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# POLIZON-2 FURNACE FOR CRYSTAL GROWTH EXPERIMENTS ABOARD THE FOTON-M4 SPACECRAFT

**Abstract**

POLIZON-2 automatic electric vacuum furnace is intended for performing experiments on material processing under microgravity conditions. It was used during FOTON-M4 mission in July – August 2014. The furnace was designed and manufactured in Research and Development Institute for Launch Complexes named after V.P. Barmin, a branch of Center for Operation of Space Ground-Based Infrastructure, a company of the Federal Space Agency of Russian Federation. The heating unit of the furnace ensures carrying out experiments on melting and solidification semiconducting materials by the Bridgman and the Zone Melting methods. The technical performances of the furnace are given. During FOTON-M4 mission five experiments were carried out on the POLIZON-2. The experiments were prepared together by Russian and German scientists. A brief description of the experiments is given as well.