

**Memorandum of Understanding**  
**between the**  
**German/British Collaboration for the Detection of Gravitational Waves**  
**(GEO 600)**  
**and the**  
**Laser Interferometer Gravitational Wave Observatory (LIGO) Project**  
**August 15, 1997**

The purpose of this Memorandum of Understanding is to establish and define a collaborative relationship between the German/British Collaboration for the Detection of Gravitational Waves (GEO 600) and the Laser Interferometer Gravitational Wave Observatory (LIGO) Project. 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 German/British Collaboration is building a detector of arm length 600m (GEO 600) near Hannover in Germany with the purposes of joining in a worldwide search for gravitational radiation from astronomical sources and of developing advanced interferometric and suspension technologies for later gravitational wave detectors. The design, construction and operation of the GEO 600 system is being carried out by the scientists and technologists at the University of Hannover, the University of Glasgow, and the Max Planck Institut fur Quantenoptik, Garching. Data Analysis will be the principal responsibility of the University of Wales (Cardiff) and the Albert Einstein Institute in Potsdam. The project is funded in Germany by the State Government of Niedersachsen, MPG and BMBF, and in the UK by PPARC.
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 obser-

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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.

vation 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>.
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 institution.
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

Aug 15, 1997  
Date

Karsten Danzmann

Karsten Danzmann  
GEO 600 Principal Investigator

Nov. 6, 1997  
Date

Jim Hough

Jim Hough  
GEO 600 Principal Investigator

November 5, 1997  
Date

Bernard Schutz

Bernard Schutz  
GEO 600 Principal Investigator

March 21 1998  
Date