Dear Jacques,

No disturbance at all!

This week I had a chat with the beam experts:

- The muon beam in all the North Area has indeed always a "significant" angular spread, width of ~2-3 cm sigma and has "not well defined properties" if compared to electron or hadron beams. In the past, we compensated for this by using the data of the 3 chambers that we have, reconstructing the track of each particle, and extrapolating it to the surface of our prototype (~30 cm downstream). In this way we got precision < ~0.5 mm with pions/electrons. Regarding muons, we never quantified it but we have always been able to resolve the fibres structure in our SpaCal prototypes (see Fig. 6 here). A few weeks ago we discussed with Stephane the possibility to synchronize your DAQ and ours; by doing so you will be able to do the same.
- A follow-up of the discussion with Stephane: the lowest muon rate achievable will be "a few" hundreds muon per spill, over a surf of approximately 100 cm².

Finally, according to the current schedule, the beamtime will start on Saturday 15/06. We will install the DAQ and ancillary equipment on Wednesday 12/06, in order to request the safety clearance during the week. Then we must wait till Saturday before taking beam and we will start with your prototype.

Let me know if I can help you with anything else, Loris

Proposal for the missions:

- 10/06 Ev.: Arrival at CERN on 10/06 evening [Hervé, Magali, Stéphane, Yingrui]
- 11/06 AM: Registration of computers and reception of dosimeters
- 11/06 AM-PM: at the Lab., Troll + drift chamber + preparatory tests on black box / trigger
- 12/06 AM-PM: installation of the system in the beam zone. Final setup.
- 15/06: Beam On !
- Reasonable end date: from the 17th. For what it's worth, I'm staying for the rest of the week.

FCC

Angular Spread:

• If we meet Loris requirements to have the drift chamber at 30 cm from the prototype, it seems we're ok.

Fluences:

- New numbers but from the beam experts !
- The lowest fluence (tunable) we can get is few hundreds of muons per spill on a surface of 100 cm².
- The spill is 5 seconds long and let's take few = 5.
- Initial minimal rate: 100 Hz.
- With Yury's trigger 5x5 cm^2: 25 Hz
- In GRAiNITA: 4 Hz
- We could use that fluence to test the system and then increase possible to the max (if possible) the WaveCatcher can afford.