

# TITAN meeting August 12th

**Present:** Fritz Buchinger, Alain Lapierre, Maxime Brodeur, Aaron Gallant, Thomas Brunner, Matt Pearson, Mel Good, Jens Dilling, Paul Delheij, Ernesto Mané

Jens introduces Ernesto, a postdoc in Matt's group. He will be working on the RnEDM experiment and the reverse extraction with the TITAN RFQ.

Jens also informs us, that he will be gone from Aug. 13 until Aug 21.

## Beam time preparations:

Max reports that the unknown mass with  $Q/M=4$  in the ToF spectrum could be identified as  $\text{He}^+$ . Besides, it was achieved to inject beam into the EBIT, charge breed and extract afterwards. The charge states that are coming out range from  $1+$  to  $5+$ .

On Monday, there seemed to be an issue with the DAQ. The number of ions detected appeared to be about 50% less than the number of ions shown on the oscilloscope.

Apparently, this occurred due to non-simultaneously observation of scaler and oscilloscope. Max and Aaron checked it again but could not find any deviations. The DAQ system works fine.

The next steps for the beam time:

- Optimize for  $\text{K}^{4+}$ , then go for  $\text{K}^{9+}$  or even He-like K. This requires a lot of beam tuning and Alain is not sure if it can be achieved.
- Perform mass measurement of  $\text{K}^{4+}$ .
- Determine the ion losses inside the MPET as function of  $t$ .
- Maybe skip storing ions inside the trap for several seconds. Storing ions in the EBIT is very sensitive to the beam tune and by just waiting, one wastes lots of beam time. Max and Thomas argue that it would be better to improve statistics and massage the data afterwards but applying appropriate cuts.
- The timing cycle gets developed during the preparation. Without storing the ions, it doesn't need to be changed.
- MPET vacuum: we will wait for the  $\text{K}^{4+}$  losses/ $t$  results before deciding how to proceed with the MPET vacuum.

Overall, we are on track towards the next beam time.

Paul then informs us, that the vacuum test slowly comes to an end. Their conclusion is that Kapton might be better suited than ceramic. The drawings of the jig to mount the B-field mapping device in the CPET magnet were sent to the machine shop. Pauls is expecting the parts to be done some time next week. His tests with the stuck module showed that it performs slightly better than the tig10 but not as well as the DSPEC. Concerning the CPET, Pauls reports that Gerald is planning on organizing a review. Gerald is on vacation and will be back on Aug17. Alain suggested including Vanessa to this review because she is supposed to do the simulations for the CPET.

Mel found a new vacuum leak at the north side of the switch yard. It is on a bellow on the North side towards the MPET, where the xy-steerer are installed.

Matt informs us that their Li11 polarizer beam time was supposed to start on Thursday. Unfortunately, there are problems with the ISAC target so he was not sure when the beam time will start.