Diamond as a versatile beam loss detector

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functonal description, characteristics,

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- Temperature and radiation limitations
- Transient current technique
- Charge - before and after irradiation
- compare with RD42 results
- Generation of trapping centres, reference KIT, Marok, Harris
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3.1 Pulse formation

3.2 Noise limitations

3.3 Temperature and radiation limitations

Chapter 4

Charge monitoring

Diamond Beam Monitor

- Spatial segmentation
- FE-I4
- Desc of ATLAS pixel module, functions
- Why do we use diamond in combination with FEI4
- Construction of 24 modules
- Performance results (main part)
- source tests
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- Problems, limitations
- Commissioning, installation
- Comparison between diamond and silicon modules.

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Spatial resolution, efficiency, ToT

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comparison between diamond and silicon modules

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- Real-time particle identification - Pulse shape (width, area. . .) and its constrants - Device constraints - Vienna TRIGA reactor // - Real time cross section measurement at IRMM?

5.1 Real-time particle identification

5.1.1 Pulse parameters

5.1.2 Real-time pulse shape analysis algorithm

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