

ICA Component Rejection Report

REJECTION SUMMARY

Total Components: 19
Excluded: 1 components
Kept: 18 components

EXCLUDED COMPONENTS: ICA002

VARIANCE ANALYSIS

Total variance removed: 9.32%

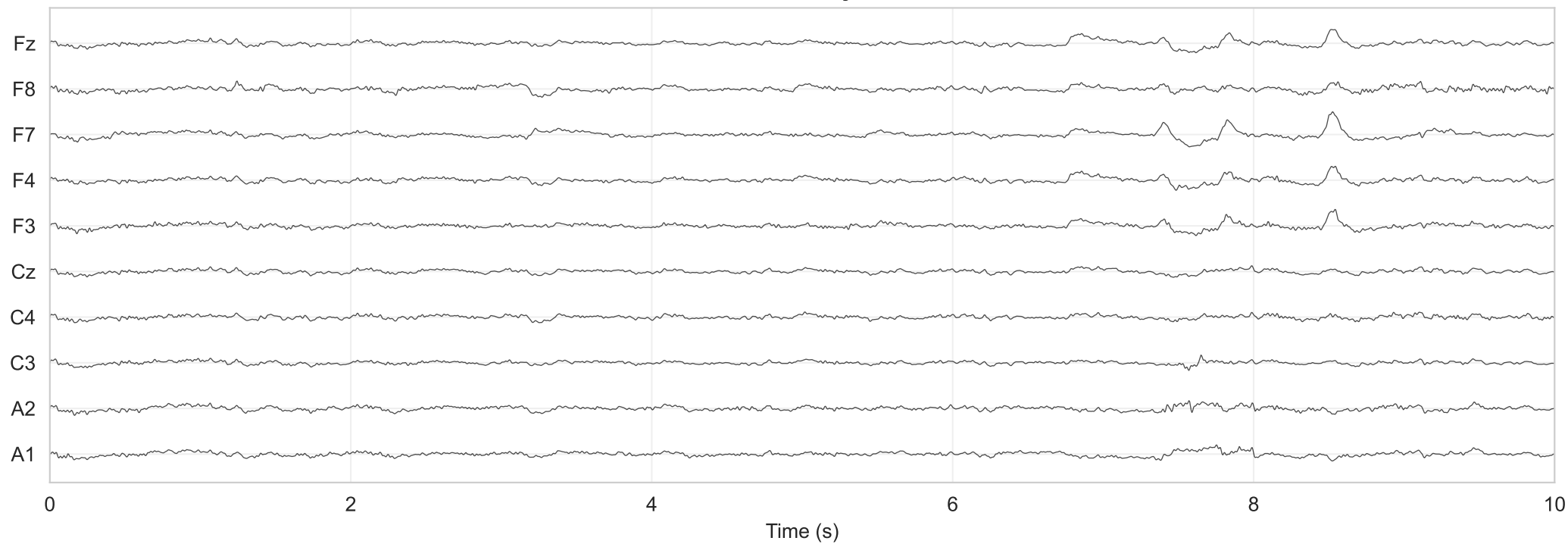
Variance per excluded component:
ICA002: 9.32% (Rank # 1, Kurtosis: 164.18)

ARTIFACT SIGNATURES

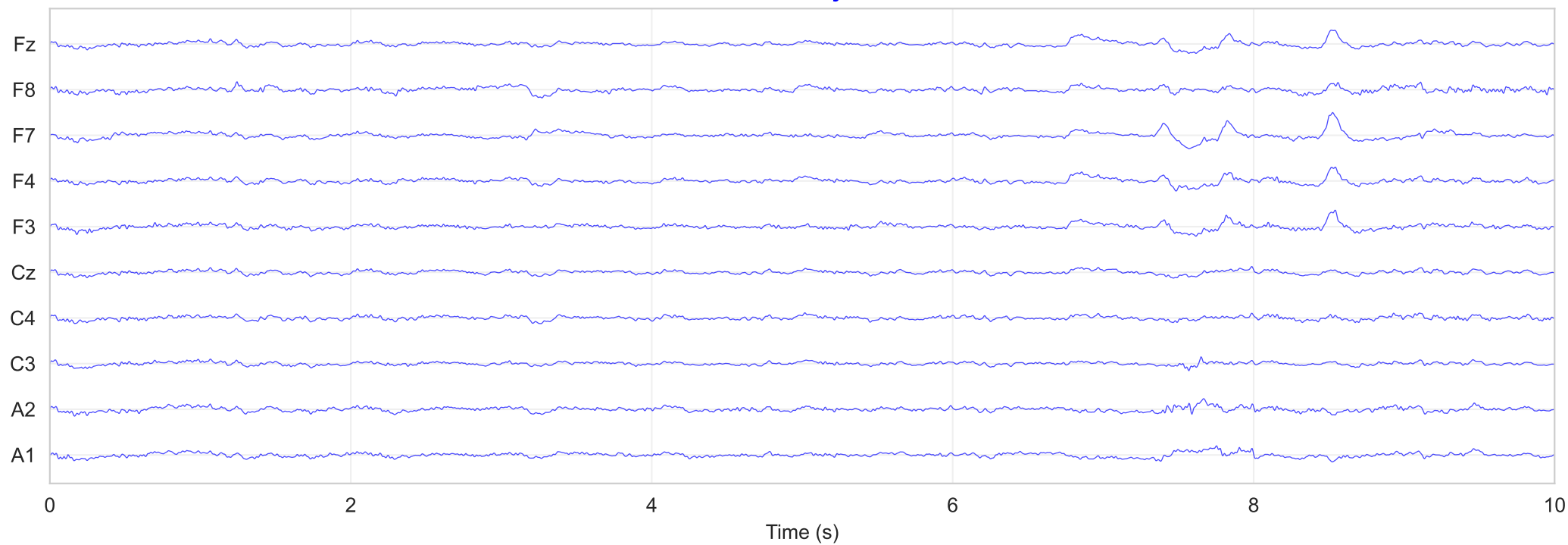
ICA002: Strong artifact (very high kurtosis)

EEG Data: Before and After ICA Artifact Rejection

Before ICA Rejection

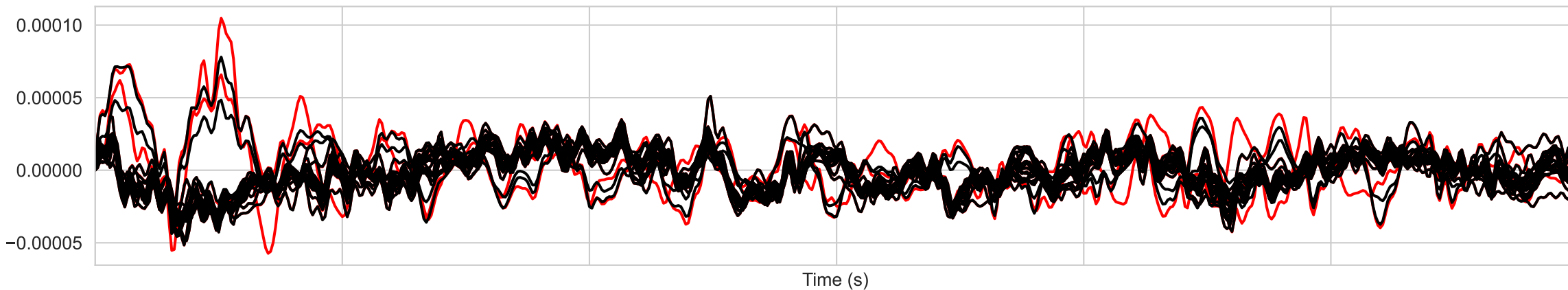


After ICA Rejection

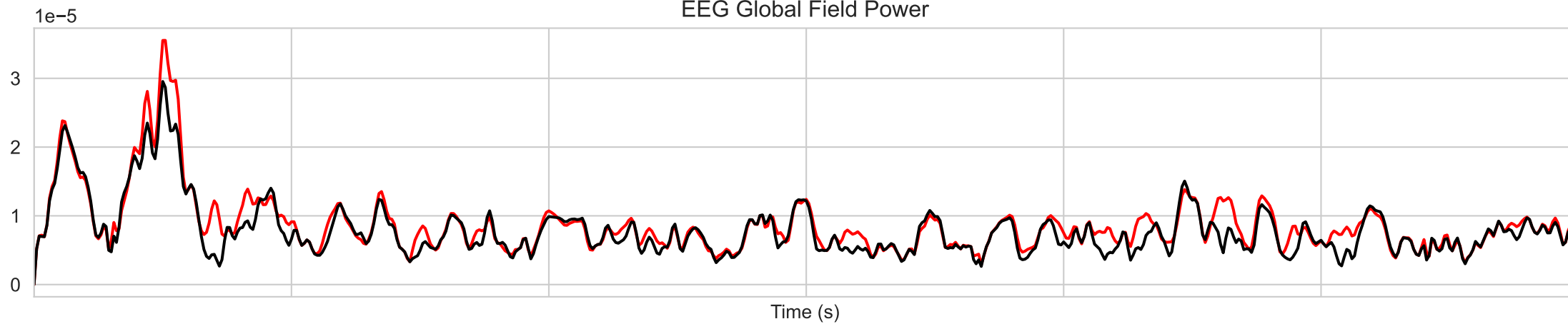


Overlay: Effect of Removing All Excluded Components (ICA002)

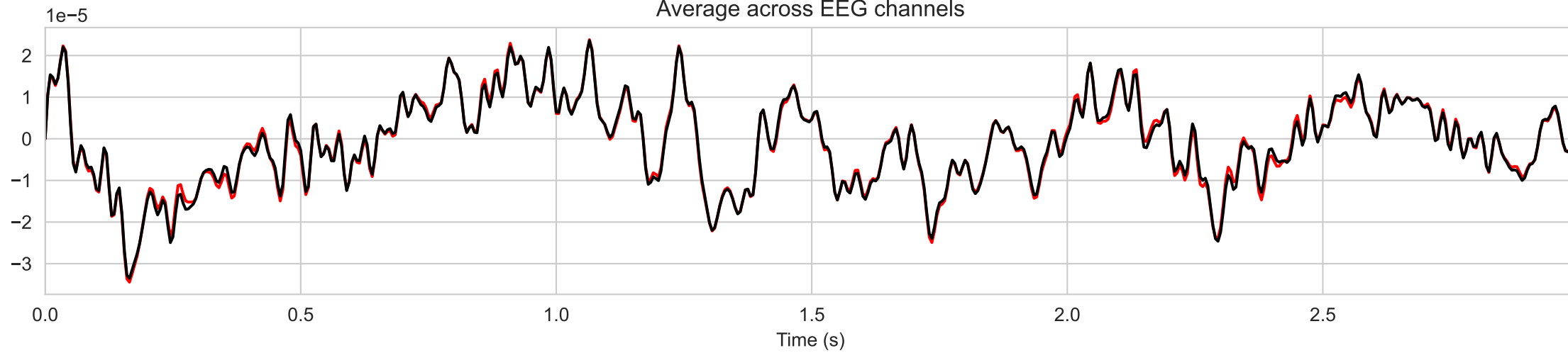
Raw EEG data



EEG Global Field Power

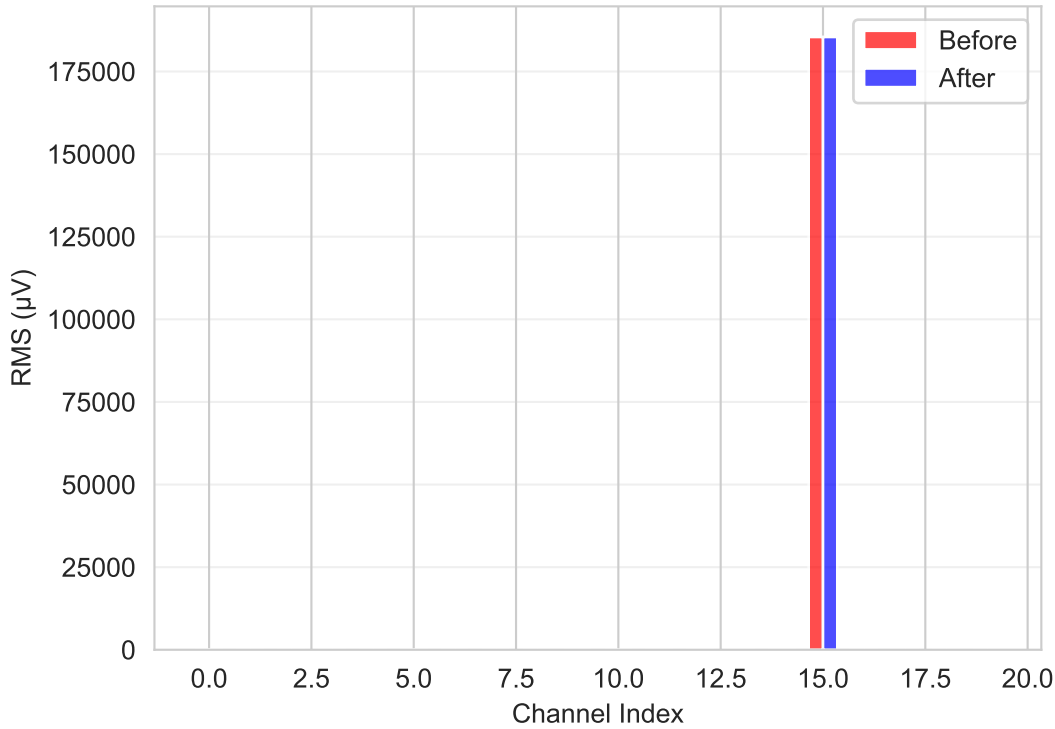


Average across EEG channels

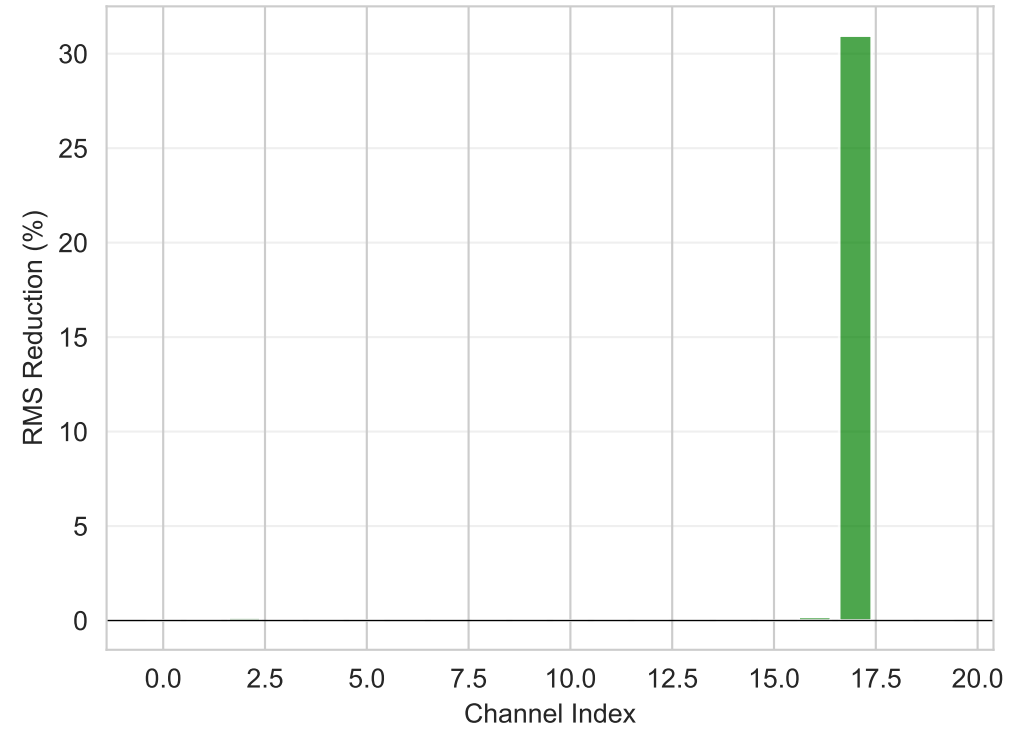


Signal Quality Metrics: Before vs After ICA

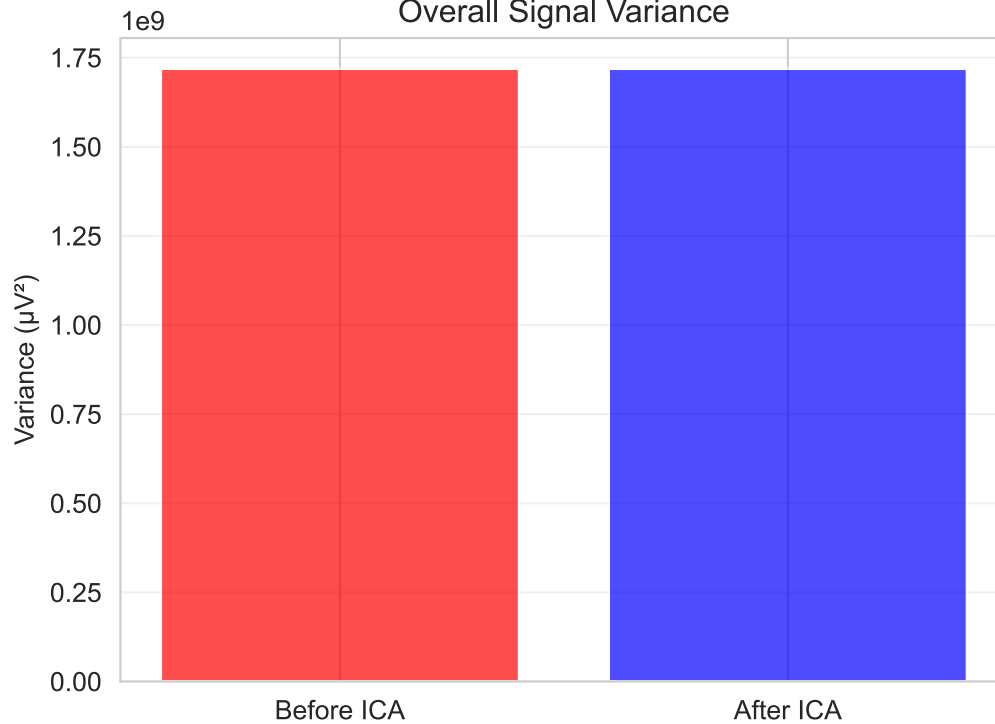
RMS Amplitude by Channel



Artifact Reduction by Channel



Overall Signal Variance



SIGNAL QUALITY METRICS

Before ICA Rejection:

Mean RMS: 9299.80 μV
Std RMS: 40408.97 μV
Variance: 1719151456.22 μV²

After ICA Rejection:

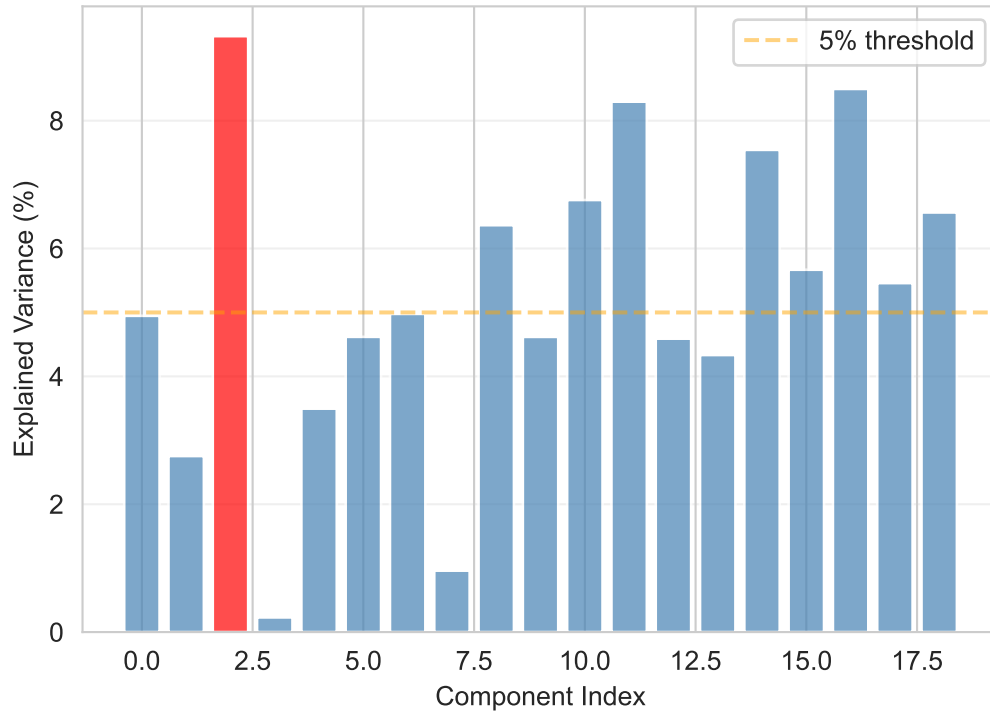
Mean RMS: 9297.93 μV
Std RMS: 40409.40 μV
Variance: 1719151081.41 μV²

Overall Reduction:

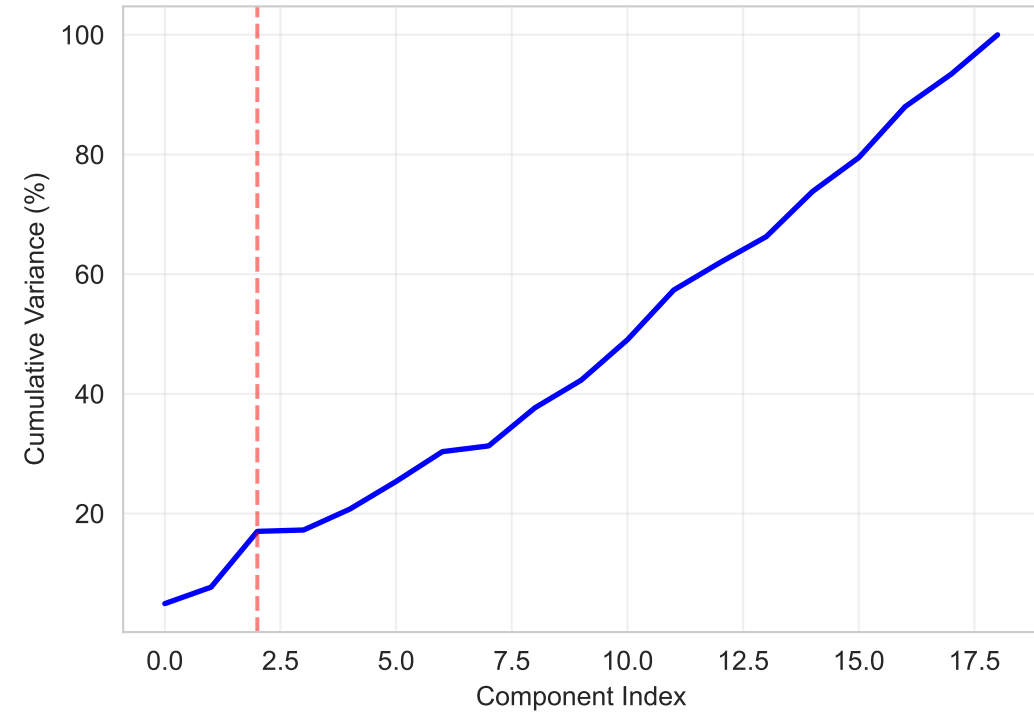
RMS reduction: 0.02%
Variance reduction: 0.00%

Variance Distribution Analysis

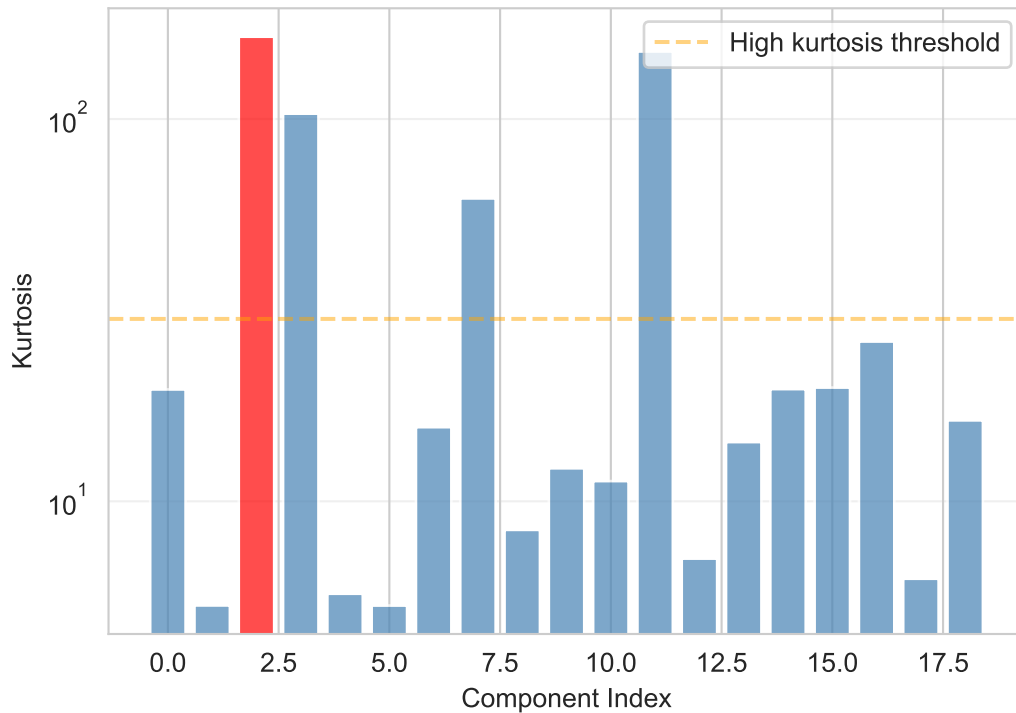
Variance by Component



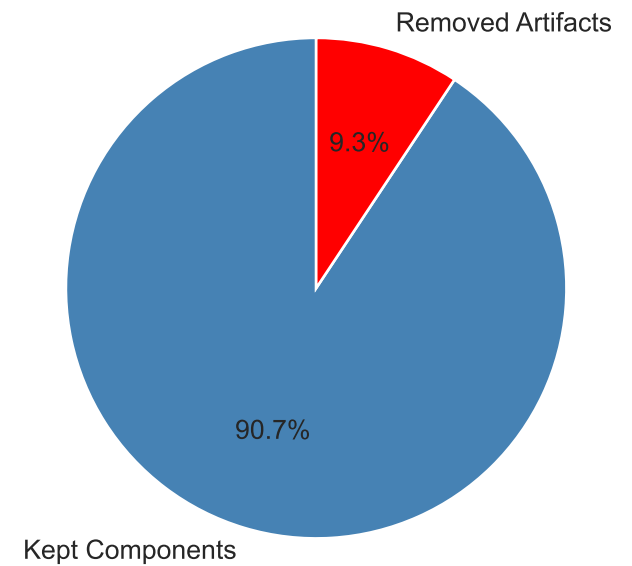
Cumulative Variance Explained



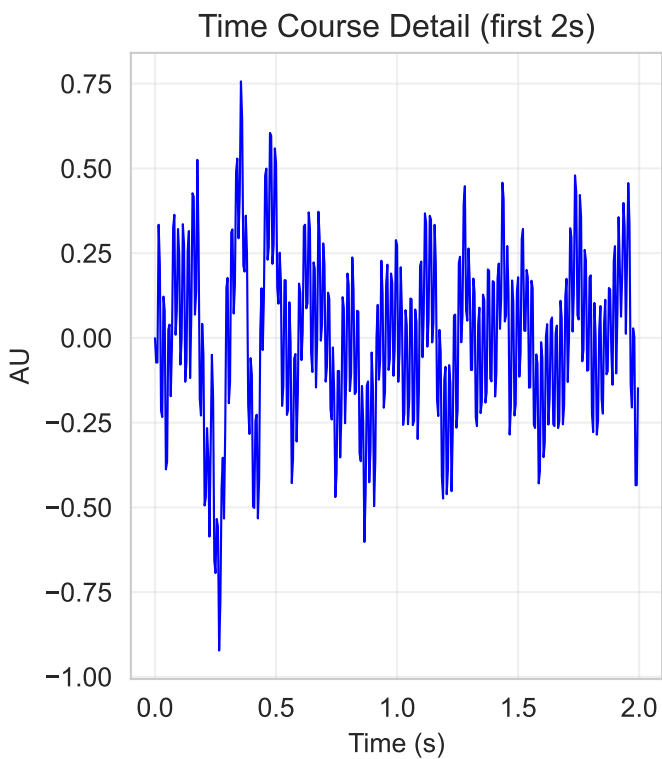
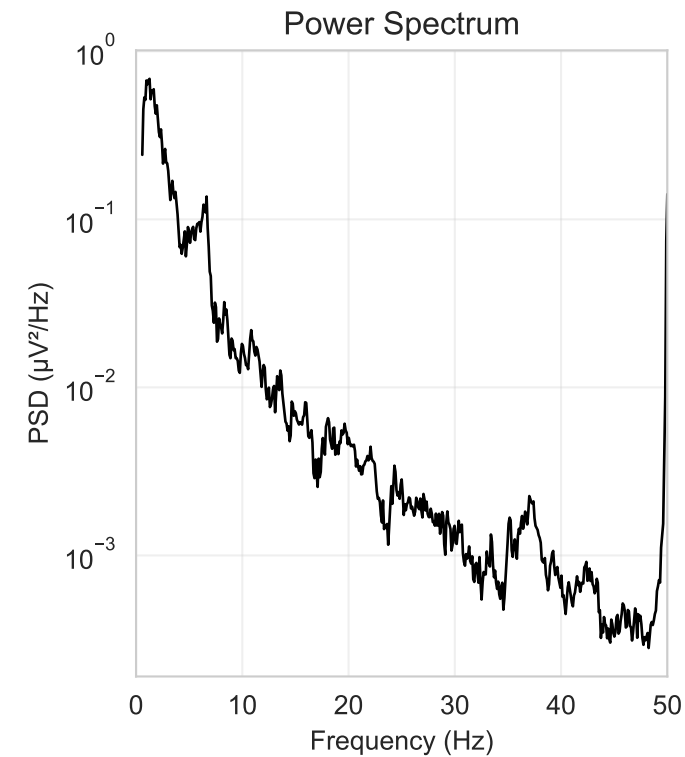
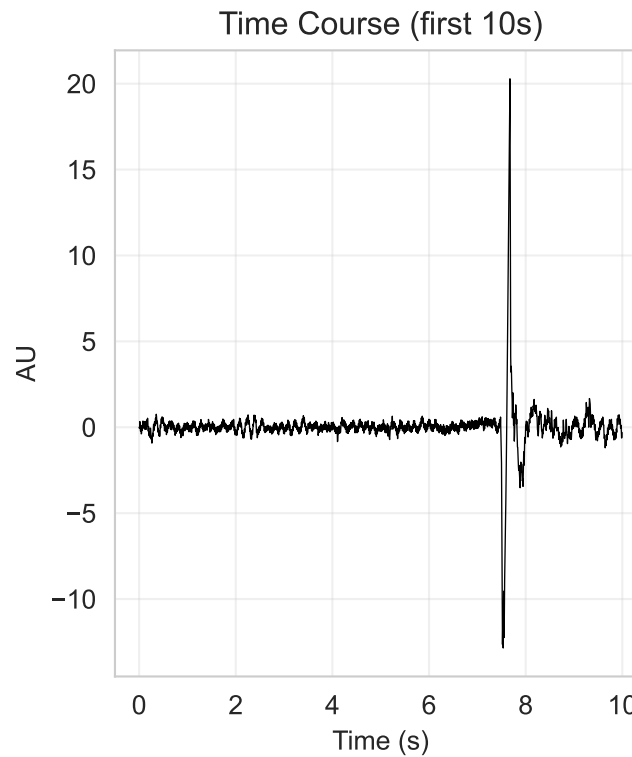
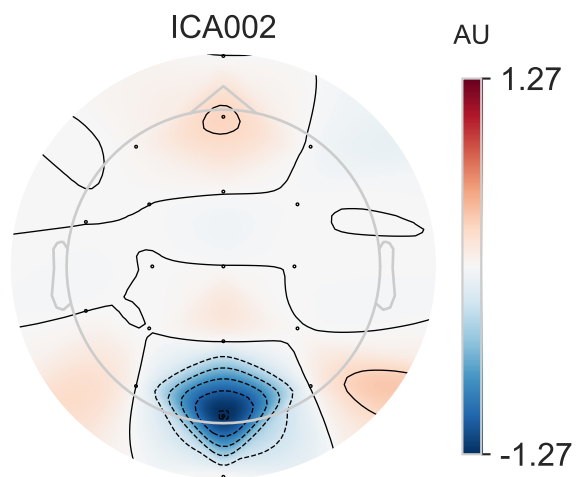
Kurtosis by Component



Variance Distribution



ICA002 - REJECTED COMPONENT



Component Statistics:

Mean: 0.001
Std: 1.326
Min: -33.441
Max: 48.168
Kurtosis: 164.180

Explained Variance: 9.32%
Rank by Variance: #1

REJECTION RATIONALE:

- EXTREME artifact signature
- Likely eye blinks/movements

