

Memorandum of Understanding
between the
Experimental Relativity Group (ERG) of the Pennsylvania State University
and the
Laser Interferometer Gravitational Wave Observatory (LIGO) Project
June 1, 1997

The purpose of this Memorandum of Understanding is to establish and define a collaborative relationship between the Experimental Relativity Group (ERG) of the Pennsylvania State University and the Laser Interferometer Gravitational Wave Observatory (LIGO) Project of the California Institute of Technology and the Massachusetts Institute of Technology. Both parties to this agreement share the joint goals of observing gravitational radiation and of using gravitational radiation as an astrophysical probe. This agreement is intended to further these joint goals.

1. The primary goal of the Experimental Relativity Group (ERG) is to investigate the physics relevant to the technology of gravitational wave detection and to apply this research to the improvement gravitational wave detectors, with special emphasis on LIGO. The ERG is part of the Physics Department of the Eberly College of Sciences of the Pennsylvania State University. It will start its activities in September 1997 under the direction of the faculty member Gabriela Gonzalez. The group expects to grow and will add a Post-Doc and two graduate students within a year.
2. The Laser Interferometer Gravitational-Wave Observatory (LIGO) Project is aimed at opening the field of gravitational-wave astrophysics through the direct detection of gravitational waves. LIGO detectors will use laser interferometry to measure the distortions of the space between free masses induced by passing gravitational waves. The design, construction, and operation of LIGO is being carried out by scientists, engineers, and staff at the California Institute of Technology (Caltech) and the Massachusetts Institute of Technology (MIT). Caltech has prime responsibility for the project under the terms of a Cooperative Agreement¹ with the National Science Foundation (NSF). LIGO will become a national facility for gravitational-wave research, providing opportunities for the broader scientific community to participate in detector development, observations and data analysis. LIGO welcomes the participation of outside scientists at any of these levels. LIGO is being constructed in a phased approach beginning with one three-interferometer detector system and evolving to a multiple interferometer configuration to enable simultaneous use by several gravitational-wave observation systems.
3. In entering into this Memorandum of Understanding, the LIGO Project will carry out its

1. Cooperative Agreement No. PHY-9210038 between the National Science Foundation, Washington, D.C. 20550 and the California Institute of Technology, Pasadena, CA 91125, dated May 1992.

responsibilities following the requirements of the Cooperative Agreement¹.

4. The LIGO Project is responsible for obtaining NSF approval of all collaborative Memoranda of Understanding with international partners, or of those involving NSF costs exceeding \$100,000. All Memoranda of Understanding will be provided to NSF for their information.
5. Each party to this agreement continues to be responsible for all support of its staff including travel costs associated with the activities under this agreement. Exceptional support of travel by the other institution may be allowed for travel requested by that party.
6. This Memorandum of Understanding will remain in force until the parties mutually agree to terminate it. An annual Attachment will define specific activities if any, beyond those spelled out in this document , to be carried out during the following year.

Approved:

Barry Barish

Barry Barish
LIGO Principal Investigator

5/9/97

Date

Gabriela Gonzalez

Gabriela Gonzalez
Pennsylvania State University
Principal Investigator

5/20/97

Date

David E. Branigan

David E. Branigan
Associate Treasurer

August 4, 1997

Date