



ČESKÉ VYSOKÉ UČENÍ TECHNICKÉ V PRAZE
ÚSTAV TECHNICKÉ A EXPERIMENTÁLNÍ FYZIKY
128 00 Praha 2 - Albertov, Horská 3a/22
tel.: 22435-9391, 9290; fax: 22435-9392



POZVÁNKA

na 272. seminář ÚTEF ČVUT v Praze
pod záštitou Československé sekce NPSS IEEE

Multinucleon Transfer Reactions for Synthesis of Neutron-rich Isotopes with $Z > 80$

Dr. Alexander M. Rodin

Flerov Laboratory of Nuclear Reactions, Joint Institute for Nuclear Research,
Dubna, Russia

Abstract: Current status of MASHA+MEIPIX setup for the production of neutron-rich isotopes using the multi-nucleon transfer reactions $^{48}\text{Ca} + ^{232}\text{Th}$, $E_{\text{beam}} = 7.3$ MeV/n is given. Nuclei in this region decay mainly by alpha and beta decay. Software for analyzing of such events where a few beta tracks should be detected from one point was developed and used. Experimental results from fusion reactions $^{40}\text{Ar} + ^{144}\text{Sm} \rightarrow ^{184-xn}\text{Hg} + xn$ and $^{40}\text{Ar} + ^{166}\text{Er} \rightarrow ^{166-xn}\text{Rn} + xn$ carried out in the mass spectrometer are also presented. The alpha decay isotopes of Hg and Rn produced in the above mentioned reactions were measured in the focal plane of mass spectrometer. The performance of the given technique and relative yields of isotopes in these reactions were determined. The program of future investigations for the production of neutron-rich isotopes with $Z > 80$ and determination of masses of super-heavy elements in the experiments using the reactions $^{48}\text{Ca} + ^{238}\text{U}$, $^{48}\text{Ca} + ^{242}\text{Pu}$ is discussed.

Seminář se bude konat v úterý 22. července 2014 ve 14 hodin
v zasedací místnosti ÚTEF ČVUT, Praha 2 - Albertov, Horská 3a/22

Ing. František Krejčí
tajemník semináře

Ing. Stanislav Pospíšil, DrSc.
ředitel

Doc. Ing. Carlos Granja, Ph.D.
předseda NPSS, ČS IEEE

NUCLEAR & PLASMA SCIENCES SOCIETY CHAPTER

IEEE Czechoslovakia Section
<http://www.ieee.cz/en/nps>

