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The Cyclotron Laboratory at INRNE-BAS

D. Tonev

Institute for Nuclear Research and Nuclear Energy,
Bulgarian Academy of Sciences, Sofia 1784, Bulgaria

Abstract. An accelerator laboratory is presently under construction in Sofia at the Institute for Nuclear Research and Nuclear Energy, Bulgarian Academy of Sciences. The laboratory will use a TR24 type of cyclotron, which provides a possibility to accelerate a proton beam with an energy of 15 to 24 MeV and current of up to 0.4 mA. An accelerator with such parameters allows to produce a large variety of radioisotopes for development of radiopharmaceuticals. The most common radioisotopes that could be produced with such a cyclotron are PET isotopes like: 11C, 13N, 15O, 18F, 124I, 64Cu, 68Ge/68Ga, and SPECT isotopes like: 123I, 111In, 67Ga, 57Co, 99mTc. Our aim is to use the cyclotron facility for research in the fields of radiopharmacy, radiochemistry, radiobiology, nuclear physics, solid state physics, applied research, new materials and for education in all these fields including nuclear energy. The building of the laboratory will be constructed nearby the Institute for Nuclear Research and Nuclear Energy and the cyclotron together with all the equipment needed will be installed there.

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