**Time-integrated measurements of the X-ray source size using a Pin-hole camera**

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Imaging X-rays with pinholes has long been the diagnostic method of choice in the inertial confinement fusion program ICF [1, 2]. X-ray pinhole cameras are imaging devices that provide two-dimensional views of laser heated targets. Utilizing foil filtration to select x-ray energies per individual channels provides valuable information on target symmetry, laser pointing and other implosion dynamics [3]. Such diagnostic system is also used in cyclotron facilities where they provide crucial information about the electron beam size [4], as well as on high current Pulsed-power plasma devices loaded as Z-pinch or X-pinch [5, 6]).

The detailed X-ray source-detector geometry makes it possible to reconstruct the size of the projected source on a selected observed plane. Image processing methods are applied for the reconstruction of the X-ray pinhole camera data from laser-produced plasma as well as plasma generated using an X-pinch device. Numerically determined point-spread functions are utilized to calculate the modulation transfer function of the pinhole camera, while the optimal Wiener filter is applied to suppress the spatial noise.

**Acknowledgments**

This work has been carried out within the framework of the EUROfusion Consortium, funded by the European Union via the Euratom Research and Training Programme (Grant Agreement No 101052200 — EUROfusion) and the Hellenic National Program of Controlled Thermonuclear Fusion. Views and opinions expressed are however those of the author only and do not necessarily reflect those of the European Union or the European Commission. Neither the European Union nor the European Commission can be held responsible for them. The involved teams have operated within the framework of the Enabling Research Project: ENR-IFE.01.CEA-02 “Advancing shock ignition for direct-drive inertial fusion”

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