Minutes of the ISAC Science Forum held on July 6 2005
Taken by JMP

Report on experiments from the past two weeks:

E989 : C. Ruiz for the Dragon collaboration:
The experiment has received 11.5 days of data taking over a three week period .Dragon itself has performed well with >95% availability. ^{26}Al beam intensity delivered to Dragon started at 80epA and was increased gradually to 200 without laser assistance and 800epA with laser ON. However this peak intensity was of short duration due to a catastrophic failure of the industrial pump laser from Coherent for which no spare part can be located in a short time.
With 2.24 10^{14} ion received by Dragon since the beginning of the run, a soccerteam worth of "golden" events have been identified with a grand total of 15-20 expected by the end of the run. The number observed are in the ballpark of what was expected for the 188keV resonance strength previously reported. The longitudinal distribution of good event origins in the gas target favors a more downstream location than the one predicted based upon the energy calibration and gas density. More refined analysis is in progress to confirm this observation.
The group warns of a follow up beam request to complete this measurement in the fall beam period.

ISAC-II S-Bend commissioning reported by R.Laxdal:
A major milestone was reached last week when a stable ^{26}Mg beam of 1.5MeV/amu was transported to the first cryomodule of the ISAC-II LINAC. The test demonstrated the operation of the S-Bend transport line as predicted by the simulation, the proper installation of all the services to the cryomodule, the first in-house operation of the LiqHe close refrigeration system without assistance of the manufacturer, operation of the diagnostics and Rf systems. However since the license to accelerate the beam was not received in time ,only the transmission and focusing of the beam through the cryomodule was tested. It is hoped that the license to accelerate will be obtained before the week end. The RF system was tested over a 24h period with 3 of the cavities locked. (the forth one had a open circuit in the vacuum envelope).
The audience congratulated Bob for an excellent achievement.
Note from the editor: the acceleration test occurred successfully on Thursday July 8th

TRILIS operation reported by J.Lassen:
For the Al run a new laser had been commissioned which allows for direct ionization without going to Rydberg states. This worked well and very good ionization improvement were obtained (factor of 4-5) as reported above. However the failure of the Coherent pump laser has identified a major flaw with the support from the company and step must be taken to move to our own servicing by acquiring spare parts for the key components.

Having solved these difficulties, Jens is planning to orient the beam development towards improving Ga ionization efficiencies, developing Ge and possibly Sn (if the target issues can be handled). When the new test facility becomes available, he plans to study 11Li and Be ionization.

E1031 $^{12}C+^{12}C$ reactions with proton and Alpha emission: presented by M.Aliotta:

The study of the partial cross sections to p,n,α, production channels is important to resolve a discrepancy in the astrophysical S –factor for the 12C+12C reaction. The experiment will use the TUDA set up with a set of detectors (LEDA and Si) to cover a wide angular range. Normalization will be obtained from Mott scattering monitoring at 45deg. In stage 1 of the program the energy excitation range above 3MeV will be surveyed. For the more relevant lower energies a more sophisticated detector like TACTIC may be used.
The experiment requires 50 enA of beam , daily energy changes beam spot of 2mm and time spread of 1ns for time of flight measurement of the reaction products. Also Dragon will be required to ascertain the absolute energy calibration after each step at the level of 0.1%. The experiment has been scheduled for OLIS time in the next two weeks.

E1027 $^{22}Na(p,\gamma)$ presented by Jac Caggiano:

Jac will want to use the current high power SiC target to generate three ^{22}Na targets for his experiment at the U of Washington Van de Graff. He reviewed the importance of making this measurement on a new resonance discovered in ^{23}Mg recently which may be of crucial importance of ^{22}Na production in Novae. A safety review is scheduled this afternoon.

JMP indicated that he is starting the scheduling process for the fall beam period and that a memo to that effect will be sent to experimental spokesperson today.