ISOLDE Physics Group Meeting 02/05/2018

Personnel

Welcome to Luis Fraile (Universidad Complutense de Madrid) who will be at ISOLDE for 4 months as an associate. Chris Raison (University of York) will join on long-term attachment as Andrei Andreyev's PhD student working on Windmill and IDS.

Technical news

- **GPS**
  - Target change on GPS went well aside from interlock issues (resolved).
  - STAGISO setup had issues (as usual) but started on Wednesday.
  - Accidental venting of the target on Wednesday night, target survived.
  - GPS deflector plate and FC490 collision Thursday morning. Interlock didn't work correctly. Manually extracted FC, but may be bent.

- **HRS**
  - Intervention on RFQ faraday cup caused the HRS to be vented in error.
  - Vacuum expert called to help restart turbo pumps in sector 40.
  - Stable beam to ISOLTRAP by Tuesday night.
  - HT died on Wednesday evening, resistor problem again. Replaced with final spare from stock, more needs to be found.
  - Chromium contamination at ISOLTRAP for 52Sc and 53Sc beams meant no scandium mass measurements and so switched to indium and new target.
  - Setup for Ge for COLLAPS started yesterday; TISD group slowly heating to understand production and release of Ge from target. Therefore, no beam to users overnight.
  - PSB machine development for a few hours today so no protons.
  - QP180 is tripping frequently, so be warned if beam disappears. Requires a local power cycle to bring it back to life.

- **Diagnostics**
  - HRS.BSC6800, CD0.BSC0800 and HRS.BSC2600 not working properly.
  - Scanner in CB0 seems to have horizontal and vertical inverted.
  - Vistar in control room is blurry. TV is bad, but internet version good.

Physics

- **Solid state physics**
  - A total of 6 experiments on-going last week.
  - Multi-ferroic materials → new phase transitions observed.
  - PAC gas phase measurements → nice data on Br and I.
  - Solar cell research from new Brazilian collaboration collected ~300 samples to be analysed!

- **ISOLTRAP**

- IS532 ($^{52-55}$Sc) → change of physics case due to large Cr contamination.
- New measurements of In, complementary to CRIS measurements last month… Same target unit has been put back on to HRS.
- PI-ICR on ^{101}In thanks to large yield → observed isomeric states.
- TOF-ICR on ^{100}In and MR-TOF on ^{99}In → Success!

A seminar by Bradley Cheal followed the meeting, titled "Laser spectroscopy at complementary facilities: JYFL and GSI" – https://indico.cern.ch/event/726505

Minutes taken by LPG