
Visualize the EEG output from the PREP processing pipeline.

Table of Contents

Write data status and report header	2
Line noise removal step	2
Initial detrend for reference calculation	2
Spectrum after line noise and detrend	3
Referencing step	3
Robust channel deviation (referenced)	3
Robust channel deviation (original)	4
Robust channel deviation (interpolated)	4
Robust deviation window statistics	4
Median max abs correlation (referenced)	4
Median max abs correlation (original)	4
Median max abs correlation (interpolated)	4
Mean max abs correlation (referenced)	4
Mean max abs correlation (original)	4
Mean max abs correlation (interpolated)	4
Bad min max correlation fraction (referenced)	4
Bad min max correlation fraction(original)	4
Bad min max correlation fraction (interpolated)	4
Correlation window statistics	5
Bad ransac fraction (referenced)	5
Bad ransac fraction (original)	5
Bad ransac fraction (interpolated)	5
Channels with poor ransac correlations	5
HF noise Z-score (referenced)	5
HF noise Z-score (original)	5
HF noise Z-score (interpolated)	5
HF noise window stats	5
Noisy average vs robust average reference	5
Noisy and robust average reference by time	5
Noisy vs robust average reference (filtered)	5
Noisy minus robust average reference by time	6

Calling directly: prepReport

This helper reporting script expects that EEGReporting will be in the base workspace with an EEGReporting.etc.noiseDetection structure containing the report. It also expects the following variables in the base workspace:

- summaryFile - variable containing the open file descriptor for summary
- consoleID - variable with open file descriptor for console (usually 1 unless the output is redirected).
- relativeReportLocation report location relative to summary

The reporting function appends a summary to the summary report.

Usually the prepReport script is called through the function:

`publishPrepReport`

It is not a function itself, to allow the MATLAB publish to dump a nice output.

Write data status and report header

```
EEG
Channels: 2
Frames: 50000
Error status: unprocessed
Boundary errors: [ ]
Detrend errors: [ ]
Line noise errors: [ ]
Reference errors: [prepPipeline failed to perform reference: Error
    using performReference (line 69)
    evaluation channels must have locations]
Prep version: PrepPipeline0.55.3
Data summary: sampling rate 5000Hz
Channels interpolated during reference:
[ ]
Channels still noisy after reference:
[ ]
Channels removed during post-process:
[ ]
```

Line noise removal step

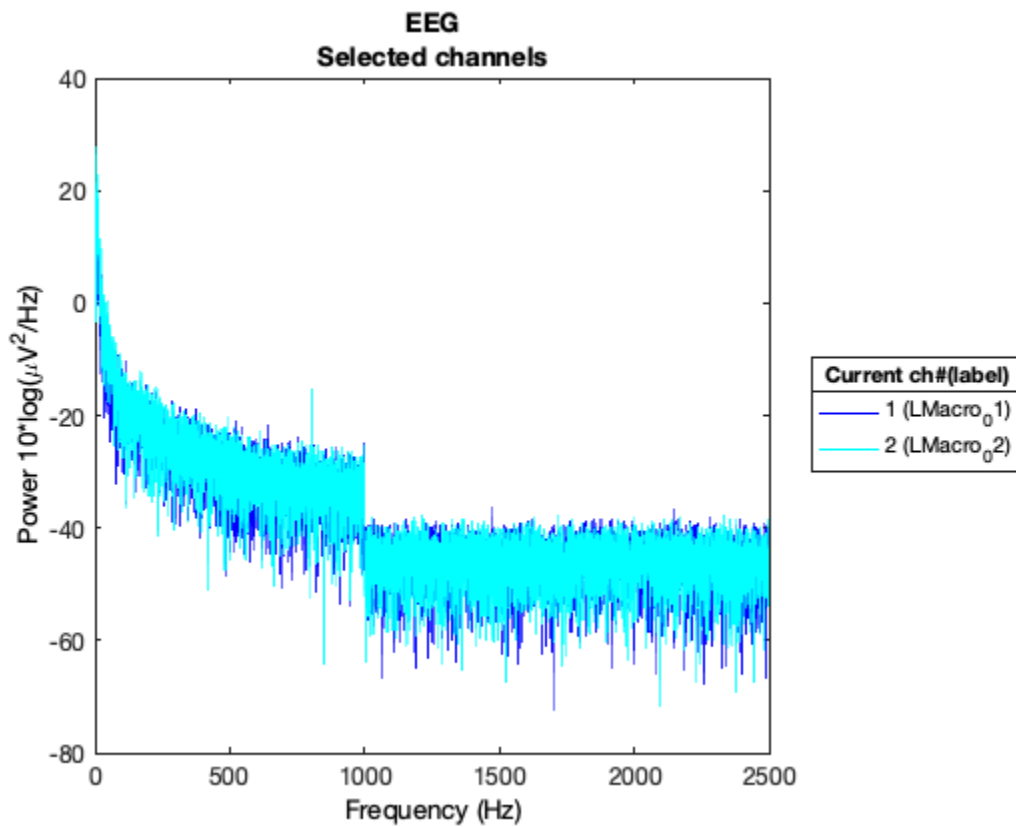
```
Line noise method: clean
Sampling frequency Fs: 5000 Hz
Line noise frequencies:
[ 60 120 180 240 300 360 420 480 540 600
  660 720 780 840 900 960 1020 1080 1140 1200
  1260 1320 1380 1440 1500 1560 1620 1680 1740 1800
  1860 1920 1980 2040 2100 2160 2220 2280 2340 2400
  2460 ]
Maximum iterations: 10
Significant frequency p-value: 0.01
+/- frequency BW for significant peaks (fScanBandWidth): 2
Taper bandwidth: 2 Hz
Taper window size (seconds): 4
Taper step size (seconds): 1
Sigmoidal smoothing factor (tau): 100
Spectral pad factor: 0
Analysis frequency interval(fPassBand): [ 0, 2500 ] Hz
Taper template: [ 1, 4, 1 ]
Line noise channels (2 channels):
[ 1:2 ]
```

Initial detrend for reference calculation

```
Detrend type: High Pass
Detrend cutoff: 1 Hz
Detrend step size: 2.000000e-02
Detrend command:
EEG = pop_eegfiltnew(EEG, 'locutoff',1,'hicutoff',[]);
Detrended channels (2 channels):
[ 1:2 ]
```

Spectrum after line noise and detrend

```
pop_eegfiltnew() - performing 16501 point highpass filtering.
pop_eegfiltnew() - transition band width: 1 Hz
pop_eegfiltnew() - passband edge(s): 1 Hz
pop_eegfiltnew() - cutoff frequency(ies) (-6 dB): 0.5 Hz
pop_eegfiltnew() - filtering the data (zero-phase, non-causal)
firfilt(): |=====| 100%, ETE 00:00
```



Referencing step

Referencing: Dataset does not contain reference reports

Robust channel deviation (referenced)

Skipping robust channel deviation

Robust channel deviation (original)

Skipping robust channel deviation (original)

Robust channel deviation (interpolated)

Skipping robust channel deviation (marking interpolated)

Robust deviation window statistics

Skipping robust deviation window statistics

Median max abs correlation (referenced)

Skipping median max abs correlation (referenced)

Median max abs correlation (original)

Skipping median max abs correlation (original)

Median max abs correlation (interpolated)

Skipping median max abs correlation (marking interpolated)

Mean max abs correlation (referenced)

Skipping median max abs correlation (referenced)

Mean max abs correlation (original)

Skipping mean max abs correlation (original)

Mean max abs correlation (interpolated)

Skipping mean max abs correlation (marking interpolated)

Bad min max correlation fraction (referenced)

Skipping bad min max correlation (referenced)

Bad min max correlation fraction(original)

Skipping median max abs correlation (original)

Bad min max correlation fraction (interpolated)

Skipping bad min max correlation fraction (marking interpolated)

Correlation window statistics

Skipping correlation window statistics

Bad ransac fraction (referenced)

Skipping bad ransac fraction (referenced)

Bad ransac fraction (original)

Skipping bad ransac fraction (original)

Bad ransac fraction (interpolated)

Skipping bad ransac fraction (marking interpolated)

Channels with poor ransac correlations

Skipping channels with poor ransac correlations

HF noise Z-score (referenced)

Skipping HF noise Z-score (referenced)

HF noise Z-score (original)

Skipping HF noise Z-score (original)

HF noise Z-score (interpolated)

Skipping HF noise Z-score (marking interpolated)

HF noise window stats

Skipping HF window stats

Noisy average vs robust average reference

Skipping noisy vs robust average reference

Noisy and robust average reference by time

Skipping noisy and robust average reference by time

Noisy vs robust average reference (filtered)

Skipping noisy vs robust average reference (filtered)

Noisy minus robust average reference by time

Skipping noisy minus robust average reference by time

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