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On μ -Compatible Metrics and Measurable Sensitivity.

We introduce the notion of W -measurable sensitivity, which extends and strictly implies canonical measurable sensitivity, a measure-theoretic version of sensitive dependence on initial conditions. This notion also implies pairwise sensitivity with respect to a large class of metrics. We show that nonsingular ergodic and conservative dynamical systems on standard spaces must be either W -measurably sensitive, or isomorphic mod 0 to a minimal uniformly rigid isometry. In the finite measure-preserving case they are W -measurably sensitive or measurably isomorphic to an ergodic isometry on a compact metric space. (Received September 22, 2011)