

Meeting: 1007, Santa Barbara, California, SS 9A, Special Session on Ricci Flow/Riemannian Geometry

1007-53-54 **James Isenberg, Martin Jackson and Peng Lu*** (penglu@darkwing.uoregon.edu), Dept of Math, Univ of Oregon, Eugene, OR 97403. *Ricci flow on homogeneous 4-manifolds.*

The Ricci flow on homogeneous 3-manifolds are studied by J. Isenberg and M. Jackson. In later work Knopf and McLeod classify the quasi-equivalence class of such flow. In this talk we will discuss the Ricci flow on homogeneous 4-manifolds. We first list the classification of such manifolds, for each family of initial metrics there are subfamily of the initial metrics such that we can diagonalize them and the Ricci flow will preserve the diagonalization, finally we will analysis long time behavior of the subfamily. In particular we find that if such a solution exists for all the time then it is type III singularities in the sense of Hamilton. (Received January 18, 2005)