

Dear Leszek,

We studied with interest the procedure you propose for THGEM tests. It is very complete indeed and it corresponds to almost a full characterization of a THGEM foil. We consider that this will be the thing to be done when we will be convinced to have in hands a promising prototype. This is not yet the case: there are two central questions that have not received a clear answer so far. The questions are:

- Reasonable time stability
- Maximum gain large enough.

This being the status, we would consider a more effective approach to have a less extended campaign of studies on a larger number of prototypes and, later, to apply the more extended procedure to a smaller set including the most promising ones.

With reference to your document, we would suggest for the starting campaign a simplified procedure in two steps.

- First step:
 - irradiate the prototype with “educated guess HV” on for 3 days (last Summer tests seem to indicate that plateau values are reached after a few days)
 - perform electron transfer properties studies
 - perform maximum gain studies with the values obtained above
- Second step:
 - Keep the prototype off and not irradiated for at least three days (12 h could be marginal to recover original properties)
 - Perform the temporal stability study, exercise number 2 only (the disentangle among the various contributions to temporal instabilities will be performed later on the selected prototypes).

Uniformity and rate capability studies can be performed later, again during the more complete characterization of the promising samples.

The purpose of these suggestions is to have a larger set of samples studied in short time to be able to answer as soon as possible to the central question: is THGEM a valid approach for HEP experiments?

Thank you for your attention to our comments, best greetings

Silvia, Fulvio