LAPP station – status (May 11th, 2016)

- Moved 3 Micromegas chambers inside a longer structure to have a more precise extrapolation (1 Micromegas chamber with HV problems to be repaired)
- Tracks with angle (w.r.t. ground) between 0 and ~20 deg. are recorded (right above the ridge)
- Operate in internal-trigger mode with a reset-gate (duty cycle of 80 %):
  trigger generated by front-end electronics when 1 ASIC memory is full (~ 1 Hz)
- Flush with non-flammable gas mixture (Ar/CO2)
  This is for the first time (Ar/Isobutane before), stability OK if running at low gas gain
- The efficiency is probably very low (need 4th chamber to be measured)

<u>Operational facts</u>

- Measured consumption below 1 kW (3-phases, not balanced)
- Data rate is about 100 Mb/hour (3 chb.)
  Mainly noise, can be improved.
  Will drop by 100's with external trigger.
- In 1 month of running (3 chb), we used
  ~ 30 bar of argon and 3 bar of CO2
  → several months with 2 cylinders of 50 L

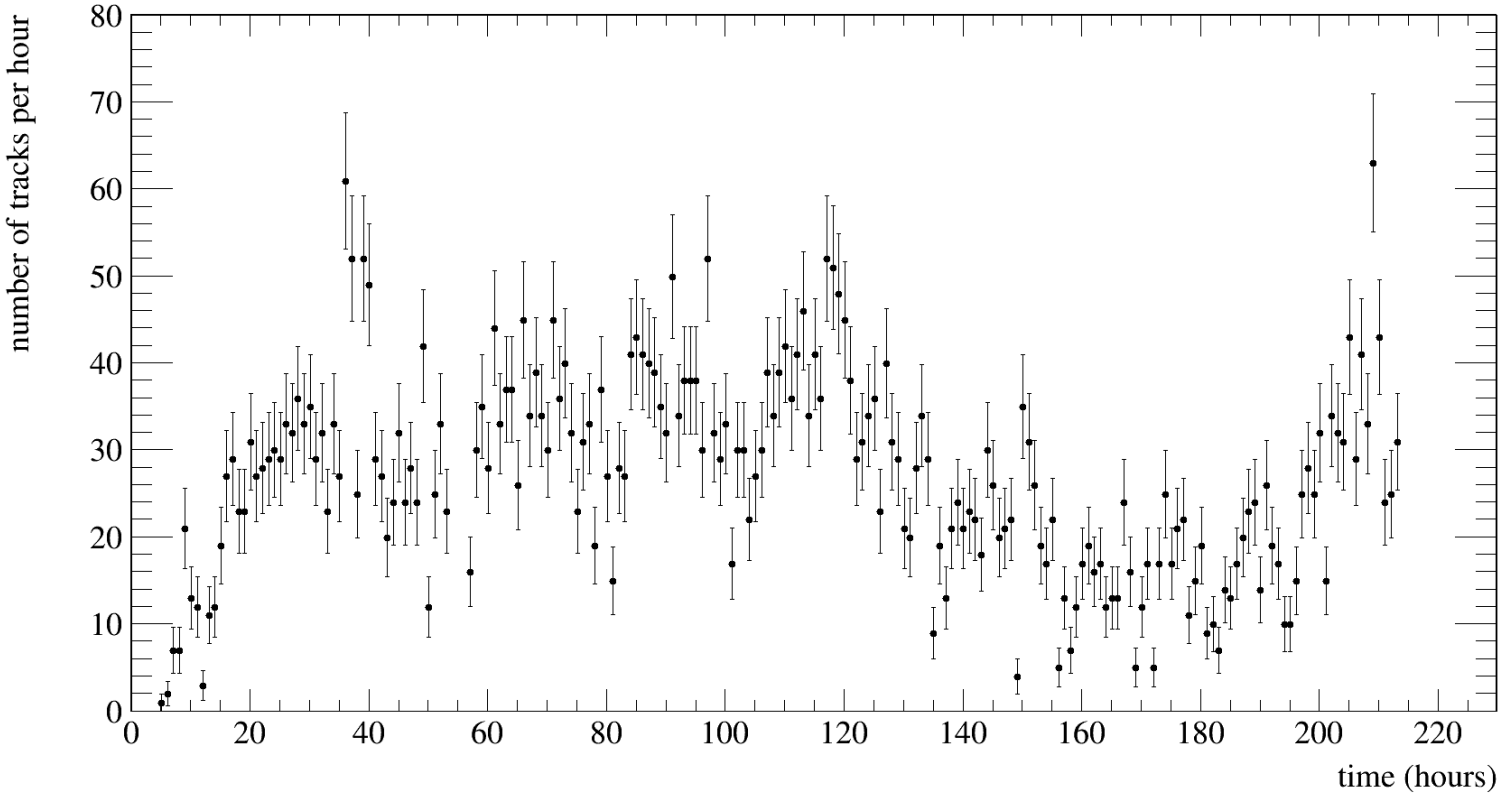
<u>To be done</u>

- HV slow-control (monitoring + restart)
- Include 4th chamber (efficiency moni.)

LAPP station – first data (1/2)

- The system has been running with no human intervention for the last 10 days.
- Data reconstruction (ROOT files) and analysis (single aligned hit clusters = track) done manually.
- We reconstruct 6700 tracks.

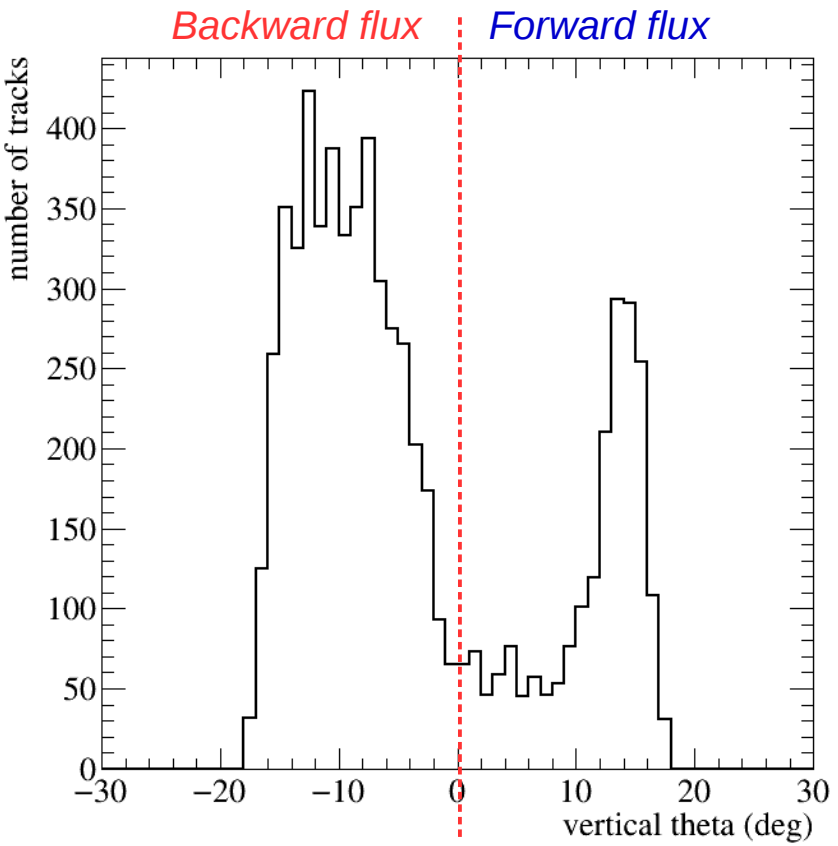
- Day-to-day P/T variations are important ; but we will normalise the forward flux (open-sky+target) to the backward flux (~ open-sky) to get rid of them. This implies to have the telescope parallel to the ground.

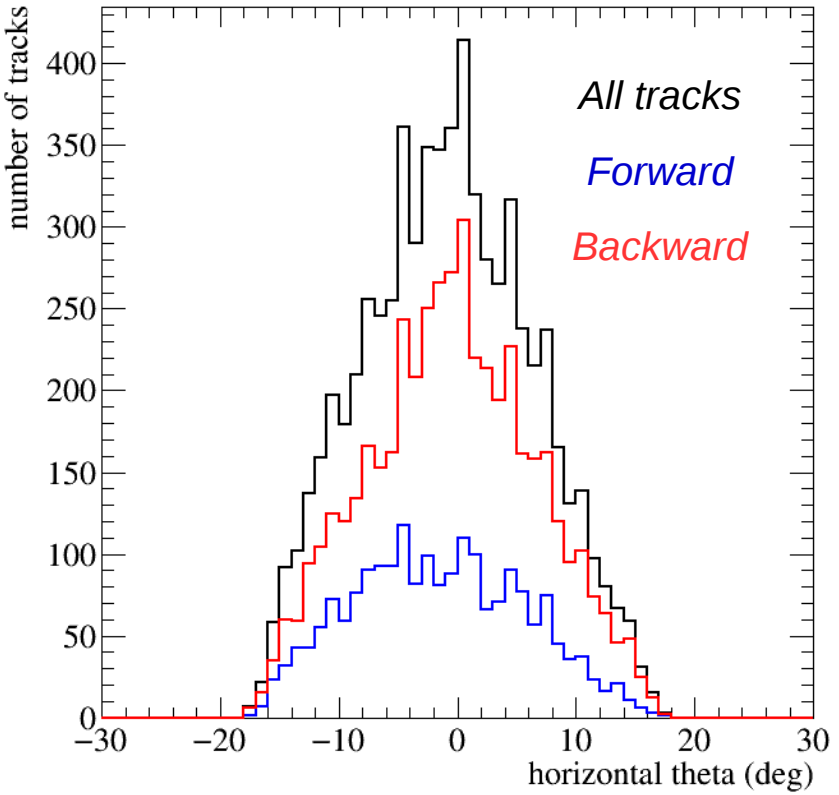


LAPP station – first data (2/2)

- The system has been running with no human intervention for the last 10 days.
- Data reconstruction (ROOT files) and analysis (single aligned hit clusters = track) done manually.
- We reconstruct 6700 tracks.

- We see a clear depletion of flux for tracks pointing at the mountain (good starting point…).
- The acceptance seems very close to the ridge : we might want to get the chamber closer together.





LAPP station – Outlook

- The telesocpe is running standalone, we just started to play with it.
- At this moment, the efficiency is not known and we need to insert the 4th chamber (after repair). Then we will know if more gas gain is needed and if such operation is stable (= no sparks).
- The plan is then to take data in June with a complete telescope.