The interaction of laser radiation of moderate intensity with shock-compressed krypton plasma.

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Currently, methods of quantum mechanics and statistical physics make it possible to correctly calculate the properties of a medium with both low and very high density of matter, provided that the interaction between particles is not too strong. Describing matter in the intermediate range of parameters, on the one hand, is associated with significant difficulties, and, on the other hand, predetermines the need to obtain new experimental data on the optical and transport properties of the studied medium, which implies conducting physical experiments using powerful shock waves. The results of new experiments on the reflectivity of polarized light from nonideal plasma of krypton are presented. The plasma was investigated by the method of oblique probing. The composition and thermodynamic parameters of the plasma were determined using the modified Saha IV code [1].

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