

# SEMINAR IN PHYSICS

FRIDAY, MARCH 28, 2014

3:30-4:25 – Ross 0220

Refreshments

## The Foucault Pendulum

Amber S. Bekkali (UNC Physics student)

Named after French physicist Leon Foucault, the Foucault pendulum was the first real proof that the earth rotated. The Foucault pendulum has been replicated multiple times, in many different places on earth to prove its rotation. In fact, we are striving to build a functioning Foucault pendulum for UNC. The Foucault pendulum is basically a simple pendulum that is held above the earth's surface. When observed from bird's eye view, one perceives that the swinging pattern seems to look as if it were rotating in a circle. This indeed is not the case, but rather is a simple way to view that the earth is rotating underneath the pendulum itself.

## Monitoring the Neutralization of Mustard Agent

Graham Stringert (UNC Physics student)

The Pueblo Chemical Depot currently stockpiles just over 3,000 tons of World War II era mustard gas munitions, in the form of 4.2 in. mortars and 105 and 155mm large artillery shells. In accordance to the Chemical Weapons Conference of 1997, all United States based chemical weapons stockpiles must be destroyed or neutralized. As such, the Pueblo Chemical Depot has contracted a few organizations to design and build a pilot plant, called The Pueblo Chemical Agent-Destruction Pilot Plant (PCAPP), to destroy the stockpile by year 2025.

One of the companies, Ohio-based Battelle Memorial Institute, focuses on environmental hazard compliance and air quality monitoring, for elimination of risk to the environment and ground water. They do so using specialized monitoring equipment, some set up in mobile trailer units, to assure zero risk to the 24,000 acre operation and surrounding community.