

TITAN meeting

Thu September 30th, 2010 (13:00)

Present: Jens, Aaron, Benjamin, Ernesto, Martin K., Matt, Paul, Stephan, Usman, Martin S.

RFQ (Ernsto):

- New switches have arrived – therefore rack has to be rearranged – installation next week with Mel.
- Ion source material has arrived: rubidium (Rb) and potassium (K) – discussion on installation see below.
- Progress on determining transport efficiencies: rates on MCPs in DC mode are still very low and not stable. Using a ratemeter for longer time integration (instead of oscilloscope) was suggested by Matt.

BNG (Martin K.):

- Results of test measurements with the new Bradbury-Nielsen Gate (BNG) were shown and discussed:
 - o 500 ns have been cut out of a continuous beam (old gate showed no transmission using the same switch and same trigger pulse)
 - o Differences between switching from positive and negative voltage to ground have been observed (time focusing and defocusing)
 - o Signal enhancement at instant of switching
- Tests should be completed by a measurement, where opposing voltages are applied to the two wire groups (e.g. +100 V and -100 V) before switching all to ground.
- Tomorrow is Martins last day (and he keeps on measuring)

EBIT (Aaron, Martin S.):

- EBIT currently off; MCP with phosphor screen for tuning injection is still in position; external triggering of the camera has been tested
- PLC will arrive soon; Mike Le Ross started programming the EPICS front panel.
- During the implementation of the PLC the EBIT won't be available; the time shall be used for a magnet warm up, however, this means additional stress for the cold head. The possibility for maintenance by Cryogenics must be clarified before.

- Labview control of EPICS variables: Labview will basically be running on two windows machines (*titanlab* and *ebit-gun* which will soon be replaced by the PLC). Aaron installs EPICS servers on those machines.

CPET (Usman, Benjamin):

- Pumping of the pipe has started; very good vacuum was reached quickly – even so good that detection of activation temperature of the getter material could be hard
Matt suggests to look at RGA (rest gas analyzer), because the getter material will work preferably on certain species
- SIMION simulations are progressing: Higher voltages improve trapping
- GSI switch is working.

MPET (Stephan):

- Progress in todo list was presented
- The frequency generators have been investigated. The provided signal for the modulation of the main frequency shows deviations. Can lead to uncertainties up to 400 eV in a mass comparison of Na and K. Not an issue for the upcoming Rb beamtime.
- MPET ion pump baking has started; currently at about 120°C; aiming for 150°C.
- Final hope to clarify the shifts in the Al measurements of the recent discretionary beamtime is a count class analysis.

The meeting was concluded with a discussion about which ion source material should be installed when? Rb will be required by the Laser Spectroscopy group in about 3 weeks, therefore Cs will be replaced by Rb soon. K will not be installed now.

Meeting ends 13:50