**Absolute Activity (2x2x2)**

Although overall activity was slightly more negative when tracking 1 item than (M=-2.042,SD=2.889) than 1 (M=-1.733,SD=2.155), this difference was not reliable, F(1,27)=0.447, p=.509.

Although overall activity was slightly more negative when the probed target was in the right hemifield (M=-1.9302,SD=2.447) than when in the left (M=-1.846,SD=2.410), this difference was not reliable, F(1,27)=0.056, p=.816.

Overal activity was significantly more negative over the right hemisphere (M=-2.422,SD=2.361) than over the left hemisphere (M=-1.355,SD=2.276, F(1,27)=20.929, p<.001.

There was a significant interaction between the number of targets and the target hemifield, F(1,27)=11.495, p=.002, *η*p2=.299.

* Overall activity was significantly more negative when tracking 1 target in the left hemifield (M=-2.489, SD=3.080) than 1 target in the right hemifield (M=-1.596, SD=3.135, t(27)=2.057,p=.057). However, when tracking 2 items, overall activity was significantly more negative when the right disc was later probed (M=-2.264,SD=2.378) than when the left disc was later probed (M=-1.203, SD=2.633, t(27)=2.185, p=.038), despite physical stimulation being identical for both types of trials up to this point.
* Exploring the interaction the other way, overall activity was significantly more negative on trials when the left target was probed when it was the only cued target than when both targets were cued, t(27)=2.195, p=.037, but there was no difference between trials where one or both targets were cued when the right item was later probed, t(27)=1.335, p=.193.

There was no significant interaction between the number of targets cued and the different electrode hemispheres, F(1,27)=2.891, p=.101.

There was no significant interaction between the target hemisphere and the electrode hemisphere, F(1,27)=0.006, p=.939.

There was a significant interaction between the number of targets cued, which target was later probed, and the different electrode hemispheres, F(1,27)=12.164, p=.002, *η*p2=.311.

* When tracking only 1 item, there was a significant interaction between the target hemifield and electrode hemisphere, F(1,27)=4.449, p=.044, *η*p2=.141.
  + When tracking 1 left item, activity was significantly more negative over right/contralateral electrodes (M=-3.160, SD=3.598) than left/ipsilateral electrodes (M=-1.817, SD=2.833, t(27)=3.557, p=.001).
  + However, when tracking 1 item in the right hemifield, there was no reliable difference between the left hemisphere (M=-1.414, SD=3.209) and right hemisphere (M=-1.778, SD=3.368, t(27)=0.969, p=.341).
* When both items were cued, there was a significant interaction between which hemifield was later probed, and the electrode hemisphere, F(1,27)=14.333, p=.001, *η*p2=.347.
  + When the left hemifield was later probed, activity was significantly more negative over the right hemisphere (M=-1.589, SD=2.665) than the left hemisphere (M=-0.816, SD=2.773, t(27)=3.016, p=.006).
  + When the right hemifield was later probed, activity was significantly more negative over the right hemisphere (M=-3.160, SD=2.411) than the left hemisphere (M=-1.368, SD=2.561, t(27)=6.493, p<.001).
* In summary, when tracking 1 item in the left hemifield, contralateral activity was more negative than ipsilateral, but this difference was not reliable when the tracked item was in the right hemifield (perhaps due to the counteractive effects of the CDA and the dominant role of the right hemisphere in attention). When tracking bilateral items though, activity was more negative over the right hemisphere than the left, regardless.

**Absolute Activity (3x2)**

Given that in the 2-target condition, there was no difference in physical stimulation between trials where the left or right hemifield were later probed (at the time of the activity in this analysis), another way to analyse the data would be use a 3x2 design, with cue type (1 left cue, 1 right cue, or 2 bilateral cues) and electrode hemisphere (left or right) as the factors. However, in this analysis, the 2-bilateral cues would have twice as many trials as either the 1 left cue or 1 right cue conditions, which might make an ANOVA an inappropriate analysis, and a non-parametric analyses may be needed.

Sphericity was not violated for either the cueType (p=.500) or the cueType\*electrodeHemisphere analyses (p=.066) but because the interaction was trending, both the corrected and uncorrected versions are reported below.

There was no overall difference in activity between the different cue types, F(2,54)=1.952, p=.152.

Overall, activity was more negative over right hemisphere electrodes (M=-2.4377, SD=2.401) than left hemisphere electrodes (M=-1.441, SD=2.582, F(1,27)=15.987, p<.001, *η*p2=.347).

There was a significant interaction between the cue type and the electrode hemisphere, F(2,54)=4.008, p=.024, *η*p2=.129, *OR GG:* F(1.682,45.414)=4.008, p=.031, *η*p2=.129.

* When tracking 1 left item, activity was significantly more negative over right/contralateral electrodes (M=-3.160, SD=3.598) than left/ipsilateral electrodes (M=-1.817, SD=2.833, t(27)=3.557, p=.001).
* However, when tracking 1 item in the right hemifield, there was no reliable difference between the left hemisphere (M=-1.414, SD=3.209) and right hemisphere (M=-1.778, SD=3.368, t(27)=0.969, p=.341).
* When tracking 2 items, activity was significantly more negative over the right hemisphere (M=-2.375,SD=2.138) than the left hemisphere (M=-.109, SD=2.335, t(27)=5.577, p<.001).

**CDA Analysis (1x2)**

Variability in absolute activity may sometimes mask dilute differences in CDA. Another analysis may be to analyse differences in the magnitude of the CDA, as defined as activity over ipsilateral electrodes minus activity over contralateral electrodes (a positive CDA would indicate greater contralateral negativity). However, in the 2-cue condition, there is a tracked target in both hemifields, therefore both hemispheres are both ipsilateral and contralateral to a target, so it would not make sense which should be subtracted from which. Therefore I have only analysed CDA magnitude differences when tracking items only in 1 hemifield.

CDA magnitude was significantly more positive when the tracked target was in the left hemifield (M=1.343, SD=1.998) then the right hemifield (M=-0.364, SD=1.988, t(27)=2.878, p=.008). That the CDA was negative for right hemifield targets suggests that activity was more negative over the right hemisphere than the left, despite it being ipsilateral. This, like other above analyses, may suggest that the right hemisphere’s dominance in attention may be greater than the contralateral/ipsilateral difference, with the two factors largely cancelling each other out.