

## An improved self-stretching GEM assembly technique

*Tuesday, 23 May 2017 15:12 (18 minutes)*

We have improved the self-stretching GEM assembly technique that was initially developed at CERN for the CMS GEM upgrade project. With this improved technique, we can build GEM detectors at a scale of  $> 1\text{m}$  that still preserve very good gain uniformity. The technique results in high-quality stretching of GEM foils and good gas tightness in GEM detectors. This report presents details of the improved self-stretching technique for large-size GEM assembly and some test results of a large-size GEM prototypes built with this technique.

### Summary

We have improved the self-stretching GEM assembly technique that was initially developed at CERN for the CMS GEM upgrade project. With this improved technique, we can build GEM detectors at a scale of  $> 1\text{m}$  that still preserve very good gain uniformity. The technique results in high-quality stretching of GEM foils and good gas tightness in GEM detectors. This report presents details of the improved self-stretching technique for large-size GEM assembly and some test results of a large-size GEM prototypes built with this technique.

**Primary author:** Prof. LIU, Jianbei (University of Science and Technology of China)

**Presenter:** Prof. LIU, Jianbei (University of Science and Technology of China)

**Session Classification:** R2-Gaseous detectors(1)

**Track Classification:** Gaseous detectors