Contribution ID: **14** Type: **not specified**

Grid behavior and testing in low pressure gaseous noble elements detector.

Friday, 13 October 2017 15:15 (15 minutes)

Metallic wire grids of various arrangements and designs are frequently employed to establish high voltage electrical
fields, with an important example being two-phase (gas-liquid) noble element time projection chambers,
such as the proposed LUX-ZEPLIN (LZ) instrument. A generally undesirable feature of such constructions is the
production of light that results from electron emission due to high local surface fields on the wires, and other possible sources.
In this talk we discuss the findings from a small-scale experiment hosted at SLAC, designed to study light emission from grids in various types
of gaseous noble gaseous environment, as well as the influence of the electropolishing and passivation techniques.
Also explored is the relationship between light response and electron drift distance, for a range of electric fields and gaseous conditions.

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Session Classification: Cryogenic Technologies V

Track Classification: Noble Liquids