

BiGONLight: a new tool for light propagation in numerical relativity

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In the current new era for cosmological observations, much work is devoted in investigating the possibility of measuring new effects like the secular changes of optical observables (known as drift effects). In this context, the new bi-local geodesic operators (BGO) formalism of light propagation provides a unified framework in which it is possible to describe all possible optical phenomena like the standard lensing effects as well as the drifts effects or the cosmic parallax. I will show how the BGO formalism can be used to compute optical observables in numerically simulated spacetimes through its implementation in the BiGONLight package.

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