

Study of Radiation Hard Dielectric Materials for the High Luminosity LHC

Saturday, 1 December 2018 10:05 (10 minutes)

As the High Luminosity Large Hadron Collider (LHC) upgrade approaches, a suitable dielectric material will be needed to provide electrical isolation between the silicon detectors and readout electronic chips in the next generation of trackers. An ideal dielectric candidate for the upgrade should survive the high radiation environment of the LHC, provide high resistivity for isolation, and possess a high dielectric strength to prevent electrostatic discharge. Dummy assemblies were built and experimentally tested with the dielectric materials that fit the above criteria after surviving exposure to various levels of radiation. Details of the testing apparatus, measurement sequences, and radiation exposures will be presented along with some preliminary results on a set of materials.

Session

Lightning Round (5+3 min)

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Session Classification: Lightning Talks