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## Quasinormal modes for a spin-3/2 field in the Reissner-Nordstrom black hole background

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**Abstract content (Max 300 words) - Formatting & Special chars**

We will present a quasi-normal modes (QNMs) calculation for a scalar (spin-0) field in a Schwarzschild black hole background and comment on how this could be generalised to QNMs for a Weyl field, as well as fields in a Reissner-Nordstrom black hole background. These are the first steps towards calculating the QNMs for the spin-3/2 field in a Reissner-Nordstrom black hole background, which is the ultimate aim of my current research project. We shall make use of the works of Sai Iyer and Clifford M. Will, where in a 1987 paper they applied the Wentzel-Kramers-Brillouin (WKB) approximation method to computing the QNMs for black holes perturbed by fields. The WKB approach has been frequently used to approximate QNMs to high orders of approximation. We shall work to sixth order for the systems described above.

**Apply to be considered for a student award (Yes / No)?**

Yes

**Level for award (Hons, MSc, PhD, N/A)?**

MSc

**Main supervisor (name and email) and his / her institution**

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**Would you like to submit a short paper for the Conference Proceedings (Yes / No)?**

Yes

**Please indicate whether this abstract may be published online (Yes / No)**

Yes

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