

THE RADIATION FIELD ON PRODUCT CONES

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In this talk I will describe recent joint work with Jeremy Marzuola (building on work with Andras Vasy and Jared Wunsch) describing the long-time behavior of the radiation field on product cones. 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 the Laplacian on a hyperbolic cone, can be computed explicitly, and agree with the expansion found by Cheeger and Taylor inside the light cone.