

Referee report on the project «**Modernization of EG-5 accelerator and development of its experimental infrastructure**».

A “Letter of intent” to open the project “Modernization of EG-5 accelerator and development of its experimental infrastructure” was presented by A.S. Doroshkevich during the previous PAC meeting. After this presentation, my recommendation was to support this project provided a better development plan with justification of the costs is presented. Also, another question was raised during the discussion of projects during the previous PAC meeting. Should one rather buy a new accelerator instead of modernizing the existing one? Previous PAC recommended comparing these two options.

I am pleased to confirm that a sufficiently detailed comparison is given in the new report. Also, the presented scientific program is diverse and very convincing. It attracts a considerable scientific community and promises numerous interesting results both in nuclear physics, condensed matter and applications. The modernized electrostatic generator EG-5 at FLNP will be a flexible instrument for a broad range of scientific studies and applications, when a few MeV/nucleus energy is sufficient. Its advantages include steady beams, high intensities and high stability of energy of the accelerated charged particles. The project organization and methods of modernization are clearly explained. Requested resources look reasonable.

I fully support the proposed program of modernization of the existing EG-5 generator, as initially proposed by the authors. I am sure that the upgraded facility will provide an increase in the overall scientific output of FLNP. I propose to support it with high priority. A continuation of this activity, involving purchase of a new generator with additional options can be considered later.

23.06.2020,  
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