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Jason Metcalfe* (metcalfe@email.unc.edu), Department of Mathematics, University of North Carolina, Chapel Hill, NC 27599-3250. *Localized energy estimates for wave equations in the presence of degenerate trapping.*

This is a joint work with R. Booth, H. Christianson, and J. Perry. We examine the wave equation on a warped product manifold that has degenerate trapping. A localized energy estimate with an algebraic loss is proved, and it is shown that this loss is sharp. This is a wave equation analog of the preceding work of Christianson and Wunsch for the Schroedinger equation, but the current scenario requires a significant new low frequency analysis that was not needed for the local-in-time estimates of Christianson and Wunsch. (Received January 16, 2017)