Minutes of the ISOLDE Physics Group Meeting, November 9th 2016

There were no comments to the minutes of the previous physics group meeting.

Technical news

- **GPS/REX/HIE-ISOLDE**
  - Post-accelerated ^{66}Ni has been delivered to Miniball last week from a UC_x target with laser ionization
  - The target installation was delayed on Wednesday due to a problem with the door of the Faraday cage of the GPS front-end. The reason was a faulty electro-valve, which was in the end replaced. It is a problem which seems to occur about every three years.
  - There were no protons on Wednesday because of the intervention on the electrical network.
  - The REX set-up worked quite smoothly and was ready ahead of time.
  - The beam energy measurement was performed on Friday and the run started the same day.
  - There were not many incidents during the run so far. The line heating tripped on Friday, one of the high-energy quadrupoles went into fault (only noticed on Tuesday) and on Monday there was a jump in the field gradient of the IH structure, which might be also the cause of some of the past instabilities in beam transmission.
  - Since Monday night the proton beam is stopped due to problems with Linac2. There were many problems which had to be fixed, broken RF lines, PLCs and other cables.
- **HRS**
  - A special target containing a W block was installed last week Tuesday for irradiation prior to the Miniball run (to be shipped to Denmark as part of the IS624 experiment).
  - There was a misunderstanding concerning the W block position with respect to the proton beam, which lead to an inefficient irradiation during the first two nights. It eventually worked, but it was more difficult than anticipated.
  - A back-up target for the Miniball run is installed and being set up today, but unless there is a problem soon on GPS there will not be enough time to set up the accelerator with the HRS beam before Friday.
- **RILIS**
  - The ^{66}Ni ionization went without problems.
  - During the electrical interventions on Wednesday RILIS performed an inspection of the GPS optics, because the UV laser beam is known to produce carbon coating. A strong coating was observed also this time, the magnitude of which is still not understood.

Physics and schedule

- The Ni run started relatively smoothly. It required replacing some of the Ge clusters at Miniball with $LaBr_3$(Ce) detectors, due to their higher efficiency at high energy. The aim of the run was to determine the level density and gamma strength function in ^{66}Ni. They have noticed using the so called Oslo method that the strength distribution increases at low gamma energies. If confirmed with unstable nuclei it will play an important role in astrophysical network calculations. A comment was made concerning the possible use of such a higher efficiency detector for the Sn. It was pointed out that, while they would allow higher statistics, this would not translate in higher energy precision because of the lower resolution.

- The last week's INTC meeting recommended for approval 121 shifts (10 proposals were fully supported, 4 letters of clarification were requested and 2 proposals were not recommended).
- The Linac2 problems produced a delay which puts a lot of strain on the schedule.
- The Miniball run will end on Monday morning at 6 AM. There might be a chance for VITO to take beam on Sunday evening.
- From Monday on the separator courses start.
- During the week there will be HIE-ISOLDE and REX tests, as well as RILIS actinium ionization tests.
- SPEDE would like to receive some beam by the end of the week.
- The LIEBE tests will be moved after the end of the proton run (when protons can still be received at low intensity).
- The machine check-up will be performed next year starting on January 23rd.
- The aim for next year's beam-time requests is to receive already a preliminary list from users in time for the first INTC of the year (February 9th 2017). Request forms will be sent in due time.

AOB

- Following last week's ISCC meeting Gerda Neyens is the new ISOLDE Physics Group leader. She will take over responsibilities in July next year, following one month of overlap with Maria.
- A video camera was installed in the ISOLDE hall extension, facing the HIE-ISOLDE tunnel. It is apparently not an initiative of safety but of the EN department, for visit purposes. The exact purpose of the camera will be checked.
- The HRS VISTAR will be modified to incorporate MEDICIS.
- The ISOLDE workshop will take place 7-9 December. It will be preceded by the NUSPRASEN workshop, which is part of the ENSAR2 project.

Seminar

- The meeting was followed by a seminar of Joao Pedro Ramos from CERN on *Titanium carbide-carbon porous nanocomposite for radioactive ion beam production: processing, sintering and isotope release properties*

The next PG meeting will be held Wednesday November 16th at 14:00 followed by a seminar by Martin Gonzalez-Alonso from Institut de Physique Nucléaire de Lyon on *Precision measurements in nuclear beta decay in the LHC era*.

Minutes taken by VM