

ISOLDE Physics Group Meeting 23/05/2018

Technical news

- **GPS**
 - IDS calibration source taken.
 - Intervention of FC490, and it is definitely not bent. It has been re-greased.
 - Suppression of FC along the beam lines is uncertain. Bias can be checked in the expert application.
 - IDS FC is playing up, but it looks to be independent.
 - Auto-tuning application not working anymore, but Emmanuelle is testing new application borrowed from the booster.

- **HRS**
 - VITO taking ^{26}Na over the weekend.
 - Target took a long time to outgas, valve may have been open in storage.
 - VITO also delayed, so longer setup time was no issue.
 - Good yields and very stable for the length of the run.
 - RFQ He bottle low in pressure, replaced in an emergency courtesy of Juliana who had a spare.
 - Pressure in bottle cannot be read remotely so not easy to monitor.
 - HRS magnet trip on Wednesday for unknown reason.
 - RB0 interlock problem due to broken dual range gauge.
 - Proton problems on Saturday, lost ~2 hours.
 - QP180 tripping still, it's becoming a feature!
 - Tim did R&D on tape station during the week... Getting there.

- **MEDICIS**
 - MEDICIS ran simultaneously while VITO took protons, target installed on Wednesday.
 - Irradiation continued for the whole run and target taken offline today.
 - Discussion on optimisation of Montrac system for target changes.
 - Rare-earth separation on-going and to be sent to NPL in the UK..

- **REX/HIE**
 - Beam ready to go into cryomodules, already at REX energies.
 - Final re-alignment taking place inside the tunnel this week.
 - Final cryomodule has some field emission at high gradients.
 - Conservative gradients being used, which reduces maximum energy.
 - A few instabilities in cryogenics, hoping to improve.

- **RILIS**
 - TiSa returned from repair.
 - Setup for Cu is now up and running, ready for physics.
 - Maybe a change of HRS laser window on Friday if dose rates acceptable.

- **Safety**
 - Please return sources to the safe when not being used.

- Hand monitor should be returned to RP cabinet in case it is needed urgently. It should always be there, please take it back.
- **Pumping stations**
 - One pumping station failed, second is missing its backing pump.
 - Frank is looking in to a new dry pumping station.

Physics

- **VITO**
 - New charge exchange cell took time to install.
 - Observed chemical shifts in DNA, but magnetic field stability uncertain.
 - The homogenous region of the magnet is too small to fit probe and sample... New magnet may be required, investigation on-going.
- **IDS**
 - Beta-decay of Cu \rightarrow Zn to measure lifetimes with fast timing (LaBr).
 - A = 74-78 with the possibility of A=73 and A=79.
 - Isomeric states in the odd-mass nuclei and lifetime discrepancies in even-mass nuclei between RDDS and Coulex.

A.O.B

- **Visits**
 - A few personal visits this week.
 - Guide needed for visit on 12th June, Swedish Summer students.

A seminar by William B Walters followed the meeting, titled "Magic numbers at gamma = 30°: level structure and shape in 78Ge and adjacent nuclei" – <https://indico.cern.ch/event/730942>

Next week's meeting will be held in B. 508, at 1400.

Minutes taken by LPG