Trial #158 — Recognition Potential Analysis

NO CONNECTED ELECTRODES

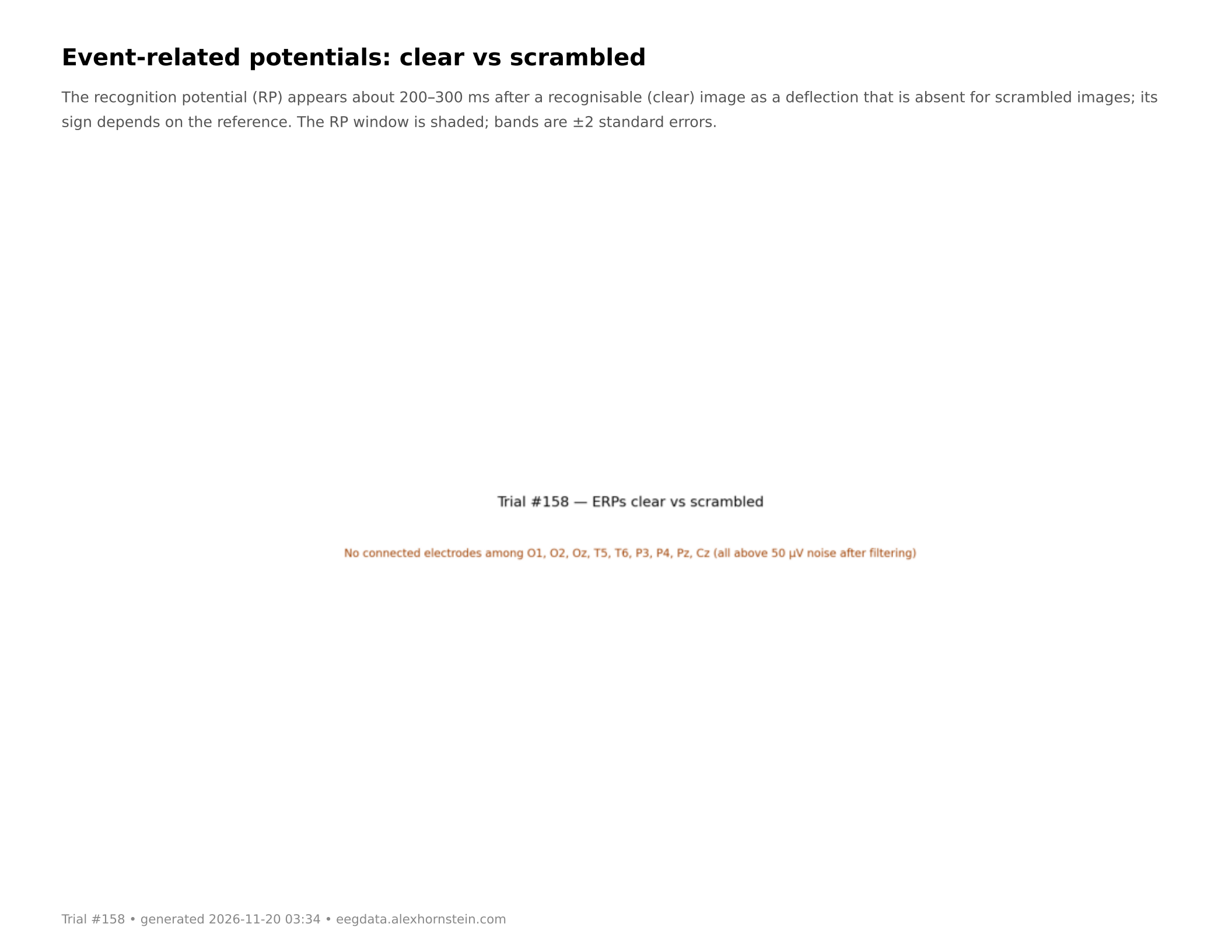
Subject	AF • recorded 05/13/2026 11:32:27.865 • dataset Celebrities
Stimuli	501 images: 64 clear, 437 scrambled • 63 keypresses (63 matched to clear images, median RT 425 ms)
EDF file	LL_20260423_205339.edf
Alignment	photodiode on A2 (negative spikes, matched to every image); clock offset 13888 ms (EDF header would give 1694328865 ms); 413/501 images matched; drift -45 ppm; jitter 34.7 ms
Electrodes	noise after filtering — O1 167 µV, O2 197 µV, T5 121 µV, T6 218 µV, P3 102 µV, P4 106 µV, Pz 532 µV, Cz 281 µV (✓ = used, threshold 50 µV)
Processing	60 Hz notch, 0.5–15 Hz bandpass, epochs -200 to 800 ms, baseline -200 to 0 ms, reject > 100 µV peak-to-peak

⚠ Only 62% of images matched a photodiode spike on A2, so the alignment may be wrong. Check the alignment plot before trusting these averages.

⚠ No connected electrodes among O1, O2, Oz, T5, T6, P3, P4, Pz, Cz (all above 50 µV noise).

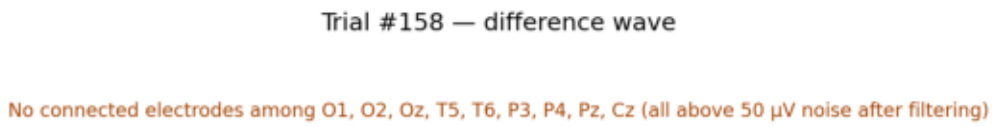
Event-related potentials: clear vs scrambled

The recognition potential (RP) appears about 200–300 ms after a recognisable (clear) image as a deflection that is absent for scrambled images; its sign depends on the reference. The RP window is shaded; bands are ±2 standard errors.



Difference wave (clear − scrambled)

Images arrive every ~330 ms, so each epoch also contains responses to neighbouring images. Subtracting the scrambled average removes that shared part and isolates the RP.



Keypress-locked average

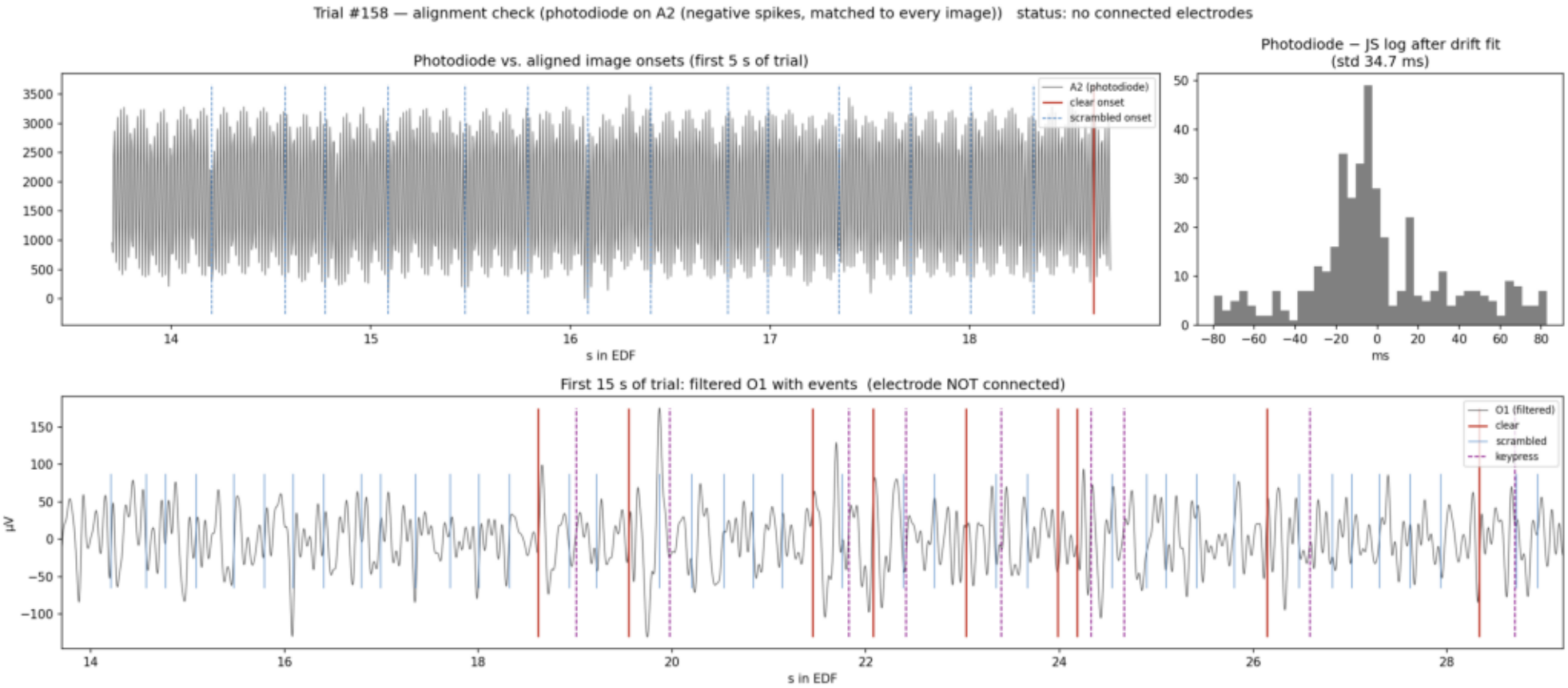
Checks whether activity tied to the button press, rather than recognition, drives the difference between clear and scrambled images.

Trial #158 — keypress-locked average

No connected electrodes among O1, O2, Oz, T5, T6, P3, P4, Pz, Cz (all above 50 µV noise after filtering)

Alignment check and signal overview

Each image onset is snapped to its photodiode spike. Bottom: the first 15 s of the filtered signal with image onsets and keypresses.



Analysis log

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Trial #158 — subject AF, 05/13/2026 11:32:27.865
  EDF: /home/japhy/eegdata/media/trialData/LL_20260423_205339.edf
  250 Hz, 176 s; 501 images (64 clear, 437 scrambled); 63 presses
  alignment: photodiode on A2 (negative spikes, matched to every image)
    offset 13888 ms (EDF header says 1694328865); 62% of images matched (typical 19%); drift -45 ppm; jitter 34.7 ms
  electrode noise (µV): O1 167, O2 197, T5 121, T6 218, P3 102, P4 106, Pz 532, Cz 281
  using: NONE
  63 of 64 clear images followed by a keypress (median RT 425 ms)
  status: no connected electrodes
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