Contribution ID: **308** Type: **Poster Presentation**

Developing a laser ionization test bench for radioactive beams

Thursday, 14 July 2011 17:00 (2 hours)

<p>Nuclear reactions employed in the production of neutron-rich radioactive beams often produce many species simultaneously. To extract these beams, they must not only be ionized, but ionized selectively, so that only the desired species is extracted. We are developing the laser resonant ionization technique to fulfil these requirements. The method makes use of high power pulsed lasers, making it possible to assume that the ionization probability of atoms entering the laser beam zone will be close to 100The lasers that are employed are the excimer laser and dye laser. The excimer laser is used to pump the dye laser and the dye laser is used to tune the wavelength. Instruments such as Fabry-Perot interferometers and diffraction gratings are used to select the wavelength required. The laser beam for ionization is directed to the chamber by means of mirrors and lenses. Separation of ion makes it possible to obtain individual spectra of each ion without the use of mass separator.

Level (Hons, MSc,
   PhD, other)?

MSc

Consider for a student
   award (Yes / No)?

Yes

Would you like to
 submit a short paper
 for the Conference
 Proceedings (Yes / No)?

No

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