

# ISOLDE Physics Group Meeting 24/10/2018

## Technical news

- **GPS**
  - Negative ion run with At beam to GLM and GANDALPH.
  - Tape station also used.
  - Minor issues switching between +ive and -ive but nothing to worry about, easily diagnosed and fixed.
  - MEDICIS test triggered interlock for 30 minutes.
  - STAGISO next week with 1 or 2 pulses until Saturday afternoon.
  - MD on LHC will have effects on SuperCycle during this week.
  
- **HRS**
  - RFQ setup in bunched mode and transmission mode.
  - Beam going to VITO and later to IDS.
  - Couple of vacuum issues where valves couldn't be opened. Seems to be because of the gauge.
  - Please remember what the isoop password is if you are on shift.
  - HRS should stop on Saturday afternoon for cooling of target.
  - MD on LHC will have effects on SuperCycle during this week.
  
- **REX/HIE**
  - Machine development during the last week, behaviour of the machine after LS2 is being investigated.
  - Intervention on EBIS power rack that should've been transparent, but rack tripped.
  - Cathode current had a shock, but it has survived.
  
- **RILIS**
  - Negative ion beam was focus: At and Cl.
  - Now setup for Tl to IDS.
  
- **Targets**
  - #658 installed on HRS for Na (VITO) and Tl (IDS).
  - ThTa rolls performed well to get At and even for Cl.
  - #534 Sn target for Cd beams for SSP.
  - Targets for the rest of the year are ready for online.
  - UCx for Li to HIE-ISOLDE on GPS.
  - Tests of UCx with new design of converter on HRS.
  
- **MEDICIS**
  - Trying UCx for the first time for production of Cu.
  - Outgassing for 5 days on MEDICIS, so not gone well.
  - Simon Stegemann tests went very well for  $^{11}\text{C}$  production (finally).

## Physics news

- **GANDALPH**
  - Electronegativity of At has been measured for the first time.
  - Can have impact on nuclear medicine.
  - Many things of the atomic properties are totally unknown.
  - Attempt to measure isotope shift in electron affinity of Cl was unsuccessful because needed a high-resolution laser.
- **IDS**
  - Setting up to measure beta-decay of  $^{182,184,186}\text{Tl} \rightarrow \text{Hg}$ .
  - Using SPEDE detector from Miniball to detect conversion electrons simultaneously with gamma rays.
  - Interesting for shape-coexistence and is complementary to future HIE-ISOLDE experiments at Miniball.
- **SSP**
  - Using Cd beams for many different experiments. The measurements will focus on probing phase changes and doping properties in a wide range of materials from multiferroic compounds to semiconductors such as  $\text{TiO}_2$ .
  - Molecular PAC to measure quadrupole moment in the gaseous state.

## Other business

- **Visits**
  - No visits this week.
  - Next week Swedish Teachers Programme at 11:30 Thursday 1<sup>st</sup> Nov.
- **Safety**
  - No news.
- **A.O.B.**
  - No information

The meeting was followed a presentation of Pedro Rodrigues from the University of Porto: "*Local Probing of Ferroic and Multiferroic Compounds*" – <https://indico.cern.ch/event/767587>

**The following meeting will take place on Oct 31, at 14.00h in the ISOLDE visitors room.**

Minutes taken by LPG