1058-55-289 **Robert G. Scharein*** (blomalfur@gmail.com), Department of Mathematics, Thornton Hall 937, 1600 Holloway Ave, San Francisco, CA 94132. *Minimal step number of cubic lattice knots in thin slabs.*

We present provisional data on the minimal step number of cubic lattice knots confined to a thin slab. In particular, we investigate thin slabs of thickness 1, 2 and 3. For most knot types, several ergodicity classes are found, often with dramatically different minimal step numbers. We discuss the number of distinct minimal step embeddings found within each class. Finally, we examine recurring patterns across the entire database of minimal step knots, both in thin slabs and for the unconstrained case. (Received February 16, 2010)