

Abstract Submitted  
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**The simulations of indirect-drive targets for ignition on megajoule lasers.** VLADIMIR LYKOV, EUGENE ANDREEV, LUDMILA ARDASHEVA, MICHAEL AVRAMENKO, VALERIAN CHERNYAKOV, MAXIM CHIZHKOV, NIKALAI KARLYKHANOV, MICHAEL KOZMANOV, SERGE LEBEDEV, GEORGE RYKOVANOV, VLADIMIR SELEZNEV, LEV SOKOLOV, MARGARET TIMAKOVA, ALEXANDER SHESTAKOV, ALEXANDER SHUSHLEBIN, Russian Federal Nuclear Center - VNIITF named after acad. E.I.Zababakhin — The calculations were performed with use of radiation hydrodynamic codes developed in RFNC-VNIITF [1]. The analysis of published calculations of indirect-drive targets to obtain ignition on NIF and LMJ lasers has shown that these targets have very low margins for ignition: according to 1D- ERA code calculations it could not be ignited under decreasing of thermonuclear reaction rate less than in 2 times. The purpose of new calculations is search of indirect-drive targets with the raised margins for ignition. The calculations of compression and thermonuclear burning of targets are carried out for conditions of X-ray flux asymmetry obtained in simulations of Rugby hohlraum that were performed with 2D-SINARA code [2]. The requirements to accuracy of manufacturing and irradiation symmetry of targets were studied with use of 2D-TIGR-OMEGA-3T code. The necessity of performed researches is caused by the construction of megajoule laser in Russia [3].

[1] A.V. Andriyash et al, Physics-Uspekhi, 49, 1084 (2006)

[2] M.N. Chizhkov, et al, J. Phys.: Conf. Ser., 244, 022073 (2010)

[3] S.G. Garanin, Physics-Uspekhi, 181, 434 (2011)

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