Contribution ID: **72** Type: **not specified**

Theory: Axially symmetric stationary gravitational perturbations of Kerr black hole — Debye vs Weyl\,–\,Lewis\,–\,Papapetrou

Tuesday, September 5, 2023 4:00 PM (15 minutes)

The axially symmetric stationary gravitational perturbations of Kerr black hole are analyzed (a) within the framework of the Debye potentials as well as (b) a perturbations of Kerr black hole within the Weyl\,–\,Lewis\,–\,Papapetrou class of metrics. We find the exact explicit calibration transformation which is needed to connect the metric perturbations in this approach. We also provide the Debye superpotential for a circular mass current/distribution on the Kerr background.

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Session Classification: Parallel Sessions