

## Participant Exclusion and Good AOI Data Identification Protocol

- All participant data were visually inspected through DataViewer by scrolling through each trial for each participant. Participants with potentially poor data quality were identified, with:
  - few eye-movements/ trials without any data (potential recording issues/ pupil not captured well)
  - majority of eye-movements off-screen area (potential calibration/ drift issues/ looking away)
  - eye-movements largely outside of AOI area (potential calibration/ drift issues/ looking away).
- These were coded to be potentially problematic or not.
- A time course binning analysis was then ran in DataViewer for all participants, which provided data on:
  - average blink sample count %
    - the percentage of the total number of samples across all trials for this participant that were in a blink.
  - average excluded sample count %
    - the percentage of the total number of samples across all trials for this participant that were excluded from all other counts (due to data selection configuration, i.e. 4000ms trial period?)
  - average off-screen sample count %
    - the percentage of the total number of sums across all trials for this participant that fall outside of the display boundary (off screen).
  - average AOI sample count %
    - the percentage of the total number of samples across all trials for this participant that fall in the specified area of interest.
    - *this variable was used to identify participants that were particularly well calibrated / had good AOI data (i.e. not for participant exclusions).*
- Participants were then selected for closer visual inspection (and comparison to previous quality inspection) if they fell within:
  - average blink sample count % of  $\geq 10\%$
  - average excluded sample count % of  $\geq 1\%$
  - average off-screen sample count % of  $\geq 10\%$
  - average AOI sample count % of  $\geq 80\%$
- The identified participants were then double checked for trials without any eye-movements, and for calibration or drift issues. Participants who had several trials without any eye-movements, or calibration / drift issues that were likely to affect statistical data on fixation duration, no. fixations, or saccade amplitude, were classified as ‘definitely exclude’.
  - Definitely exclude  $n = 5$  (participants 2, 74, 101, 102, 110)
- For selection of participants with good AOI data, data with an average AOI sample count %  $\geq 80\%$  (derived from time course binning analysis) were first compared with the initial quality inspection coding. The data that had been identified by the average AOI sample count %  $\geq 80\%$  but not by the initial visual quality inspection were selected for closer visual inspection, and confirmed to be good AOI data (good initial centred calibration and no major drift upwards throughout the course of the experiment).
  - Good AOI data  $n = 28$  (participants 8, 9, 13, 14, 16, 29, 30, 32, 37, 38, 40, 45, 46, 48, 51, 53, 63, 64, 68, 69, 79, 100, 104, 107, 108, 121, 129 & 131).

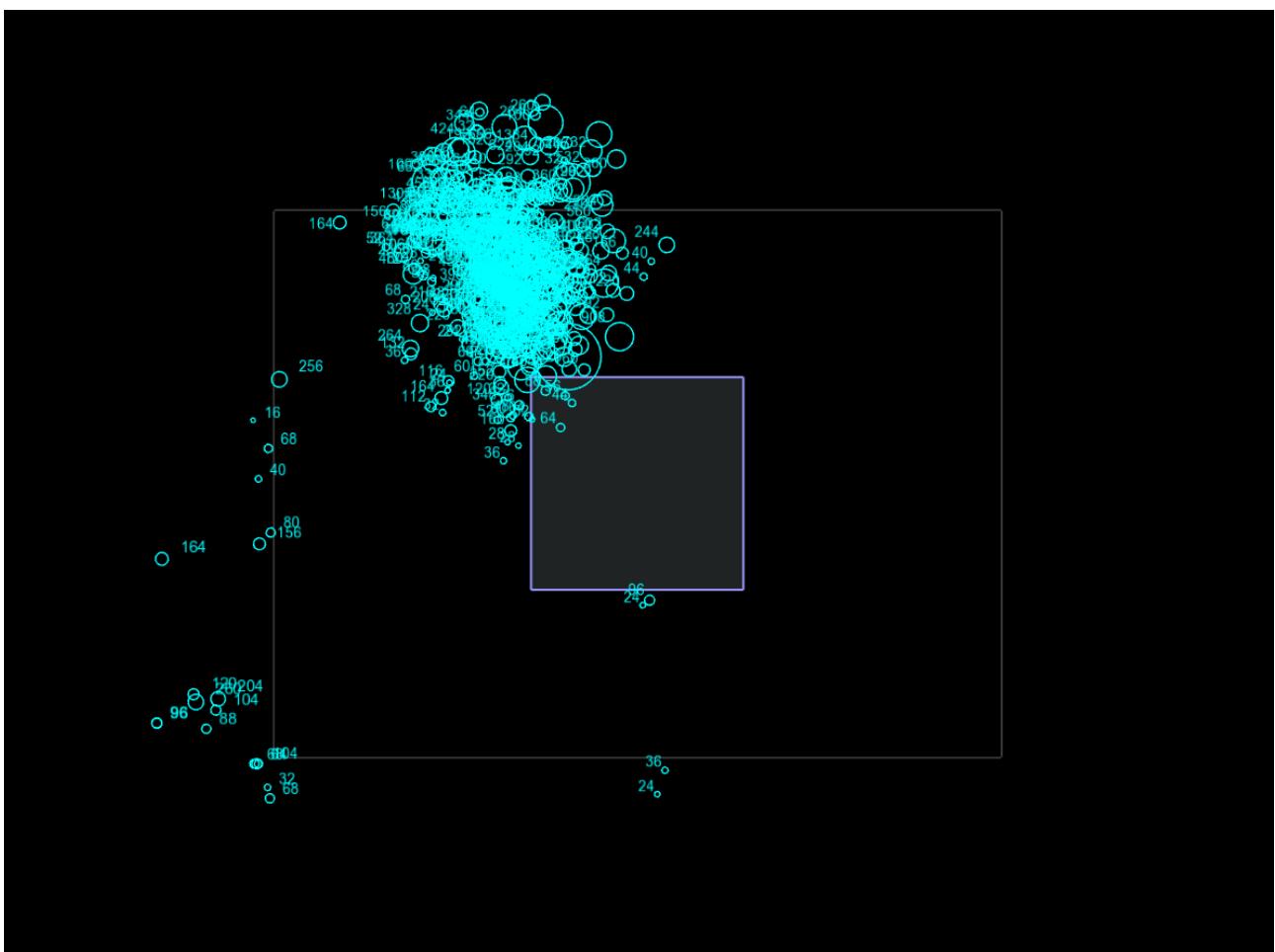
**Note.** The below figures are aggregate trial data, and so for participants who had many trials without any eye movements (such as participant 2), this may not be apparent from the figures.

Purple square = CS AOI.

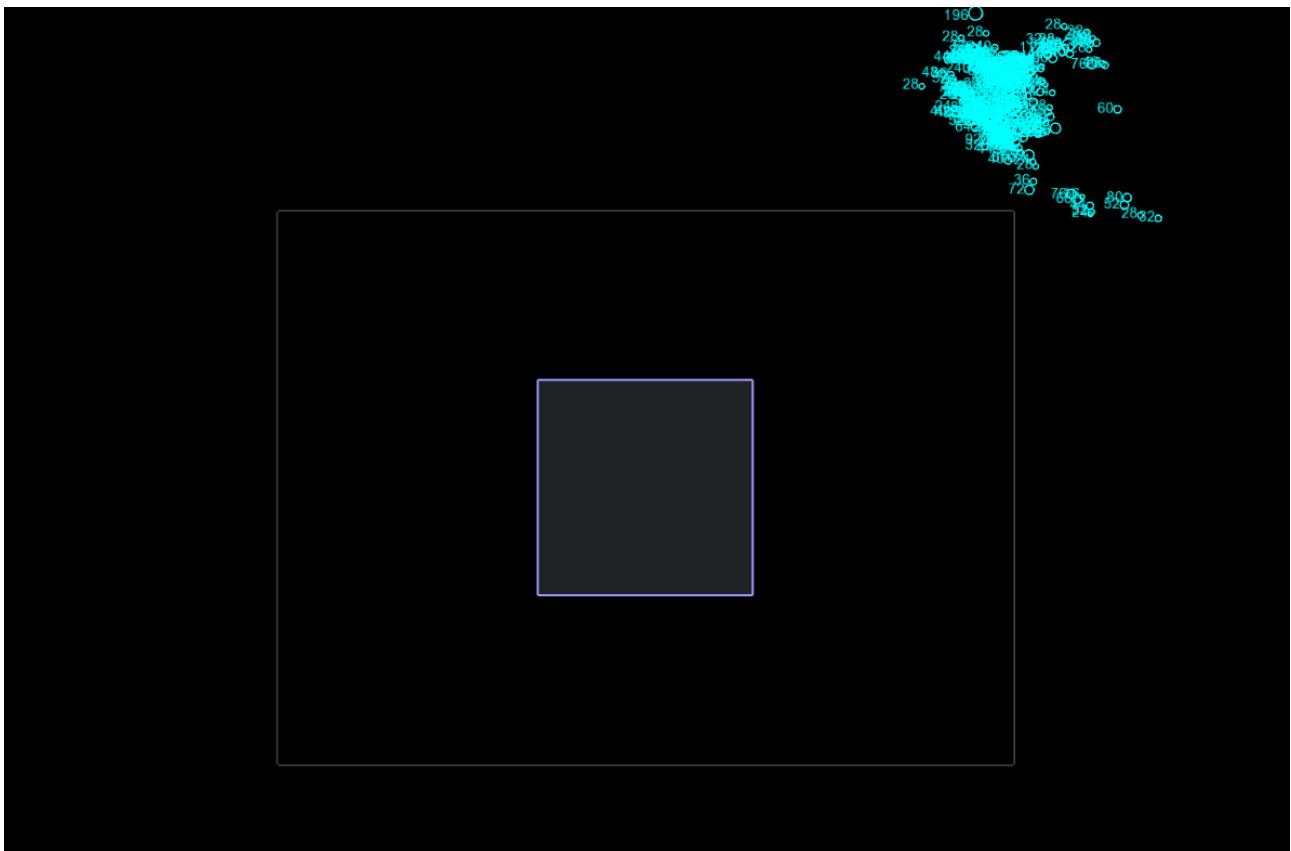
Black rectangle (with light grey border) = screen area (800x600)

Participant 001

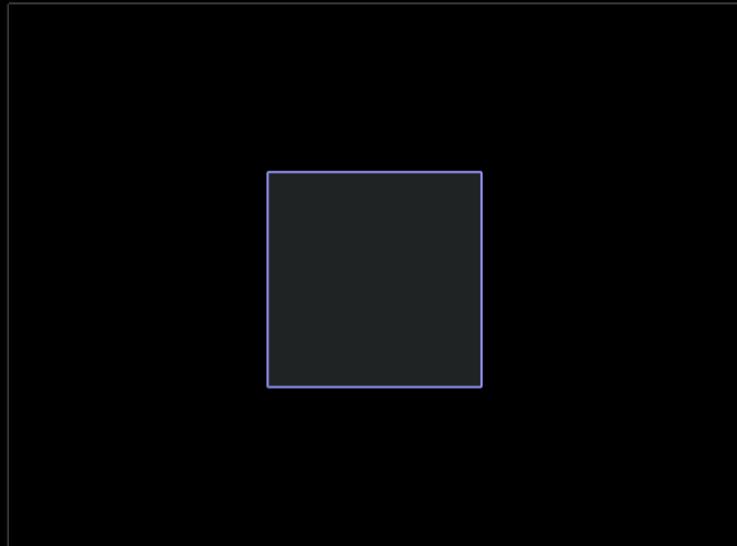
### Participant Exclusions



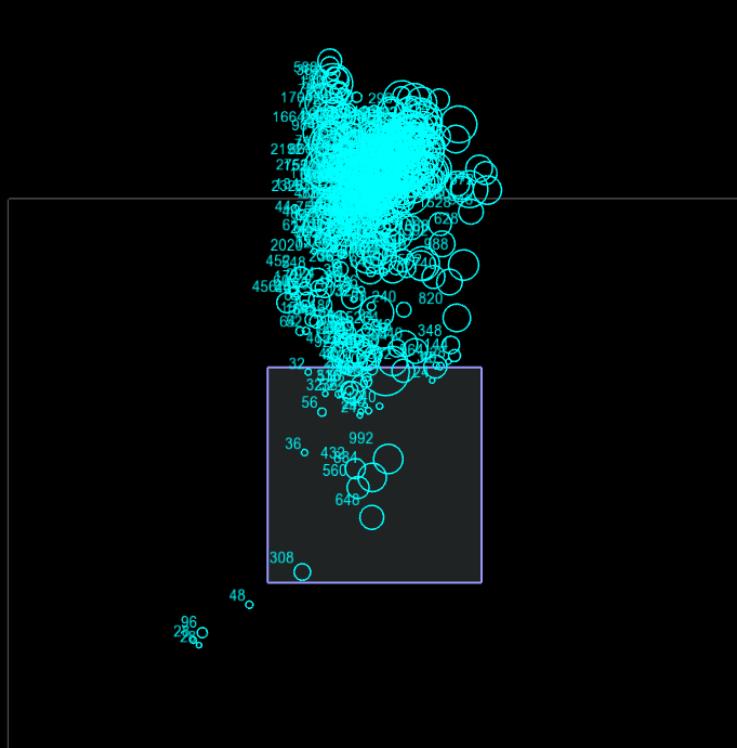
Participant 002



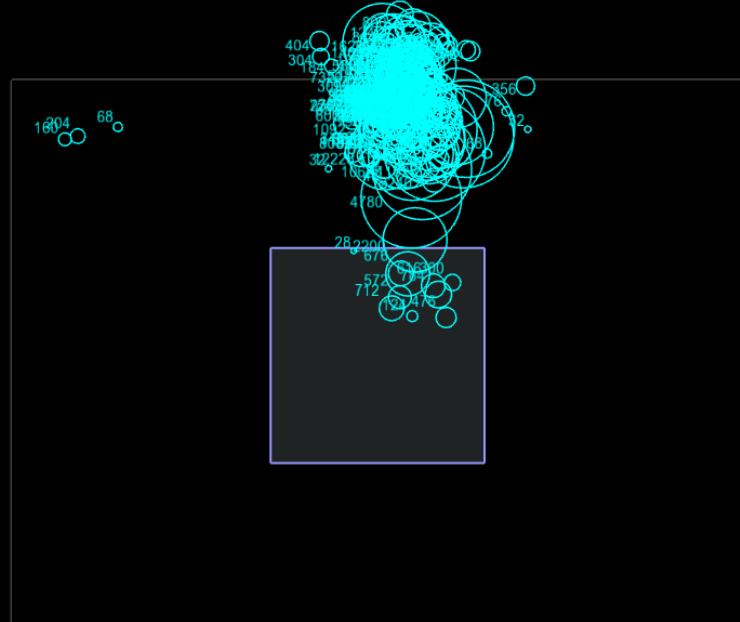
Participant 007



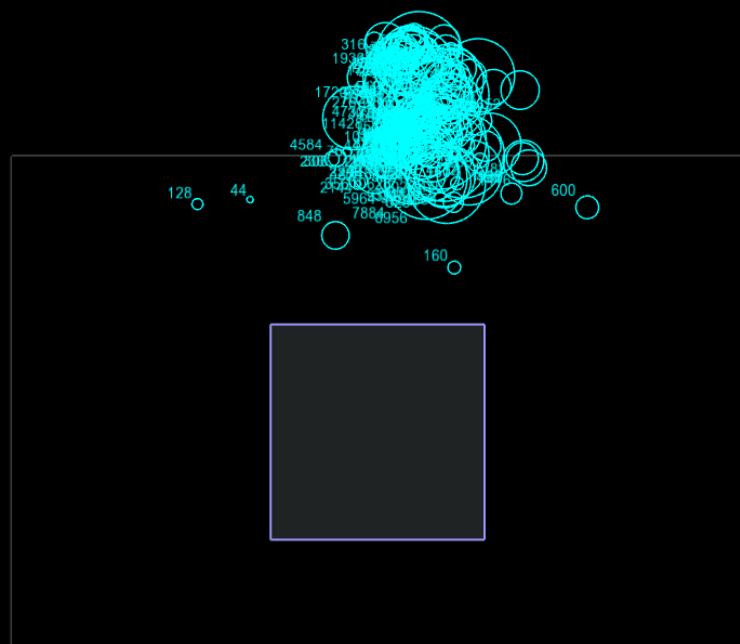
Participant 012



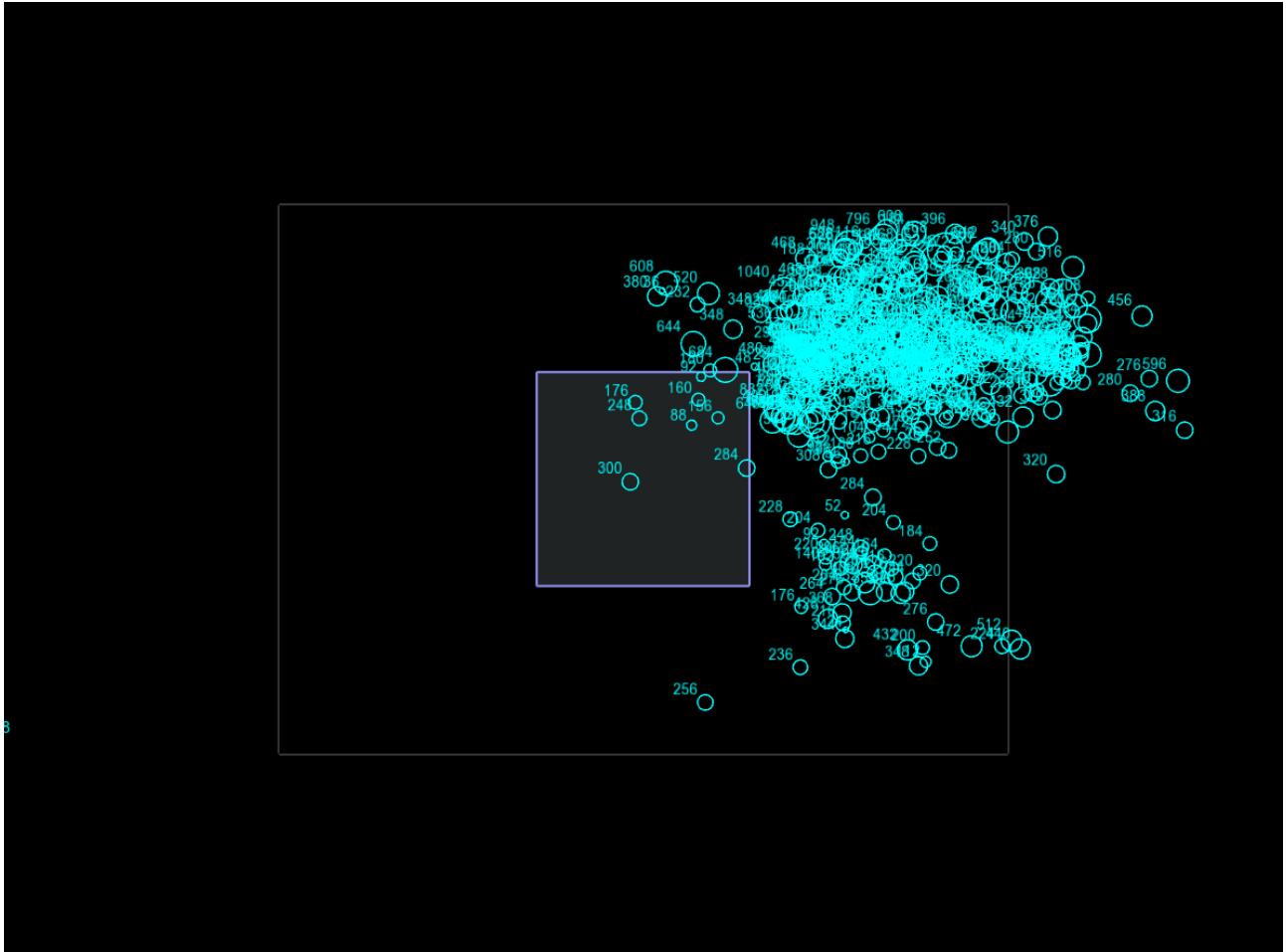
Participant 015



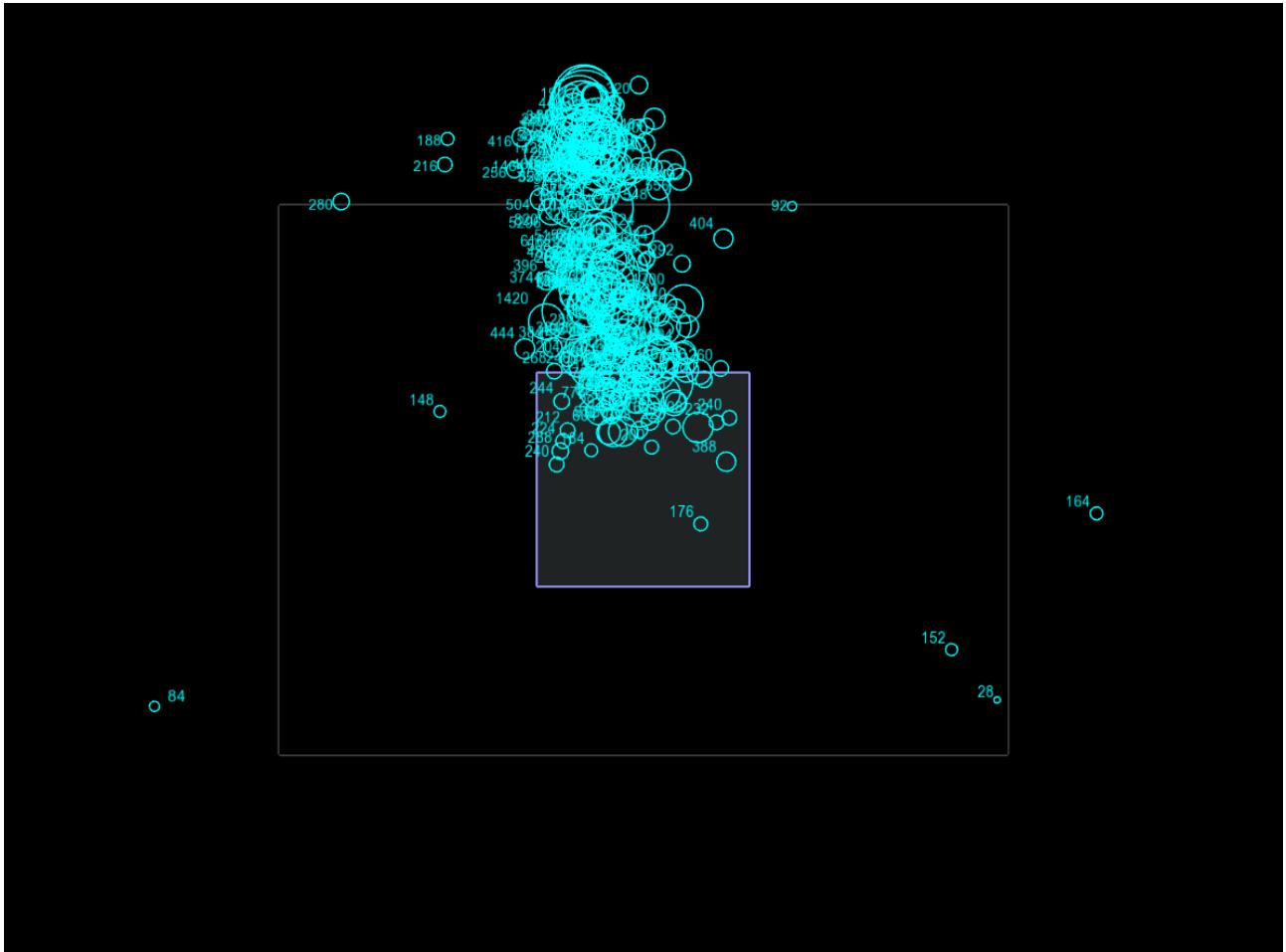
Participant 019



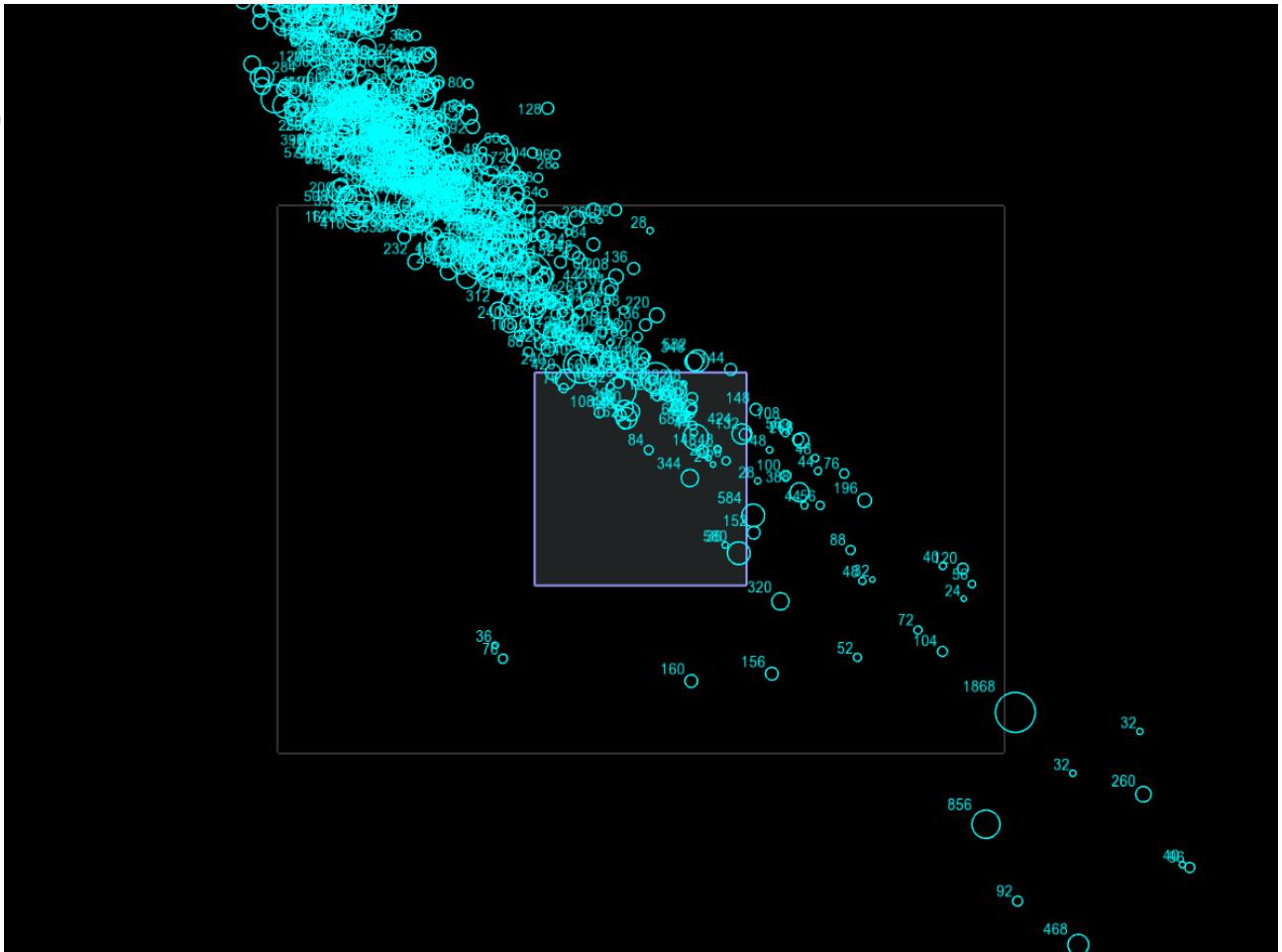
Participant 022



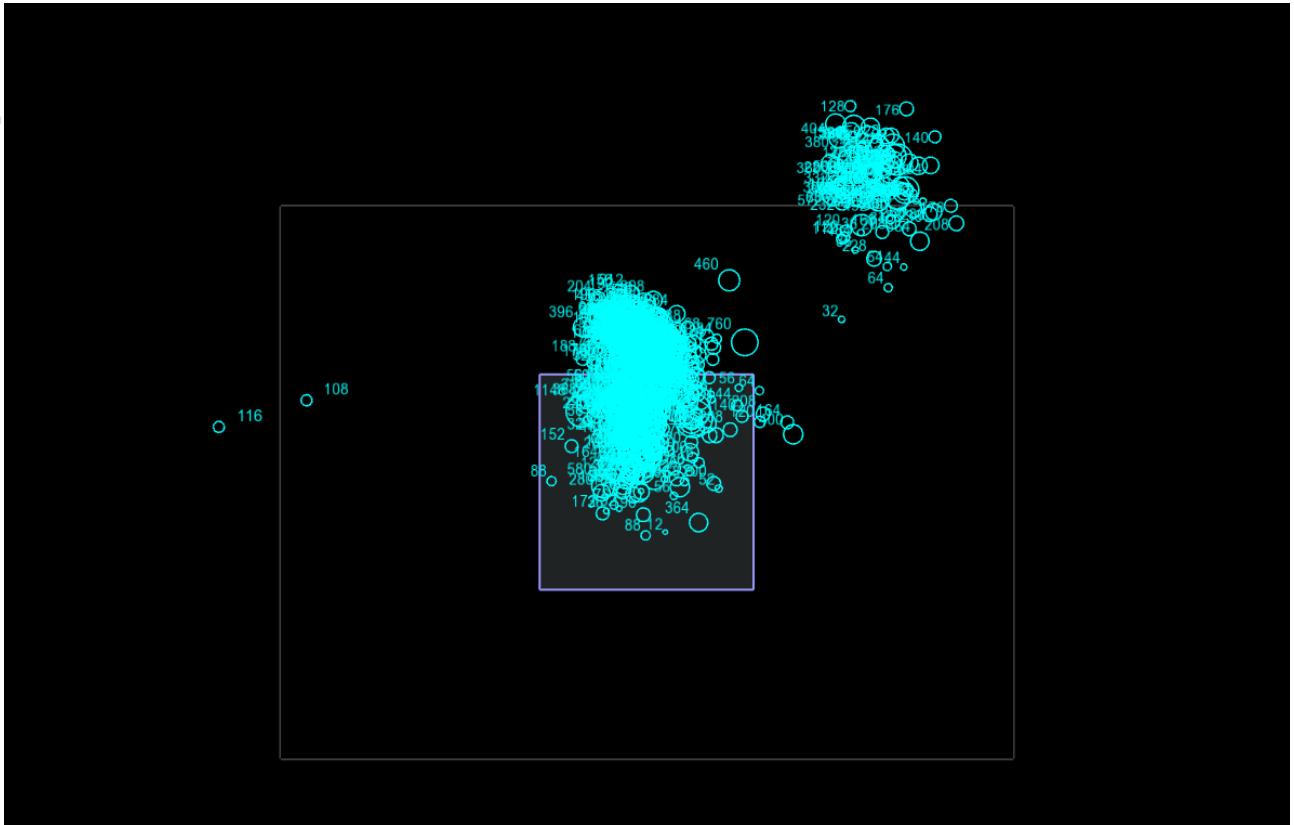
Participant 027



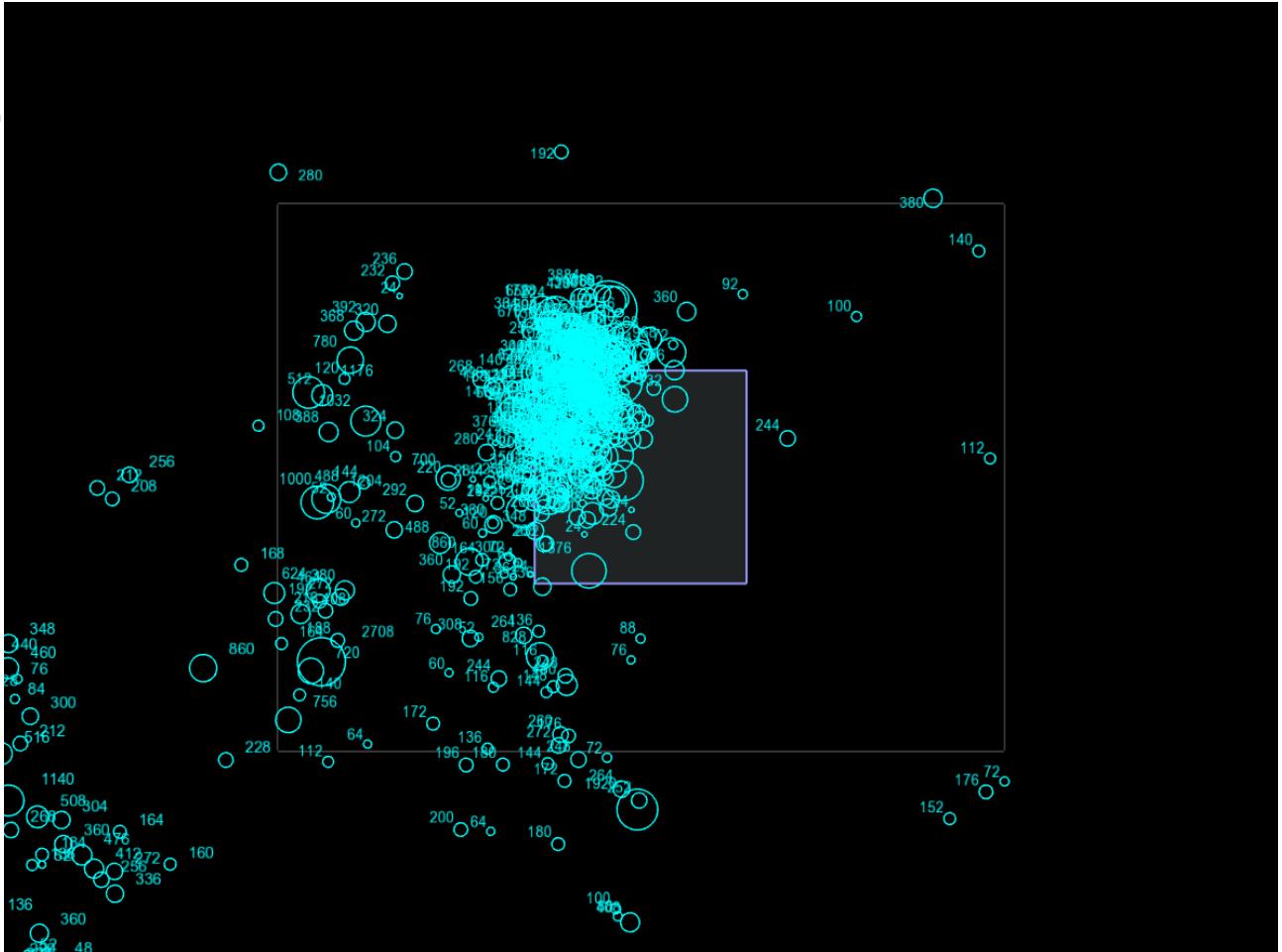
Participant 033



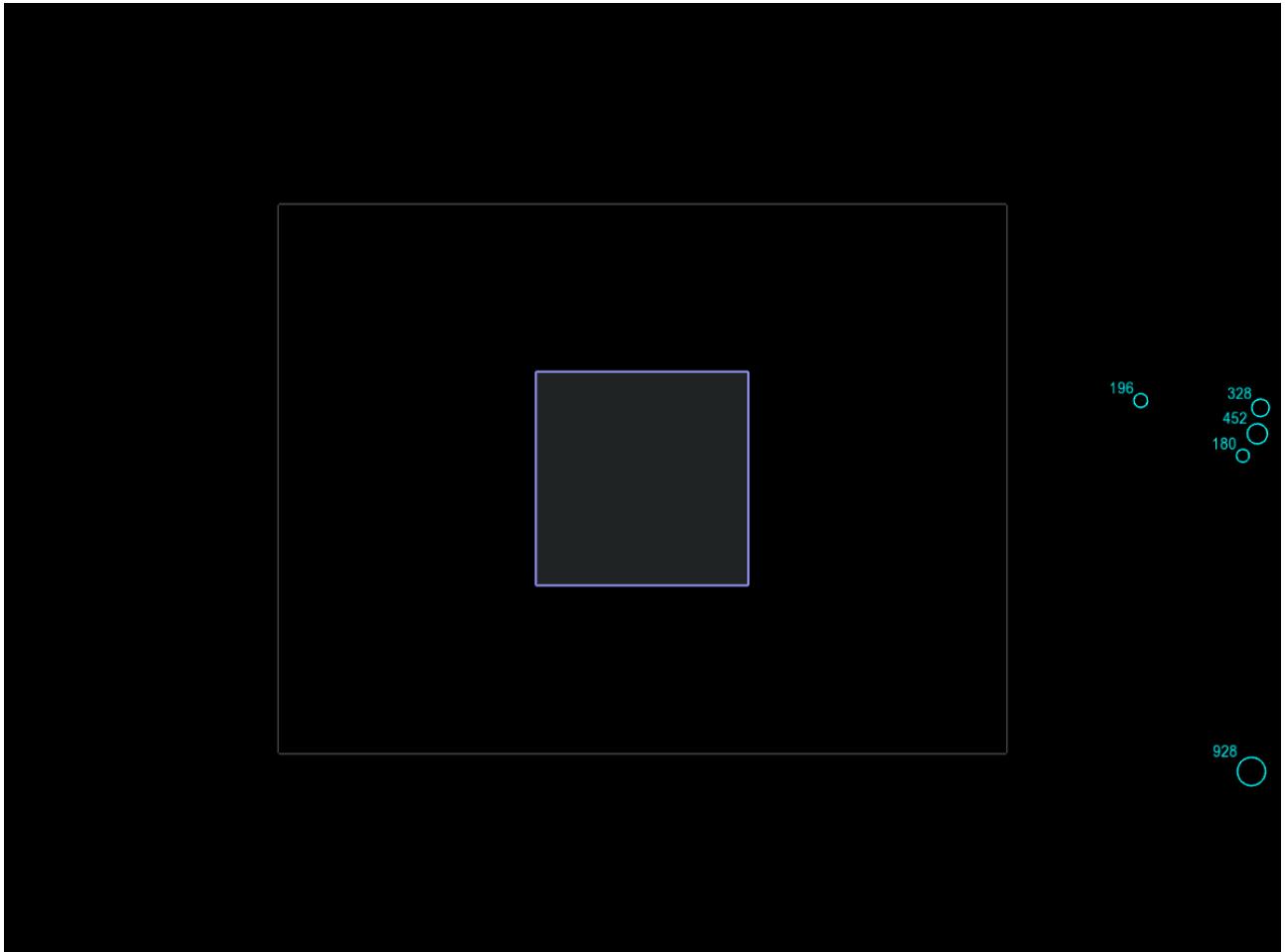
Participant 041



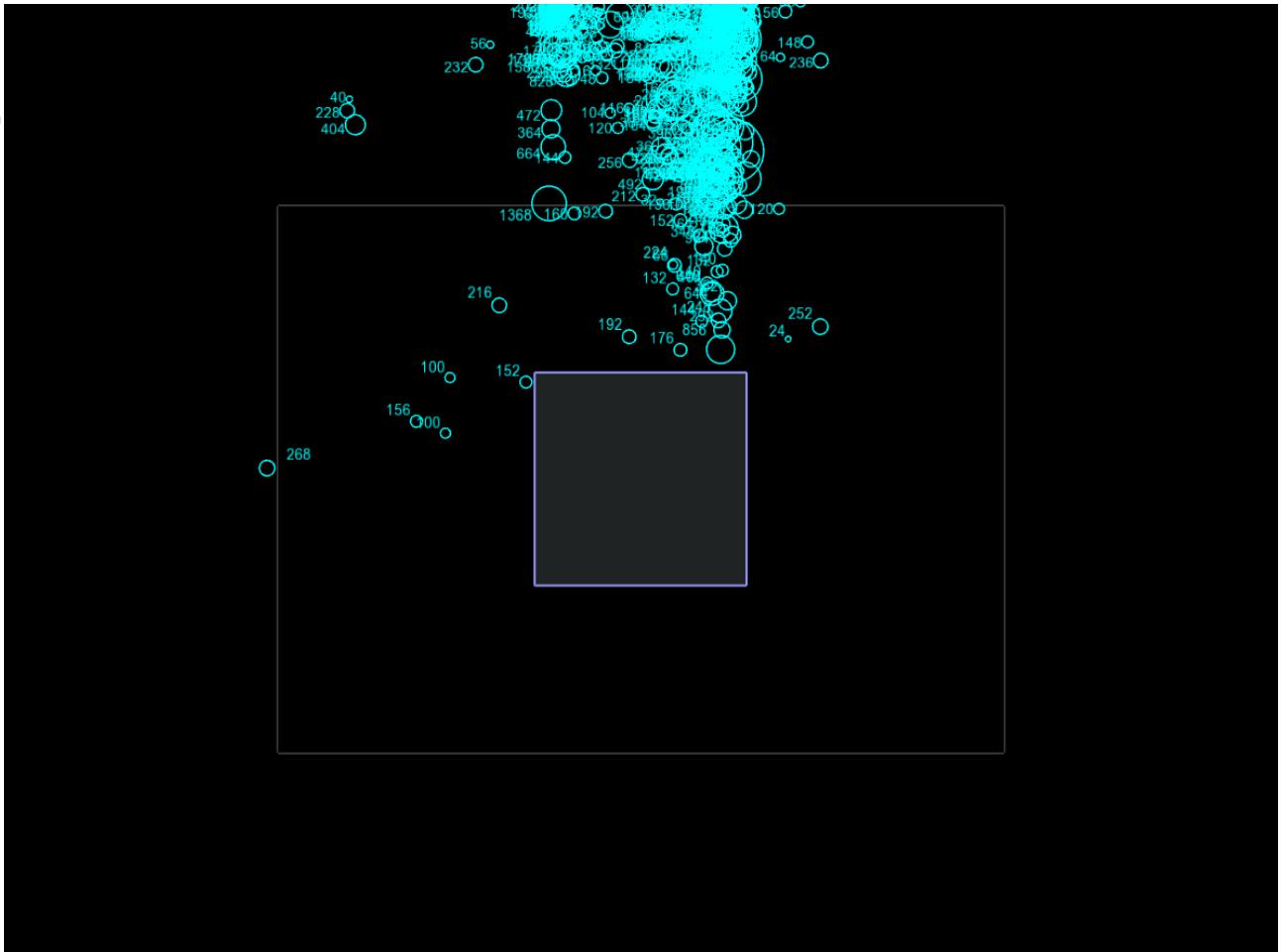
Participant 043



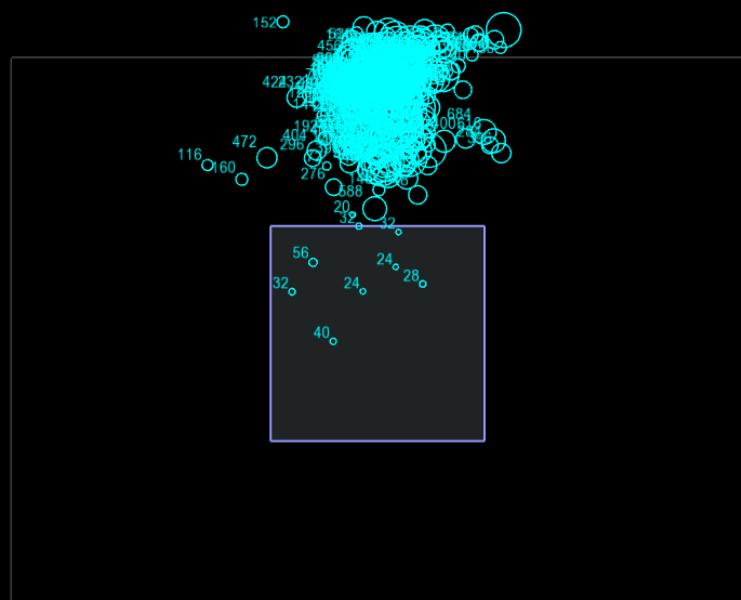
Participant 044



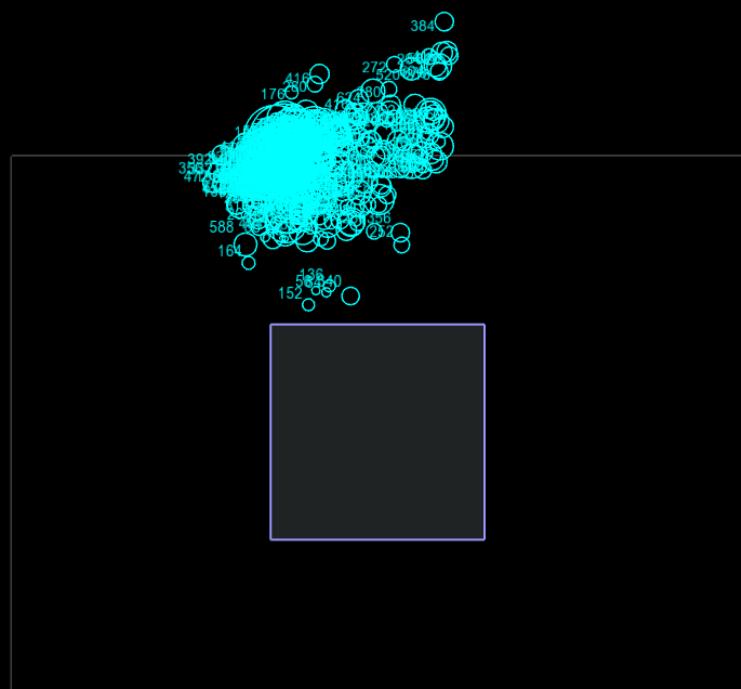
Participant 047



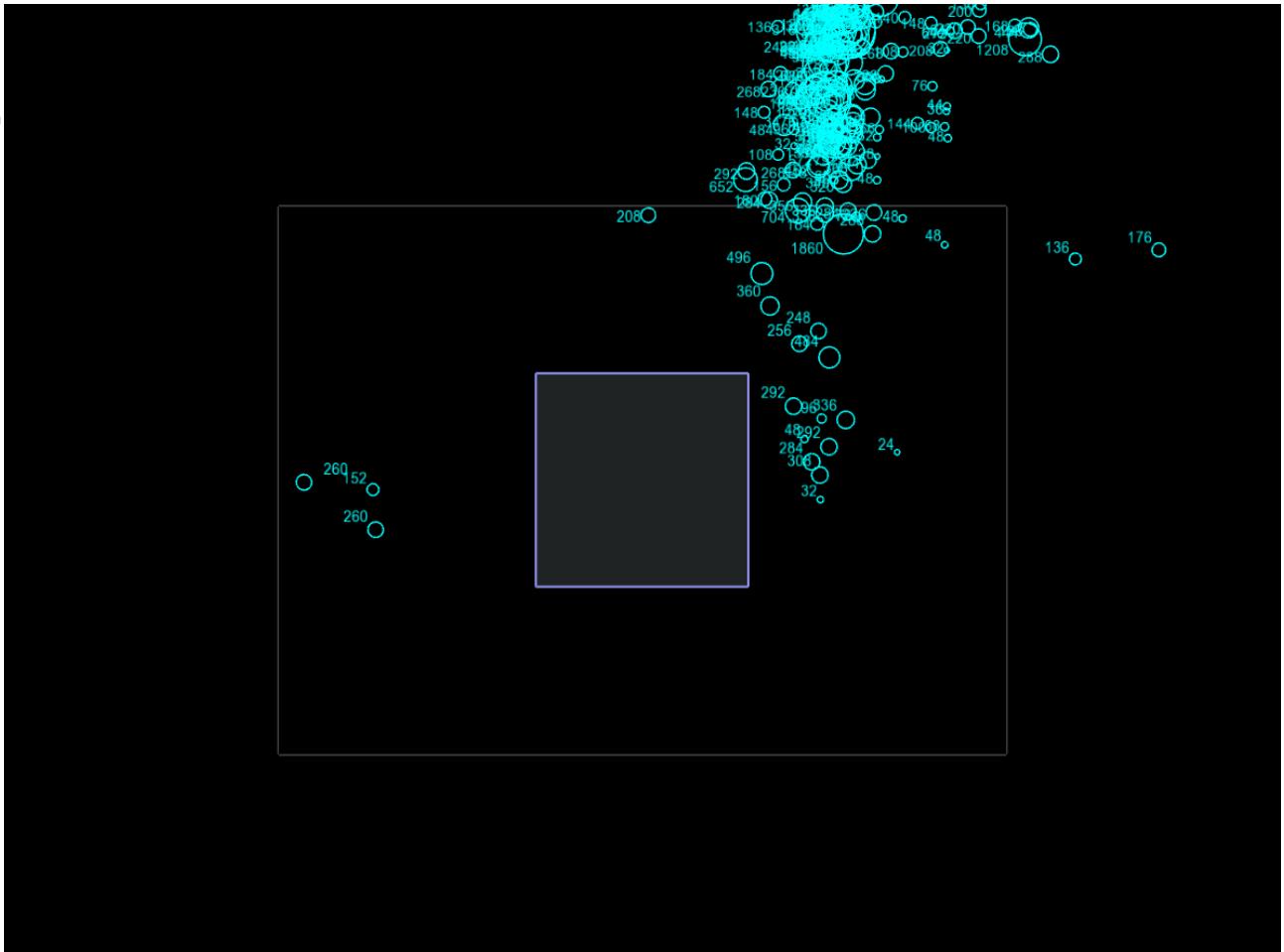
Participant 056



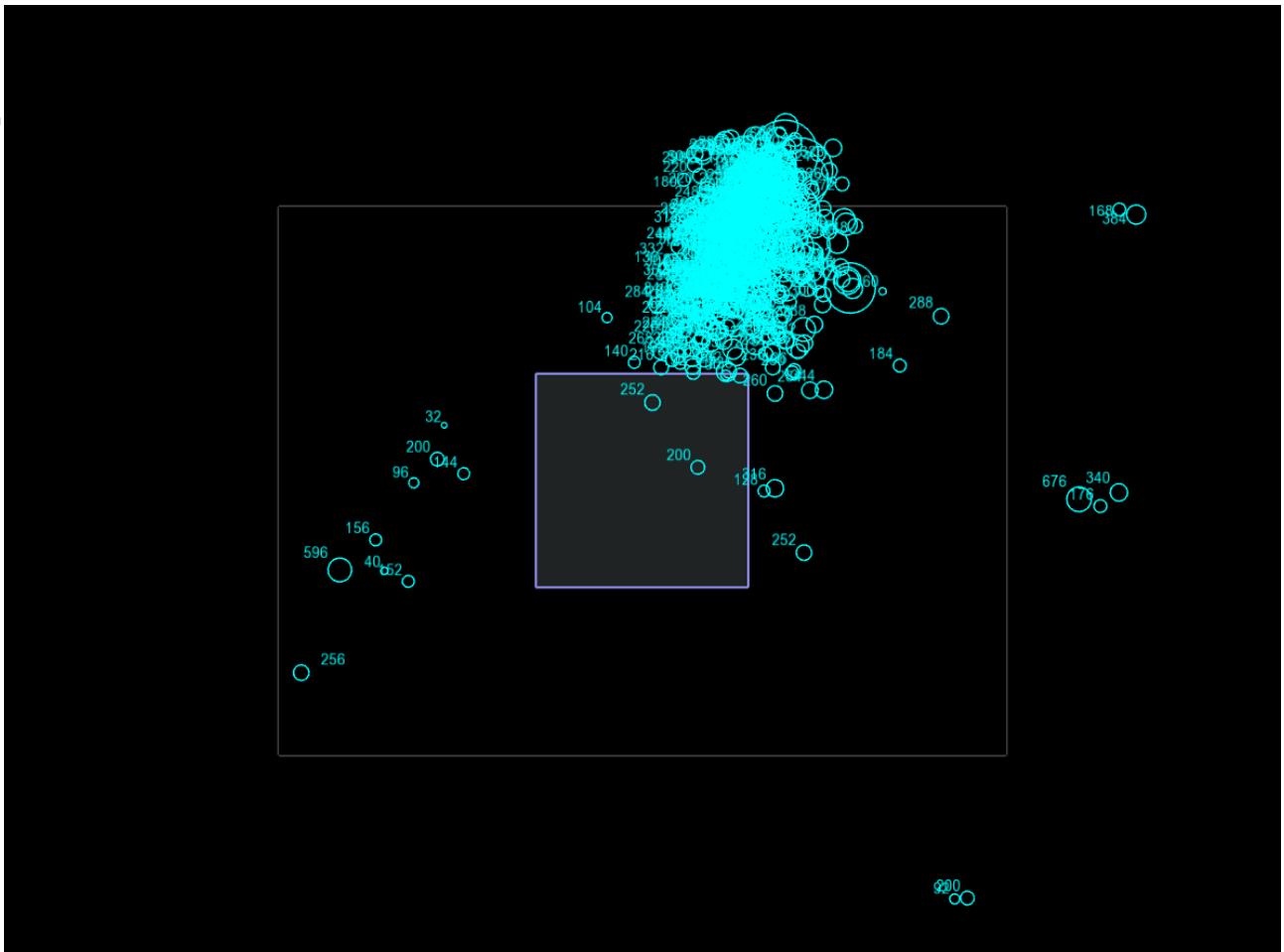
Participant 060



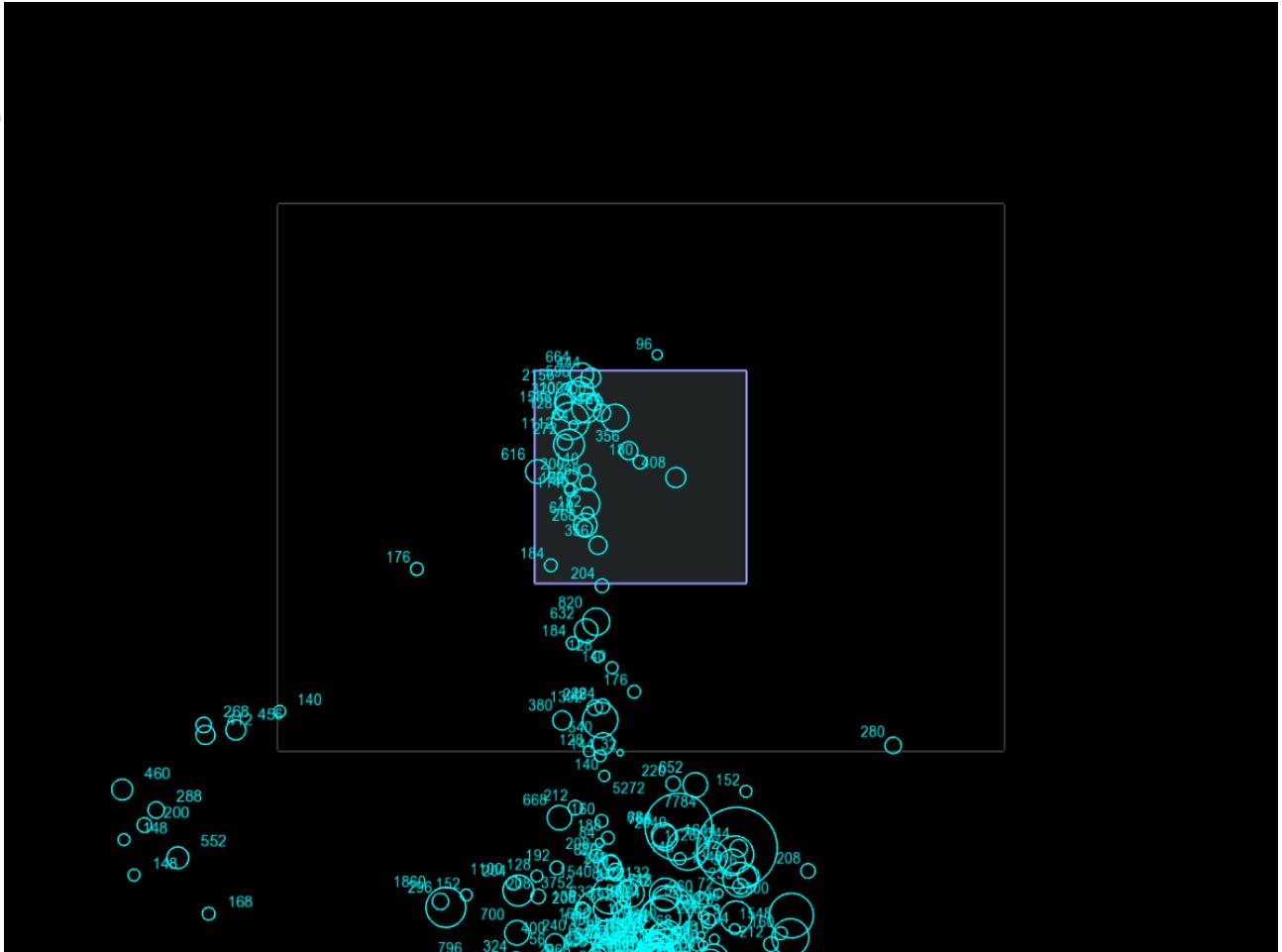
Participant 062



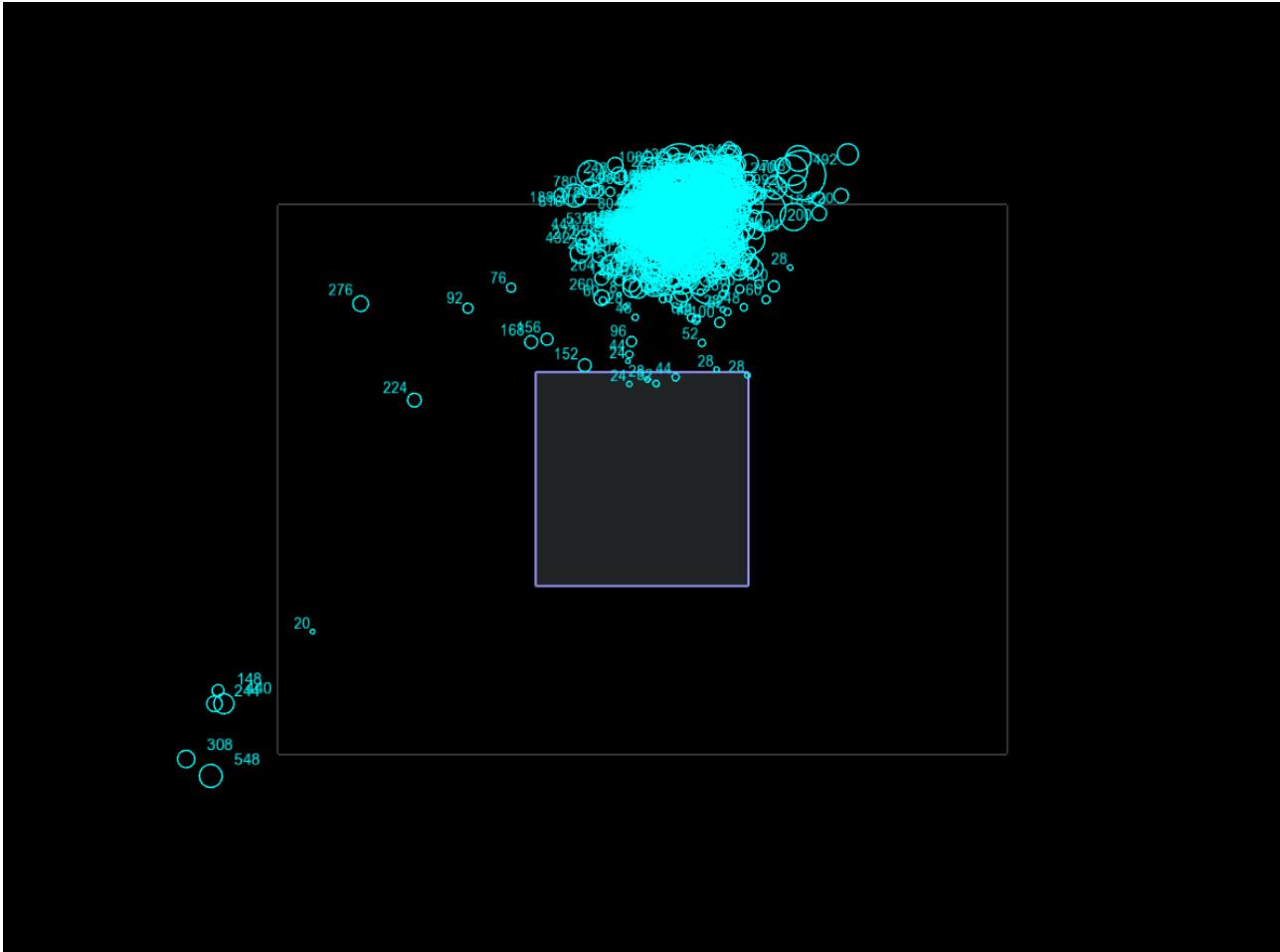
Participant 071



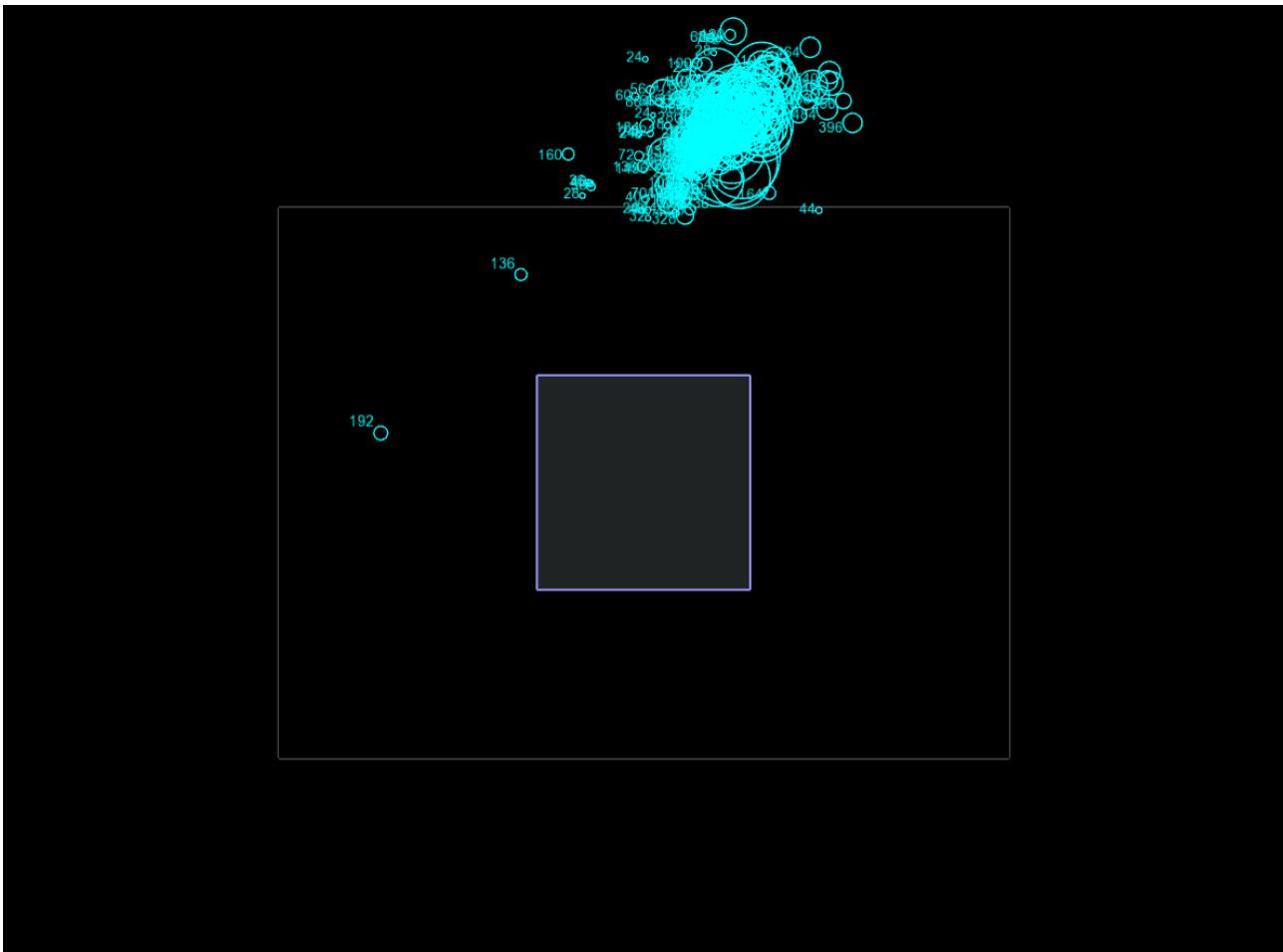
Participant 074



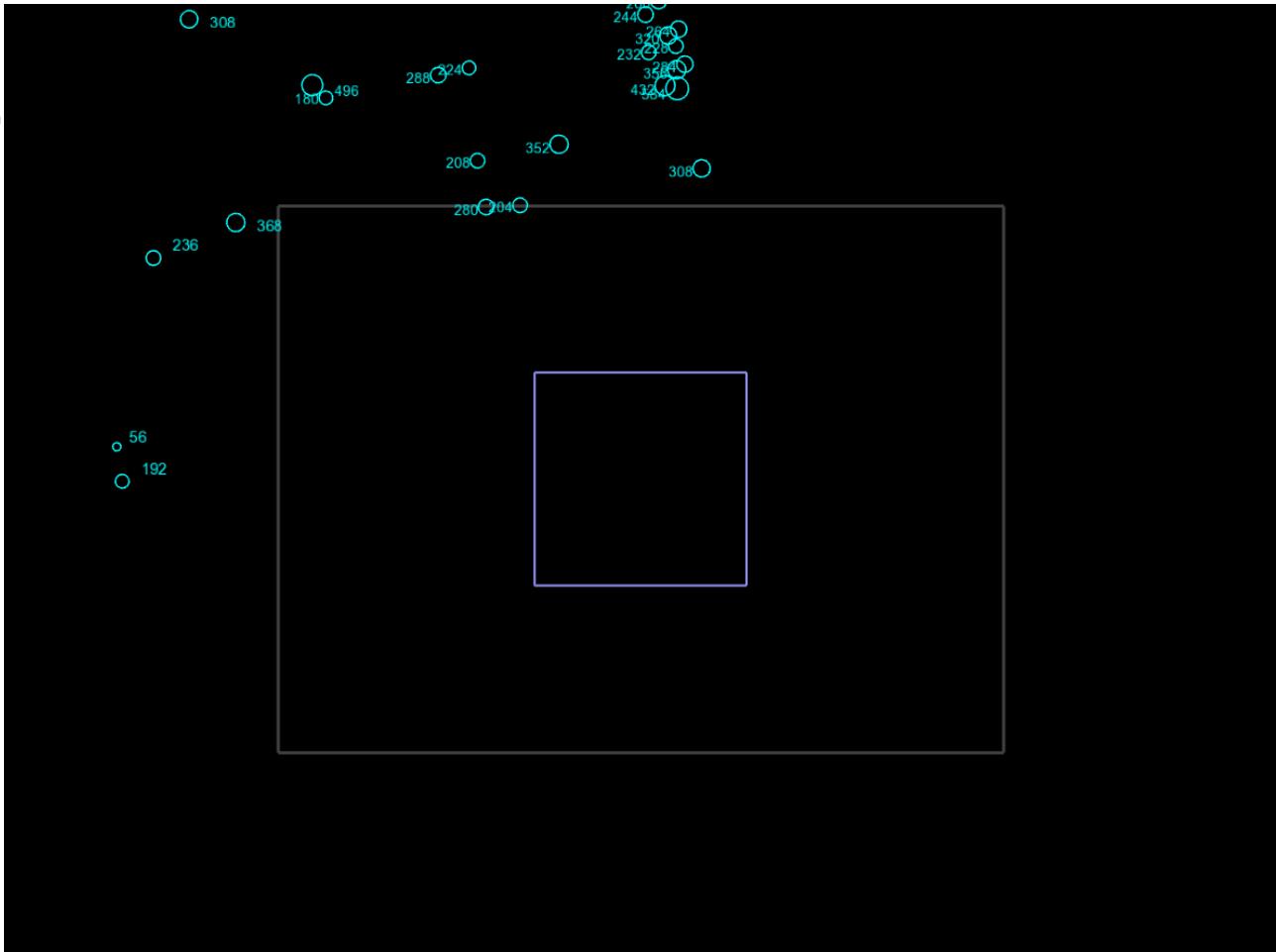
Participant 089



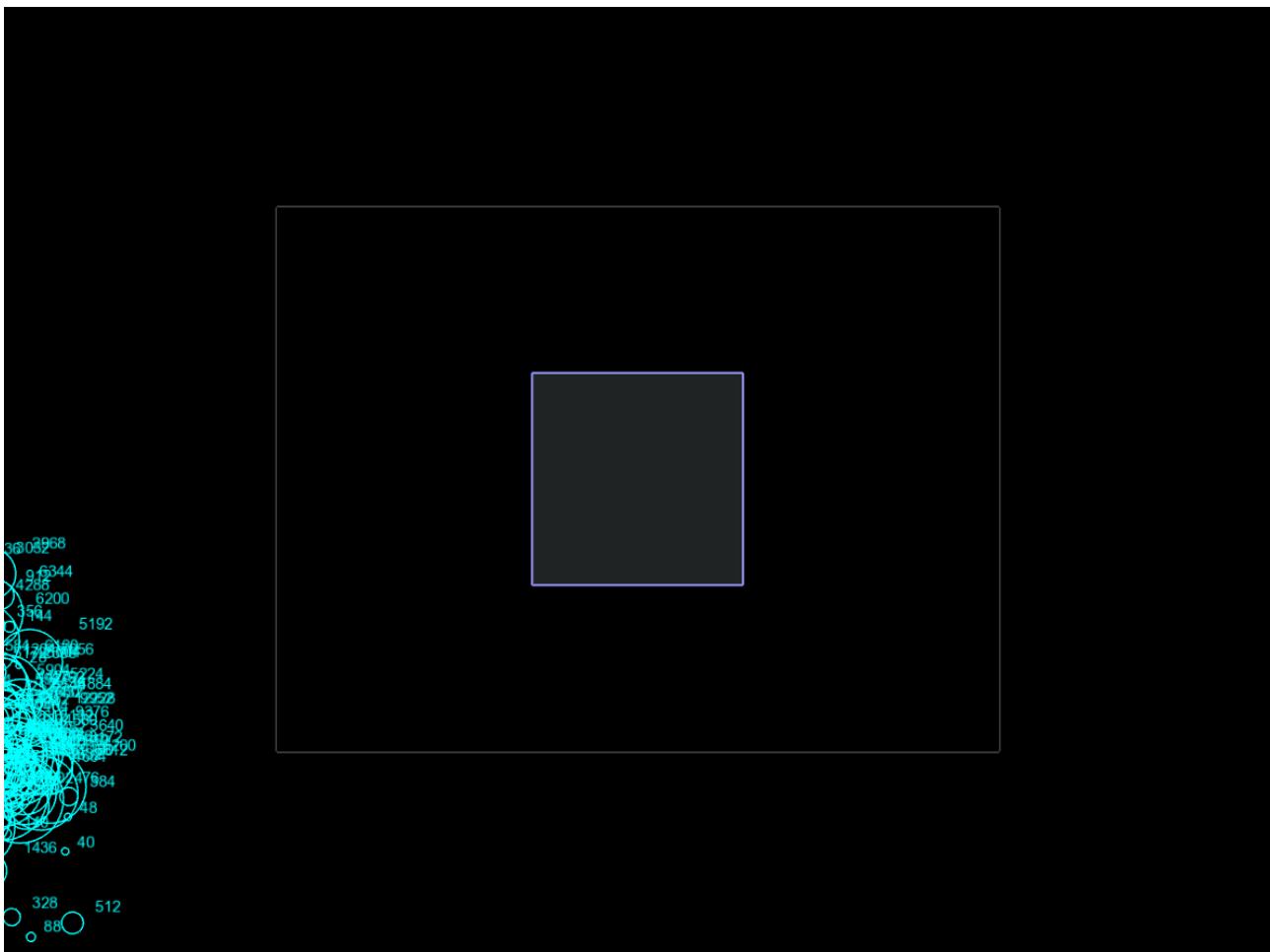
Participant 090



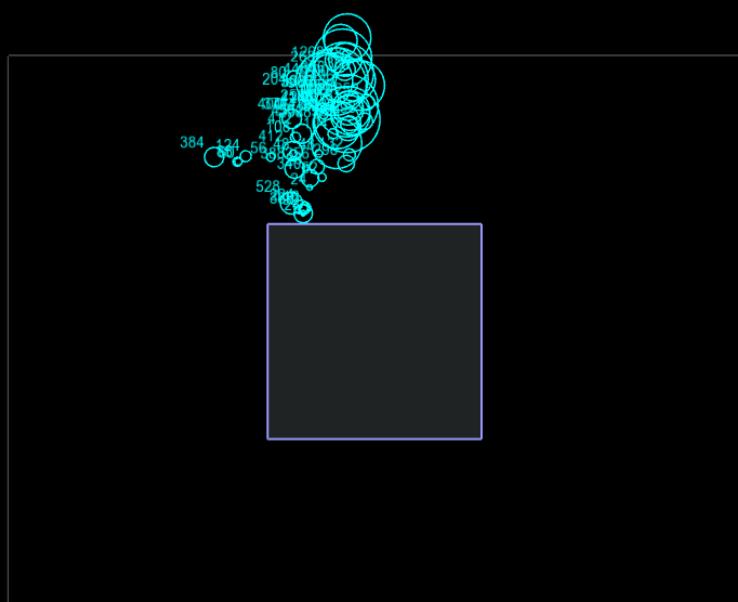
Participant 097



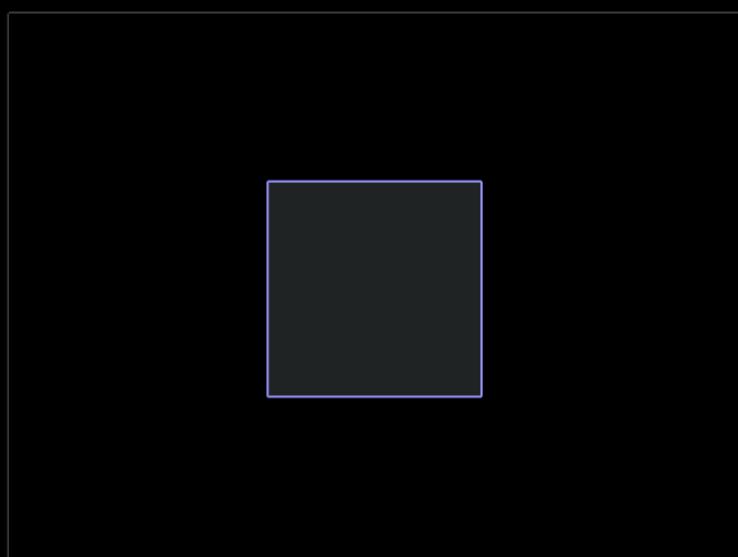
Participant 098



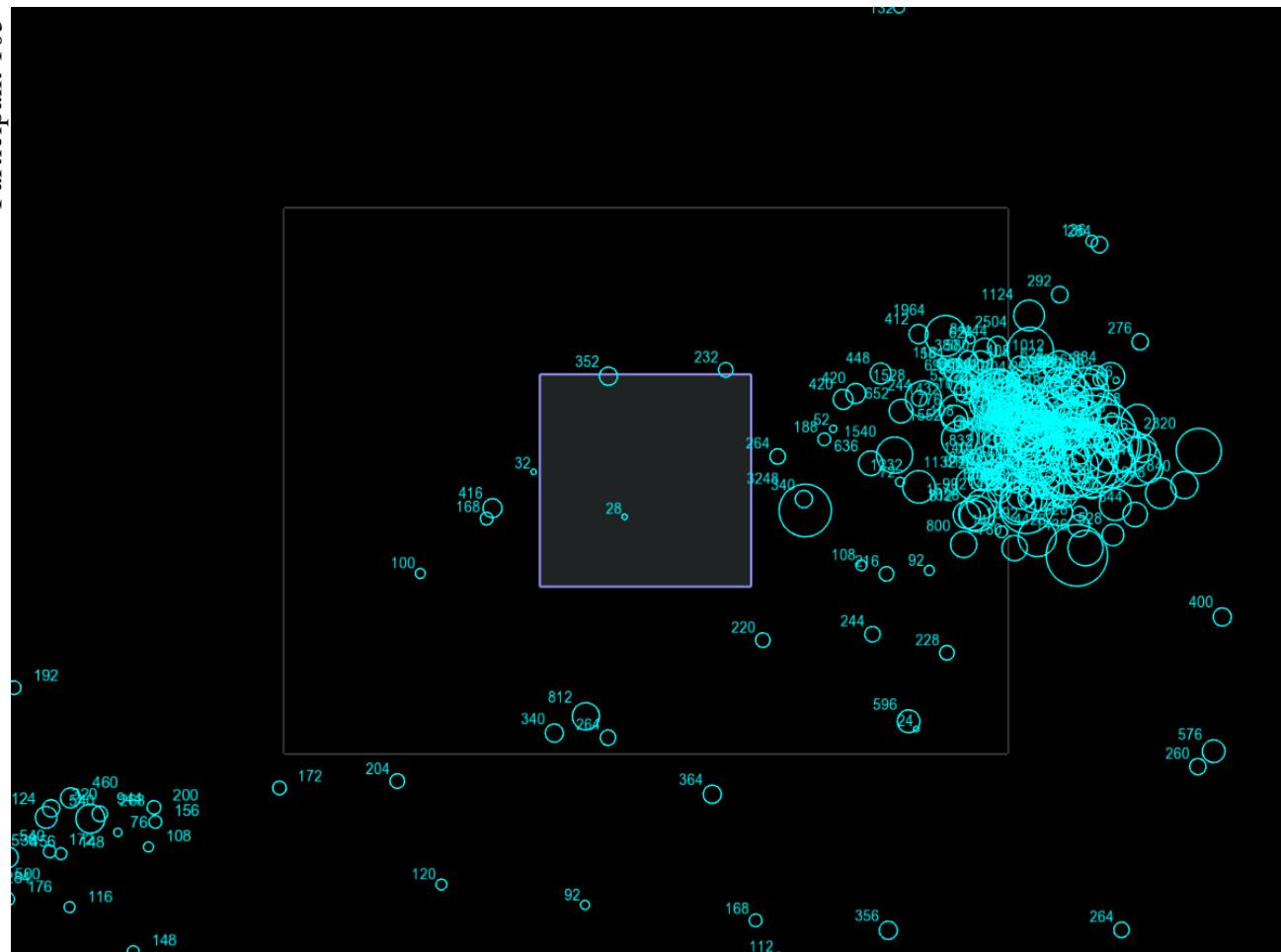
Participant 101



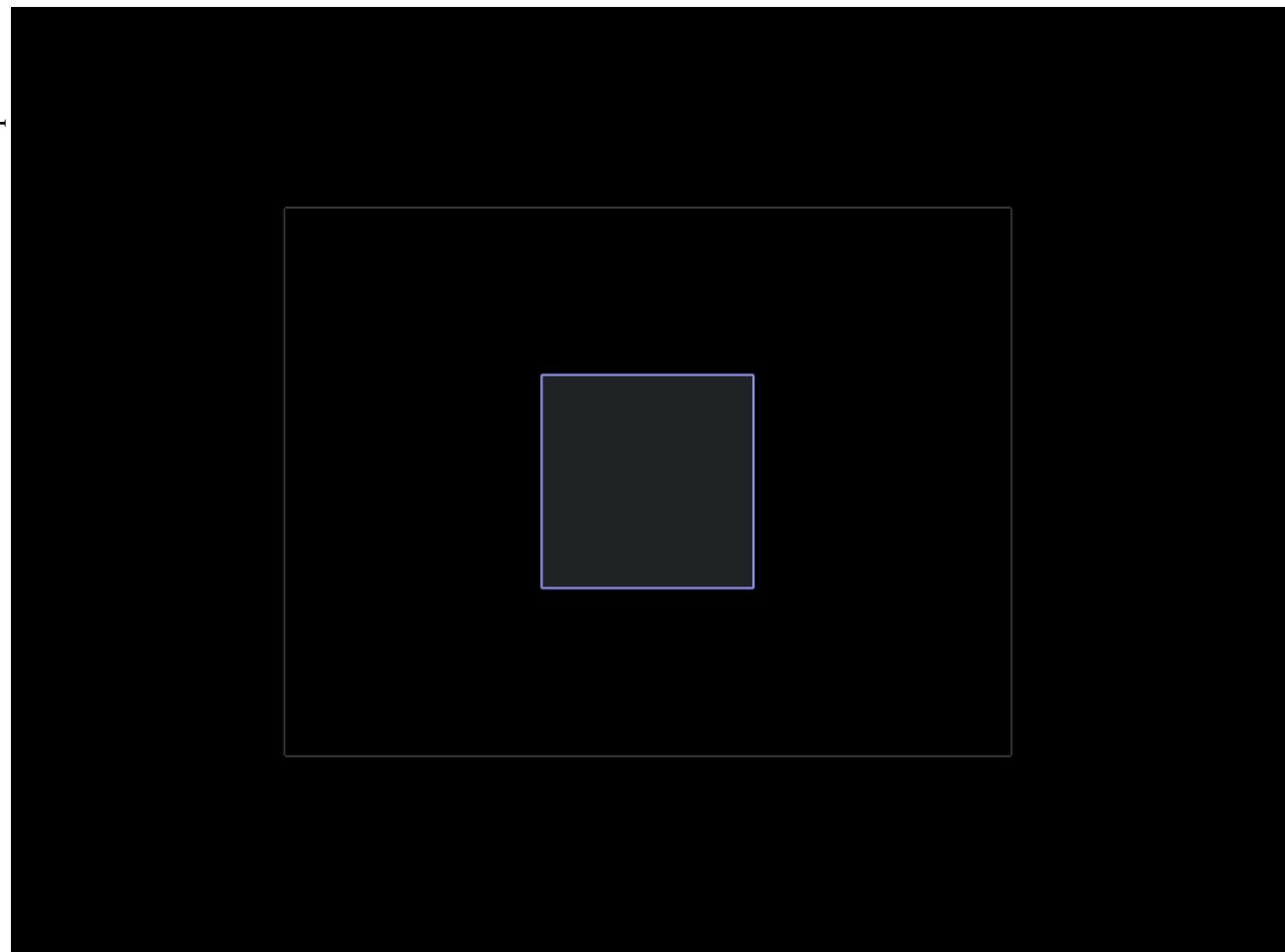
Participant 102



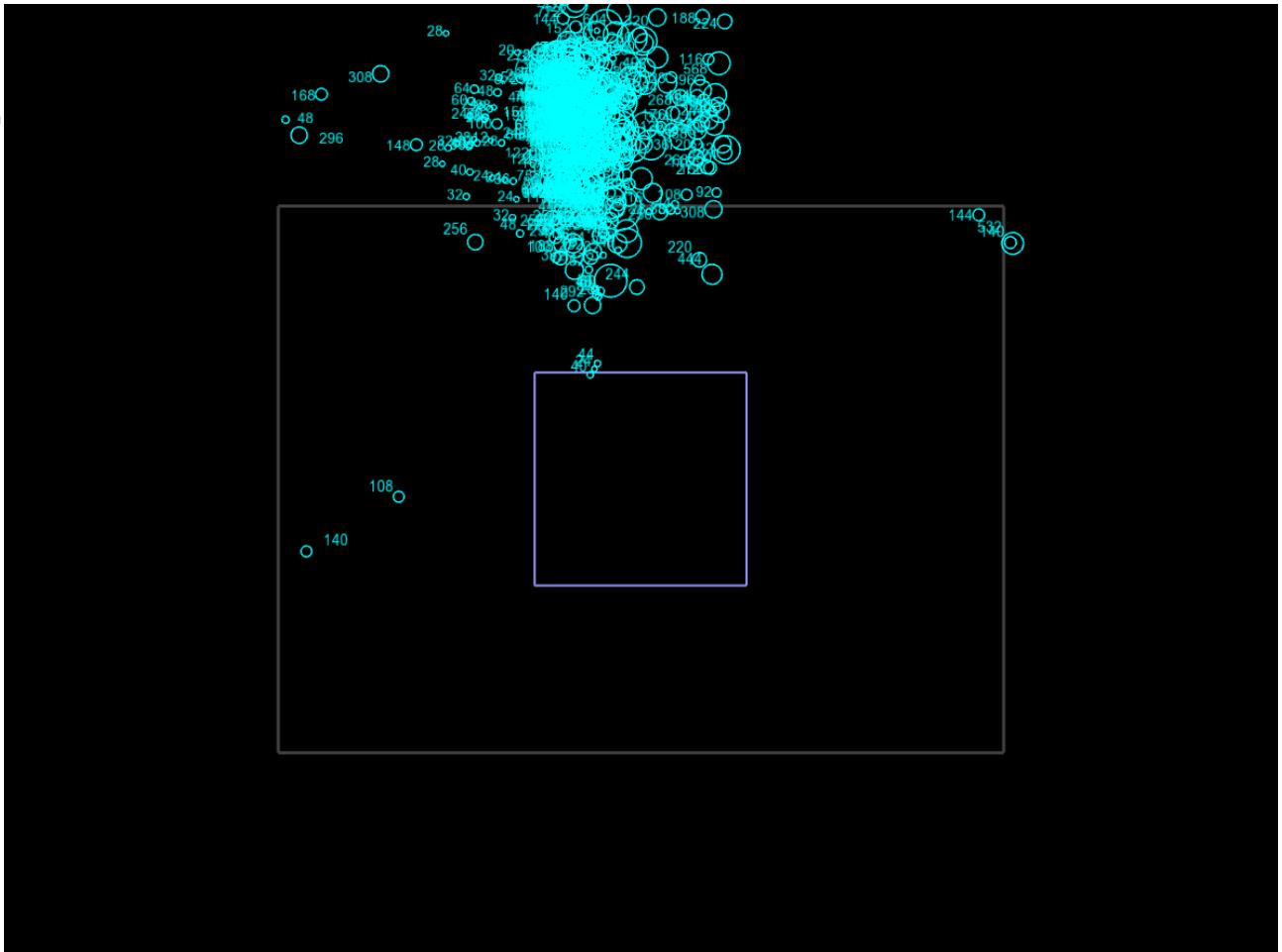
Participant 105



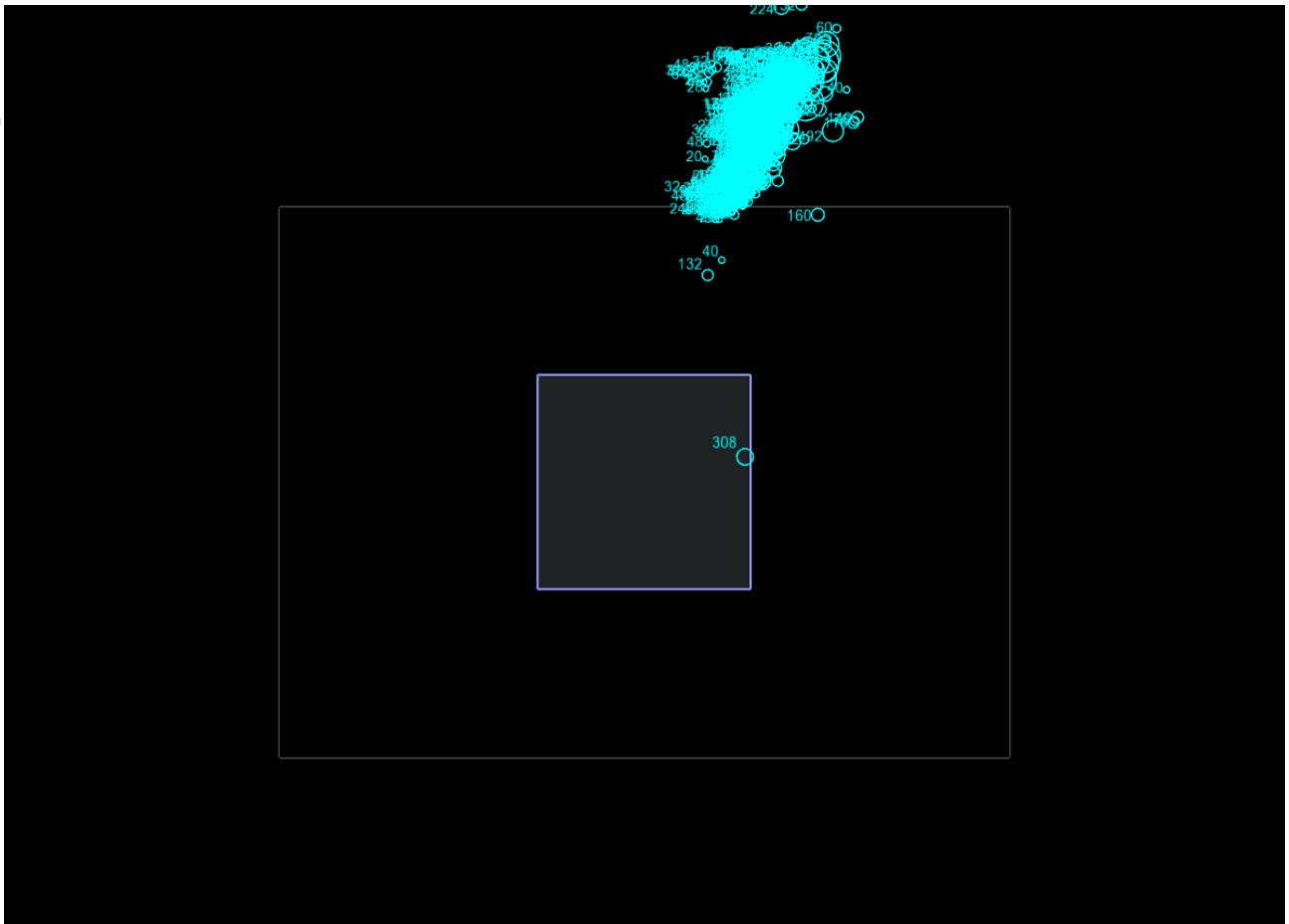
Participant 110



Participant 112



Participant 113

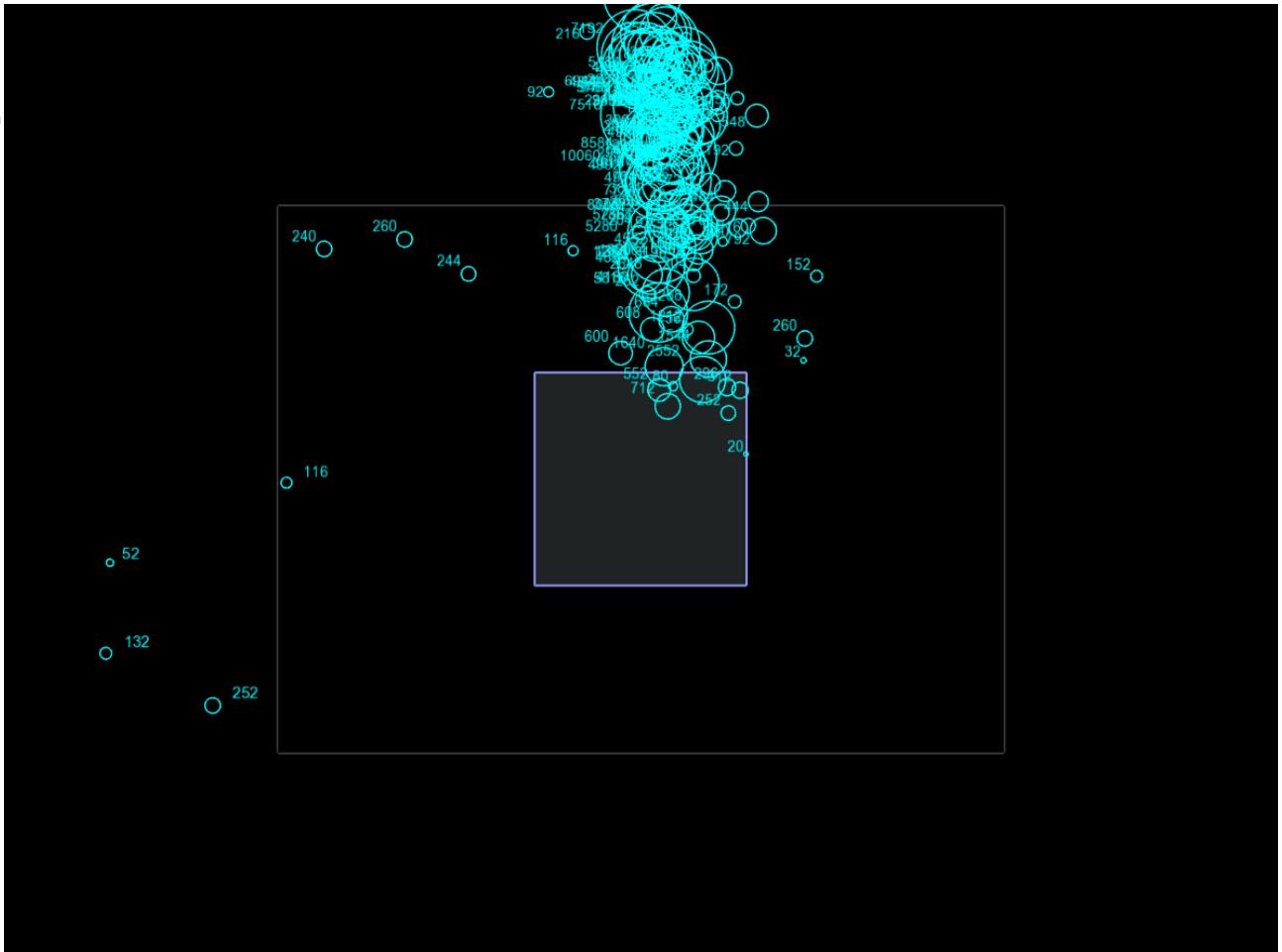


Participant 114

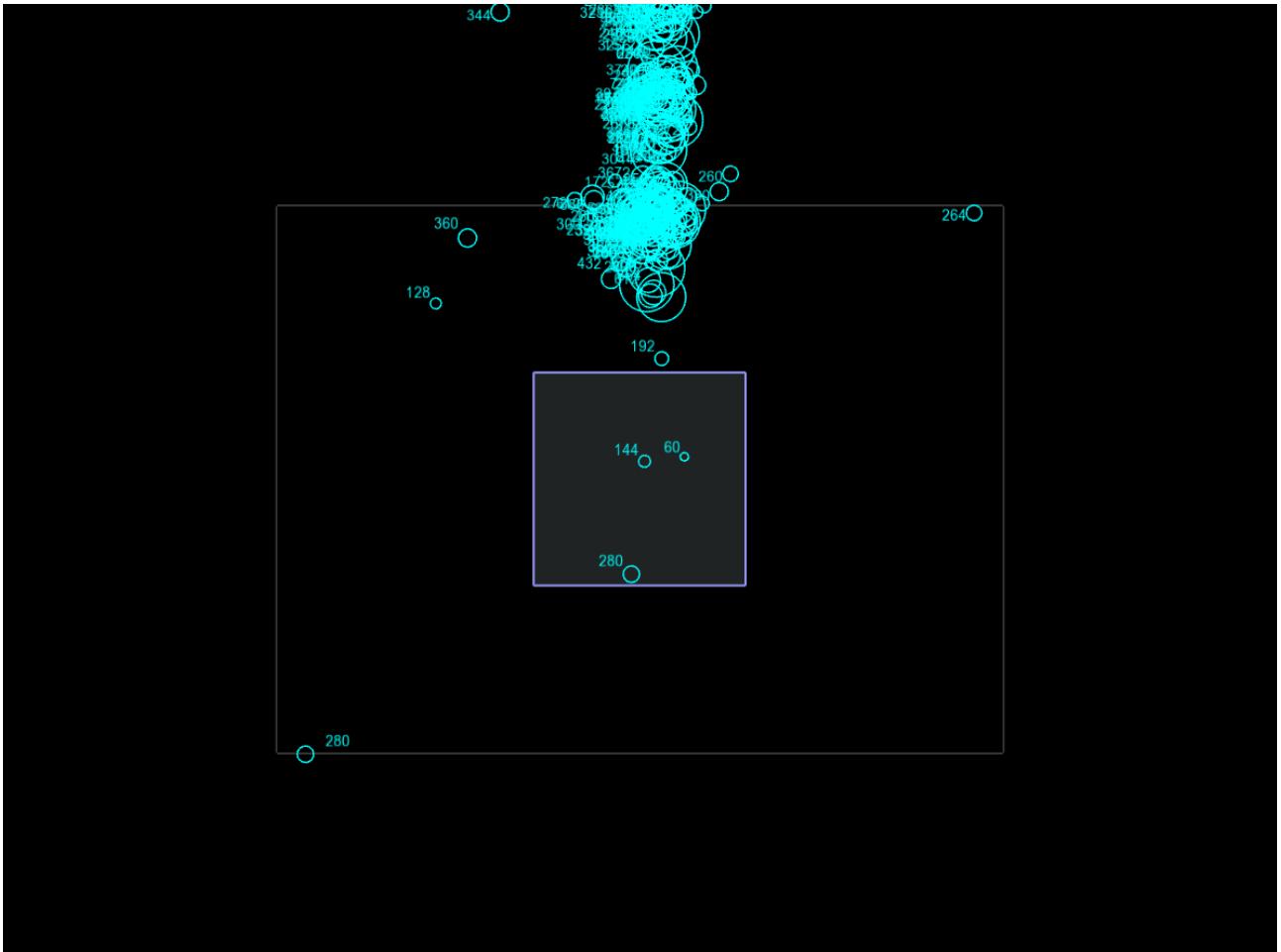
Participant 117



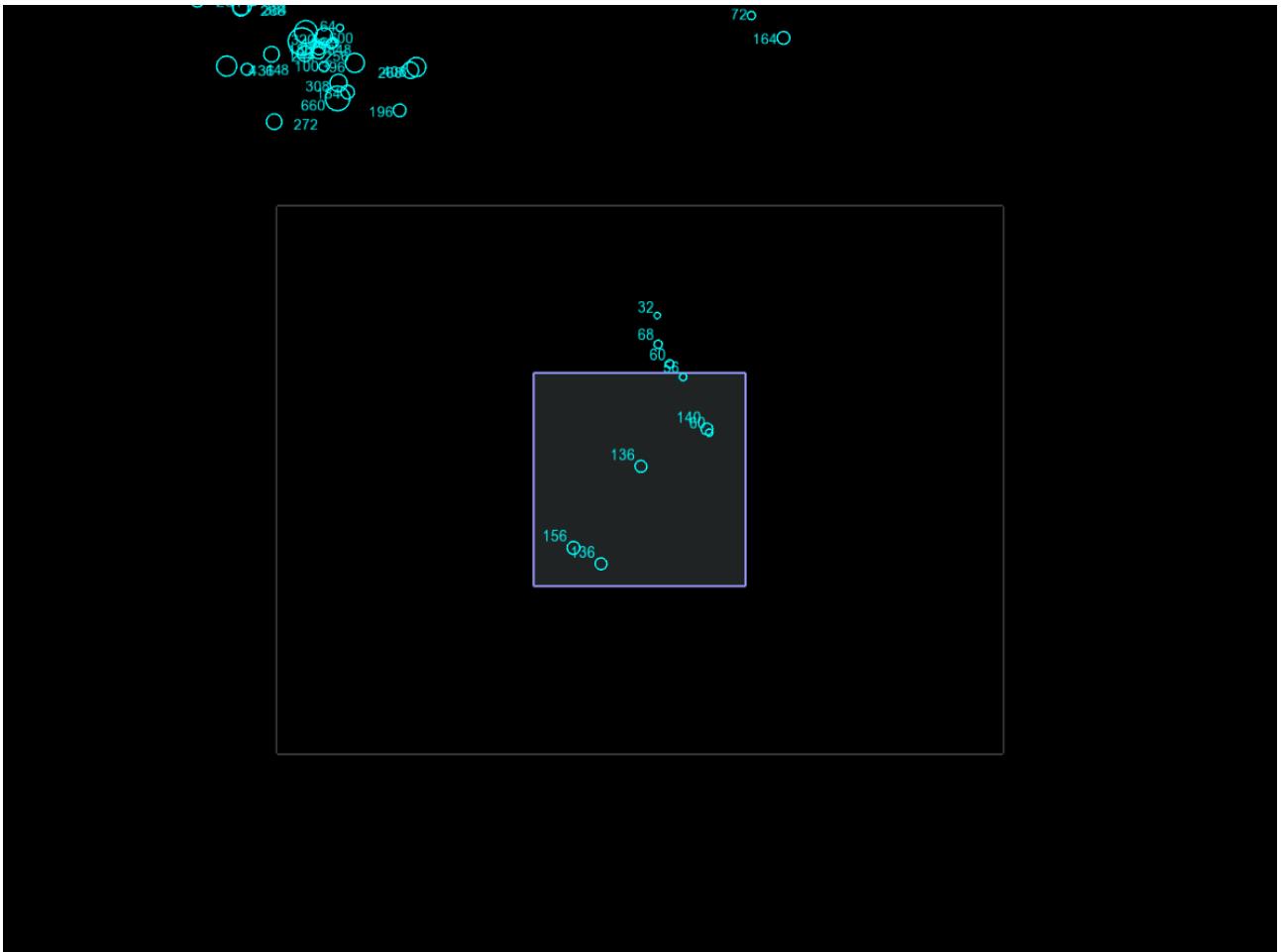
Participant 119



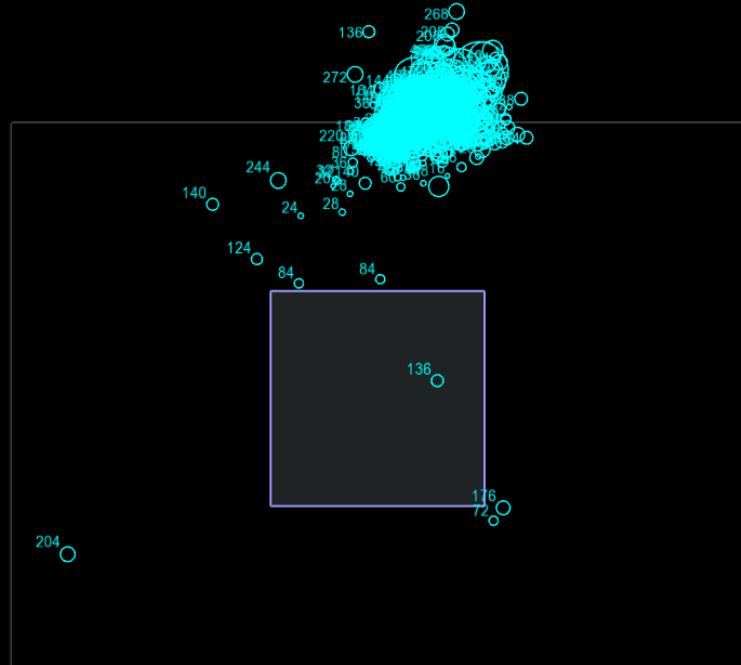
Participant 125



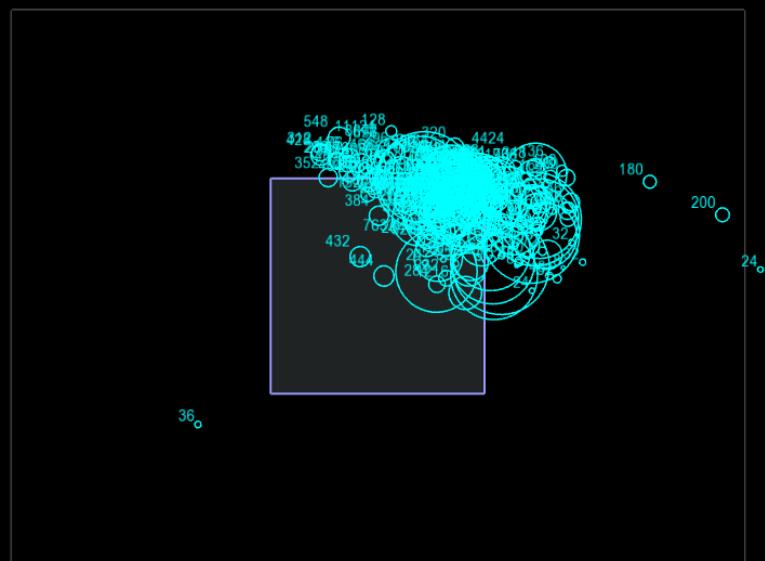
Participant 126



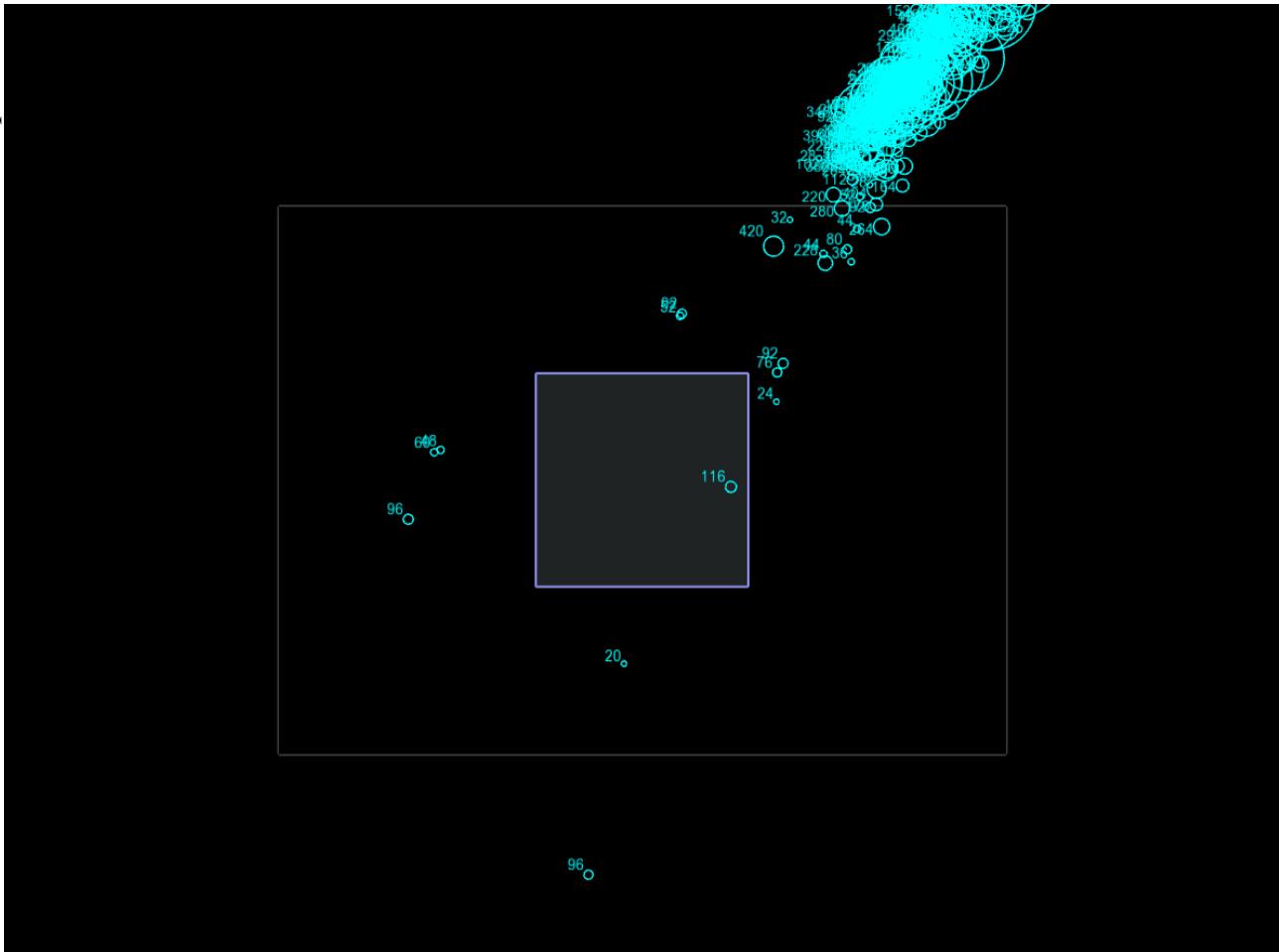
Participant 128



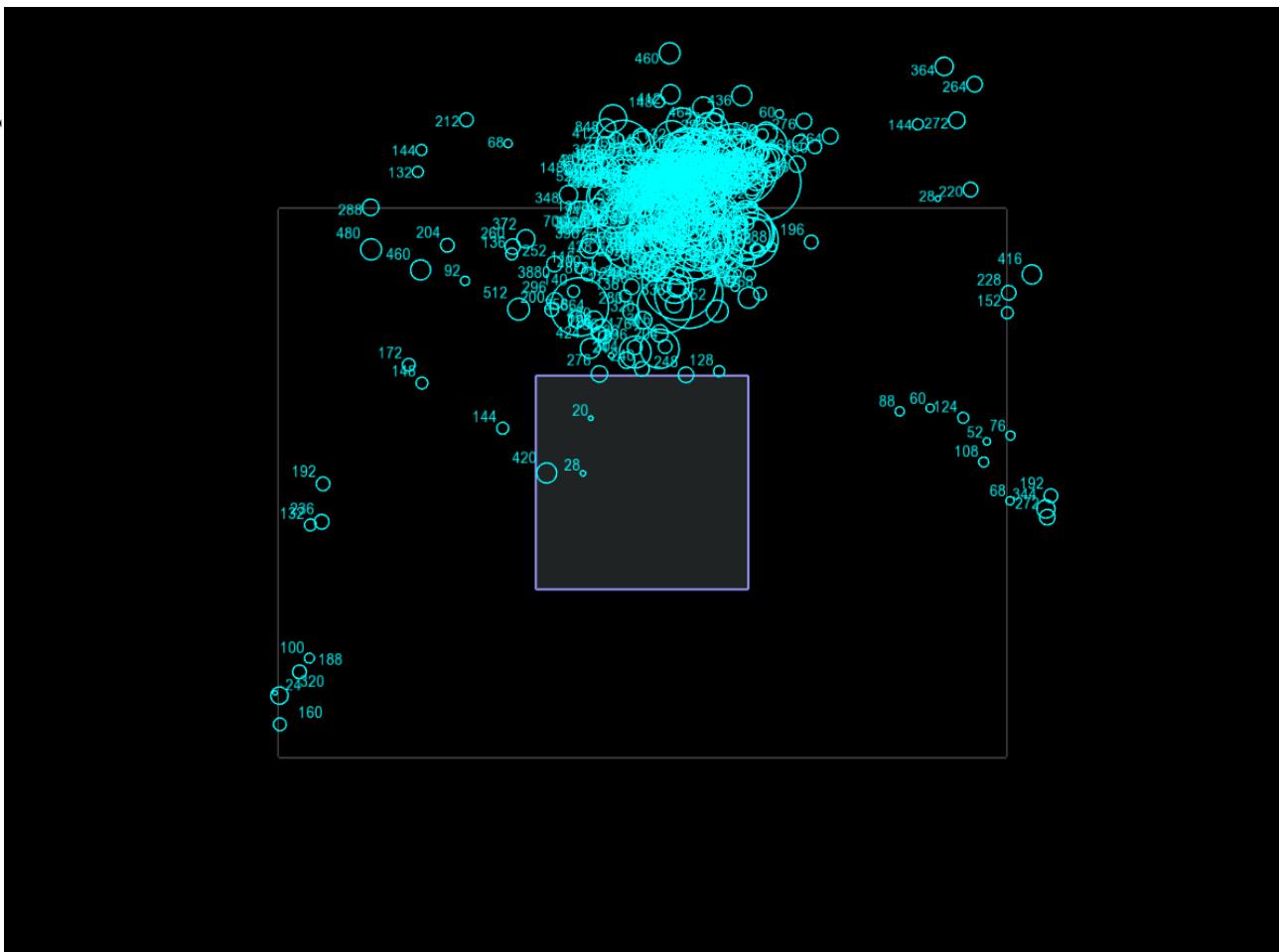
Participant 130



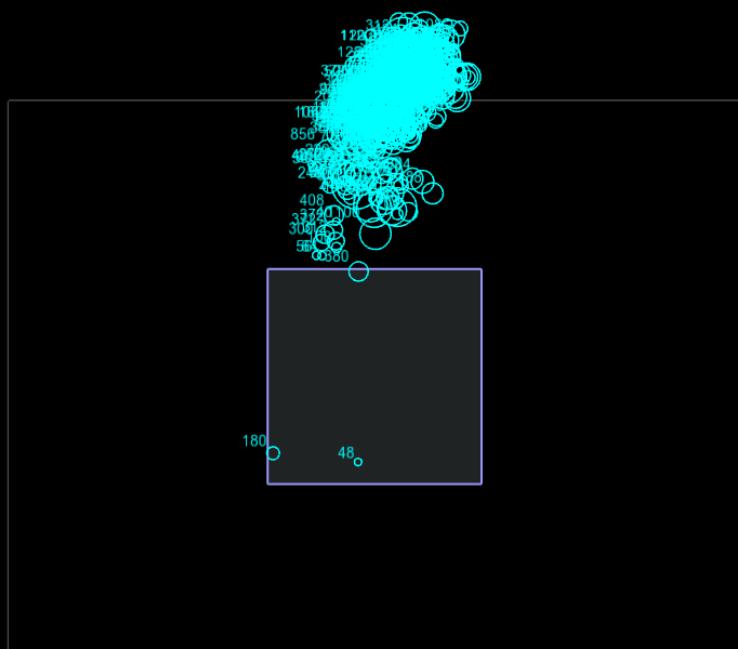
Participant 132



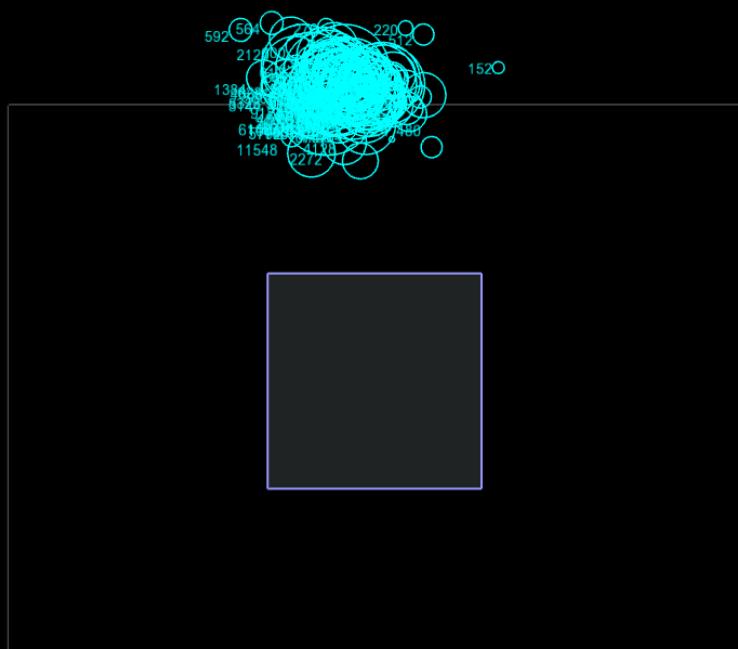
Participant 136



Participant 137

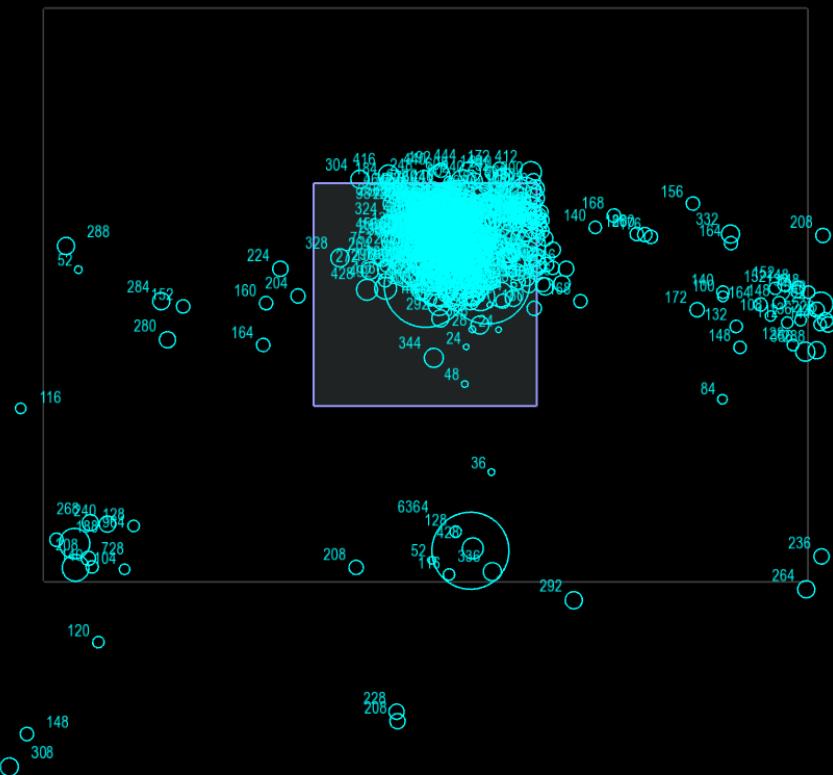


Participant 142

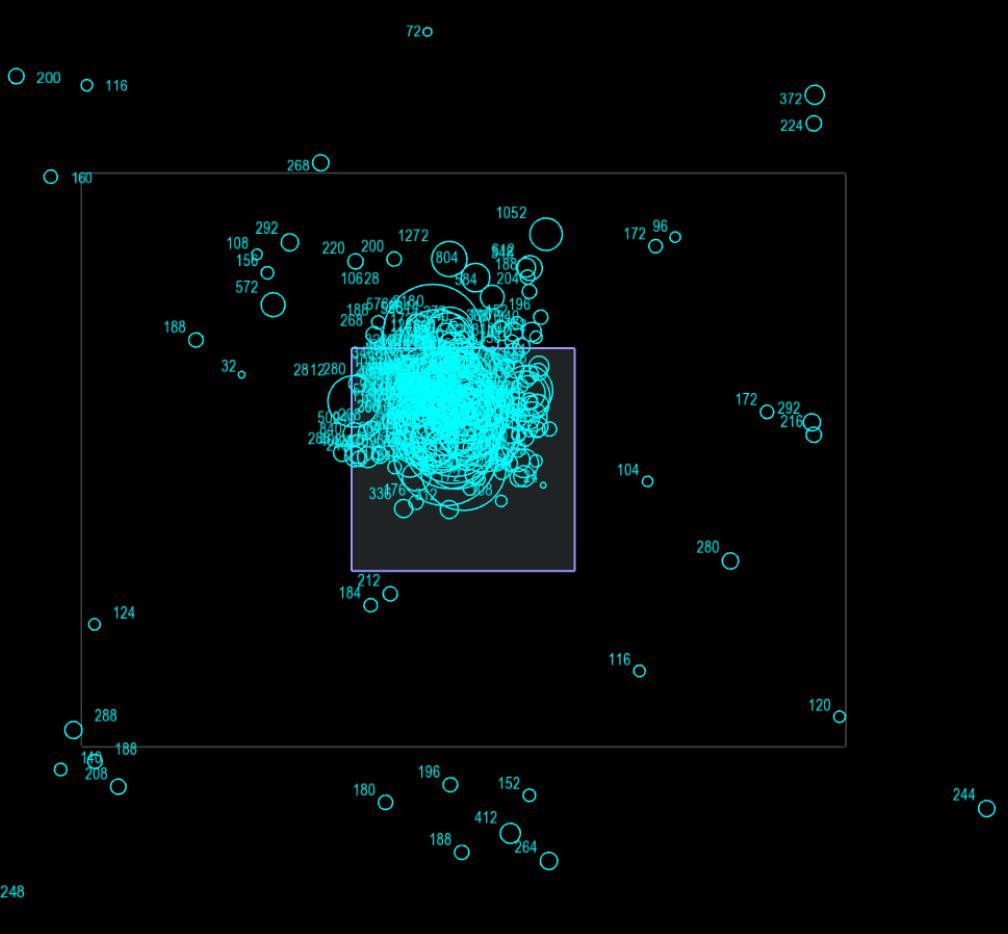


Participant 008

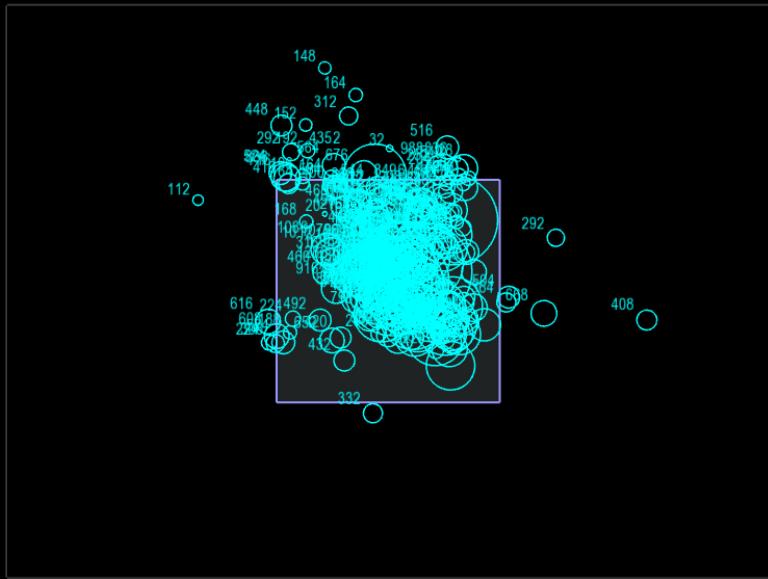
## Good AOI Participants



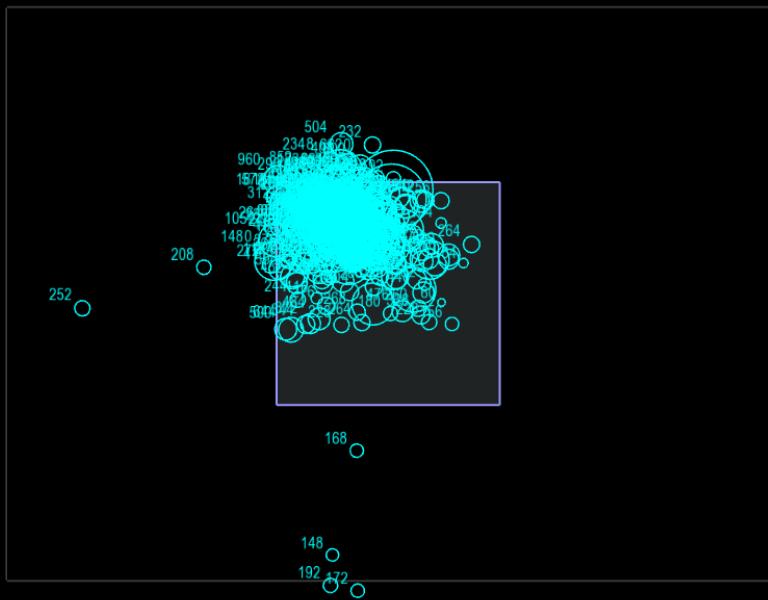
Participant 009



Participant 013

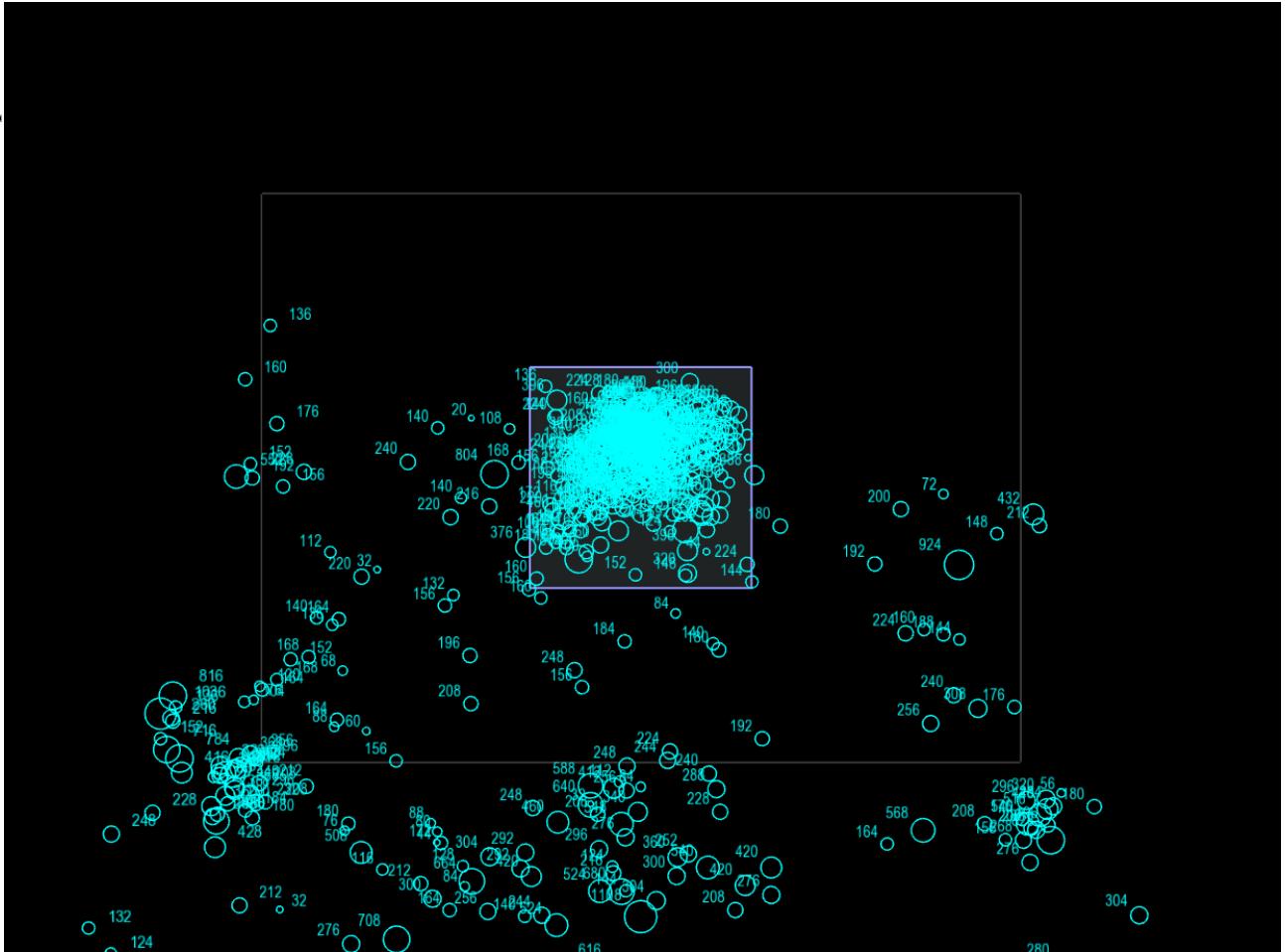


Participant 014

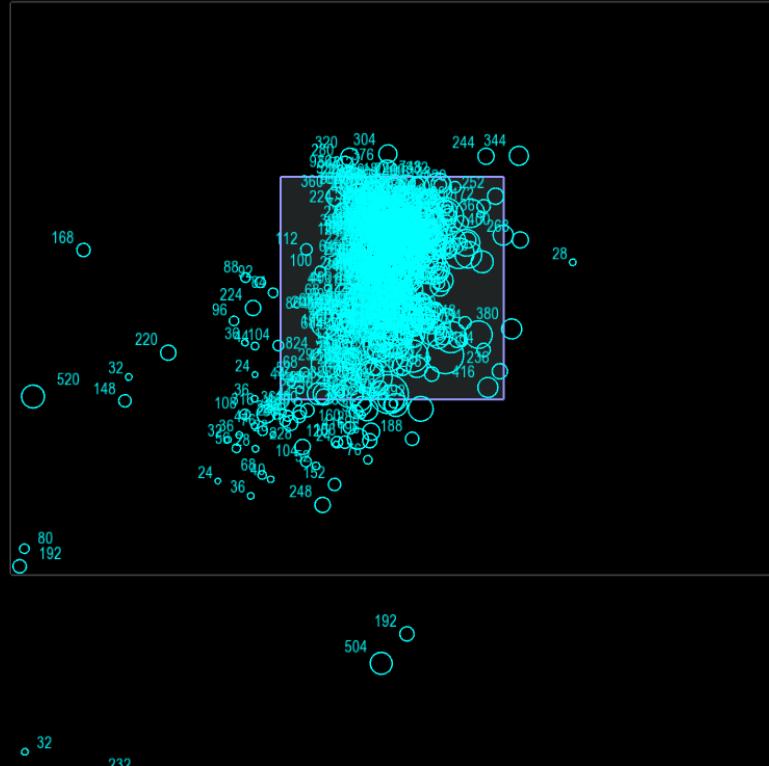


○ 452  
○ 144

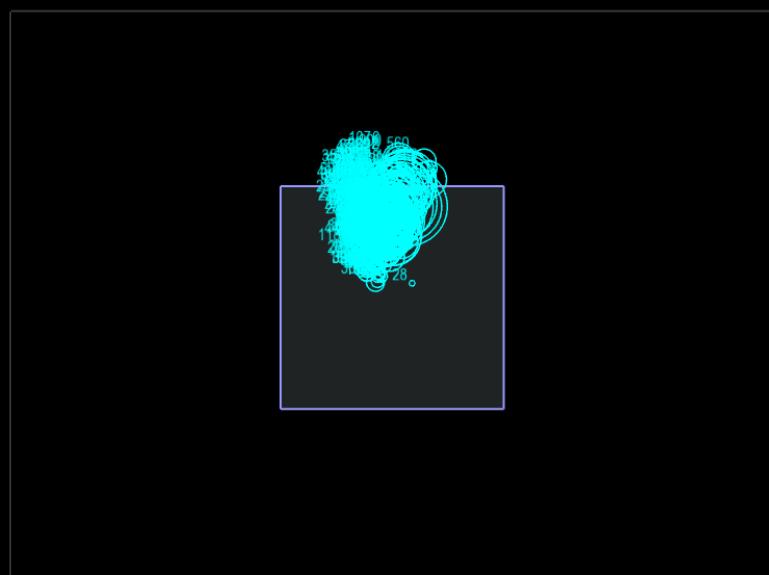
Participant 016



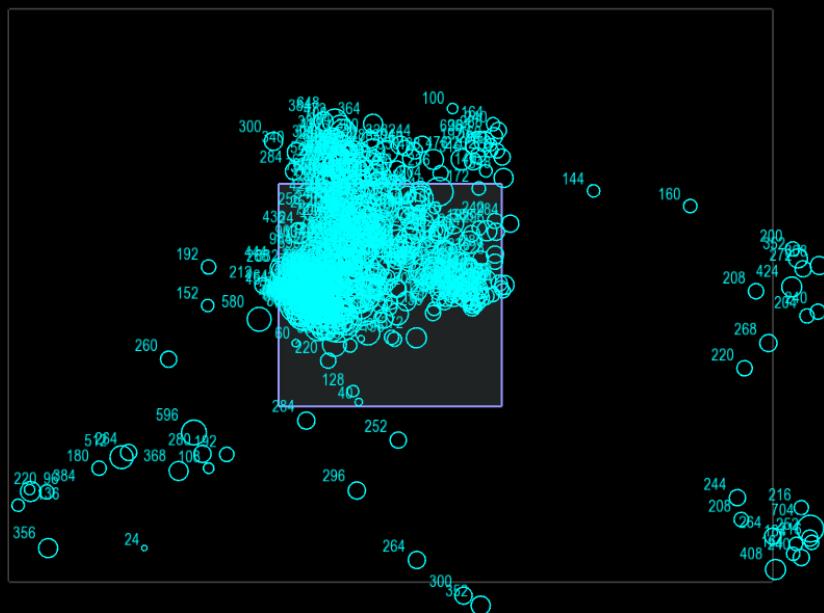
Participant 030



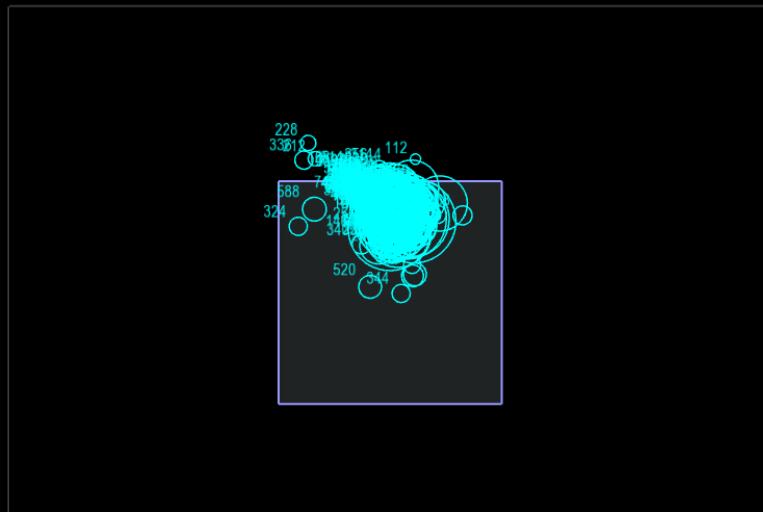
Participant 032



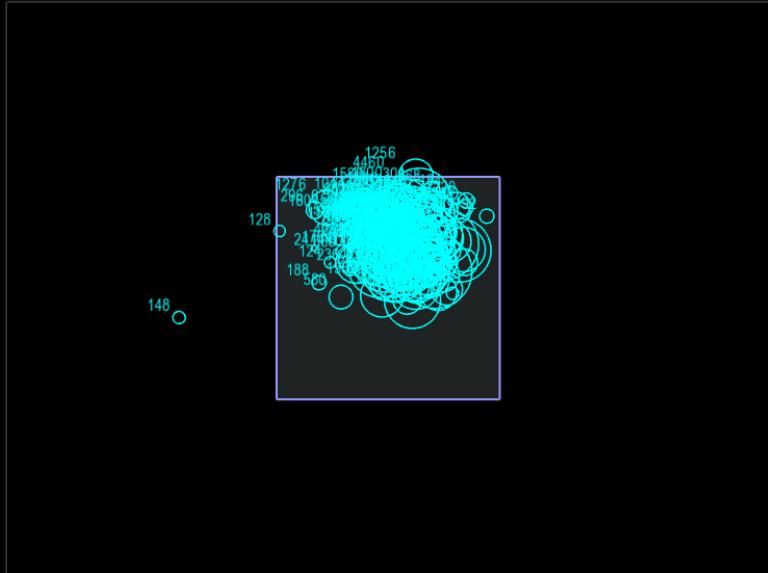
Participant 037



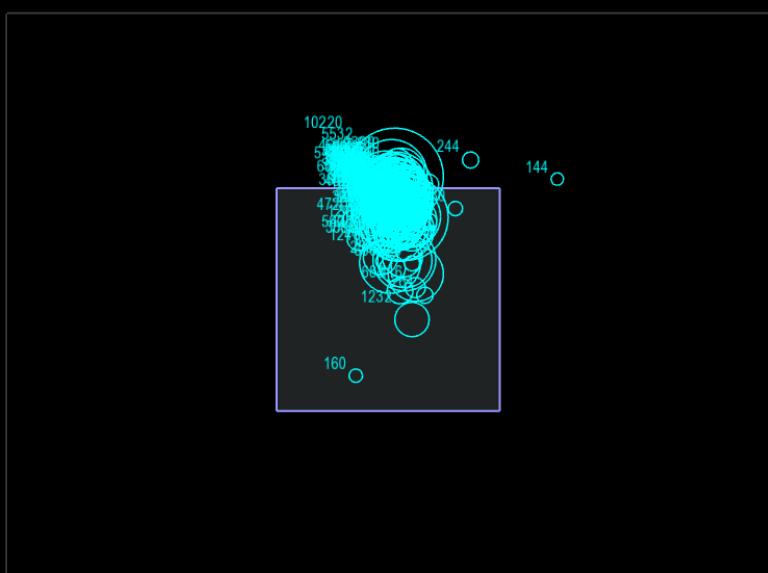
Participant 038



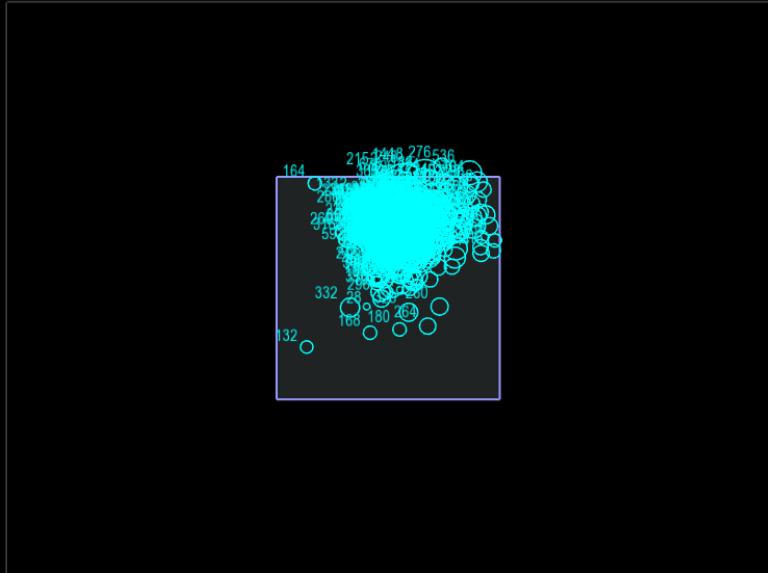
Participant 040



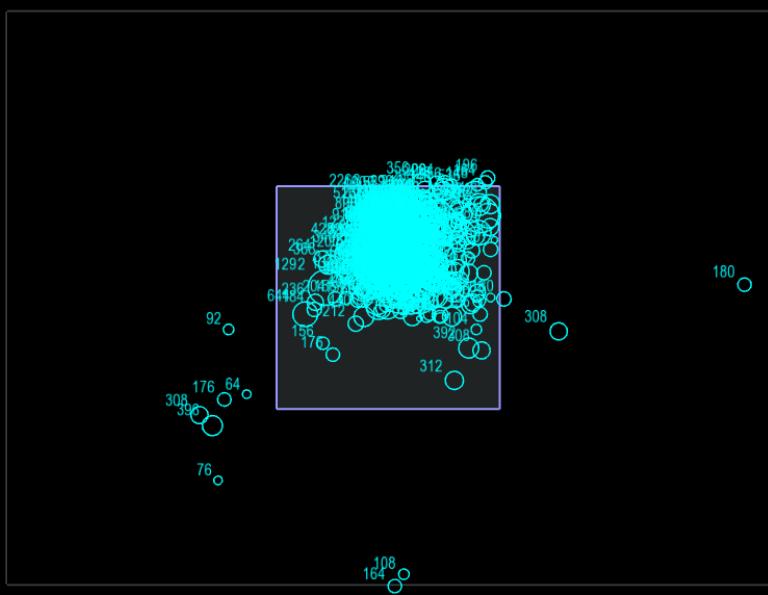
Participant 045



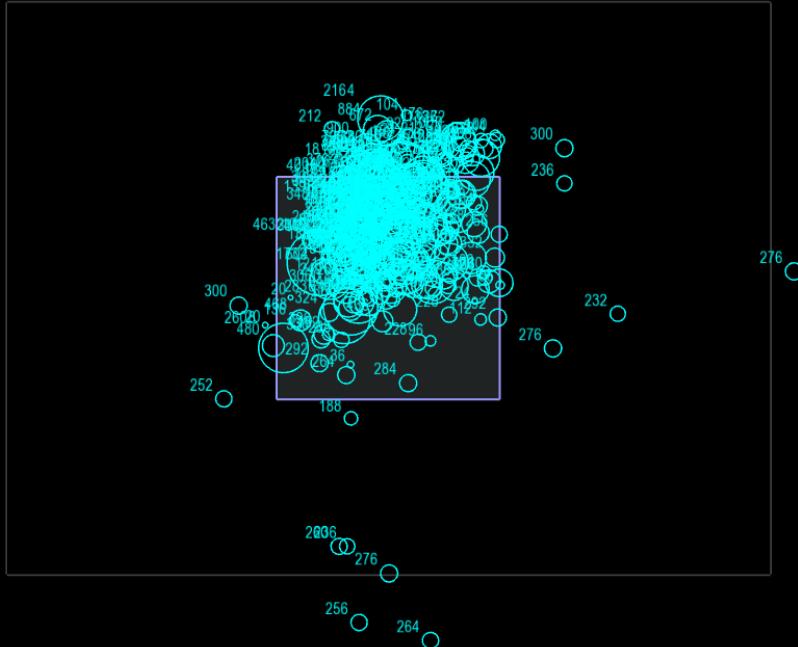
Participant 046



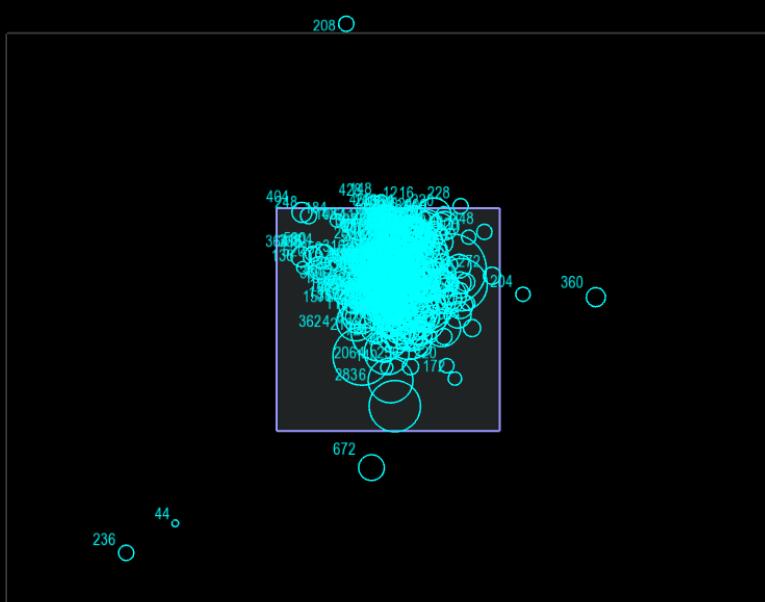
Participant 048



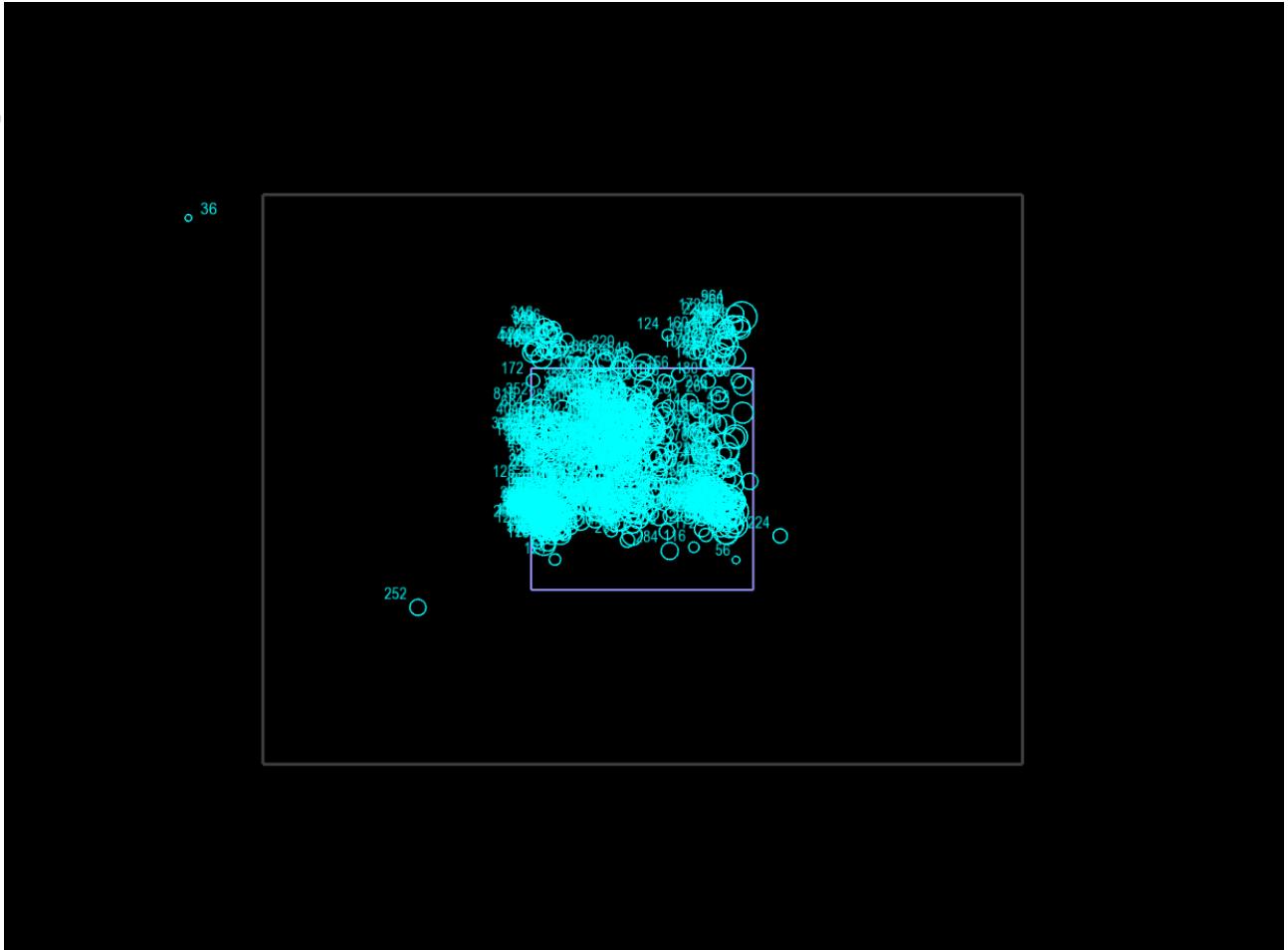
Participant 051



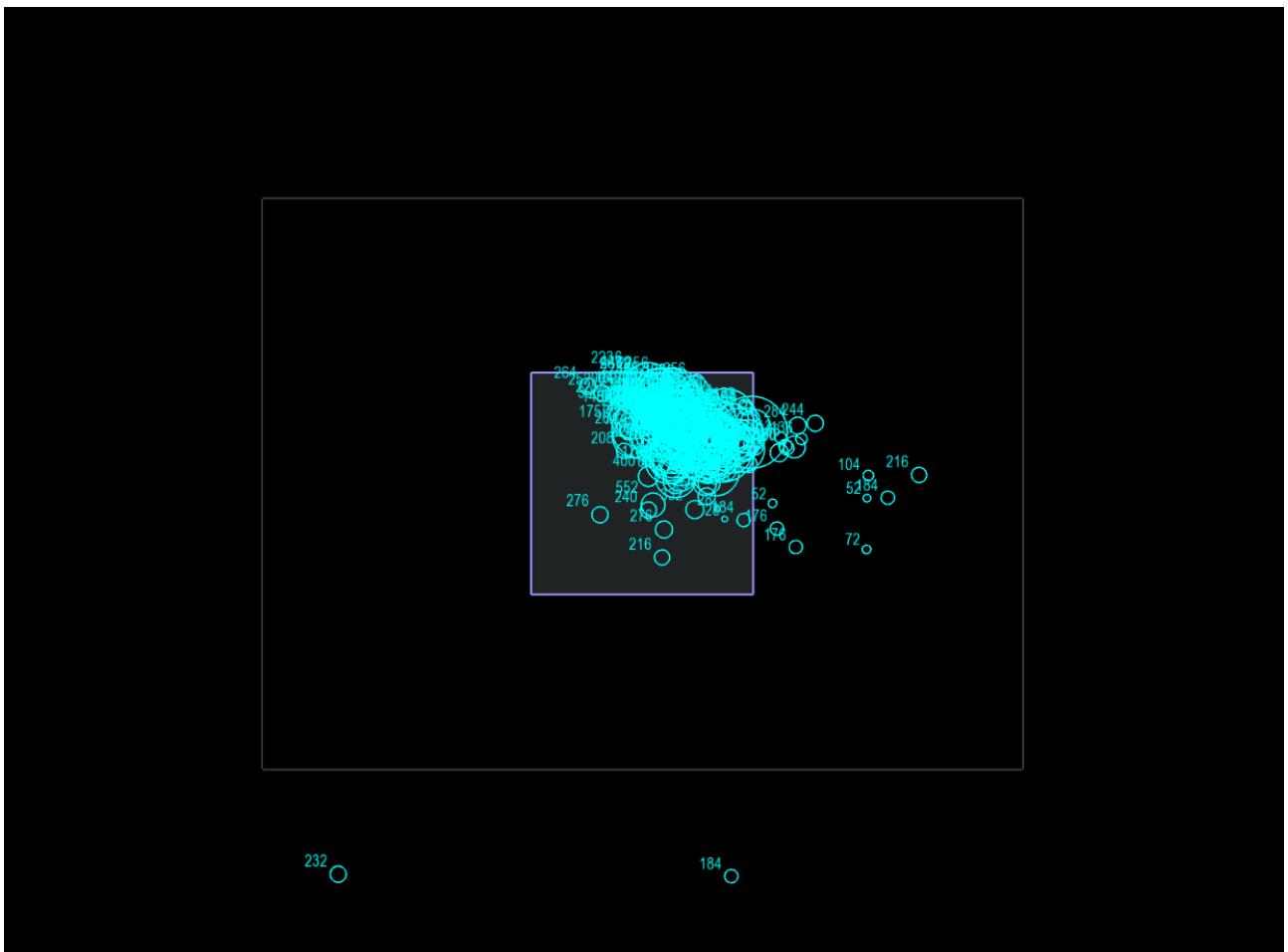
Participant 053



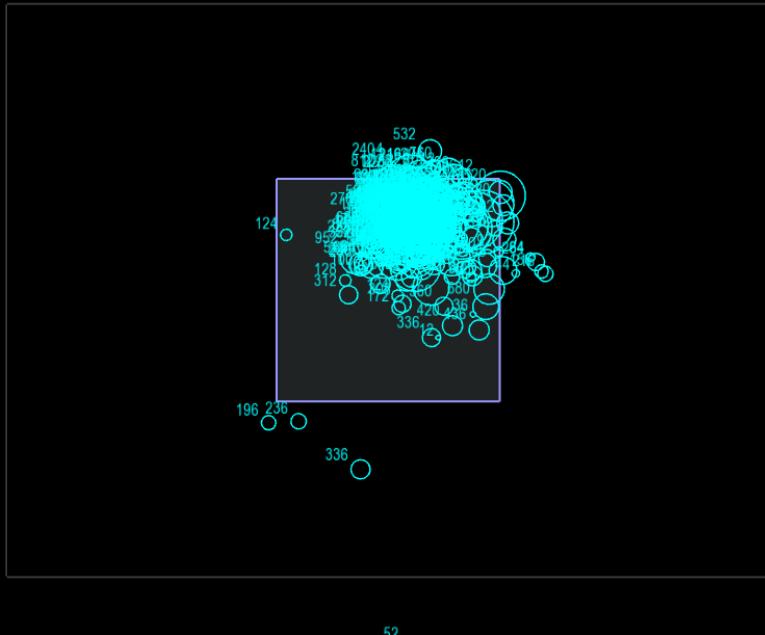
Participant 063



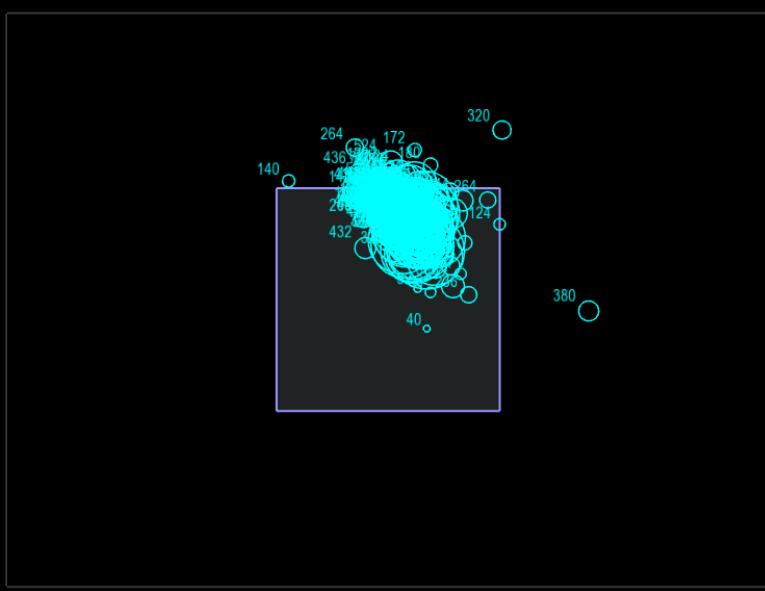
Participant 064



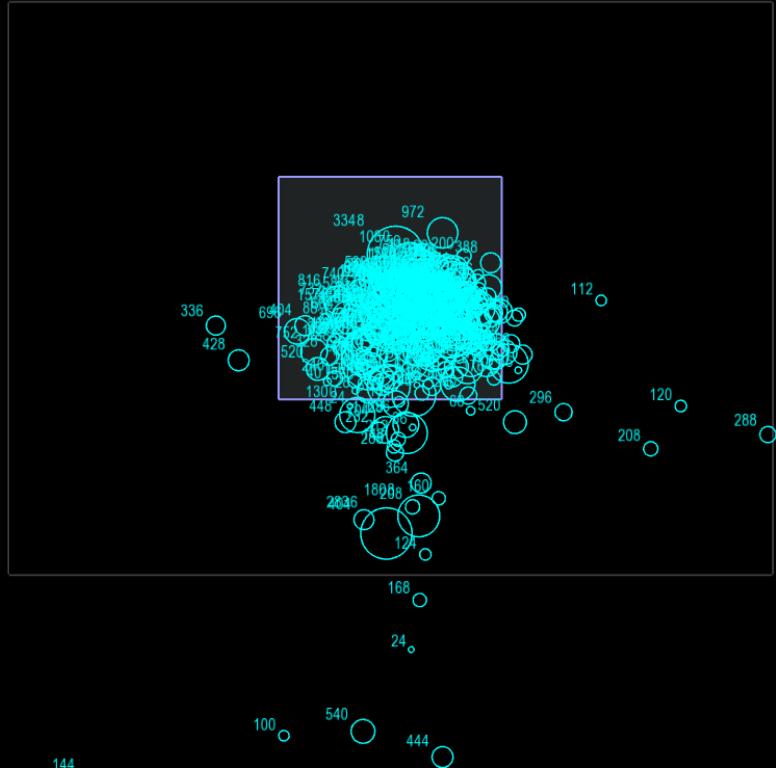
Participant 068



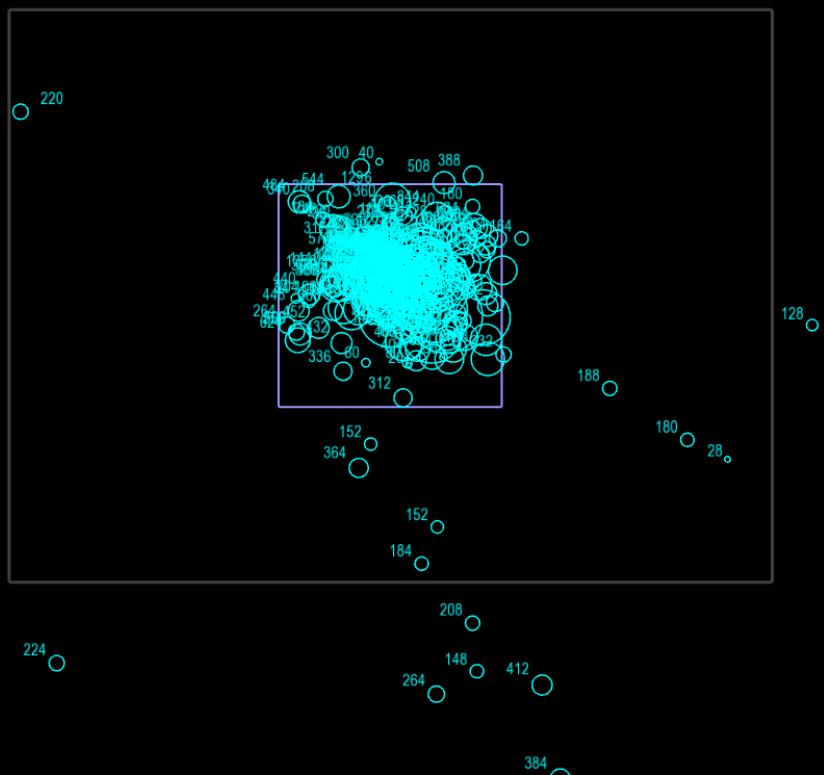
Participant 069



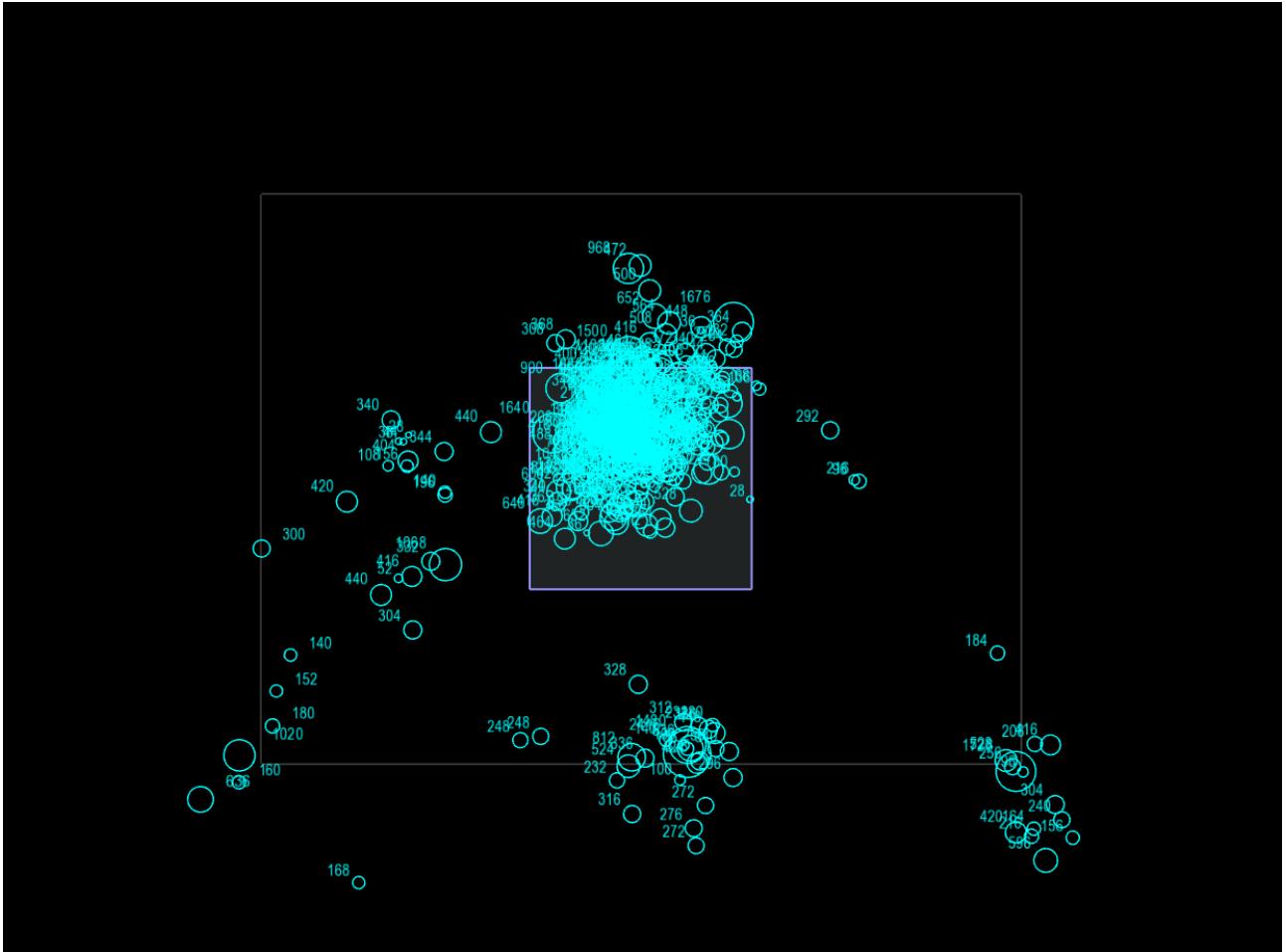
Participant 079



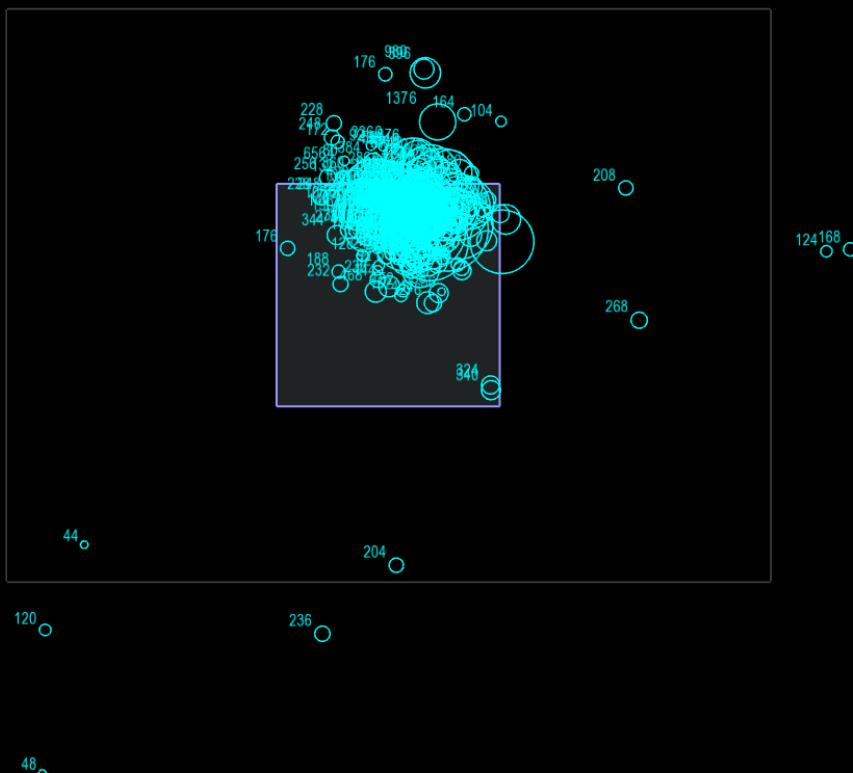
Participant 100



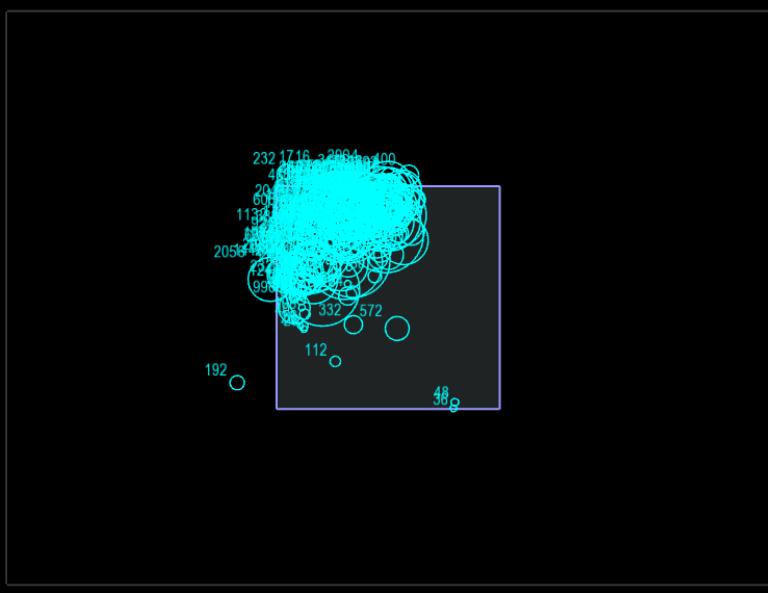
Participant 104



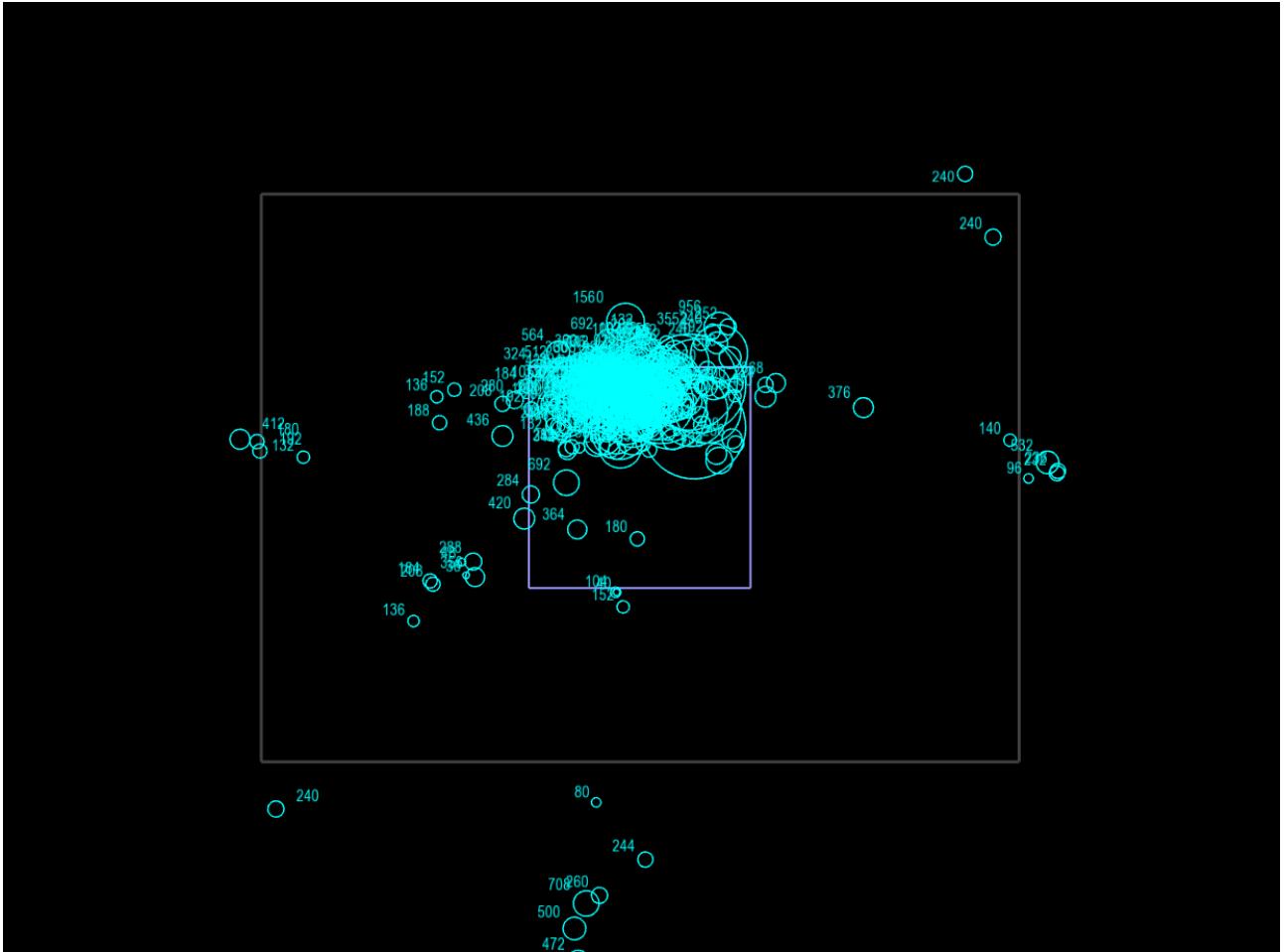
Participant 108



Participant 121



Participant 129



Participant 131

