

**Meeting:** 1003, Atlanta, Georgia, SS 16A, AMS Special Session on Inverse Spectral Geometry, I

1003-58-1060      **Colin Guillarmou\***, Department of Mathematics, 150 N. University Street, West-Lafayette, IN 47907. *Resolvent and scattering theory on asymptotically hyperbolic manifolds.*

We review recent results about scattering theory on a class of complete manifolds with asymptotically constant negative curvature near infinity. In particular, we give a necessary and sufficient condition on the metric to obtain a meromorphic extension of the resolvent for the Laplacian to the entire complex plane and we find examples where the resolvent has a sequence of poles converging to particular points in the non-physical sheet. We also discuss the relation between resonances and scattering poles in this setting and its applications to convex co-compact hyperbolic manifolds. (Received October 03, 2004)