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**Dean Baskin**, Department of Mathematics, Northwestern University, 2033 Sheridan Road, Evanston, IL 60208-2730, **Andras Vasy\***, Department of Mathematics, Stanford University, Building 380, 450 Serra Mall, Stanford, CA 94305-2125, and **Jared Wunsch**, Department of Mathematics, Northwestern University, 2033 Sheridan Road, Evanston, IL 60208-2730. *Asymptotic behavior of waves on asymptotically Minkowski spaces.*

In this talk we consider a non-trapping  $n$ -dimensional Lorentzian manifold endowed with an end structure modeled on the radial compactification of Minkowski space. We find a full asymptotic expansion for tempered forward solutions of the wave equation in all asymptotic regimes. The rates of decay seen in the asymptotic expansion are related to the resonances of a natural asymptotically hyperbolic problem on the “northern cap” of the compactification. For small perturbations of Minkowski space this corresponds to resonances of small perturbations of actual hyperbolic space. The methods of this work are closely related to those employed by Hintz and Vasy in an analysis of semilinear wave equations on such spaces. (Received August 13, 2013)