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IMPLOSION OF NESTED ARRAYS OF MIXED COMPOSITION AT ANGARA-5-1 FACILITY ^{*)}

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The experimental results on the study of soft X-ray pulses generation (SXR, $h\nu > 100$ eV) during plasma compression of two-stage nested arrays from mixed composition with a different ratio of cascade radii carried out on Angara-5-1 pulsepower facility at a discharge current level up to 3.5 MA are presented. The outer cascade consisted from a substance with a small atomic number (thin plastic fibers), the inner cascade consisted from a substance with a high atomic number (thin tungsten wires). It was previously shown that in the case this design of nested arrays, it is possible to obtain a significant increase in the peak power of the SXR compared to single W-arrays with a same parameters as the W-array in the inner cascade [1, 2]. By optimizing linear mass of the outer cascade and its radius, powerful SXR pulses are obtained.

References

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^{*)} [abstracts of this report in Russian](#)