



PHYSICS & ASTRONOMY WEEKLY CALENDAR

TEL: 225-578-2261
FAX: 225-578-5855
<http://www.phys.lsu.edu>

202 NICHOLSON HALL
Louisiana State University
Baton Rouge, Louisiana 70803-4001

WEEKLY CALENDAR

March 3, 2008

Departmental Colloquium

“Exploring the transient Universe with gravitational waves”

3:40 PM – Thursday, March 6, 2008

109 Nicholson Hall

Patrick Brady

University of Wisconsin at Milwaukee

Host – Gabriela Gonzalez

•Refreshments served at 3:15 PM in 201 Nicholson Hall•

The Universe is full of astrophysical objects that emit bursts of electromagnetic radiation and elementary particles. By applying a variety of tools to the study of such transient phenomena, we learn more about the sources that power them. Gravitational waves provide a unique way to study the transient Universe. The Laser Interferometer Gravitational-wave Observatory (LIGO) has recently completed taking a year of data at design sensitivity. Among the most likely sources of gravitational radiation detectable by LIGO are the coalescences of stellar-mass, compact-object binaries (i.e. binary systems containing black holes and/or neutron stars). After a brief introduction to gravitational waves from compact binaries, I will discuss the status of searches for those waves and implications of LIGO observations for the gamma-ray burst GRB 070201. Looking to the future, I will outline the information that might be obtained by direct observation of gravitational waves from compact binaries and the prospects for combined electromagnetic and gravitational-wave observing campaigns.

Reminder:

There will a faculty meeting on Tuesday, March 4, 2008 at 3:40 pm in Room 109.

Publications:

“Loop quantization of spherically symmetric midi-superspaces: the interior problem,” Miguel Campiglia, Rodolfo Gambini and **Jorge Pullin**, 2008 American Institute of Physics, Melville, New York 2008, AIP Conference Proceedings, Volume 977.

“Fiducial Stellar Population Sequences for the u'g'r'i'z' System,” **James L. Clem**, Don A. Vandenberg, and Peter B. Stetson, *Astronomical Journal*, vol. 135, p. 682, 2008.

“Experimental study of the atmospheric neutrino backgrounds for $p \rightarrow e + \pi^0$ searches in water Cherenkov detectors,” S. Mine ... **T. Kutter** ... (K2K Collaboration).