Trial #137 — Recognition Potential Analysis

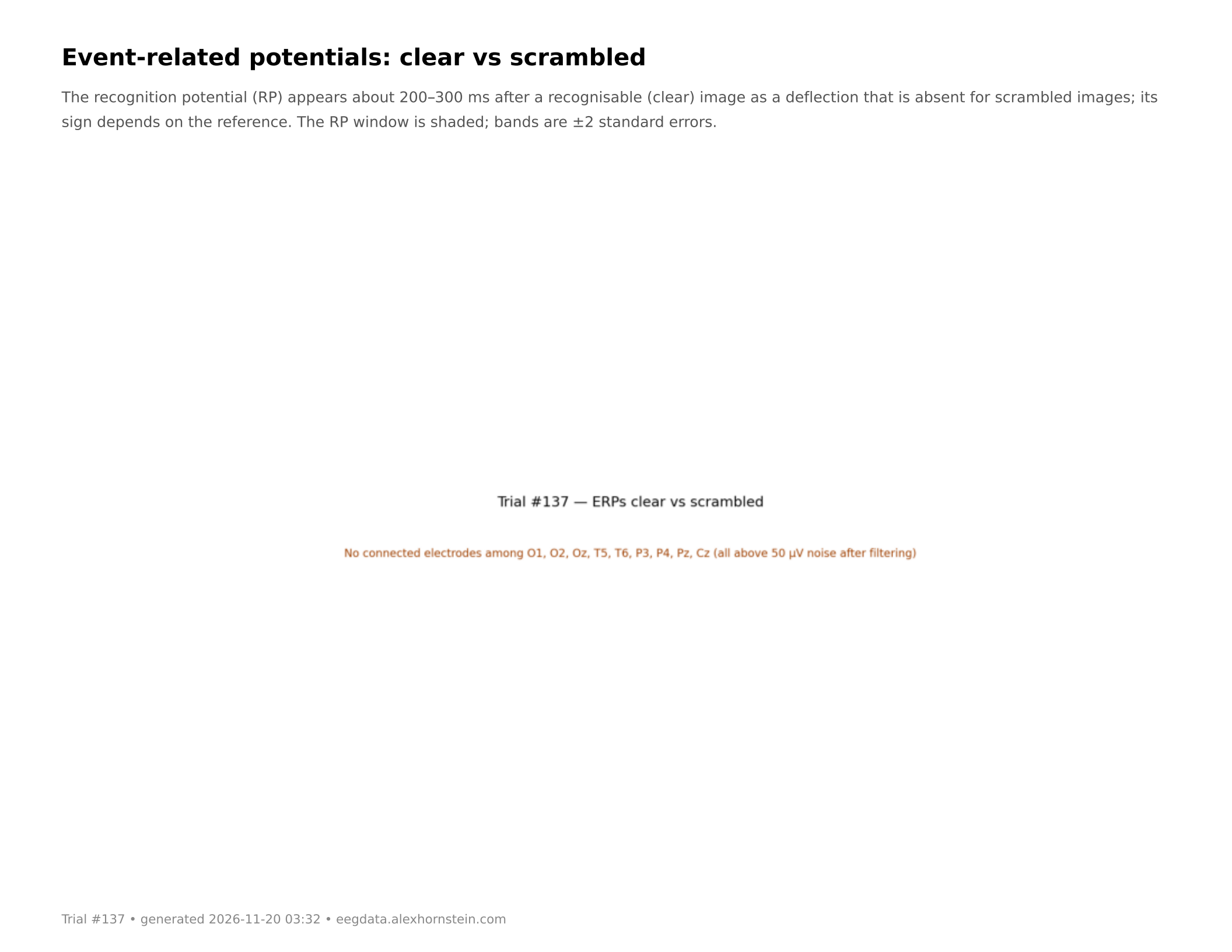
NO CONNECTED ELECTRODES

Subject	AF • recorded 01/02/2026 21:01:27.244 • dataset Celebrities
Stimuli	251 images: 32 clear, 219 scrambled • 32 keypresses (32 matched to clear images, median RT 463 ms)
EDF file	fp_20260102_223155.edf
Alignment	photodiode on A1 (positive and negative spikes, matched to every image); clock offset 15054 ms (EDF header would give -5427756 ms); 231/251 images matched; drift -268 ppm; jitter 24.6 ms
Electrodes	noise after filtering — O1 244 µV, O2 223 µV, T5 248 µV, T6 223 µV, P3 649 µV, P4 605 µV, Pz 634 µV, Cz 641 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

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

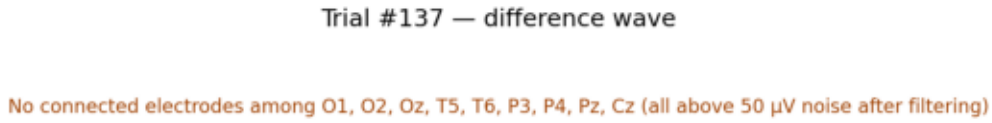
Event-related potentials: clear vs scrambled

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

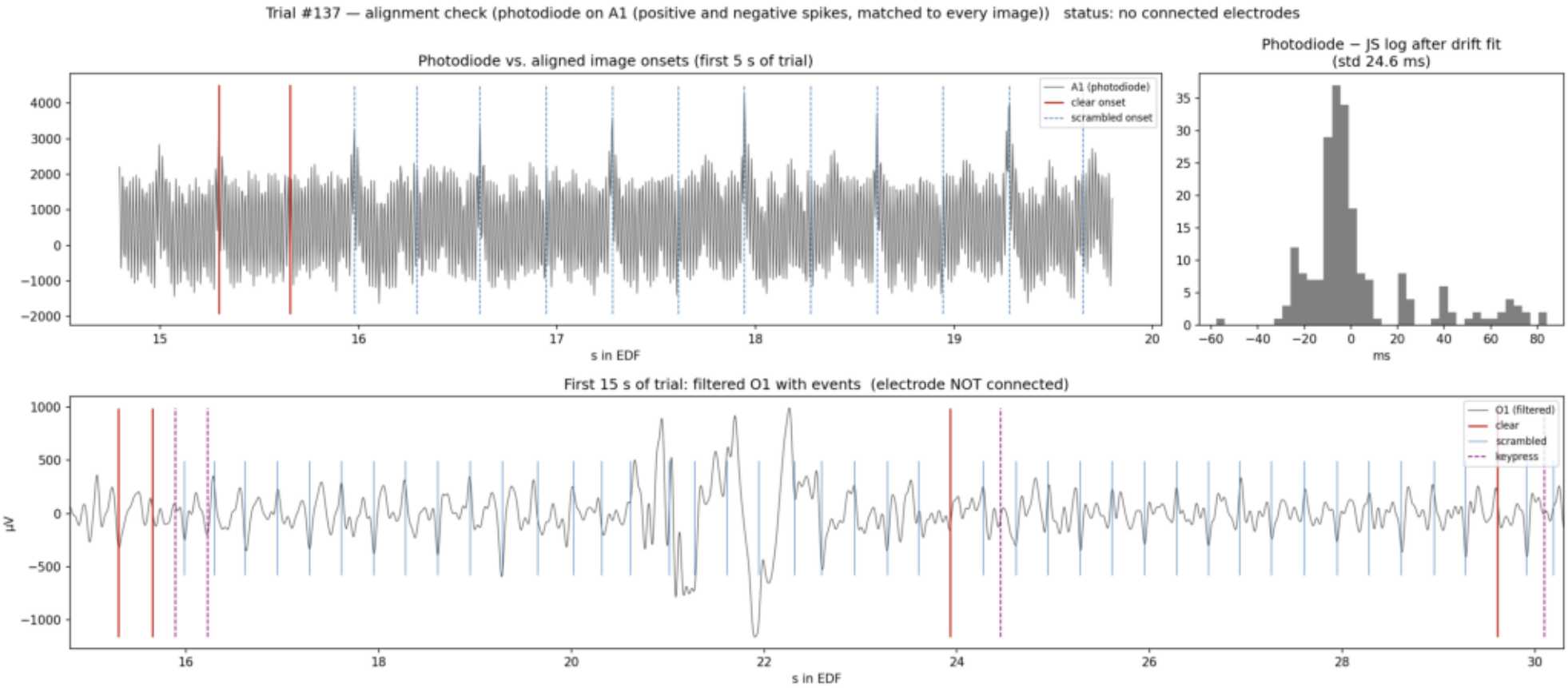
Checks whether activity tied to the button press, rather than recognition, drives the difference between clear and scrambled images.

Trial #137 — 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 #137 — subject AF, 01/02/2026 21:01:27.244
  EDF: /home/japhy/eegdata/media/trialData/fp_20260102_223155.edf
  250 Hz, 104 s; 251 images (32 clear, 219 scrambled); 32 presses
  alignment: photodiode on A1 (positive and negative spikes, matched to every image)
    offset 15054 ms (EDF header says -5427756); 80% of images matched (typical 25%); drift -268 ppm; jitter 24.6 ms
  electrode noise (µV): O1 244, O2 223, T5 248, T6 223, P3 649, P4 605, Pz 634, Cz 641
  using: NONE
  32 of 32 clear images followed by a keypress (median RT 463 ms)
  status: no connected electrodes
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