



Figure 1. DIAS-generated traces of both *Canton S* wild type flies (above, left) and Locomotor-deficient *dCASK* Null flies generated from overlapping deletions (above, right). The traces represent what is seen in the recorded videos. Both pictures contain traces from 8-10 flies run for 30 seconds in the video tracking assay following an air pulse.

Figure 2. Wild type flies were run in the locomotor assay (below) following an air pulse (purple bars) and without an air pulse (blue). In all parameters calculated by the analysis program, there were no significant differences between the two conditions (determined with two-tailed student t-test). This demonstrates that following an air pulse, flies locomote normally in our setup.

