Contribution ID: **25** Type: **Invited oral presentation**

A novel single-shot, spectrally resolved X-ray imaging technique of ICF relevant plasmas

Wednesday, 30 November 2011 15:30 (30 minutes)

A new diagnostic tool has recently been developed, which allows to get 2D X-ray images of ICF relevant plasmas with simultaneous energy encoded information. This is achieved by using a pinhole camera scheme in which a CCD camera, forced to operate in the single-photon regime, is used as a detector. The use of this method, initially limited to a single-pin-hole, multi-shot basis, has recently been extended to single-shot experiments typical of large scale laser installations using custom pin-hole arrays of sub-10 micron diameter. Preliminary tests have been carried out at the PALS facility and the diagnostics has been successfully employed in a PW environment in a recent experiment at RAL. The details of the method as well as some results from such recent experiments will be given.

Co-authors: Dr CECCHETTI, Carlo Alberto (CNR); GIZZI, Leonida Antonio (PI); KOESTER, Petra; LEVATO, Tadzio (LNF)

Presenter: Dr LABATE, Luca (Intense Laser Irradiation Laboratory - IPCF, Consiglio Nazionale delle Ricerche)

Session Classification: Measurements of Temperature and Density