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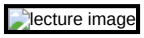

Special Guest Lectures

A New Mechanism for Core-Collapse Supernova Explosions: Implications for Gravitational-Wave Astronomy

Christian David Ott
Assistant Physics Researcher, Albert-Einstein-Institute
Johnston 338
December 01, 2005 - 12:00 pm

Abstract:
In the light of recent developments in core-collapse supernova theory (Burrows et al. 2005, astro-ph/0510687) I will review the current status of supernova gravitational waveform theory and present the wave signature imprint of the new core-acoustic-explosion mechanism. The core g-mode quadrupole emission dwarfs any emission process such as rotational bounce or post-bounce convection previously considered. We surmise that, even without rotation, galactic core-collapse supernovae will be observable by first-generation LIGOs and next-generation tuned bars.

Speaker's Bio:
Christian David Ott received his Diploma in Physics from the University of Heidelberg in 2003 and is currently finishing his Ph.D. in Physics at the Universitat Potsdam/Max-Planck-Institut fur Gravitationsphysik. He is currently a full-time research assistant at the Albert-Einstein-Institute. In 1999-2003 Ott served as the Unix Systems Administrator in the Office of the Dean of the Department of Physics and Astronomy at the University of Heidelberg.

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2003 Digital Media Center • Telephone: +1 225/578-5890 • Fax: +1 225/578-8957