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First experiments of impurity LBO injection in RFX-mod ALESSANDRO FASSINA, ALBERTO ALFIER, FEDERICA BONOMO, LORELLA CARRARO, GIANLUCA SPIZZO, MARIA ESTER PUIATTI, ROBERTO PASQUALOTTO, MARCO VALISA, Consorzio RFX, Padova — A system for impurity injection via laser blow-off has been recently installed on the RFX-mod experiment to study impurity transport. The system layout will be described, in terms of the laser, its path and optics, the ablation chamber and the target manipulator. Measurements of the impurity time-of-flight have been performed before installing the system on RFX-mod. An overview of nickel LBO experiments in discharges at 1.5 MA in presence of QSH will be presented. Nickel line emissions in XUV and VUV spectral range and SXR continuum emission are described and compared with the reconstructions obtained with a 1-dimensional collisional-radiative impurity transport model [1,2]. Injection process has been traced with aid of TS diagnostic, bolometry, and SXR tomography, displaying the presence of radiation structures inside the plasma. An upgrade of the optical system is planned: this will provide a more uniform energy deposition on the target, improving the ablation efficiency. [1] M.Mattioli et al. J.Phys.B 34, 127 (2001) [2] M.Mattioli et al. J.Phys.B 37, 13(2004)

Alessandro Fassina
Consorzio RFX, Padova

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