

**Meeting:** 1005, Newark, Delaware, SS 2A, Special Session on Singular Analysis and Spectral Theory of Partial Differential Equations

1005-58-168      **Grigore Raul Tataru\*** ([tataru@math.purdue.edu](mailto:tataru@math.purdue.edu)), Department of Mathematics, Purdue University, 150 N. University St, West Lafayette, IN 47907. *Szegő projections on cosphere bundles of asymptotically Euclidean manifolds.* Preliminary report.

The cosphere bundle  $\mathbb{S}^*X$  of an asymptotically Euclidean manifold  $X$  carries a contact structure and a CR structure with special degeneracies at the boundary. A class of parabolic (Heisenberg) pseudodifferential operators on  $\mathbb{S}^*X$  is introduced and contains the Szegő projection associated to the CR structure. Questions regarding the relation between the scattering wavefront set of distributions on  $X$  and the singular support of corresponding CR distributions on  $\mathbb{S}^*X$  are also addressed. (Received February 08, 2005)