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Title: First applications of a new evolution code based on the Kadath library

Abstract: I will present a new evolution code based on the Kadath library. The standard Kadath library is a free and open-source software commonly used for initial data computation. This new code implements time evolution schemes and preserves the modularity of Kadath. I will first demonstrate the validation of the code on a simple wave equation. I will then discuss the current process of validation in the context of GR with the evolution of a Teukolsky wave as well as how we cured some instabilities. In particular, we are using spherical coordinates and a special care is given to the treatment of the innermost spherical domain which contains the origin. I will conclude with some prospects about future applications of this code and possible developments.