



Supplemental Figure 2

Population characteristics of neurons with 1-PEF and 2-PEF pattern during locomotion on the flat surface, ladder, and with barriers.

Only neurons tested with barriers are shown.

Activity of neurons discharging with a 1-PEF (A, C, E) or 2-PEF (B, D, F) pattern during locomotion on the flat surface (A, B), ladder (C, D), and with barriers (E, F).

A1 - F1: Phase distribution of periods of elevated firing (PEFs). Each horizontal bar represents the PEF of one neuron. Neurons are rank ordered so that those active earlier in the cycle are plotted at top of the graph. In A1, C1, and E1, circles indicate the preferred phase of the activity (PrPh).

A2 - F2: Corresponding phase distribution of discharge frequencies. Average firing frequency in each 1/20th portion of the cycle is color-coded according to the scale shown at bottom of the figure.

A3 - F3: Proportion of active neurons (neurons in their PEF) in different phases of the step cycle during locomotion on the flat surface (A3, B3), ladder (C3, D3), and with barriers (E3, F3).

A4 - F4: The distribution of the mean firing rate during the stride on the flat surface (A4, B4), ladder (C4, D4), and with barriers (E4, F4). Thin lines show SEM. Crosses indicate periods of the stride when the activity of the 1-PEF population was statistically significantly greater than that of the 2-PEF population ($p < 0.05$, t test). Red stars show periods of the stride when the activity during locomotion on a complex surface was statistically significantly greater than on the flat surface ($p < 0.05$, t test).

In each panel, a vertical interrupted line denotes the average end of the swing and beginning of the stance phase of the right forelimb.