

Abstract Submitted
for the TSF14 Meeting of
The American Physical Society

Neutron Activation Analysis Screening of Scintillator Material for Low Background Experiments¹ BRIAN ZAMARRIPA-ROMAN², University of Texas at El Paso — Low background neutrino experiments require a well understood system to avoid unwanted interference. The neutrino experiment at the SNOLAB uses certain wavelength shifters to detect low energy neutrinos. The wavelength shifters were analyzed using neutron activation analysis to determine the elemental composition of the substances and determine the amount of isotopes that could decay and interfere with the experiment. When activating the substance in a neutron flux, the decay of the activated substance emits radiation specific to the isotopes decaying in the substance. These decays are analyzed and are compared to activated samples with added isotopes to calculate initial quantities.

¹Made possible by the NSSC MSI Research Fellowship

²Will be presenting under the mentorship of Efrain Ferrer and Vivian Incera.

Brian Zamarripa-Roman
University of Texas at El Paso

Date submitted: 25 Sep 2014

Electronic form version 1.4