Trial #142 — Recognition Potential Analysis

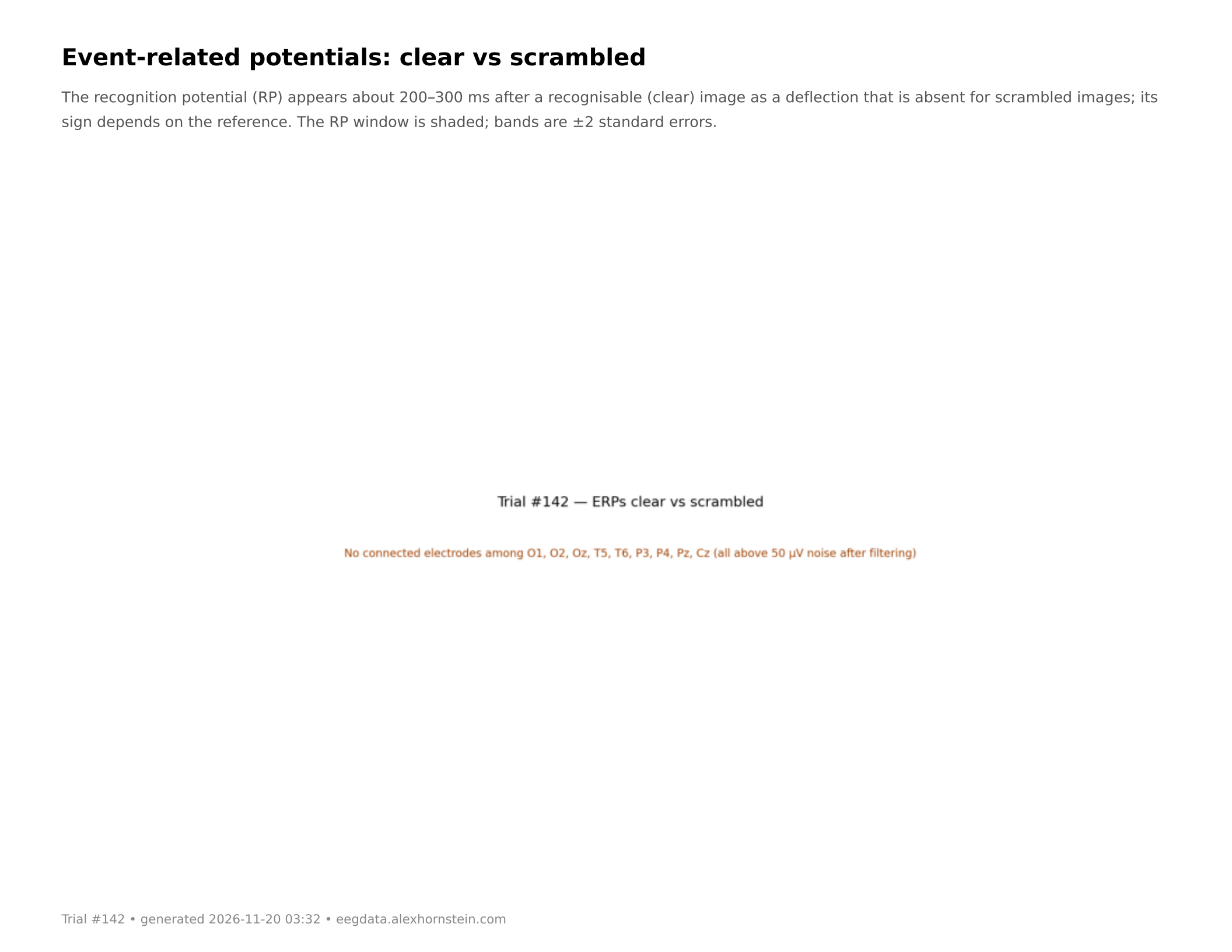
NO CONNECTED ELECTRODES

Subject	AF • recorded 02/01/2026 15:35:9.52 • dataset Celebrities
Stimuli	501 images: 37 clear, 464 scrambled • 35 keypresses (31 matched to clear images, median RT 461 ms)
EDF file	fp_20260201_153535.edf
Alignment	photodiode on CH21 (positive and negative spikes, matched to every image); clock offset 3262 ms (EDF header would give -25480 ms); 793/501 images matched; drift -46 ppm; jitter 30.7 ms
Electrodes	noise after filtering — O1 307 µV, O2 305 µV, T5 302 µV, T6 311 µV, P3 394 µV, P4 403 µV, Pz 282 µV, Cz 318 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).

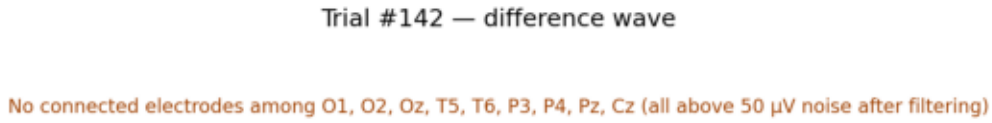
Event-related potentials: clear vs scrambled

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

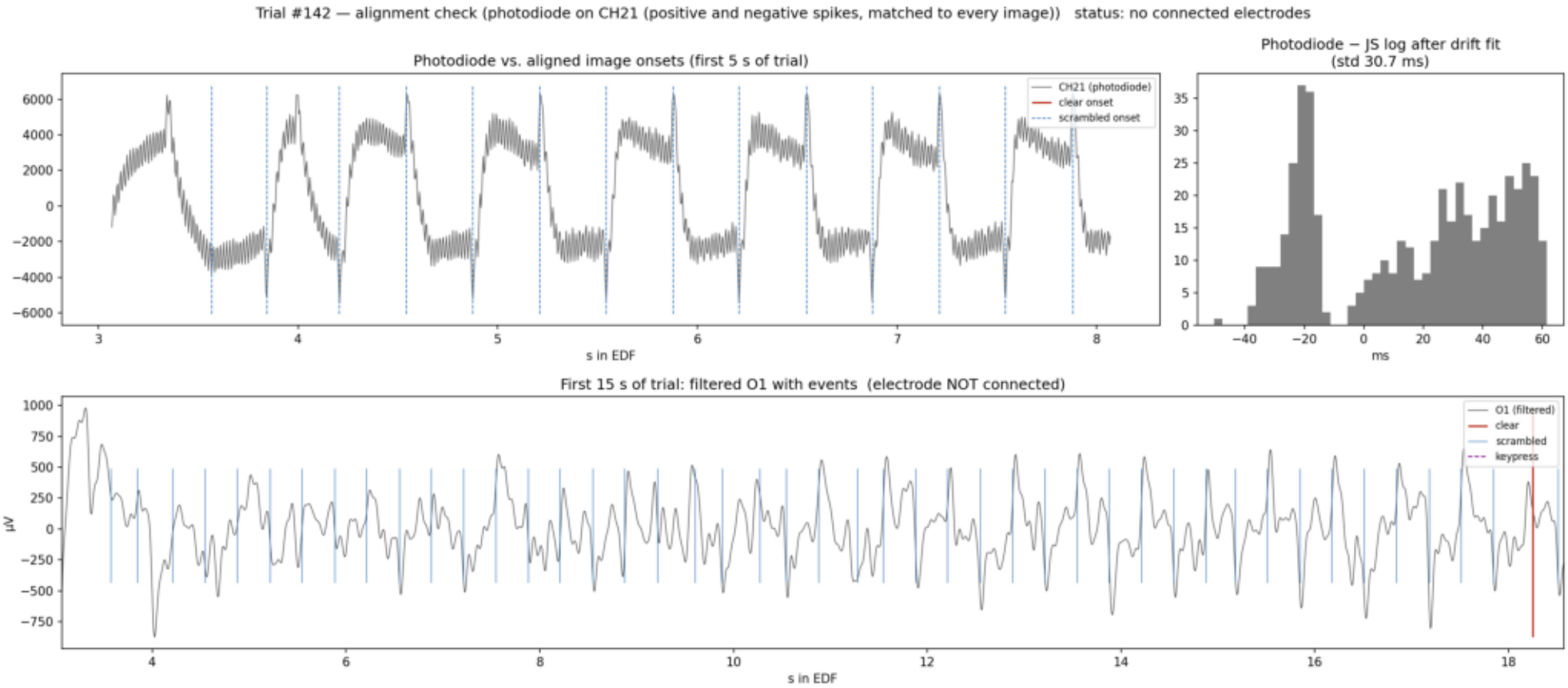
Checks whether activity tied to the button press, rather than recognition, drives the difference between clear and scrambled images.

Trial #142 — 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 #142 — subject AF, 02/01/2026 15:35:9.52
  EDF: /home/japhy/eegdata/media/trialData/fp_20260201_153535.edf
  250 Hz, 176 s; 501 images (37 clear, 464 scrambled); 35 presses
  alignment: photodiode on CH21 (positive and negative spikes, matched to every image)
    offset 3262 ms (EDF header says -25480); 100% of images matched (typical 39%); drift -46 ppm; jitter 30.7 ms
  electrode noise (µV): O1 307, O2 305, T5 302, T6 311, P3 394, P4 403, Pz 282, Cz 318
  using: NONE
  31 of 37 clear images followed by a keypress (median RT 461 ms)
  status: no connected electrodes
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