

---

## **Seminar**

### **Bremsstrahlung spectra generated by keV-electrons incident on thick- and thin targets**

**R. Shanker**

**Banaras Hindu University, Varanasi**

This talk presents the measurements of bremsstrahlung spectra that are produced under impact of keV-electrons with pure thick elements (Ti, Ag, W, Pt) and with free Ar-atoms. These measurements have been carried out on a newly developed experimental setup to study the characteristic- as well as non-characteristic (bremsstrahlung) x-ray photons. The photon energy and Z-dependence of the double differential cross sections (DDCSs) of the considered targets have been measured and compared with theoretical calculations. The agreement between experiment and theory is found to be satisfactory within the experimental uncertainty of measurements. The yields of bremsstrahlung and those of characteristic photons of thick Ti and Pt are also reported and discussed. Furthermore, our recent studies on DDCS of free Ar atoms under impact of 4-keV electrons, for the first time, have shown a mild signature of 'polarization bremsstrahlung' on top of the 'ordinary bremsstrahlung' as it is predicted by the current theoretical models.

***Thursday, July 17<sup>th</sup> 2014***

***11:30 AM (Tea/Coffee at 11:15 AM)***

***Seminar Hall, TCIS***