Viorel Nitica* (vnitica@wcupa.edu), Department of Mathematics, West Chester University, West Chester, PA 19383, and Anatole Katok. Rigidity of abelian cocycles with values in diffeomorphisms groups.

We consider cocycles over certain hyperbolic higher rank abelian actions and show rigidity properties for cocycles with values in a Lie group or a diffeomorphism group, which are close to identity on a set of generators, and are sufficiently smooth. The actions we consider are Cartan actions on compact quotients of SL(n,R) or SL(n,C), for n greater than 3. The results rely on a technique developed recently by D. Damjanovic and A. Katok. This talk is based on joint work with A. Katok. (Received September 10, 2007)