1014-37-891 **John Franks***, Department of Mathematics, Northwestern University, Evanston, IL 60208-2730, and **Michael Handel** and **Kamlesh Parwani**. *Fixed Points of abelian actions on S^2 and R^2*. Preliminary report.

We prove that if G is a finitely generated abelian group of orientation preserving C^1 diffeomorphisms of R^2 which leaves invariant a compact set then there is a common fixed point for all elements of G. We also show that if G is any abelian subgroup of orientation preserving C^1 diffeomorphisms of S^2 then there is a common fixed point for all elements of a subgroup of G with index at most two. (Received September 26, 2005)