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Peter Nandori* (pnandori@math.umd.edu). *Mixing and local central limit theorem for hyperbolic dynamical systems.*

We present a convenient joint generalization of mixing and the local version of the central limit theorem (MLLT) for an abstract class of probability preserving dynamical systems. By a result of Gouezel, MLLT holds for maps modeled by Young towers: in particular for many important examples of hyperbolic maps. We show that MLLT also holds for several hyperbolic flows (such as Axiom A flows, Sinai billiards flows, suspensions over Pomeau-Manneville maps). We apply these results to verify various mixing properties of infinite measure preserving systems (such as Krickeberg-Hopf mixing or global mixing). Joint work with Dmitry Dolgopyat. (Received September 24, 2018)