

ISAC Science Forum, 2004-09-22

PRESENT: Marik Dombisky, Pierre Bricault, Mike Trinczek, Rick Baartman, Paul Schmor, Zaher Salman, Martin Smith, BS, Tom Drake, , Peter Jackson, Friedhelm Ames, Jens Dilling, Gordon Ball, Greg Hackman, Colin Morton, BD, Keerthi Jayamanna, Lothar Buchmann, Paul Delheij, John Behr, Rene Roy, Dave Hutcheon, Rodolfo Sahchez, Andy Hurst, Jean-Michel Poutissou, Alan Shotter, Jac Caggiano, Pat Walden, Jens Lassen, Matt Pearson, Bob Laxdal

Reports on Prior Beam times

E991, ^{6-11}Li Charge Radius – Rodolfo Sanchez, GSI

10^8 ^8Li 45 keV, 10^6 ^9Li 30 keV was delivered for equipment shakedown. Resonance frequencies were scanned in 1 MHz steps +/- 15 MHz of resonance. $^{6,7}\text{Li}$ were also done as references. Variations in ion beam intensity were compensated by beam intensity monitoring. Preliminary $^{6,9}\text{Li}$ isotope shift measurements agree with GSI and have much better precision. The experimenters went down to 30 keV on ^8Li , beam stability was far superior, also agree with GSI and even better. They still plan on using 45 keV, but could run at 30 keV if needed to get better stability. It was estimated that the experimenters need 10,000 per second ^{11}Li for a good measurement.

High Power Beam Tests – Marik Dombisky

Initial tests with the high power target showed significant sensitivity to moving the beam on target. The “nominal” beam tune was not optimal, and by tuning a relatively low current (5 μA), two orders of magnitude was gained in ^8Li yield.

Three general conclusions could be drawn from subsequent discussion: 1) the beam profile and position is critical to the performance of the targets; 2) for each new target and proton beam current, the beam must be custom-tuned by experts; 3) diagnostics along beamline 2A are not currently adequate for this and must be upgraded.

Upcoming

TRILIS: Jens Lassen

This week's plans include: install frequency tripling units; establish reliability of lasers & transport to W. target station; laser-ionize Ga as a stable salt in preparation for Dec. run.

ENAM highlights

AS reported that this was an excellent meeting, but expensive, and had a low proportion of students (45 out of 300). The next one will be in Poland. Rob Keifl gave the only condensed matter talk but it was very well received. RK was surprised by number of young faces at the conference. Several talks were relevant to TRIUMF, but there was no overview talk from TRIUMF (need to address in future). AS has given four overviews and wants to encourage young people to give future overviews. Laser selectivity came up over and over and over again. Other highlights reported included Japanese work on superheavies, Rex-Isolde progress, and ongoing controversies involving B(E2) near ^{32}Mg .