

Minutes of the TITAN Meeting

Held on the 22nd of July 2008

Present: Thomas Brunner, Christian Champagne, Paul Delheij, Jens Dilling, Stephan Ettenauer, Melvin Good, David Lunney, Ryan Ringle, and Savanna Shaw

RFA:

Christian continued the RFA measurements and tried different potentials on the first and third mesh of the RFA. This did not influence the energy spread, but is important for normalization purposes. Finally, Chris went back to the initial settings.

The last measurements investigated the gas pressure as a parameter for the energy spread. Differences were observed, but not statistically significant. Christian will now look at the influences of the beam gate.

Beam stability: The power supply for the drift tube was changed but the beam remains unstable. The set voltage does not always agree with the delivered voltage. During the night the beam seems more stable indicating that the beam instabilities could be caused by warm temperatures. Thus, it is considered to install a fan to cool the power supply.

EBIT:

The EBIT beam line is commissioned and Mel will install the MCPs. The EBIT will be commissioned in the first week of August after the arrival of the convectron gauges. Afterwards, the E-Gun will be attached to the EBIT and optimized.

EBIT detectors:

Thomas recorded gamma spectra (with dspec) for different rise times in the shaping amplifier. The energy resolution depends linearly on the rise time. For larger rise times the peak energies are not linear any more.

With TIG10 cards spectra can currently only taken up to 100 keV. Chris Pearson will look into that.

Mass evaluation:

David presented the mass evaluation based on frequency ratios provided by Maxime. For He it is necessary to take the electron binding into account. Maxime has explained how to do this in an E-log entry.

In the output of the mass evaluation TITAN measurements have- among others- the following impacts: ^8He 100 %, ^8Li 19.79 %, or ^9Be 61.59 %, and through ^8He even on ^7Li (0.03 %) and ^6Li (2.44%).

The total χ^2 of TITAN's measurements is 1.043 and indicates good consistency. Dave will forward an evaluation summary to Thomas, who will put it on the webpage.

Simulation of Lorentz Steerer:

Savanna showed results of the Lorentz Steerer simulations: Radial distance versus applied voltage shows a linear dependence. Mass versus radial distance has an unexpected oscillation. As a check Savanna plans to re-do the simulation with constant magnetic field for which results are known.