

Attachment DAT to the
Memorandum of Understanding (LIGO- M050266-00-M)
between the
Michigan Gravitational Wave Group (MGWG)
and the
Laser Interferometer Gravitational Wave Observatory (LIGO)
August 15, 2005

This Attachment DAT to the Memorandum of Understanding LIGO-M050266-00-M defines the role of the Michigan Gravitational Wave Group (MGWG) as a Member of the LIGO Scientific Collaboration (LSC), in particular, its activities in data analysis in support of the initial LIGO interferometers. The period of performance for the activities in this Attachment is from August 15, 2005 to August 15, 2006.

1. Together, the LIGO Laboratory and the LIGO Scientific Collaboration are responsible for implementing and exploiting the initial LIGO detector through its science data runs. The LSC has organized the data analysis effort into search groups which coordinate the analyses, perform detailed reviews, and prepare publications on behalf of the collaboration. LSC groups are encouraged to participate in one or more of these groups. MOU Attachments define the contributions of each participating group to the data analysis groups.
2. During the period August 15, 2005 to August 15, 2006, the members of MGWG Group will participate in the analysis of initial LIGO data in the following areas:
 - a) **Burst Search:** Riles will continue chairing the burst group papers review committee for all S2/S3 publications and some S4 publications. He has asked, however, to be relieved of this duty in the coming year, to devote more time to the pulsar search analysis and to detector characterization.
 - b) **Pulsar Search:** Dergachev and Riles will continue a broadband, all-sky search for continuous-wave gravitational sources using Dergachev's PowerFlux analysis pipeline, based on incoherent averaging of power spectra with noise and antenna-pattern weighting. Final results for the S4 data run will be produced for publication. The S5 data will also be analyzed on a regular basis during the run, to improve upper limits and provide feedback to commissioners on spectral lines. Refinements and optimizations of the PowerFlux pipeline are also planned.
3. Resource Sharing: The LIGO Laboratory will contribute resources including allocation of appropriate scientific and engineering personnel, research facilities and funding in support of the effort in Item No. 2, as indicated below.
 - a) Research accommodations for MGWG group members while on LIGO research assignment at any LIGO Laboratory site,

- b) Access to LIGO data through established LSC channels in support of this work.
4. Coordination and Reporting – MGWG Group will perform this research within the structures established by the LIGO Laboratory and the LSC where appropriate. In particular activities described in Item 2a) will be carried out within the LSC Burst Search Group, Item 2b) will be carried out within the LSC Pulsar Search Group. Coordination will include keeping the Group leaders informed of activities and plans, reporting to the group at meetings and telecons, and through technical documents submitted to the LIGO Document Control Center.

In addition, an annual report will be submitted with the update to this Attachment, giving a summary status on research by topic as indicated in Item No. 2, including progress against the milestones if any, significant accomplishments such as new insights/discoveries or publications, issues of concern if any, and an indication of invested time. This Attachment will be updated at least annually with a plan of activities for the succeeding on-year period. These documents will be due one month before the close of the period of performance under this Attachment.

5. All computer code delivered to the LSC under this Attachment must be developed in consultation with the LSC Data Analysis Software Working Group (DASWG) and archived, documented and reviewed as determined by that group.

Approved:

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LIGO Laboratory Director

Keith Riles
MGWG Principal Investigator

Peter Saulson
LSC Spokesperson

Erik Katsavounidis
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