GRAVITATIONAL-WAVE INTERNATIONAL COMMITTEE GWIC

June 7, 2010

GWIC Support for the IndIGO Consortium for Gravitational-wave Physics and Astronomy

On behalf of GWIC, the Gravitational Wave International Committee, I am writing to express our strong support for the IndIGO Consortium for Gravitational-wave Physics and Astronomy, a collaborative effort to expand the participation of the Indian gravitational wave community in the global search for these elusive waves. The detection of gravitational waves from violent astrophysical systems in our Universe is one of the most challenging problems in experimental astrophysics, and the state of the art technology it uses has a very high potential return to society. It promises the opening up of a new field of astronomy - for example, the observation of the interactions of black holes and neutron stars in a way not possible with conventional optical, radio or other electromagnetic techniques.

GWIC was formed in 1997 to facilitate collaboration and cooperation in the construction, operation and use of the major gravitational wave detection facilities world-wide. It is affiliated with the International Union of Pure and Applied Physics as a sub-committee of IUPAP's Particle and Nuclear Astrophysics and Gravitation International Committee. A key GWIC goal is to promote international collaborations, especially those that expand the capabilities of the gravitational wave community.

The Indian gravitational wave community has had a long-standing collaboration in theory and data analysis with the global gravitational wave community, notably in the US project LIGO, but in the past year there has been a surge in interest in expanding this collaboration towards experimental work. The IndIGO Consortium is helping to open new research opportunities in this important field, while sustaining the existing connections, by supporting collaborative work between Indian scientists and students and their international colleagues. GWIC endorses the multi-pronged strategy proposed by the IndIGO consortium, consisting of an advanced prototype in India and strong participation in the global program, especially a close collaboration for a new detector in Australia.

In summary, the membership of GWIC urges the host research institutes and funding agencies to support the IndIGO consortium and its efforts to bring this important scientific opportunity to reality.

Yours sincerely,

James Hough

Prof. James Hough FRS, FRSE, FAPS, FInstP Chair, Gravitational Wave International Committee, Kelvin Professor of Natural Philosophy, Associate Director of the Institute for Gravitational Research, University of Glasgow, Glasgow G12 8QQ, UK Current member projects and their representatives on GWIC include:

ACIGA

ALLEGRO

AURIGA

EINSTEIN TELESCOPE

EXPLORER/NAUTILUS

EUROPEAN PULSAR TIMING ARRAY (EPTA) <u>GEO 600</u>

LIGO, including the LSC

<u>LISA</u>

MiniGRAIL and other **Spherical Acoustic Detectors**

NANOGrav

PARKES PULSAR TIMING ARRAY (PPTA)

TAMA/CLIO/LCGT

Virgo

- Observatory (Japan)
 - Kazuaki Kuroda, Institute for Cosmic Ray Research, University of Tokyo
 - Francesco Fidecaro, University of Pisa
 - Benoit Mours, LAPP-Annecy

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