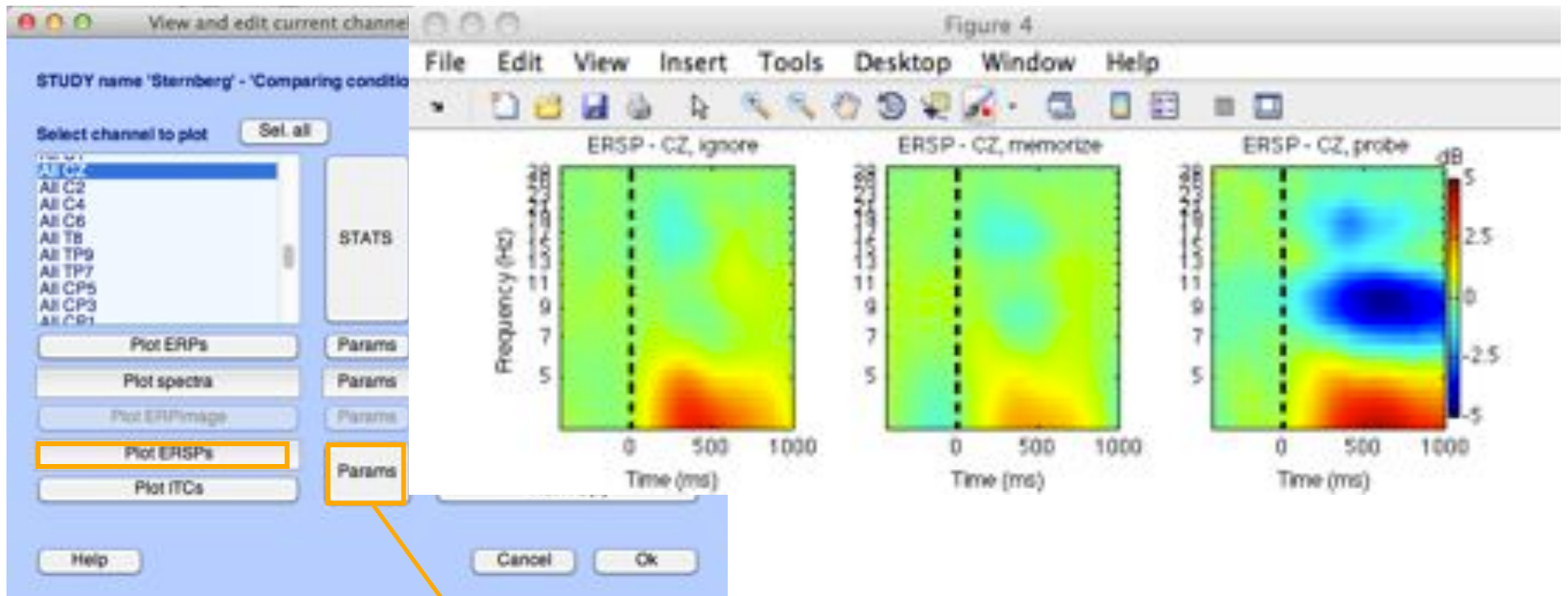


Computing ERSP



'cycles', [3 0.8], 'nfreqs', 50, 'ntimesout', 100





Set ERSP/ITC plotting parameters -- pop_erspparams()

ERSP/ITC plotting options

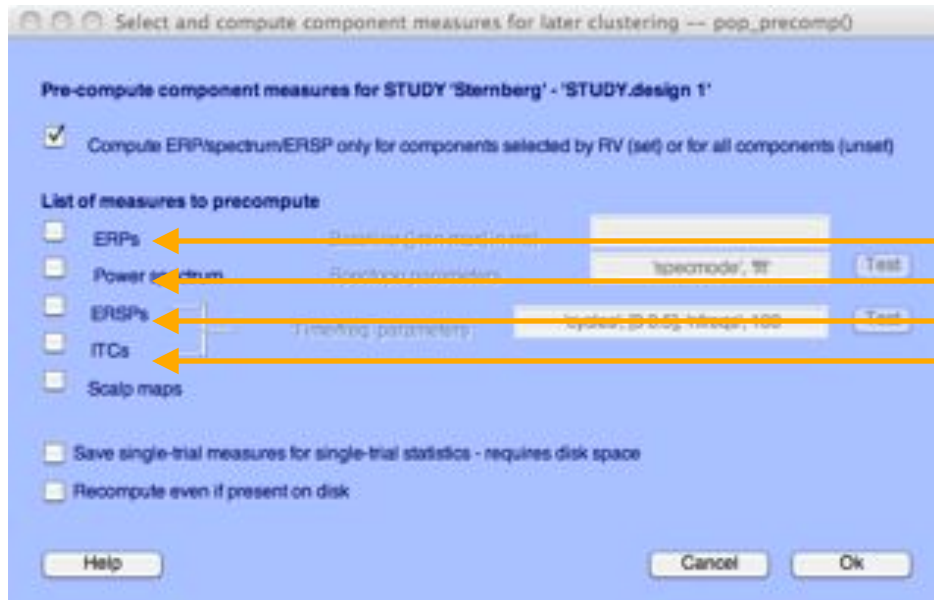
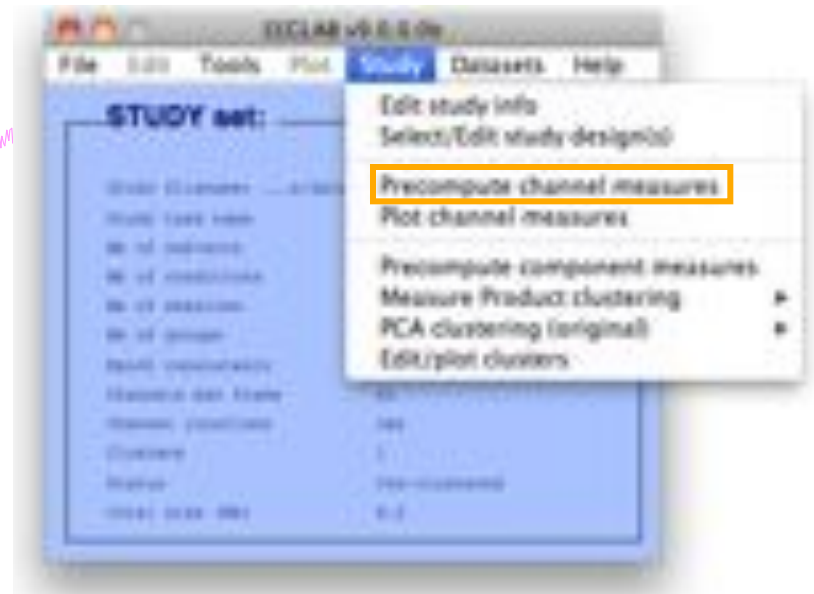
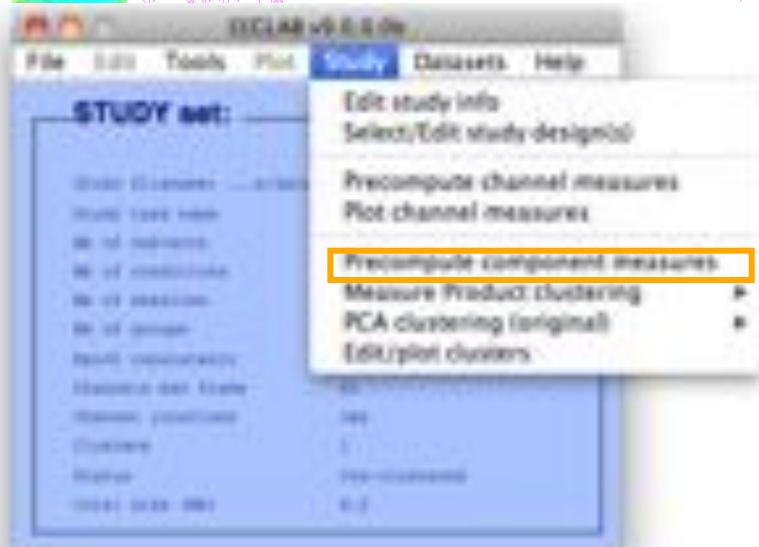
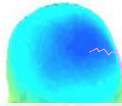
Time range in ms [Low High] Plot scalp map at time [ms]

Freq. range in Hz [Low High] Plot scalp map at freq. [Hz]

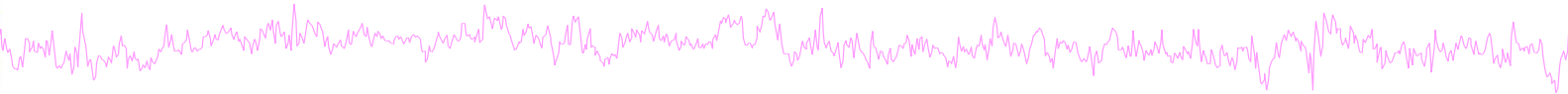
Power limits in dB [Low High] ITC limit (0-1) [High]

Compute common ERSP baseline (assumes additive baseline)

Pre-compute measures



View and edit clusters



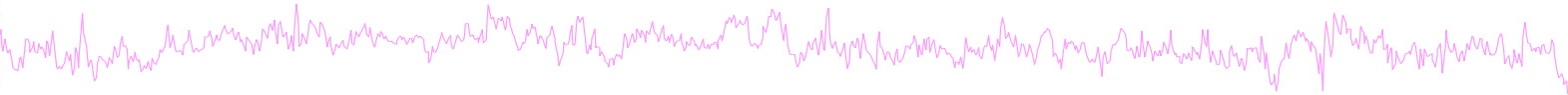
STUDY set: A1

Study filename:	
Study task name:	
Nb. of subjects:	
Nb. of conditions:	
Nb. of sessions:	
Nb. of groups:	
Epoch consistency:	yes
Channels per frame:	11
Channel locations:	yes
Clusters:	26
Display:	Pre-clusters
Total size (Mb):	13.1

- Edit study info
- Precompute channel measures
- Plot channel measures
- Precompute component measures
- Build prelistening array
- Cluster components
- Export clusters**



Plot cluster data



Choose which cluster

Study "Attention": 181 of 181 components clustered

Select cluster to plot

- All cluster centroids
- ParentCluster 1 (181 ICs)
- outlier 2 (1 ICs)
- Cls 3 (5 ICs)

Select component(s) to plot

- outlier 2 comp. 1 (S12 IC12)
- 'Cls 3' comp. 1 (S01 IC1)
- 'Cls 3' comp. 2 (S05 IC11)
- 'Cls 3' comp. 3 (S06 IC15)

Plot scalp map(s)

Plot dipoles(s)

Plot ERP(s)

Plot spectra

Params

Params

Params

Create new cluster

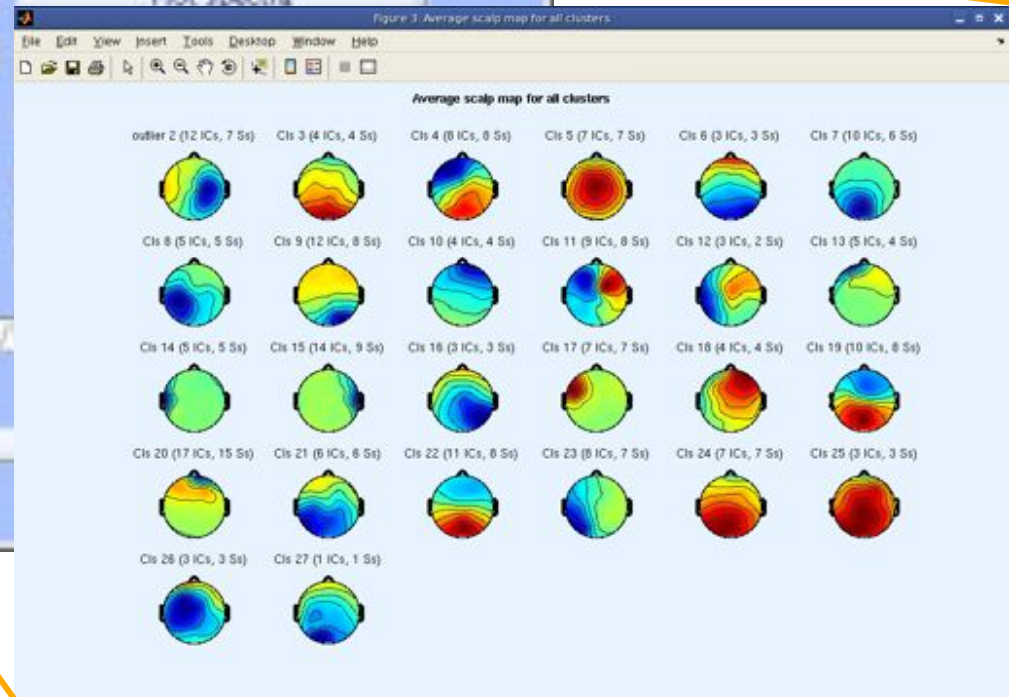
Rename selected cluster

Merge clusters

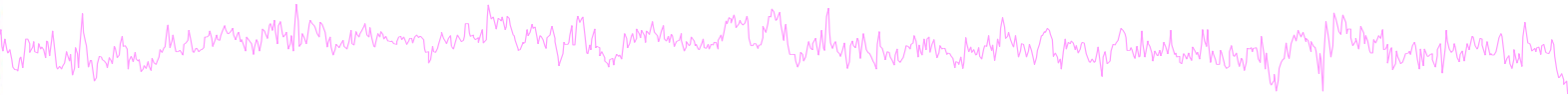
Save STUDY set to disk

Cancel Help

Plot mean scalp maps for easy reference



Plot cluster data



Choose which cluster

View and edit current component clusters -- pop_clustered(t)

Study 'Attention': 181 of 181 components clustered

Select cluster to plot

- Cls 6 (3 ICs)
- Cls 7 (10 ICs)**
- Cls 8 (5 ICs)
- Cls 9 (12 ICs)

Select component(s) to plot

- All components**
- S01 IC6
- S05 IC9
- S06 IC12

Plot scalp map(s)

Plot scalp maps

Plot dipoles

Plot ERPs

Plot spectra

Plot ERSPs

Plot ITCs

Plot cluster properties

Params

Params

Params

Create new cluster

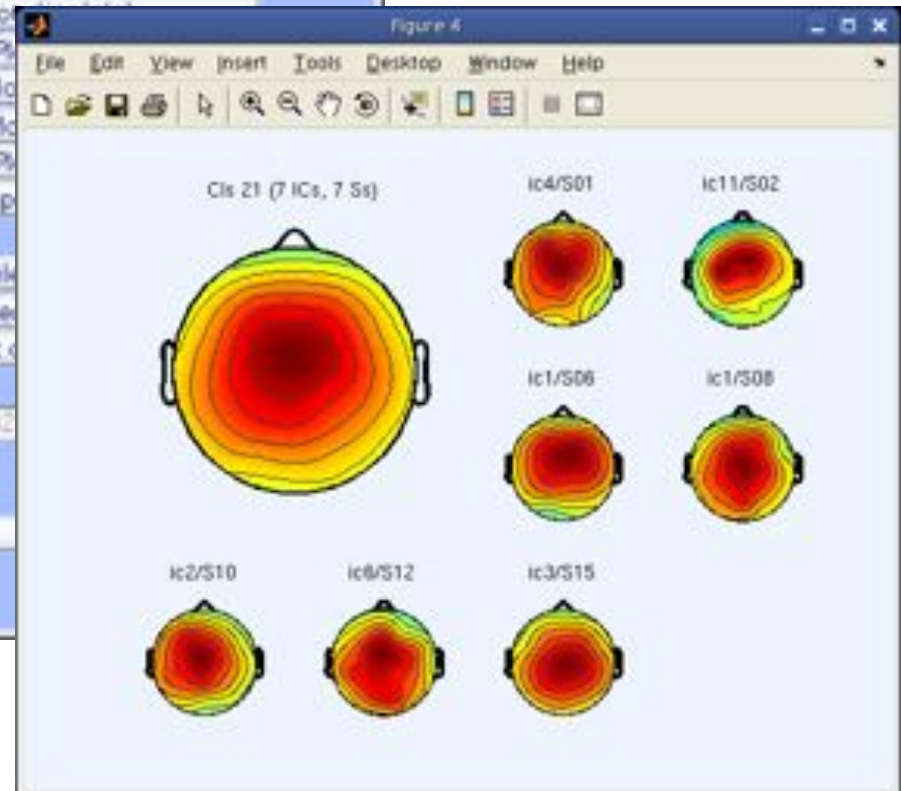
Rename selected cluster

Merge clusters

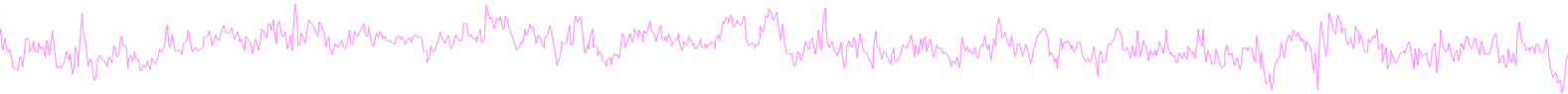
Save STUDY set to disk

Cancel Help

Choose which components



Plot cluster data



View and edit current component clusters -- pop_clustered(t)

Study 'Attention': 181 of 181 components clustered

Select cluster to plot

- Clk 6 (3 ICs)
- Clk 7 (10 ICs)**
- Clk 8 (5 ICs)
- Clk 9 (12 ICs)

Plot scalp maps

Plot dipoles

Plot ERPs

Plot spectra

Plot ERSPs

Plot ITCs

Plot cluster properties

Params

Params

Params

Create new cluster

Rename selected cluster

Merge clusters

Save STUDY set to disk

/home/julie/WorkshopSD2007/STUDY

Cancel Help Ok

Select component(s) to plot

- All components**
- S01 IC6
- S05 IC9
- S06 IC12

Plot scalp map(s)

Plot dipole(s)

Plot ERP(s)

Plot spectra

Plot ERSP(s)

Plot ITC(s)

Plot component properties

Reassign selected component(s)

Remove selected outlier comps.

Auto-reject outlier components

Clk 19 - 5 sets - 14 components (14 dipoles)

File Edit View Insert Tools Desktop Window Help

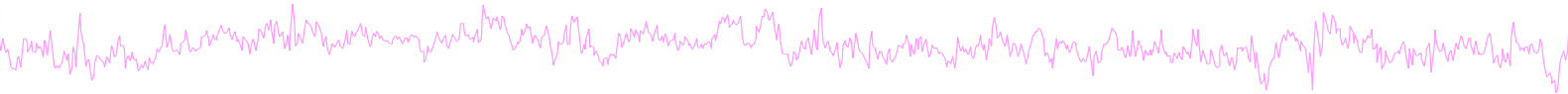
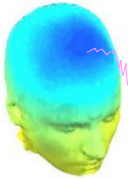
15 dipoles:

- Plot one
- Keep/Next
- Next
- Prev
- Keep/Prev
- 1
- IC3, 502
- RV: 2.62%
- X tal: -6
- Y tal: -13
- Z tal: 21

Display:

- Mesh on
- Tight view
- Sagittal view
- Coronal view
- Top view
- No controls

Exercises



1. Load stern.study in STUDY folder
2. Create a new STUDY design to compare two types of conditions
 - Ignore letter **grouped** with Memorize letter
 - Probe letters
3. Recompute spectrum and plot spectrum for electrode Fz
4. Plot scalp topography at 10 Hz for both conditions

