



Figure S1. The competitive parameter dependence of spatial map, place unit, and place field characteristics. The measures computed here are based on the same 16×16 parameter sweep of inhibitory strength J and threshold λ shown in Figure 4. The sparsity (A), number of fields and peak firing rate (B), and area (C) plots are the same panels shown in Figure 4. The 11 measures shown here (in three categories) are the same used to quantify the sample sets summarized in Table 1. **A.** Spatial map values (left to right): network sparsity (proportion of inactive units), coverage (proportion of environment overlapped by at least one place field), peak firing rate of strongest place unit, and average representation (average number of place fields overlapping a given point in the environment). **B.** Active place unit values (l to r): number of place fields, coverage (including primary and secondary place fields), and peak firing rate. **C.** Place field values (l to r): area, diameter (computed directly from area, assuming place field circularity), peak firing rate, and average rate across the extent of the place field. Spatial coding measures based on field size (representation, place unit coverage, area) are monotonic decreasing with J and λ ; other measures are non-monotonic in λ depending on the strength of inhibition.