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Mihai H Tohaneanu* (mihaitohy@gmail.com), 3811 Canterbury Rd Apt 306, Baltimore, MD 21218. *Pointwise decay on nonstationary spacetimes.*

Let u be a solution to the equation $\square_g u = 0$ where g is some (nonstationary) Lorentzian metric and \square_g its associated d'Alembertian. If we assume a priori that certain local energy norms for u and its higher derivatives hold, we can prove that u decays pointwise like t^{-3} in a compact region. As an application, we can prove the aforementioned decay on Kerr spacetimes and some perturbations. This is joint work with Jason Metcalfe and Daniel Tataru. (Received July 28, 2011)