**Quantification of Behavioral Stereotypy in Flies** JASON MANLEY,
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VITZ, Princeton University — A commonly accepted assumption in the study of
behavior is that an organisms behavioral repertoire can be represented by a rela-
tively small set of stereotyped actions. Here, "stereotypy" is defined as a measure of
the similarity of repetitions of a behavior. Our group utilizes data-driven analyses
on videos of ground-based *Drosophila* to organize the set of spontaneous behav-
iors into a two-dimensional map, or behavioral space. We utilize this framework
to define a metric for behavioral stereotypy. This measure quantifies the variance
in a given behaviors periodic trajectory through a space representing its postural
degrees of freedom. This newly developed behavioral metric has confirmed a high
degree of stereotypy among most behaviors and we correlate stereotypy with various
physiological effects.

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