Contribution ID: 34

Type: Oral

Targets for studies of the medical radioisotopes production with α and p/d beams

Thursday, 17 November 2016 10:00 (30 minutes)

Targets for studies of the medical radioisotopes production with α and p/d beams

Stolarz Anna 1) for teams of

- 1. Heavy Ion Laboratory, University of Warsaw, Warszawa, Poland
- 2. Institute of Physics, University of Silesia, Katowice, Poland
- 3. Biological and Chemical Research Centre, University of Warsaw, Warszawa, Poland
- 4. Institute of the Nuclear Chemistry and Technology, Warszawa, Poland

The studies on the production of the medically interested radioisotopes are carried at the HIL UW with alpha beam provided by the heavy ion cyclotron U200P K=160, and with proton beams provided by the medical p/d high current 16/8 MeV PETtrace cyclotron, both located at HIL UW and by the cyclotron C-30 at Świerk, National Centre for Nuclear Research.

The research quantities of the medical radioisotopes are produced by irradiation of the targets made of 100Mo, natural and isotopically enriched Ca, natGe, natBi.

The natBi targets are used for the production of 211At in reaction with α -particle internal beam. The alpha beam is ussed as well for the production of medically atractive 43,44g,mSc isotopes in reaction with Ca, using mainly targets in form of calcium carbonate.

Samples irradiation by the internal α -particle beam delivered by U200P requires special shape of the targets. The procedure used for their preparation will be presented.

The irradiations with proton beam are performed using external lines. Preliminary studies of the thermal aspects related to the calcium carbonate targets irradiated at PETtrace proton machine will be discused as well.

Primary author: Dr STOLARZ, Anna (Heavy Ion Laboratory, University of Warsaw)

Presenter: Dr STOLARZ, Anna (Heavy Ion Laboratory, University of Warsaw)

Session Classification: Session 8

Track Classification: Plenary