

# Minutes of the TITAN Meeting

June 11<sup>th</sup>, 2009

**Present:** Jens Dilling, Alain Lapierre, Thomas Brunner, Mel Good, Maxime Brodeur, Stephan Ettenauer, Scott Foubister, Aaron Gallant, Matt Pearson

## Detectors

- New firmware for tig10:
  - Possible to set a parameter so program won't compensate for decay
  - Possible to store waveforms for up to 400 $\mu$ s
- tig10 resolution is 1.5 times worse than DSPEC for  $E \sim 1\text{MeV}$ , and 2 times worse for  $E \sim 100\text{keV}$ . TB will try to improve this to allow better separation of peaks
- TB will attach copper sheets & mesh to the aluminum crate holding the tig10s, hopefully this shielding will improve the lower detection limit for the tig10s.
- TB took the LEGe detector out of vacuum, better data now. Spectra can be taken in 30 mins as opposed to 3-4 hours
- TB is continuing storage times measurements for the EBIT
- TB calculated for 1.6 min half-life  $^{126}\text{Cs}$ , a 2s storage time is optimum
- TB will try to fix the problem of the first pulse from the RFQ not being captured in the EBIT.
- PIPS detector assembly ready to install by end of next week
- The preamp for the PIPS detector should arrive in 2 weeks, needs to be installed and ready for the upcoming beamtime July 16-20

## Beamtime Preparations

- The discretionary beamtime June 20-21 has been cancelled
- Instead JD said that the priority is to prepare for the Cs beamtime July 16-20 and later the K beamtime
- The Cs run will be final test for branching ratio before the real measurement. This is important for TB's thesis.
- TB's experiment is the highest priority – once the Cs source is in, extra time should be spent on charge breeding. Important for everyone to work together in the next 5 weeks before the beamtime.
- TB will start thinking about the run plan

## Ion Sources

- Li source will soon be removed and the Cs source will be installed.
- Li source is bigger than Cs source, so some modifications necessary for Cs source to be installed.
- Cs source was installed before, so parts should be around – MB will look for them

## CPET

- RTDs and controller for measuring temperature of Ti tube during baking arrived yesterday. SF will read the manual and install them
- Talked about computer interface for the RTDs and UHV gauges. This would allow improved data acquisition during and the baking process. Currently, SF writes the pressures & temperatures down manually, several times during the day. Several options for computer interface:
  - MP suggested talking to Grant Sheffer from TWIST for a RS232 data acquisition unit that will recognize the both RTDs and the UHV gauges.
  - SE and TB suggested using LabVIEW – SE has a program that can be modified to read the data. SE & SF will look at this option. It shouldn't take too long to figure out and it will allow data to be taken automatically, overnight, and at shorter intervals.
- SF is working on calculating the ultimate pressure attainable with the current setup. He took out several books from the UBC library to learn how calculations like this are done.
- SF is looking in the literature for info on Titanium outgassing rates and baking info – how long and at what temperatures Ti need to be baked to be activated
- Charge exchange of HCl – SE has found several relevant papers addressing the issue of how high the vacuum needs to be for HCl, SF & SE will discuss this further