ATLAS Micromegas at GIF++

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Micromegas set-up

- Detectors ~1.5m away from the source
- Rate of \( \sim 3 \times 10^7 \) 1/(cm\(^2\)·s)
Small chambers

• 10x10 cm$^2$ bulk Micromegas detectors
• Ar/Co2 premixed gas
• Running since middle 2015
• HV controlled remotely via dedicated DCS

No significant degradation is observed!
NSW MM module

- SM2 M1 was in Gif++ from 25th of July till the 1st of August
- HV scans at different attenuations done on two good sectors
- Impact of the current on the gas flow rate investigated
- Long term stability under high rate investigated over 8h
- Stability at source off investigated for ~1h
LM2 Module-0

• 2x1.5 m² Micromegas prototype
• 4 layers, 22 HV regions
• Ar/Co2 premixed gas
• Remote control of current for each HV region

General aims:
• Performance studies with muon beam and photon irradiation
• Ageing studies

Current session:
• From end of August till end (middle) of October
• Decrease of current have been observed starting from 9\textsuperscript{th} of September
• Found the decrease is related to loosing gas
• Gas leak tests to be performed, before that HV is turned off

Future plans:
• Open the chamber for cleaning and investigation on layer 3
• Put the chamber in GIF++ for long term irradiation