Software for X-Ray Images Calculation of Hydrogen Compression Device in Megabar Pressure Range

NIKOLAY EGOROV, ALEXANDER BYKOV, VALERY PAVLOV, Russian Federal Nuclear Center - VNIIEF — Software for x-ray images simulation is described. The software is a part of x-ray method used for investigation of an equation of state of hydrogen in a megabar pressure range. A graphical interface that clearly and simply allows users to input data for x-ray image calculation: properties of the studied device, parameters of the x-ray radiation source, parameters of the x-ray radiation recorder, the experiment geometry; to represent the calculation results and efficiently transmit them to other software for processing. The calculation time is minimized. This makes it possible to perform calculations in a dialogue regime. The software is written in “MATLAB” system.

1The work was performed in the frameworks of the ISTC project # 2564.