## Suzuki, Daisuke

**差出人:** matta adrien <matta@lpccaen.in2p3.fr>
**送信日時:** Monday, July 9, 2018 9:36 AM
**宛先:** Suzuki, Daisuke; Lapoux Valérie; Charles.Houarner@ganil.fr; Flavigny Freddy
**件名:** Re: E738 status
**添付ファイル:** Screenshot_2018-07-09 () - document.png

Hi Daisuke,

I will be in LISE around 10.30AM.

I would like to put a word of caution about a MUST2xCATS Trigger. The only experiment where we used such a trigger, MUST2 electronic did not behave as expected. We never fully understand the issue, I guess this is due to an issue in the resetting of the MUVI when the event is not read out.

I attached a pictures of the kind of problematic PID plot we had, from the following thesis (p.114):

https://tel.archives-ouvertes.fr/tel-00875639/document

If you got for such an option, we should carefully monitor those plot. I also wonder if we should not put on the CLAMP mode on the preamplificator of MUFFEE to force return to the base line when resetting the electronic. We might have to cable some kind of DT/busy from MUVI to prevent the DAQ restarting an event while MUVI finnish its reset, but in that case I suspect you loose an event but have roughly the same DT.

Cheers,

Adrien.


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On 08/07/2018 21:12, Suzuki, Daisuke wrote:

> Dear all,
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> Yesterday (Saturday) morning, we started the experiment at 10 am, a bit later than originally planned due to an RF issue. The beam was stopped for a few hours in the afternoon due to water leakage from the cooling system of the slit AF44 at the exit of the alpha spectrometer. The beam was back at 6 pm to LISE. Since then, the beam of 12C has been very stable at an intensity of 2 electric micro A.
>
> The tuning of 10C was finished at midnight and the data taking of 10C@56 MeV/u + liquid H at started around 1 am on Sunday. The purity is almost 100% and the intensity is 100 kpps on CATS and 80 kpps on target. As of 10 pm tonight, the total time of data taking is about 21 hours (or 2.6 UT). 4 UT of data taking will be complete as scheduled at 9 am tomorrow (Monday), if nothing happens during night.

Regarding the detection system, the data acquisition or the cryogenic target, there are not so many to report. We have lost one strip of CATS1 Y. To gain in efficiency for 10C, we are pushing CATS to its limit. We found some issue with TAC for CATS-HF, which was fixed.

From the preliminary analysis, both 10C(p,d)9C and 10C(p,t)8C events were identified. Due to backgrounds, it is quite difficult to identify the 2+ state of 10C (which is unknown). I think multiple particles hit to MUST2 should be carefully treated to clean the spectrum. Nonetheless the statistics of the ground state will be a few thousands after 4 UT of data taking, which is what we expected.

I would like to switch the beam to 9C tomorrow morning as it is scheduled.

- 9 to 10 am: empty target run
- 10 am – evening (subject to many unknowns): Tuning LISE for 9C. In parallel (1) regenerate cryogenic target, and (2) prepare MUST2 *CATS trigger.

The MUST2 *CATS trigger is to reduce the trigger rate, which will be more important in the 9C run with a higher intensity expected due to impurities. Currently 20% to 30% of MUST2 trigger are not in coincidence with CATS. This is due likely to beta rays emitted from beam ions implanted to the target cell. If our understanding is correct, the ratio of beta rays will increase as the beam intensity gets higher and limit the data acquisition efficiency. We like to mitigate this risk.

I am very sorry for any inconveniences due to this late notice.

Best regards,
Daisuke
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