Visualize the EEG output from the PREP processing pipeline.

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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: 65
Frames: 530280
Error status: unprocessed
Boundary errors: [ ]
Detrend errors: [ ]
Line noise errors: [ ]
Reference errors: [prepPipeline failed to perform reference: Error using
performReference
evaluation channels must have locations]
Prep version: PrepPipeline0.56.0
Data summary: sampling rate 1000Hz
Events: 104
Original events: 104
Hard boundary events:    [ 1 ]
Hard frame numbers:    [ 1 ]
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: 1000 Hz
Line noise frequencies:
  [ 60 120 180 240 300 360 420 480 ]
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, 500 ] Hz
Taper template: [ 1, 4, 1 ]
Line noise channels (65 channels):
  [ 1:65 ]
```

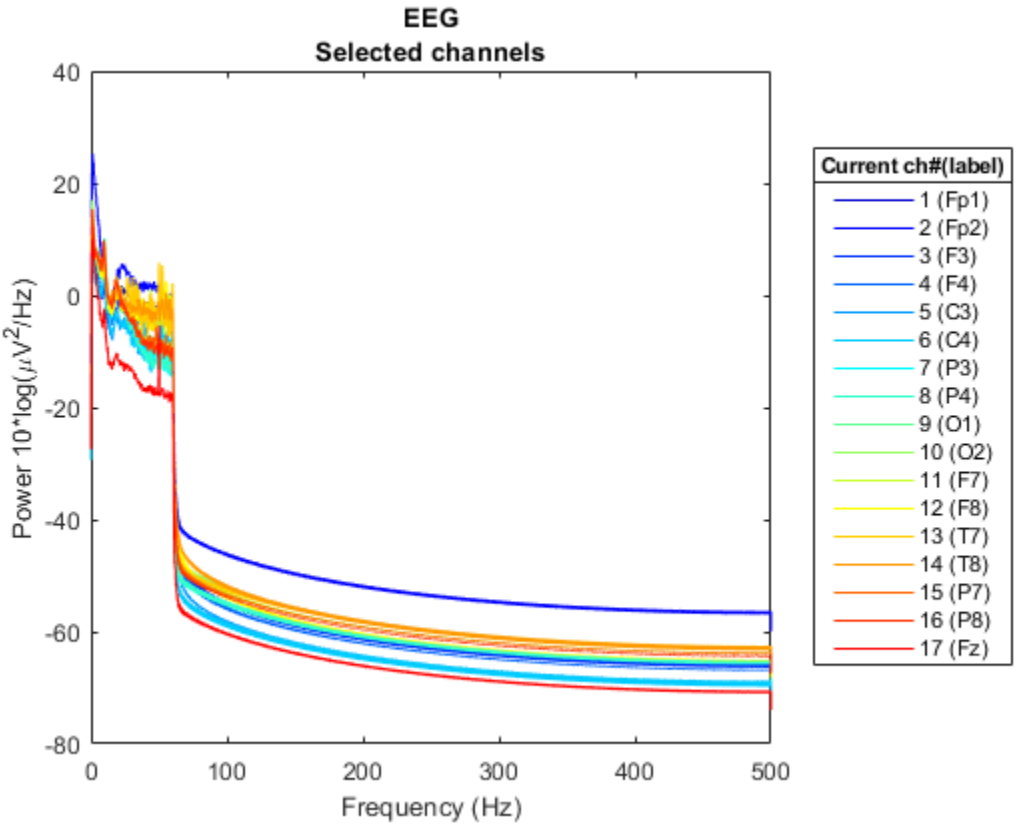
Initial detrend for reference calculation

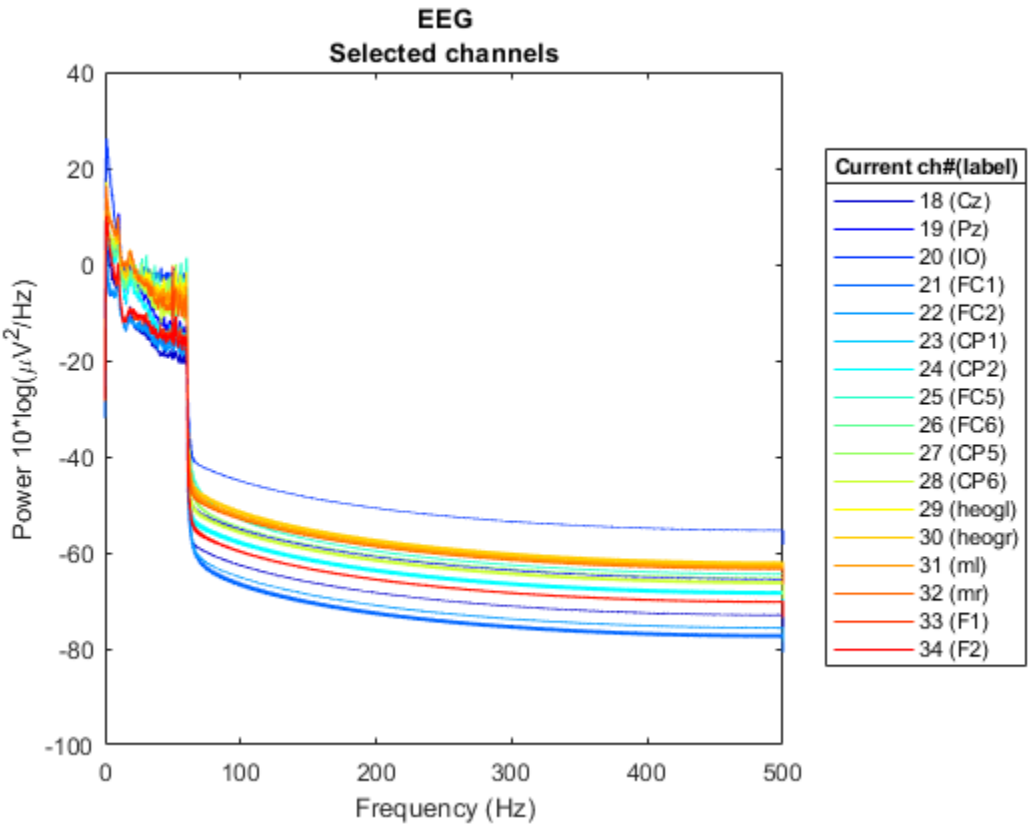
```
Detrend type: high pass
```

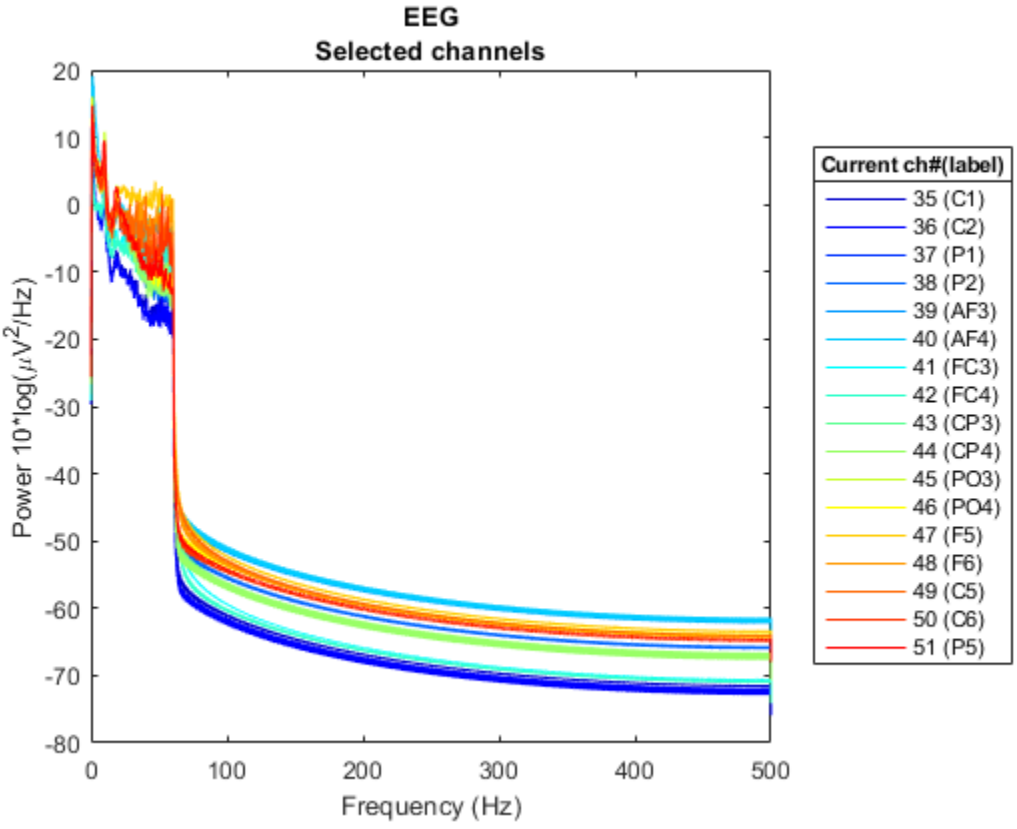
```
Detrend cutoff: 1 Hz
Detrend step size: 2.000000e-02
Detrend command:
EEG = pop_eegfiltnew(EEG, 'locutoff',1,'hicutoff',[]);
Detrended channels (65 channels):
  [ 1:65 ]
```

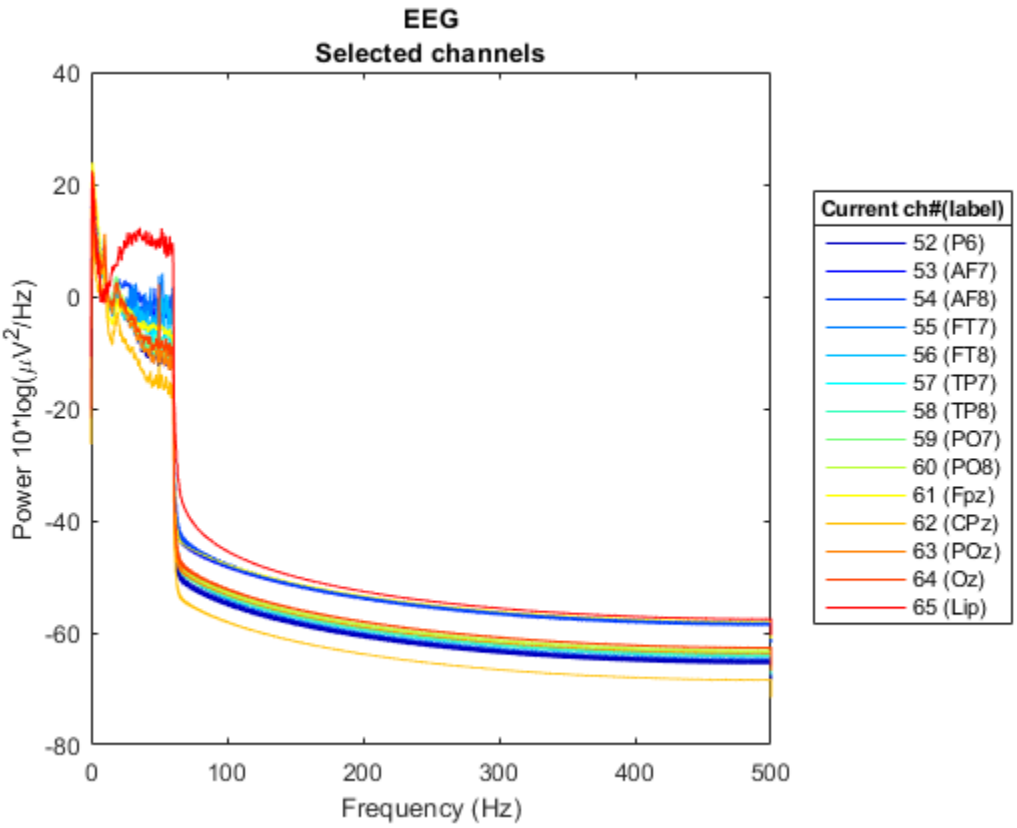
Spectrum after line noise and detrend

```
pop_eegfiltnew() - performing 3301 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
```




EEG
Selected channels
Power 10*log(μV²/Hz)
Frequency (Hz)
Current ch#(label)
18 (Cz)
19 (Pz)
20 (IO)
21 (FC1)
22 (FC2)
23 (CP1)
24 (CP2)
25 (FC5)
26 (FC6)
27 (CP5)
28 (CP6)
29 (heogl)
30 (heogr)
31 (ml)
32 (mr)
33 (F1)
34 (F2)


EEG
Selected channels
Power 10*log(μV²/Hz)
Frequency (Hz)
Current ch#(label)
35 (C1)
36 (C2)
37 (P1)
38 (P2)
39 (AF3)
40 (AF4)
41 (FC3)
42 (FC4)
43 (CP3)
44 (CP4)
45 (PO3)
46 (PO4)
47 (F5)
48 (F6)
49 (C5)
50 (C6)
51 (P5)



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 absoluted 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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