

Physics Colloquium

Michigan Technological University

January 20 (Thursday) 2005, 4:00 to 5:00 pm
Room 139, Fisher Hall

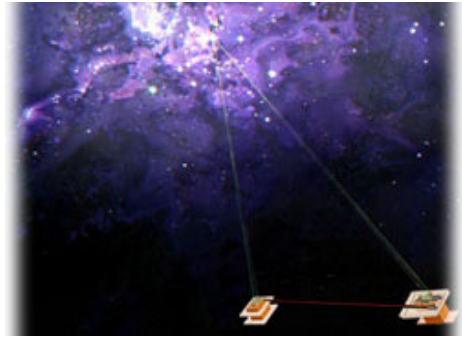
Progress toward Observing Gravitational Radiation from Astrophysical Sources

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Abstract

Gravitational radiation is emitted from a variety of astrophysical sources, such as coalescing black-hole and neutron-star binaries, supernovae, and other violent events. Although the resulting signals at the Earth are exceedingly weak, a new generation of detectors is coming on line with the promise of observing these and other cosmic phenomena. One of these ambitious undertakings is LIGO, the Laser Interferometer Gravitational-Wave Observatory, developed by a Caltech-MIT collaboration. In this lecture I will review the status and plans of LIGO, along with the physics and engineering involved in building its sensitive detectors.



Biography



illustrated book "The Snowflake: Winter's Secret Beauty".

Dr. Kenneth Libbrecht is Professor and Chairman of the physics department at Caltech. He earned his B.S. in Physics with Honors from Caltech in 1980. He earned Ph.D. in Physics from Princeton in 1984, after which he returned to Caltech to join the physics faculty. Dr. Libbrecht's research interests include advanced detector development for the Laser Interferometer Gravitational-wave Observatory (LIGO) project, which is aimed at detecting gravitational waves from violent astrophysical events. He is also interested in the physics of crystal growth and pattern formation of ice, and has co-authored the wonderfully-