Grand Challenge: Binary Black Holes

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1.0 Major Achievements during the reporting period

Syracuse's work includes activity in both Computer Science and Physics. In both areas we were very active this reporting period.

The majority of our effort was devoted towards the development of the ADM code. We have been developing the code in order to meet the "moving hole" benchmark agreed upon during the Chapel Hill meeting. During this period we made four major relases of the code, each time adding new features. The current release, label 1.0, includes causal differencing, extraction/matching modules, apparent horizon location and several different initial conditions. We have done extensive testing of the ADM code, development of the majority of the modules, the software engineering of the code, along with speeding up the code by over a factor of 100.

The other achievements is the creation of a new Web sit for the Alliance (http://www.npac.syr.edu/projects/bh) that gathers all the available information about the Alliance activities in one place. This effor will be continued to make it even more interactive to becaome a collaborative environment that uses state-of-the-art web technologies available.

In parallel to the development of the ADM code we are working on the PSE for the Alliance. The specification will be published during the Syracuse meeting this fall (which goes along with the timeline agreed upon at Chapel Hill).