

**Memorandum of Understanding**  
**between the**  
**Experimental Relativity Group(ERG) in the Department of Physics and**  
**Astronomy(DPA)of the Louisiana State University**  
**and the**  
**Laser Interferometer Gravitational Wave Observatory (LIGO) Project**

**October 1, 1995**

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

1. The Experimental Relativity Group(ERG) in the Department of Physics and Astronomy(DPA) of the Louisiana State University(LSU), is experienced in building and operating cryogenic gravitational wave detectors. ERG will collaborate with LIGO on matters of mutual technology such as vibration isolation, low loss materials, data acquisition and data analysis, and the search for correlations and coincidences between the two types of detectors.
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 Agreement<sup>1</sup> 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 nine-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 responsibilities following the requirements of the Cooperative Agreement<sup>1</sup>.

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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.

