



The 2-nd International Conference

Current Problems in

Nuclear Physics and Atomic Energy

June 9 - 15, 2008

Book of Abstracts



Kyiv, Ukraine

It is supposed to use wide experience which has been accumulated in the leading world centers on creation of injectors and accelerating systems for reduction of time necessary for creation of installation.

Complex SALO includes: an electron injector on the basis of superconducting RF gun; a source polarized electrons with the superconducting accelerating module; system injection of a beam in recirculator; accelerating system on the basis of superconducting accelerating sections TESLA; two rings beam recirculation. The maximum energy accelerated electrons - 730 MeV at a current less than 100 mA. The accelerator will take places in targets hall of accelerator LU 2000 complex.

Various operating modes of a complex on physical programs are considered. Variants of beam transportation on physical installations are developed. The outline sketch of the electromagnetic equipment of an accelerating complex is developed.

Consultations of possible equipment suppliers are carried out and estimation of cost of installation which is supposed to be started in two stages is spent.

Ivan Guk 300-293

INNOVATIVE ACCELERATOR BASED NEUTRON SOURCE

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Pilot innovative accelerator based facility is under going to start operating now at Budker Institute of Nuclear Physics, Novosibirsk. This facility is based on compact vacuum insulation tandem accelerator with proton current up to 10 mA. Epithermal neutrons for boron neutron capture therapy are proposed to be generated by 1.915 MeV protons bombarding a lithium target using ${}^7\text{Li}(p, n){}^7\text{Be}$ threshold reaction. Monochromatic 9.17 MeV γ -quantum for detection of explosives by nuclear resonance absorption technique is proposed to be produced by 1.75 MeV protons bombarding a carbon-13 target. The 2 mA 2 MeV proton beam has been obtained now. In the report, the pilot facility design is given, results of experiments on proton beam transport and on monochromatic γ -rays generation are presented. Optimization of the target for boron neutron capture therapy is carried out with the Monte Carlo simulation code MCNP. The conception of optimal neutron producing target and results of investigation of radiation blistering and lithium layer are presented also. The neutron producing target had been manufactured, assembled and placed into facility. Some diagnostics are prepared for neutron generation that the planned within the next two months.

Sergey Taskaev 176-175

AUTOMATIZED SPECTROMETRIC INSTALLATION FOR INVESTIGATION OF SCATTERING NEUTRON ANISOTROPY

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In the middle energy region (from several keV up to hundreds keV) there are essential distinctions between experimental values of the neutron cross-sections obtained in different scientific centres. For some reactions such experimental data are absent at all, or the measured accuracy is not sufficient for up to day needs in data for science and technology needs. This problem is not specifically Ukrainian, but refers to all nuclear community and this can be demonstrated with the annually revised document *The NEA High Priority Nuclear Data Request List*, where the new requests for nuclear data of urgent needs for nuclear technologies are compiled.

In the set of reactions, where the needs in new experimental data are important, the evident place is taken with neutron scattering on nuclei, as well as the angle distribution of scattered neutrons.

With the aim of study the neutron angle scattering distributions, the two spectrometric installations were developed in the INR Neutron Physics Department, the detailed description of those was presented in [1].