



College of  
Science  
Department of Physics  
& Astronomy

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## Weekly Calendar

August 31-September 4, 2015

### Departmental Colloquium

#### ***“The Dark Energy Survey and Gravitational Waves”***

**3:30 PM Thursday, September 3, 2015**

**109 Nicholson Hall**

***Marcelle Soares-Santos***

Fermi National Accelerator Laboratory

HOST: Gabriela Gonzalez

• Refreshments served at 3:10 PM in 232 (Library) Nicholson Hall •

The Dark Energy Survey (DES) is an ongoing imaging sky survey, the largest such survey to date. Its main science goal is to shed light onto dark energy by making precision measurements of the expansion history and growth of structure in the universe. In this talk I present our latest results and introduce a new DES initiative: searches for optical counterpart of gravitational wave events.

### Publications:

1. “Linear Optical Quantum Metrology with Single Photons: Exploiting Spontaneously Generated Entanglement to Beat the Shot-Noise Limit,” Keith R. Motes, **Jonathan P. Olson**, Evan J. Rabeaux, **Jonathan P. Dowling**, S. Jay Olson, and Peter P. Rohde, Phys. Rev. Lett. 114, 170802 – Published 30 April 2015.
2. “Quantum Hall effect with small numbers of vortices in Bose-Einstein condensates,” Tim Byrnes and **Jonathan P. Dowling**, Phys. Rev. A92, 023629 – Published 20 August 2015.

### Announcements:

The University will be closed on Monday, September 7, 2015 due to the Labor Day Holiday. Classes will resume on Tuesday, September 8, 2015 at 7:30 am.