MODELING OF SPECTRAL OPACITIES OF NEAR-LTE ALUMINUM PLASMAS

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Using the SPECTR-DTA numerical model based on detailed description of bound-bound and bound-free photoabsorption to calculate spectral opacities of LTE plasmas, the modeling of K-shell photoabsorption spectra of near-LTE Al plasmas was performed at the temperatures of 10–80 eV and densities of 0.02–0.2 g/cc. Calculated x-ray transmission spectra are compared to the data of special-purpose experiments with thin aluminum foils backlight by quasi-continuum radiation of point x-ray sources conducted at Iskra-5 laser facility.