Wave extraction using the Newman-Penrose formalism: theory and applications ANDREA NEROZZI, University of Texas at Austin, MARCO BRUNI, Institute of Cosmology and Gravitation. University of Portsmouth. Portsmouth UK, VIRGINIA RE, School of Physics and Astronomy. University of Birmingham. Birmingham UK., LIOR M. BURKO, University of Alabama at Huntsville — Newman-Penrose quantities such as Weyl scalars are potentially a powerful wave extraction tool especially in those cases where a solid wave extraction technique has not been developed yet, like, for example, in simulations relying on the ADM formulation of Einstein's equations. Here we present the progress done in building up a novel technique which optimizes the process of calculating Weyl scalars for wave extraction purposes and we apply these results to a specific numerical example.

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