

1070-11-190

**Dmitry Kleinbock\*** (kleinboc@brandeis.edu), Department of Mathematics, Brandeis University, Waltham, MA 02454, and **Gregory Margulis** and **Junbo Wang**. *Dirichlet's theorem, nonplanarity in the space of matrices, and homogeneous flows*. Preliminary report.

We present a condition on an analytic submanifold in the space of  $m \times n$  matrices which guarantees that Dirichlet's theorem cannot be infinitely improved for almost all its points. The main tool is quantitative nondivergence in the space of lattices. The exposition will be given for the simplest interesting case,  $m = n = 2$ . (Received February 10, 2011)