



Contribution ID: 30

Type: **Oral presentation**

## Characterization and Validation of first GEM Foils produced in India

*Monday, 22 May 2017 14:20 (20 minutes)*

The Gas Electron Multipliers (GEM) foils have been successfully produced for the first time in Indian in collaboration with Indian Industry. The foil production process has been established successfully using the double-mask etching technique. We will present the first results on a comprehensive quality control (QC) and characterisation of these GEM foils involving optical (geometrical) and electrical properties. We will present the results on the inner and outer hole diameter studies as well as size uniformity and leakage current measurements. The measured mean diameter and uniformity of the holes and pitch are found to be consistent with the desired parameters. The electrical properties measurements results are well within the thresholds and in agreement with the double mask foils produced elsewhere. The preliminary results shows that the foils produced in India are of good quality and confirms with all the standard quality control. We will present the results from our comprehensive studies of these foils and will also explore about its possible usage in the LHC experiments.

**Primary authors:** KUMAR, Ashok (University of Delhi (IN)); NAIMUDDIN, Md (University of Delhi (IN))

**Co-authors:** GOLLA, Mohit (University of Delhi (IN)); Dr MALHOTRA, Shivali (University of Delhi (IN)); Mr AHMED, Asar; Mr SHARMA, Ram Krishna (University of Delhi (IN)); SHAH, Aashaq Hussain (University of Delhi (IN))

**Presenters:** KUMAR, Ashok (University of Delhi (IN)); NAIMUDDIN, Md (University of Delhi (IN))

**Session Classification:** MPGD detector technologies - 3 (Chair: Matt Posik)