Contribution ID: **133** Type: **poster**

Scatter, Scatter, Scintillation Photons in Solid and Liquid Argon, Xenon, and Krypton

The speed and path traveled of light in vacuum is well known and easy to predict. Once light travels though a medium, the speed changes and the light becomes likely to scatter. The speed change and scattering is directly related to the wavelength of the light and thermodynamical properties of the medium in which it travels. This is of particular interest to those using argon, xenon, or krypton scintillating detectors under different thermodynamic conditions for proper optical modeling. Using previously published data on the temperature dependent index of refraction of liquid and solid argon, xenon, and krypton and the Sellmeier equation, we have extrapolated the index of refracation at the scintillation wavelength and used this to calculate the Rayleigh scattering length at this wavelength.

Author: GRACE, Emily (R)

Presenter: GRACE, Emily (R)

Track Classification: Poster Session