We conducted a series of different experiments, each designed to test various visual conditions into virtual reality set up.

Please note that the ant number varied depending on the specific experiment being performed. Importantly, no single group of ants was used across multiple sets of experiments, ensuring that each test was performed with a distinct set of ants to avoid any carryover effects or bias in the results.

**Raw folder**

Each Raw(…) repository contain raw data file extracted from the virtual reality experiments.

**column descriptions:**

* X, Y: Raw path coordinates extracted from the virtual reality setup.
* time\_sec: Recording time in seconds.
* lag\_time\_sec: The time between two successive data acquisitions.
* Count: Frame number.

**Data file**

Contain processed data derived from the raw paths.

**Column descriptions:**

* file\_name: Corresponding raw path data.
* Ant: Ant ID for a given experiment set.
* Test\_order: Sequence of tests for the corresponding visual condition.
* Visual\_condition: Visual background used in the virtual reality setup.
* Power\_spectrum\_frequency: Frequency with the highest peak magnitude.
* Power\_spectrum\_magnitude: Magnitude of the power spectrum.
* mean\_angular\_velocity (°/s): Mean angular velocity in degrees per second.
* mean\_forward\_velocity (m/s): Mean forward velocity in meters per second.