

Spin-3/2 fields in black hole space-times

In previous works we have studied spin-3/2 fields near D-dimensional Schwarzschild black holes. The techniques we developed in that case have now been extended here to show that it is possible to determine the potential of spin-3/2 fields near D-dimensional black holes by exploiting the radial symmetry of the system. This removes the need to use the Newman-Penrose formalism, which is difficult to extend to D-dimensional space-times. In this talk we will derive a general D-dimensional gauge invariant effective potential for spin-3/2 fields near black hole systems. We then use this potential to determine the quasi-normal modes and absorption probabilities of spin-3/2 fields.

I intend to submit my contribution for the proceedings

Yes

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