



Contribution ID: 159

Type: Poster

Measurement of excitation functions for (d,x) reactions on natural molybdenum

Tuesday, April 20, 2010 11:45 AM (20 minutes)

Cross sections for deuteron induced reactions on natural molybdenum leading to ^{93}Tc , $^{93\text{m}}\text{Tc}$, ^{94}Tc , $^{94\text{m}}\text{Tc}$, ^{95}Tc , $^{95\text{m}}\text{Tc}$, ^{96}Tc , $^{96\text{m}}\text{Tc}$, $^{99\text{m}}\text{Tc}$, $^{99\text{Mo}}$, $^{92\text{m}}\text{Nb}$, ^{95}Nb and ^{89}Zr were measured in deuteron energy range 9.0–19.6 MeV on the cyclotron U-120M of the Nuclear Physics Institute AS CR. Special attention was paid to excitation function for formation of $^{95\text{m}}\text{Tc}$, which is used as a tracer for determining ^{99}Tc in environmental samples, and to excitation functions and thick target yields for formation of $^{99\text{m}}\text{Tc}$ and $^{99\text{Mo}}$, the most widespread radionuclide generator pair in nuclear medicine. If appropriate, obtained data are compared with the heretofore published cross sections.

Primary author: Dr LEBEDA, Ondřej (Nuclear Physics Institute, Academy of Sciences of the Czech Republic)

Co-author: FIKRLE, Marek (Nuclear Physics Institute, Academy of Sciences of the Czech Republic)

Presenter: Dr LEBEDA, Ondřej (Nuclear Physics Institute, Academy of Sciences of the Czech Republic)

Session Classification: Poster Session - Production and Application of Radionuclides

Track Classification: Production and Application of Radionuclides