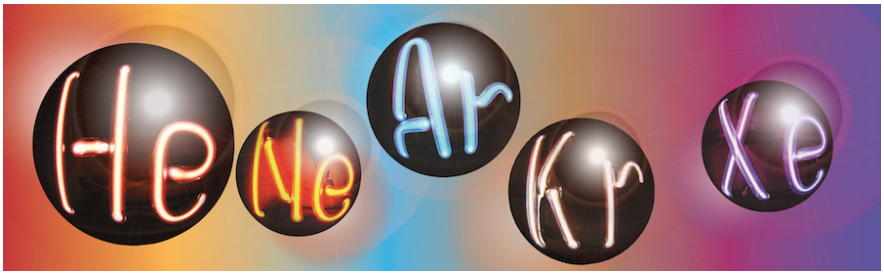

Contribution ID: **40** Type: **Presentation**

PTFE Reflectance for Xenon Scintillation Light

Friday, 22 September 2017 12:45 (15 minutes)

Many rare event searches including dark matter direct detection and neutrinoless double beta decay experiments take advantage of the high VUV reflective surfaces made from polytetrafluoroethylene (PTFE) reflector materials to achieve high light collection efficiency in their detectors. As the detectors have grown in size over the past decade, there has also been an increased need for ever thinner detector walls without significant loss in reflectance to reduce dead volumes around active noble liquids, outgassing, and potential backgrounds. The dependence of the reflectance on thickness of two PTFE samples at wavelengths near 175 nm using the Michigan Xenon Detector (MiX) will be presented. We will also discuss reflectance measurements of Kapton, and PEEK performed with the same apparatus.

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Session Classification: Friday Morning 2

Track Classification: Detector techniques (HV, cryogenics, purification, calibration, etc.)