Trial #120 — Recognition Potential Analysis

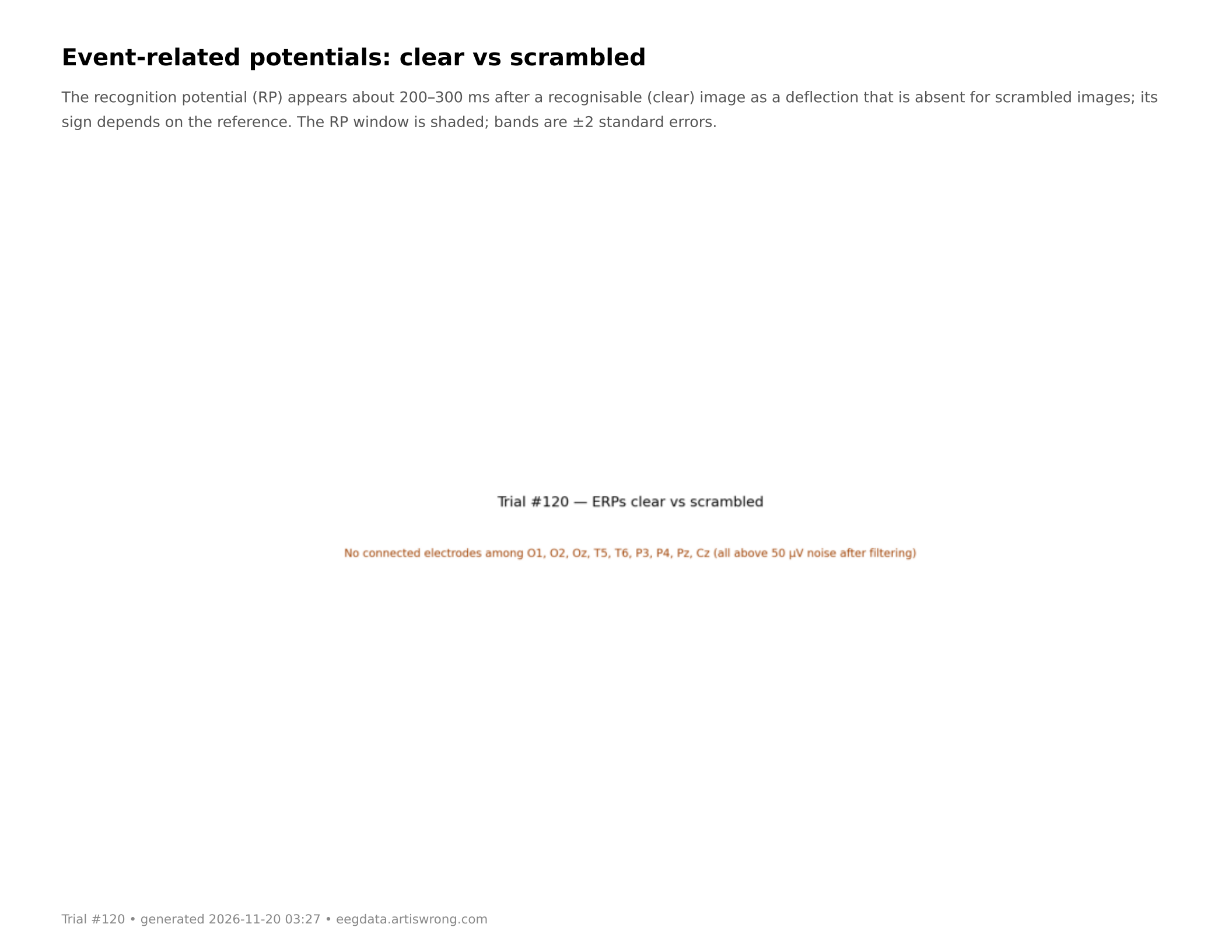
NO CONNECTED ELECTRODES

Subject	AF • recorded 10/23/2025 13:54:33.612 • dataset Celebrities
Stimuli	501 images: 74 clear, 427 scrambled • 68 keypresses (68 matched to clear images, median RT 423 ms)
EDF file	AF_20251023_135424.edf
Alignment	photodiode on CH21 (positive and negative spikes, matched to every image); clock offset 23105 ms (EDF header would give 9612 ms); 501/501 images matched; drift -188 ppm; jitter 25.8 ms
Electrodes	noise after filtering — O1 713 µV, O2 783 µV, T5 784 µV, T6 747 µV, P3 1160 µV, P4 1025 µV, Pz 1281 µV, Cz 467 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).

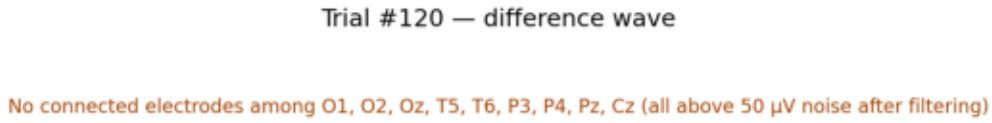
Event-related potentials: clear vs scrambled

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

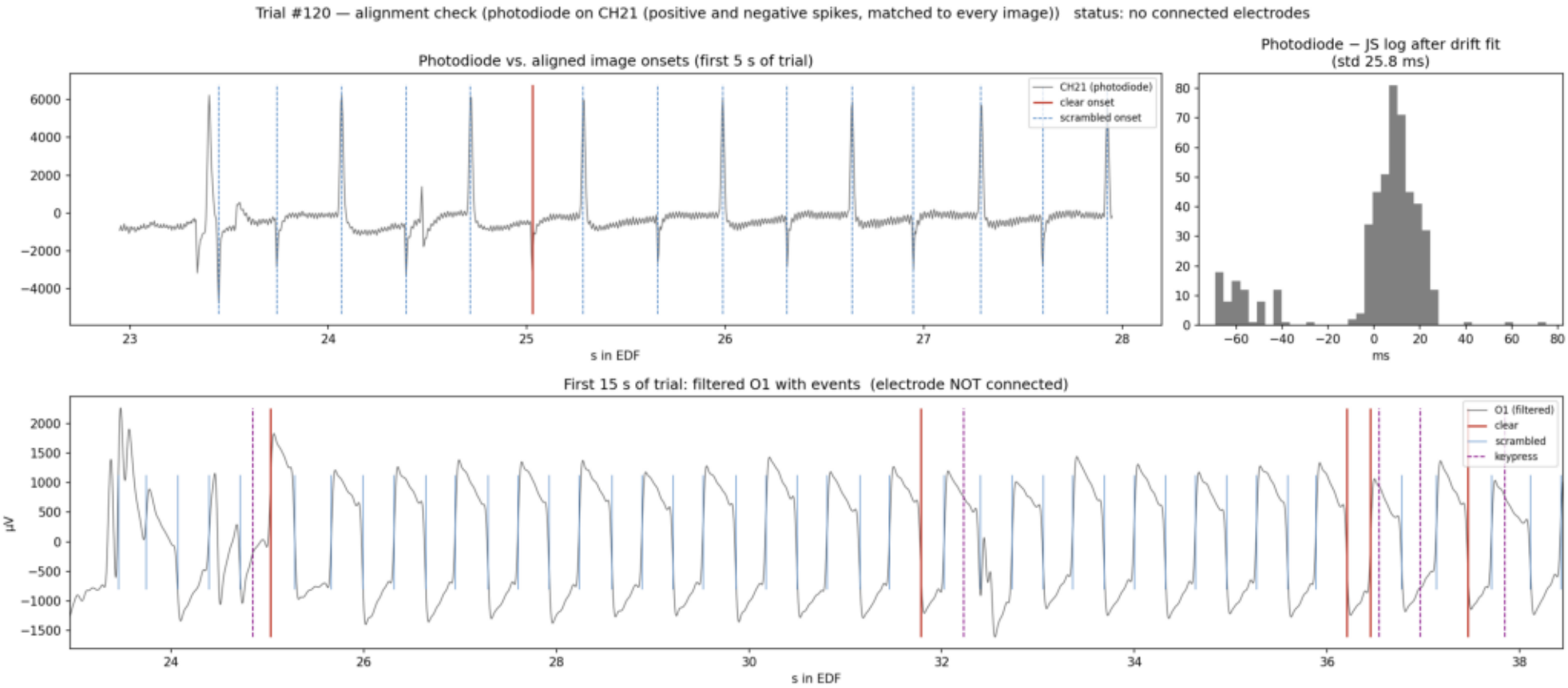
Checks whether activity tied to the button press, rather than recognition, drives the difference between clear and scrambled images.

Trial #120 — 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 #120 — subject AF, 10/23/2025 13:54:33.612
  EDF: /home/japhy/eegdata/media/trialData/AF_20251023_135424.edf
  250 Hz, 200 s; 501 images (74 clear, 427 scrambled); 68 presses
  alignment: photodiode on CH21 (positive and negative spikes, matched to every image)
    offset 23105 ms (EDF header says 9612); 86% of images matched (typical 20%); drift -188 ppm; jitter 25.8 ms
  electrode noise (µV): O1 713, O2 783, T5 784, T6 747, P3 1160, P4 1025, Pz 1281, Cz 467
  using: NONE
  68 of 74 clear images followed by a keypress (median RT 423 ms)
  status: no connected electrodes
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