

Program Advisory Committee for Nuclear Physics
51st Meeting, 30–31 January 2020

Referee Report by Sigurd Hofmann
to the Proposal by Vasiliy Semin and Vladimir Utyonkov
on the “Status of the SuperHeavy Element Factory”

In the year 2019 the first beams of ^{40}Ar , ^{48}Ca , and ^{84}Kr were successfully accelerated by the new cyclotron DC280. Maximum intensities of 10.4, 5.1, and 1.4 μA , respectively, were reached at a Faraday cup no. 3 behind DC280. As a first step of the experimental program these data sound very promising.

In the presentation during the meeting we hope to get additional information on the average beam intensity and its stability as function of time and on the consumption of the noble gases Ar and Kr and in particular of the isotope ^{48}Ca as function of the beam intensity.

In addition to the work with the beam from DC280, the commissioning of the separator DGFRS-2 was completed and first experiments with beams of ^{40}Ar and ^{48}Ca started. The PAC eagerly awaits the presentation of the results from these experiments in the presentation.

The “Program of Day-1 Experiments at the SHE Factory” was presented by Vladimir Utyonkov in January 2019. I assume that main parts of this program are still valid. Therefore, for a review of this program I refer to my report distributed in January 2019. Unfortunately, at that time I could not join the meeting due to health problems.

Sigurd Hofmann,

GSI Darmstadt, January 14, 2020