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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 $SL(n, \mathbb{R})$ or $SL(n, \mathbb{C})$, 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)