Minutes of the TITAN Meeting

Held on the 5th of June 2008

Present: Jens Dilling, Maxime Brodeur, Christian Champagne, Paul Delheij, Melvin Good, Stephan Ettenauer, Alain Lapierre, Ryan Ringle, Vladimir Ryjkov, Savanna Shaw, Mathew Smith.

MPET

*Increasing Lorentz steering shifts the fitted cyclotron frequency downward by as much as 80 ppb. The cause of this shift is not yet clear, but that number was added as conservative systematic error to the measured He8.
*Both Li6 and Li7 displayed systematic shift in their fc by an amount comparable as their ratio remain unchanged. How the shift scale with mass is unclear.
*One problem thought to be asymmetry in the TOF spectra side-bands, but Gaussian fit shown comparable result as MIKE fit as well as longer scans with more statistics and symmetric side-bands. So there seems to be a 'real' shift with changing LS, but the cause is still unclear.
*The ion count number was observed to go down with time, which can be due to changing injection energy of the beam into the Penning trap. Possible cause can be drifting of the PB5 PS, change in the bender voltage, PB5 switch circuit not performing that well or something else…
*Last night scans have shown few events (once or twice per hour) where 10-20 ions/shot (usual < 7) were recorded. They display very large TOF (heavy contaminant from the trap or dischage?).
*Savanna is getting familiar with EVA by looking at the data collected last night. She will look for time-dependence of the fc and count number.
*Vladimir looked if an axial compression of the beam would remove the asymmetry in the depletion vs applied frequency but did not see any effects.
*The asymmetry can be removed by changing the voltage on the tube electrode from 2.8 V to 3.0 V. Vlad will do a magnetron scan to test this value.
*We improved the depletion efficiency (~3-4%) but we cannot fully deplete yet. Is it due to scattering of the ion with background gas? This can be tested by trapping heavier mass.

EBIT

*Chris handed his report to Alain.
*2-3 bellows are still in the machine shop.
*Control group is working on the EBIT EPICS system.

Controls

*There will be a computer dedicated to EVA and data analysis which will avoid crashing down TITAN01. This computer should have at least 4 Gigs of rams and dual core processor.