

LSC Six-Month Progress Report

Organization University of Rochester LIGO Group

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This report covers activities over the past calendar year.

1. Completed the analysis of the high frequency data taken during S3. These results are included in the thesis of W. Butler that he successfully defended in June of 2004. The thesis has been posted on the DCC under PO40026-00-R.

The subject of the analysis was the search for a high frequency stochastic background using a single IFO. This is based on the distinct spectral shape of the IFO response at its free spectral range frequency. For the 4K instruments, $f_{\text{fsr}} = 37.52$ kHz.

2. Worked on the search for a stochastic signal by cross-correlating two IFOs. At high frequency the IFOs have to be co-located. We developed a Monte Carlo program and the results have been summarized in a report, which will be posted on the Archive.
3. A proposal was submitted to the NSF for support of the URLG research activities and a new graduate student (Stefanos Giampanis) joined the group. He is analyzing sample data from the E11 run. We made presentations to the PAC as well as to the stochastic group.
4. We have contributed to the acquisition of hardware necessary for the implementation of the fast channels on the IFOs. We have also participated in the commissioning of the channels and in setting up the format for the corresponding RDS.