



**Department of Physics and Astronomy
Presents**

Prairie University Physics Seminar Series

Gamma Rays & Blowfish



Dr. Rob Pywell
University of Saskatchewan
Thursday March 22nd, 2018
1:40 pm, Room C640, U Hall

Lecture abstract:

Our research program at the University of Saskatchewan centers on experimental investigations of photon induced subatomic physics reactions. Measurements are designed to test fundamental concepts and assumptions in subatomic physics. These include: testing current models of the nucleon-nucleon interaction through photodisintegration of light nuclei and through measurements of the neutron polarization following low-energy photodisintegration of the deuteron, looking for new physics through direct measurement of the Gerasimov-Drell-Hearn sum rule for the Deuteron, investigating fundamental properties of nucleons and light nuclei through nuclear Compton scattering, and testing QED predictions of the gamma ray pair-production asymmetry. These measurements are performed at the High Intensity Gamma Source at the Duke University Free-Electron Laser Facility in Durham, NC. In this talk I will describe our progress on some of these investigations and the experimental challenges in making these measurements to the precision necessary.

EVERYONE IS WELCOME