

Attachment Number 1 to the
Memorandum of Understanding (LIGO-M950097-00-M)
between the
Department of Physics and Astronomy(DPA) and the Center for Advanced
Microstructures and Devices(CAMD) of the Louisiana State University
and the
Laser Interferometer Gravitational Wave Observatory (LIGO) Project
October 1, 1995

This Attachment to the Memorandum of Understanding LIGO-L950057-00-M describes the activities of the Department of Physics and Astronomy(DPA) and the Center for Advanced Microstructures and Devices(CAMD) in providing resources and/or opportunities to the LIGO project in connection with the development and operation of the Livingston site. The period of performance for the activities in this Attachment is from October 1, 1995 to September 30, 1998. This period may be modified by agreement to a revision of this Attachment.

1. Goal - The aim is to provide the following resources and/or opportunities to the LIGO project in connection with the development and operation of the Livingston site:
2. Faculty Status: It will be recommended to the faculty of the LSU Department of Physics and Astronomy that key faculty-level researchers from the LIGO staff be appointed as adjunct faculty members of the department;
3. Local Advisory Board: Both units will assist the Principle Investigator(PI) and Project Manager(PM) in establishing a Local Advisory Board consisting of key residents, business people, and political representatives of Livingston Parish, East Baton Rouge Parish, and the geographical regions surrounding these parishes;
4. Office Space: Office space will be provided for several faculty level researchers or technicians. The offices will be located in the same building that houses the Director of CAMD and his staff. This building is on LSU's main campus, near the Department of Physics and astronomy(Nicholson Hall);
5. Computing Facilities: Access to the internet is provided by the campus wide LAN(ethernet network). Local staff will be provided reasonable access to the computing facilities of the Department of Physics and Astronomy and the CAMD. These include a VAX cluster and a cluster of Sun Microsystems workstations. As appropriate, access to the high -performance computing platforms in the Concurrent Computing Laboratory for Materials Simulation (CCLMS) may also be granted;
6. Local Expertise: The LIGO staff will have access to LSU's Purchasing Dept. and to business personnel in the DPA as well as to other related administrative support services. Local LIGO

staff may interact daily with business personnel and the technical staffs associated with the LSU DPA and CAMD;

7. Student Base: Through its association with LSU, the LIGO project will have an opportunity to draw on the talents and energies of LSU's graduate and undergraduate students.
8. Additional LSU resources can be made available to the LIGO project if sufficient funds are in place to cover the associated costs. Examples are:
 - a. Purchasing - LSU will establish an account through which the LIGO staff can conduct procurement activities locally, benefitting simultaneously from LSU's regional expertise and its advantageous position within Louisiana as a large, well-managed state funded institution of higher education. Utilization of such an account will require that the LIGO staff abide by Louisiana's state procurement laws;
 - b. Computing Facilities - The CCLMS(a concurrent computing laboratory operated jointly by DPA and Computer Sciences) is prepared to provide the local LIGO staff with reasonable access to its facilities in support of the development of parallel algorithms for data analysis or simulation tasks associated with the project;
 - c. Shop Facilities - LIGO staff will have access to the technical staff and associated facilities of the DPA shops. These include a machine shop (3 machinists), an electronics shop (3 technicians) and a cryogenic facility (1 technician). Shop charges are currently \$28/hr. If long-term utilization of these facilities becomes sufficiently heavy, DPA will consider adding personnel to these facilities;
 - d. Sharing Local Expertise - In connection with the ongoing research activities of DPA and CAMD, many research associates and technicians are supported through grants and contract funds. Support for similar positions may be shared with LIGO if the need arises.

Approved:

Barry Barish

Barry Barish
LIGO Principal Investigator

Nov 14, 1995

Date

Joel E. Tohline

Joel E. Tohline
Chairman, Dept. of Physics and Astronomy

January 30, 1996

Date

V. Swin

Volker Saile,
Director, J. Bennett Johnston, Sr.
Center for Advanced Microstructures
and Devices

January 30, 1996

Date