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## WEEKLY CALENDAR

March 23, 2009

### DEPARTMENT COLLOQUIUM

**"A New Way of Looking at the Long-Term Behavior of Gamma Ray Bursts"**

3:40 PM, March 26, 2009  
109 Nicholson Hall

**John Cannizzo**  
NASA-Goddard Space Flight Center

**Host: Juhan Frank**

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

I discuss a new idea for the very long term evolution of GRBs in which an "accretion disk" around the black hole powering the GRB jet strongly modulates the jet over a very long time scale - more than ten days. The mass and hence luminosity of isolated accretion disks decay with time as power laws. This decay can explain the observed long term X-ray light curves for many GRBs observed with Swift.

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#### Publications:

"Quantum Cosmic Censor: Gravitations Makes Reality Undecidable." Rodolfo Gambini and **Jorge Pullin**, International Journal of Modern Physics D, Vol. 17, Nos. 13 & 14 (2008) 2535-2538.

"Spin-orbit scattering and quantum metallicity in ultrathin Be films", Y.M. Xiong, A.B. Karki, **D.P. Young**, and **P.W. Adams**, Physical Review B 79, 020210(R) (2009).

"Investigation of the effect of Ni substitution on the physical properties of  $Ce(Cu_{1-x}Ni_x)_ySb_2$ ", D.P. Gautreaux, M. Parent, A.B. Karki, **D.P. Young**, and J.Y. Chan, Journal of Physics: Condensed Matter 21, 056006 (2009).

"Fabrication, characterization and microwave properties of polyurethane nanocomposites reinforced with iron oxide and barium titanate nanoparticles", Z. Guo, S.-E. Lee, H. Kim, S. Park, H.T. Hahn, A.B. Karki, and **D.P. Young**, Acta Materialia 57, 267-277 (2009).