1014-37-701 Huyi Hu (hu@math.msu.edu), Yakov Pesin (pesin@math.psu.edu) and Anna Talitskaya* (anjuta@math.northwestern.edu), Department of Mathematics, Northwestern University, 2033 Sheridan Rd, Evanston, IL 60201. The existence of a volume-preserving ergodic hyperbolic flow on any manifold of dimension at least 3. Preliminary report.

While the uniformly hyperbolic maps are ergodic, they do not exist on all manifolds. Non-uniform hyperbolicity, a weaker condition, requires asymptotical hyperbolicity. In 2001 Dolgopyat and Pesin proved the existence a non-uniformly hyperbolic ergodic map on any manifold. I will talk about generalizing this result to flows. (Received September 22, 2005)