



Contribution ID: 745

Type: **Poster**

## **Search for Space-Time Correlations from the Planck Scale with the Fermilab Holometer**

*Monday 8 August 2016 18:30 (2 hours)*

Measurements are reported of high-frequency cross-spectra of signals from the Fermilab Holometer, a pair of co-located 39-m, high-power Michelson interferometers. The instrument obtains differential position sensitivity to cross-correlated signals far exceeding any previous measurement in a broad frequency band extending to 7.6 MHz, twice the inverse light crossing time of the apparatus. General experimental constraints are placed on parameters of a set of models of universal exotic spatial shear correlations, with a sensitivity that exceeds the Planck-scale holographic information bound of space-time position states by a significant factor.

**Primary author:** Mr RICHARDSON, Jonathan (University of Chicago)

**Presenter:** Mr RICHARDSON, Jonathan (University of Chicago)

**Session Classification:** Poster Session

**Track Classification:** Beyond the Standard Model