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GWIC - Ten Years on

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The Gravitational Wave International Committee (GWIC) celebrates its tenth birthday this year. It was formed in 1997 to facilitate international collaboration and cooperation in the construction, operation and use of the major gravitational wave detection facilities world-wide. GWICs goals are broad and far-reaching:

- Promote international cooperation in all phases of construction and exploitation of gravitational-wave detectors;
- Coordinate and support long-range planning for new instrument proposals, or proposals for instrument upgrades;
- Promote the development of gravitational-wave detection as an astronomical tool, exploiting especially the potential for coincident detection of gravitational-waves and signals from other fields (photons, cosmic-rays, neutrinos);
- Organize regular, world-inclusive meetings and workshops for the study of problems related to the development or exploitation of new or enhanced gravitational-wave detectors, and foster research and development of new technology;
- Represent the gravitational-wave detection community internationally, acting as its advocate;
- Provide a forum for the laboratory directors to regularly meet, discuss, and plan jointly the operations and direction of their laboratories and experimental gravitational-wave physics generally.

GWIC derives its formal standing in the international physics community through IUPAP (International Union of Pure and Applied Physics). IUPAP was established in 1922, with the broad mission to assist in the worldwide development of physics, to foster international cooperation in physics, and to help in the application of physics toward solving problems of concern to humanity. One of the IUPAP Working Groups (WG.4: Particle and Nuclear Astrophysics and Gravitation International Committee or PaNAGIC) has adopted GWIC as a specialized sub-field panel, which is done when PaNAGIC determines that a sub-panel will be useful in promoting convergence of large international projects. The chairman of GWIC is automatically a member of PaNAGIC. These ties also give GWIC a formal link to the International Society on General Relativity and Gravitation, which is an Affiliated Commission of IUPAP and a participant in PaNAGIC.

Who is GWIC?

The membership of GWIC represents all of the worlds active gravitational wave projects, both ground-based and space-based. Each project has either one or two members on GWIC depending on size. Because the GWIC representatives are generally the leaders of each project, GWIC has access to the broader expertise throughout the community. GWIC also includes representation from the International Society on General Relativity and Gravitation and from the astrophysics/theoretical relativity community.

This year has seen important changes in the leadership of GWIC. At its meeting in July, GWIC selected Jim Hough (GEO) as its new chair, succeeding Massimo Cerdonio (AURIGA) and before that Barry Barish (LIGO). Earlier this year, Sam Finn stepped down as Executive

SecretarySam had held this post since GWICs inception, and we owe him a debt of gratitude for his service.

What does GWIC do?

GWIC has some very easily identifiable activities that many of you will recognize:

- GWIC sponsors the biennial Edoardo Amaldi Conferences on Gravitational Waves (see the report on Amaldi 7 by Jorge Pullin in this issue of MOG). The Amaldi meeting is considered by many in the gravitational wave community to be their most important international gathering. The members of GWIC serve as the Scientific Organizing Committee for the Amaldi meetings. The next (8th) Amaldi meeting will be held at Columbia University from June 21-26, 2009.
- In 2006, GWIC established an international prize, to be awarded annually to an outstanding Ph. D. thesis based on research in gravitational waves. The 2006 GWIC Thesis Prize was just presented at the Sydney 7th Amaldi meeting to Dr. Yoichi Aso, for his research performed at the University of Tokyo. A first Announcement of the 2007 GWIC Thesis Prize, to be presented at the LISA Symposium in Barcelona in June 2008, is attached at the end of this article.

However, I would argue that GWICs most important contributions are less concrete. By bringing together the leaders of the different projects on a regular basis, it has helped break-down the barriers and improved communication among the various gravitational wave projects. The growing collaboration among the various gravitational wave projects has been triggered in large part by discussions which have taken place at GWIC meetings. In particular, the recent agreement between LIGO/GEO and Virgo to analyze their data together has its roots in the GWIC meeting in the summer of 2005.

Along this line, one of the major up-coming activities for GWIC was commissioned at its July meeting: Jay Marx (LIGO) was appointed chair of a committee to prepare a global roadmap for the field of gravitational wave science, with the perspective to optimize the global science in the field. The charge to the committee is to cover both ground- and space-based detectors with 30-year horizon. The final report will use broad input from the communities affected to identify relevant science opportunities and the facilities needed to address them. We hope that this study will help focus the R&D for the next few years and guide the funding agencies to support the highest priority projects.