**Status of the Factory of Superheavy Elements**

***Programme of Day-1 experiments at the SHE Factory***

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At present, the region of known superheavy nuclei (SHN) with Z ≤118 and their -decay descendants forms a relatively narrow “ridge” in the nuclear landscape. In order to more fully understand the role of shell stabilization in this region, it is essential to considerably extend the area of synthesized SHN which require a significant increase in the overall sensitivity of experiment.

The project of priority experiments which are planned to be performed for testing the capabilities of DGFRS-2 coupled with DC-280 will be presented. These include experiments on the production of Z=90-104 isotopes in 48Ca- and 50Ti-induced reactions. At this step, the image size of synthesized nuclei, their transmission and dispersion of DGFRS-2 could be measured. In the next stage, study of the 243Am+48Ca reaction is planned to be carried out for measurement of yields of Mc isotopes with large statistics at different beam energies.First, the optimal parameters of DGFRS-2 could be determined. The sensitivity of this experiment at the maximum reaction cross section could reach about 15 decay chains per day. In addition, several issues may be clarified in these studies with large sensitivity, e.g.,the excitation-function values at low energies, registration of  decay of 281Rg,descendant nucleus of the 2*n* evaporation channel, 289Mc, possible observation of isomeric state for 277Mt, level of the p*xn* channels and electron-capture branch for nuclei, synthesis of the still unknown 286Mc. The production of elements Cn and Fl in the 242Pu+48Ca reaction with use of the chemistry setup placed behind DGFRS-2 and investigation of their chemical properties is discussed as well. These experiments could shed light on chemical properties of these elements with a yield of Fl of about 5 atoms per day. The first research experiments, including synthesis of new elements 119 and 120 in the reactions of 249Bk and 249-251Cf with 50Ti, will be also considered.Due to increased beam intensity of DC-280 cyclotron and larger transmission of DGFRS-2 the production rate of the nuclides under study could reach one event per month.