

1128-35-280

Dean Baskin* (dbaskin@math.tamu.edu). *The radiation field on conic manifolds*. Preliminary report.

In this talk I will describe recent joint work with Jeremy Marzuola describing the long-time behavior of the radiation field on product cones. We consider the wave equation on $\mathbb{R} \times X$, where X is a product cone equipped with the Riemannian metric $dr^2 + r^2h$, where h is a Riemannian metric on the cross-section. We find asymptotic expansions for solutions of the wave equation in all asymptotic regimes and find the exponents seen in the expansion for the radiation field (the pattern seen by a distant observer); these exponents are precisely the resonances of a hyperbolic cone and can be computed explicitly. (Received February 28, 2017)