



PUSHING THE FRONTIERS OF SCIENCE

Project: Laser Interferometer Gravitational-Wave Observatory (LIGO)

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LIGO-India Project - Optical Instrumentation at its limits!



Abstract:

- The Laser Interferometer Gravitational Wave Observatory or LIGO as it is popularly known, is a 4 km arm length laser interferometer designed and developed for detecting the minuscule contraction and expansion of space due to a passing gravitational waves. The LIGO interferometers are arguably the most complex instrument that humankind had ever built to understand the universe. The talk will provide a brief overview of the LIGO-India project which is for setting up one of these interferometers in India, the complexities and challenges in setting up of a 4 km arm length laser interferometer and the technology that goes into achieving the required sensitivity to be able to detect and measure Gravitational Waves.

About the Speaker:

- Sendhil Raja S. did his B.Sc. in Physics from P.S.G. Collage of Arts & Science, Coimbatore. He did his M.Sc. in Physics from the India Institute of Technology Madras, Chennai, after which he joined the Raja Ramanna Centre for Advanced Technology to pursue a career in optical instrumentation. He received his PhD in Physics (Optical Instrumentation) from India Institute of Technology Madras, Chennai, in 2009. He is a recipient of the Young Technologist Award of the Department of Atomic Energy for the year 2006. He currently heads the Laser & Optical Instrumentation Section of the Advanced Lasers & Optics Division at Raja Ramanna Centre for Advanced Technology, Indore.

