



**Attachment OUT to the  
Memorandum of Understanding LIGO-M050292-00  
between the Caltech Relativity Group (CaRT)  
and the  
Laser Interferometer Gravitational Wave Observatory (LIGO)  
For The Period  
August 15, 2007 - August 14, 2008**

This Attachment OUT to the Memorandum of Understanding LIGO-M050292-00 defines the role of the Caltech Relativity Group (CaRT) as a Member of the LIGO Scientific Collaboration (LSC) in support of Education and Outreach to the broader community. The period of performance for the activities in this Attachment is from August 15, 2007 - August 14, 2008.

## **1. Education and Outreach**

As a frontier physics effort, LIGO offers a unique opportunity to inspire interest in science among students and to educate the broader community. The LIGO Laboratory supports a broad program of education and outreach to take advantage of these opportunities.

Activities to attract and educate visitors take place at both Observatories, as well as the development of educational materials for use there and elsewhere.

The LIGO Laboratory is building a Science Education Center at the Livingston Observatory, and is participating with local partners to make it a vehicle for science education throughout the region. LSC groups are invited to participate in these activities, and to suggest others, with the goal of leveraging activities to make a greater impact.

This MOU Attachments defines the role and responsibilities of groups in this development group.

## **2. Participation**

During the period August 15, 2007 - August 14, 2008, the members of CaRT will participate in in LDG in the following areas:

- a. Educational Materials Developed

*Not Applicable*

- b. Other Contributions

- 1. Lectures for the general public.**

Thorne will give occasional lectures for the general public about gravitational-wave science and related issues.

## **2. “Interstellar”: A science fiction movie based on gravitational physics.**

Thorne will continue his development (with Spielberg, Obst and Nolan) of a science fiction movie, with working title “Interstellar”, whose venue is the “Warped Side of the Universe” (including black holes, wormholes, gravitational waves and their detection, and brane-worlds).

## **3. DVD or documentary on science underlying “Interstellar”**

Thorne will try to initiate development of a DVD or a PBS documentary on the science that underlies “Interstellar”.

## **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 CaRT group members while on LIGO research assignment at any LIGO Laboratory site.

*Not Applicable*

- b. Access to LIGO data through established LSC channels in support of this work.

*Not Applicable*

## **4. Coordination and Reporting**

CaRT will perform research within the structures established by the LIGO Laboratory and the LSC where appropriate. In particular, activities described in Item 2 will be carried out with the LIGO Observatories Educational and Outreach Leaders.

This includes 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 one-year period. These documents will be due one month before the close of the period of performance under this Attachment.

## **5. Computer Code**

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.



Jay Marx  
**LIGO Laboratory Director**



Kip S. Thorne  
**Principal Investigator(s)  
CaRT**



David Reitze  
**LSC Spokesperson**