TITAN Meeting

Date: Thursday July 12, 2007 Time: 15:00
Chairperson: Paul Delheij
Others present: Mel Good, Don Dale, Fritz Buchinger

RFQ: Matthew Smith, Ryan Ringle

RFQ	- Put Li-11 gas through RFQ, tried to send beam through - Took frequency scan to see what's coming out of source - been 4 days, haven't stabilized - Majority of gas through RFQ has mass = 38 – 40, Lithium definitely not dominant component. - No manufacturer specifications for temperature or current (1.7A = reasonable?) - For now, just knock up current and wait until impurities goes down.
MCP	- Discovered metal piece between feed-through and wall - Used assembly today for time of flight measurements

EBIT: Alain Lapierre, Thomas Brunner, Christian Champagne, Josef Berger, Cecilia Leung

Einzel lens	- Status mainly unchanged. - Anticipate Sikler/Einzel lens return from shop next Tuesday. - Then vent, align, pump out, run EBIT
Detector	- Model is ready - Revise machine drawings with Mel before sending them into machine shop
PIPS	- Tested, pre-amplifier doesn't work - Closed vacuum tube to pump - Got signal from detected e^-, now working

MPET: Vladimir Ryjkov, Maxime Brodeur, Alexei Bylinskii

MPet	- Changed vacuum system with proper control system - Found leak in joint we didn't open, replaced gasket, performed leak test. Pressure = 10^{-9} now (back to where it was) - e^- gun verified working before, now see if MCP & e^- gun work in tandem. - MCP flooded at first, now try to properly bias drift tubes - Detecting 10^4 - $<10^6$ ions/sec. (less than expected) - Working in DC mode- create lots of space charge. - Critical item: HV amplifier- pulse e^- beam → noise issues source = ripple from DC power supply fast oscillations correspond to peak of ripple (0.5V) solution: by-pass power supply, increase capacitance at amplifiers

Scientific Experiments:

Behlke-switch	- Completed & tested to 300V, looked clean
RFQ-MPET beamline	- Next step = transmission output of RFQ - Faraday cup right around corner detects beam profile is round; close to what we expect
Data acquisition	- Profile left over from last year; with Susanne - Difficult to clean up signal, try using frequency ram. (swift cleaning not recommended: didn't work well at MSU/Isol-trap) - Concentrate on step ramp- gives us quadruple excitation and burst