

**Meeting:** 1006, Lubbock, Texas, SS 15A, Special Session on Discrete Groups, Homogeneous Spaces, Rigidity

1006-37-118      **Alexander Gorodnik\*** (gorodnik@caltech.edu), Mathematics 253-37, CalTech, Pasadena, CA 91125. *Multiple mixing of non-commuting automorphisms*. Preliminary report.

Following the works of Rokhlin and Schmidt, we investigate mixing properties of (not necessarily commuting) automorphisms of compact abelian groups. It turns out that without commutativity assumption, mixing does not imply mixing of higher orders, but for automorphisms of connected finite-dimensional groups, one can derive a convenient characterization for multiple mixing. This is a joint work with V. Bergelson. (Received February 10, 2005)