

EGO-IndIGO meeting on Gravitational Waves

November 1 - 2, 2011, Pune, India

Patrons:

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Department of Science and Technology (DST).
H.E. Giacomo Sanfelice di Monteforte,
The Ambassador of Italy to India.

Organizers:

Prof. Federico Ferrini,
University of Pisa and EGO.
Prof. Bala Iyer,
Raman Research Institute and IndIGO.
Prof. Lidia Szpyrkowicz,
S&T Attaché, Embassy of Italy.

Support by:

European Gravitational Observatory (EGO).
Italian Embassy at New Delhi.
Indian Initiative in Gravitational-wave Observations (IndIGO).
Inter-University Centre for Astronomy and Astrophysics (IUCAA).
Istituto Nazionale di Fisica Nucleare (INFN).

Scientific committee:

Prof. Federico Ferrini,
University of Pisa and EGO.
Dr. Adalberto Giazotto,
INFN Pisa.
Prof. Bala Iyer,
Raman Research Institute and IndIGO.
Dr. Michele Punturo,
INFN Perugia.
Prof. Tarun Souradeep,
Inter-University Centre for Astronomy and Astrophysics.
C.S. Unnikrishnan,
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Abstract: An International Network consisting of a new generation of gravitational wave detectors (GWD) is presently under realization. The advanced (or second generation) detectors Advanced Virgo, Advanced LIGO, LCGT are promising to detect gravitational waves in the first years of their operation. A further evolution, represented by the 3rd generation observatories, like the European project Einstein Telescope (ET), is under design now. India has proposed initiatives to contribute significantly to this emerging field, thanks to new competences and facilities under development. The technological challenges and the science perspectives of these new experiments will be the theme of this meeting. Areas of possible scientific and technological interactions between India and Italy in this rapidly evolving field will be identified and the road map for EGO-IndIGO Collaboration explored.

Programme:

The Virgo experiment – past and present (F. Fidecaro, *INFN and Università di Pisa*)

Advanced Virgo: Status and perspectives (G. Losurdo, *INFN Firenze*)

Focus on technology: Suspensions (F. Frasconi, *INFN Pisa*)
Thermal Compensation systems (V. Fafone, *INFN and Università di Roma Tor Vergata*)
Optics (R. Flaminio, *LMA-CNRS, Lyon*)

Multi-messenger astronomy with GW, the supernovae case (E. Coccia, *INFN and Università di Roma Tor Vergata*)

3rd Generation: ET project (M. Punturo, *INFN Perugia and EGO*)

3G Technologies for ET: Cryogenics (F. Ricci, *INFN and Università di Roma La Sapienza*)

Numerical simulation tools for optics (J.-Y. Vinet, *OCA-CNRS, Nice*)

From the origins to ET (A. Giazotto, *INFN Pisa and EGO*)

EGO: its role in international GW research (F. Ferrini, *EGO*)

The TIFR 3m prototype (C.S. Unnikrishnan, *TIFR*)

GWDA with Networks (A. Pai, *IISER*)

Radiometric searches (S. Dhurandhar, *IUCAA* / S. Mitra, *Caltech* / T. Souradeep, *IUCAA*)

GW Data Centre plans (A. Sengupta, *University of Delhi*)

Optics for GW Detectors - in the context of IndIGO (S. Raja, *RRCAT, Indore*)

Technological Frontiers with possible EGO overlaps (A. Prabhakar, *IIT Madras*)

IndIGO Current Status (T. Souradeep, *IUCAA* / B. Iyer, *RII*)

GW sources for 2nd and 3rd Generation Detectors (S. Bose, *Washington State Univ Pullman*)

EGO speakers

IndIGO speakers