

# Minutes of the ISOLDE Physics Group Meeting, August 30<sup>th</sup> 2017

The meeting took place in the visitors' room of b. 508. There were no comments to the minutes of the last ISOLDE PGM.

## Technical news

### – GPS/REX/HIE-ISOLDE

- The first post-accelerated experiment on the XT03 beam-line (the new location of the scattering chamber) is currently ongoing ( $^{15}\text{C}$  from a CaO target). Most of the previous week was dedicated to setting up this beam line.
- There were significant difficulties with the transport of the beam to the scattering chamber, but once this was accomplished the experiment ran much more smoothly.
- Saturday morning/afternoon the difficulties were finally overcome and on Saturday evening the setup was ready for beam.
- There have been regular trips of the IHS amplifier (approximately once per shift), due to a triggered water interlock. The system is not straightforward to reset, therefore after each trip a non-trivial intervention is required.
- Another spontaneous target/line heating trip occurred on Saturday afternoon, but without any damage to the target integrity.
- The run is ongoing and will continue until Monday morning.
- On Thursday the extraction electrode moved in again, but this time there is a rather clear idea of the problem: a bug in the PLC software. A patch will be applied to fix this problem.
- The power supplies of the CA0 region (including kicker and bender) still trip from time to time. The vacuum group is diagnosing the problem

### – HRS

- From time to time the HRS-QP330 power supply trips. During the last ISOLTRAP run the power supply could not be reset from the control system and a manual reset (power off- power on) of the supply was necessary.

### – RILIS

- The preparation for the collections next week are ongoing. The goal is to set up a Dy ionization scheme for the main users on GPS, but go through a Ti and Sc scheme, which would also allow some yield checks (Tuesday).

### – Targets

- The target currently on GPS (CaO, #613) was the first target produced with a newly installed oven. So far it has been performing within expectations (see also Physics and Schedule).
- The UC<sub>x</sub>-n unit for the Collaps Ni beam time (#617) was finished today.
- The UC<sub>x</sub> unit #611 for the upcoming rubidium run will be finished next week.
- Sebastian Rothe is developing an automated system for monitoring the yields on the tape station. It will be finalized by next year and would allow switching the beam to the ISOLDE tape station once every few minutes, to check yield and composition. It still requires control-system developments.

## Physics and schedule

- The yield of  $^{15}\text{C}$  in the ongoing GPS experiment is about 5000/s, a factor 2 lower than hoped for, but still allowing the experiment to perform its measurements. The physics outcome will have to be discussed once the beam time is finished and the data is looked into. The aim of the experiment is to perform scattering reactions with  $^{15}\text{C}$  on  $^{208}\text{Pb}$ . The neutron detectors

were not intended to be used during the beam time, but now that the run has become less difficult they might be tested.

- Next week ISOLDE will run on GPS, for a set of medical and biophysics collections. Both surface ionized beams and laser-ionized Dy will be collected. Part of the run depends on a new collection chamber which will arrive on Monday and will have to pass a safety check the same day, therefore the schedule will be fluid.

## **Safety**

- The ISOLDE balloons will be emptied.
- The answer letter to the OFSP following the ISOLDE inspection which took place early this year has been in draft mode for some time and will be soon dispatched.
- The FC490 Faraday cup is not working very reliably, but a spare will soon be available.
- The Faraday cup after REX cannot easily be replaced without a major intervention, but Jose Alberto thinks this does not pose a great problem at this stage.

## **Visits**

- The visit schedule is still rather free.

## **AOB**

- The SAS is full of boxes and other items blocking dewar access. It is important to clear the space before the next nitrogen delivery.
- On September 29<sup>th</sup>, during the European Researchers' Night, a CERN exhibition will be organized in the globe and ISOLDE will have its own stand. Volunteers for the occasion are greatly appreciated. The event will begin during the evening and last until 2 AM .

## **Seminar**

- The meeting was followed by the summer-student presentations of Radostina Zidarova ,Maria Franziska Maier and Antero Toysa.

The next PG meeting will take place on Wednesday, September 6<sup>th</sup>, at 14:00 in the visitors' room of b. 508. It will be followed by the summer-student presentations of Ipek Efe, Leandro Sottili and Timo Steinsberger.

Minutes taken by VM