Minutes of the DRAGON meeting November 25, 2008

Present: CV, DH(recorder), CR(chair), CD, UH, BD, LB, GR, DO, PB, PM, UG

1. Status of 23Mg(p,g)24Al experiment

Following are some of the points raised in a wide-ranging, recursive discussion of what had happened so far, what were the critical issues and what should be done next.

* we appear to have about two score of 'silver-plated' events--ones which have the position in PID and MCP-TOF expected for 24Al. Their rate of production was >1 per hour at the original energy (502 keV/u) and perhaps 2x lower when beam energy was reduced 5 keV/u.

* how to reconcile this with the non-observation of events in July? (At the rate of >1 per hour with the present 23Mg beam intensity, we would have expected to see ~3 events in the July run.) Our 502 keV/u run is ~2 keV/u higher than the July run--maybe the resonance it right at the upper limit allowed by various error bars?

* the 23Na background rate was reduced shortly before the energy change and one or the other change seemed to reduce the leaky beam rate a lot (but ED2 was found to be mistuned 6% too low for the first few runs at 496 keV/u).

* could be a combination of uncertainties in 24Al excitation energy, 24Al mass and beam energy? need to account for about 6 keV. Could there be a high-energy tail to the beam? CV suggests to use our separator to measure the post-buncher energy distribution.

* plan is to run overnight at 496 keV/u and then go up to the original energy.

2. Hardware

DO...was told that there had been a screeching sound from Dragon gas target pumps, but when DO went to listen the noise was gone.