1035-Z1-298   **James S Cook*** (`jscook3@ncsu.edu`). *What is geometric superspace ?*

Supersymmetry is an exciting new symmetry of theoretical physics which has yet to be verified experimentally. Superfields provide a natural representation of supersymmetry. A superfield is simply a mapping from superspace. We view superspace as a geometric supermanifold; superspace is a G^∞ supermanifold. The definition of the geometric supermanifold was crafted by Alice Rogers so that the usual geometric structures on real manifolds naturally generalize to the super case. For example, a super Lie group is a group which is also a supermanifold with supersmooth operations. We present some results concerning super Lie groups and superspace which were a joint work with R.O. Fulp. (Received August 31, 2007)