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# Capabilities of Gamma facility to study material properties in the range of warm dense matter and pressure up to 100 GPa.

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High power Gamma facility is being developed at Russian Federal Nuclear Center (VNIIEF) for generation of X-rays. Potential of this facility at full 16 module variant (maximal current to the load up to 10 MA) and initial 4 module variant (maximal current to the load 3 MA) can be used to study the warm dense matter (WDM) and material properties in the megabar pressure range. Some results are presented in this paper of modeling of experiments for WDM generation, shock and quasi isentropic compression of some materials (Ta, Cu, Al) with the Gamma facility currents. The current curves in the load was obtained with the parameters of the facility and its transmission lines and also based on experiments with the single working module. Physical schemes of possible experiments and the ranges of velocity, pressure and temperature attainable in these experiments are presented.

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