Abstract Submitted
for the DPP09 Meeting of
The American Physical Society

Experimental background emissivity at the transitions useful for the active CXRS in RFX-mod F. BONOMO, M. VALISA, L. CARRARO, M.E. PUIATTI, B. ZANIOL, Consorzio RFX, Padova, Italy — We present the investigation of the background emissivity of the transitions useful for active charge exchange (CX) spectroscopy. In particular, we focused on the Carbon and Oxygen emissivities at those transitions which could be attractive for the neutral beam diagnostic installed in RFX-mod. These transitions are: the n=8→7 (529.0nm), n=7→6 (343.4nm), and n=6→5 (207.0nm) for C VI; the n=10→9 (606.8nm) for O VIII. Their experimental background emissivities have been studied and compared to those predicted by an active CX simulation code (M.von Hellermann), in order to highlight which transition features the best signal to background ratio and to set up the most effective experimental arrangement for a charge exchange diagnostic on RFX-mod.

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Date submitted: 16 Jul 2009 Electronic form version 1.4