Trial #138 — Recognition Potential Analysis

NO PHOTODIODE

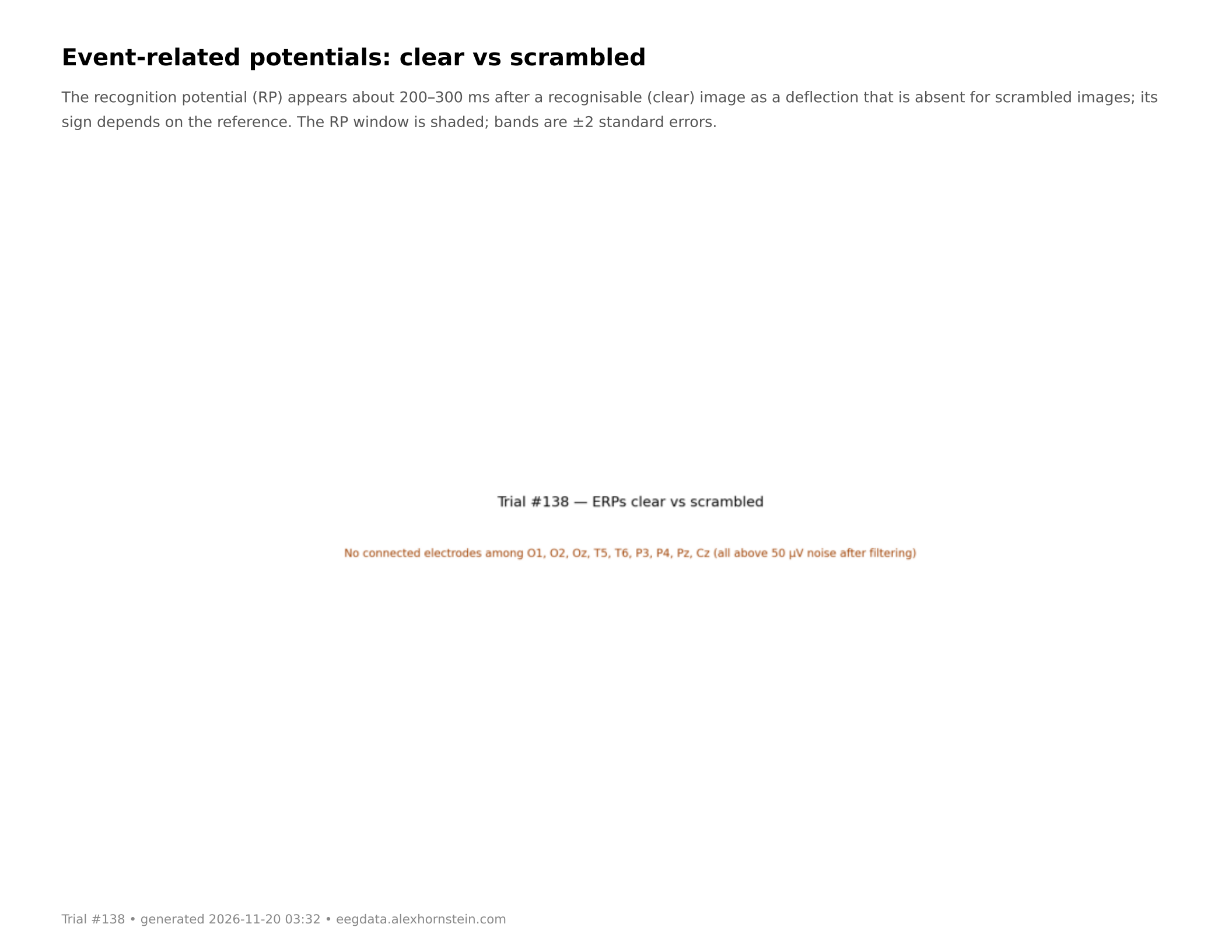
Subject	V001 • recorded 01/02/2026 21:04:53.62 • dataset Celebrities
Stimuli	501 images: 74 clear, 427 scrambled • 74 keypresses (74 matched to clear images, median RT 433 ms)
EDF file	fp_20260102_223524.edf
Alignment	EDF header time (fallback — UNRELIABLE)
Electrodes	noise after filtering — O1 221 µV, O2 255 µV, T5 249 µV, T6 207 µV, P3 579 µV, P4 510 µV, Pz 437 µV, Cz 557 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 photodiode channel matched the stimulus log, so image onsets come from the EDF header clock. Averages are probably smeared — treat with caution.

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

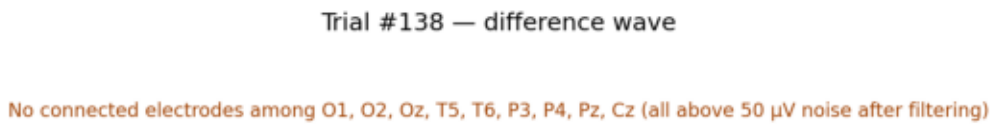
Event-related potentials: clear vs scrambled

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

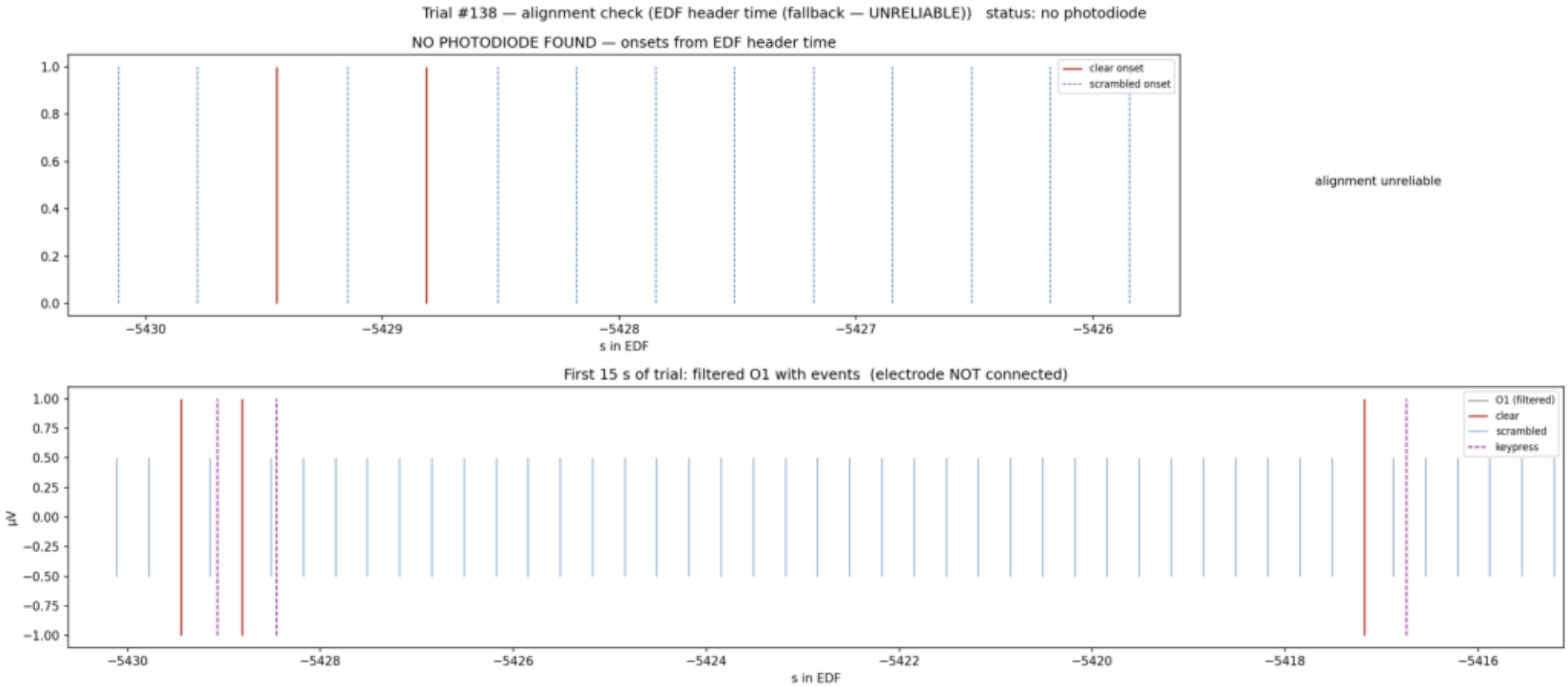
Checks whether activity tied to the button press, rather than recognition, drives the difference between clear and scrambled images.

Trial #138 — 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 #138 — subject V001, 01/02/2026 21:04:53.62
  EDF: /home/japhy/eegdata/media/trialData/fp_20260102_223524.edf
  250 Hz, 189 s; 501 images (74 clear, 427 scrambled); 74 presses
  alignment: EDF header time (fallback — UNRELIABLE)
    WARNING: no photodiode found (closest: C4, 44% vs typical 24%)
  electrode noise (µV): O1 221, O2 255, T5 249, T6 207, P3 579, P4 510, Pz 437, Cz 557
  using: NONE
  74 of 74 clear images followed by a keypress (median RT 433 ms)
  status: no photodiode
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