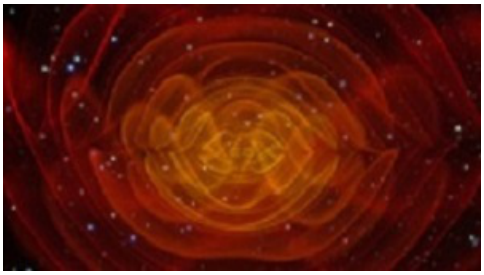

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Eccentric Orbit EMRIs: Enhanced Method for Determining Analytical Flux Coefficients to 7 PN.

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Continuing the work of Forseth et *al.* (2016), we use high precision comparisons between perturbation theory and the post-Newtonian expansion to extract new information on eccentric orbit EMRIs to 7 PN order. Fluxes are calculated by combining the MST formalism with spectral source integration (SSI) for a multitude of orbits, whose parameters are then fit over in the PN form. This time, we perform a fit on each LMN mode individually, exploiting the patterns contained therein. The result is a significantly enhanced ability to fit for the combinations of transcendentals that appear in the higher PN orders.

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