

Plasma tomography of higher resolution

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New microwave tomography scheme for plasma diagnostic is suggested – ray based diffraction tomography, which promises to reach a resolution, close to a diffraction limit. Besides, this scheme is less sensitive to the amplitude fluctuations as compared with traditional phase tomography. The method, which was suggested earlier for the ionosphere applications, can be helpful also for revealing of electron density inhomogeneities in a hot plasma. The algorithm, used for processing, is able to reveal small-scale plasma inhomogeneities of characteristic length, comparable with microwave wavelength, that is up to 1-3 cm.