

Ukrainian Nuclear Data Centre

Progress Report, 2017/18

Technical Meeting of the International Network of NRDC

1- 4 May 2018, Bahadurgarh, India

Olena Gritzay

Institute for Nuclear Research

Prospekt Nauky, 47, Kyiv, Ukraine, 03028

Web: <http://ukrndc.kinr.kiev.ua/>

e-mail: ogritzay@kinr.kiev.ua, ogritzay@ukr.net

Introduction

UkrNDC is subdivision within the Neutron Physics Laboratory in the Institute for Nuclear Research of the National Academy of Sciences of Ukraine

UKRNDC has:

- **3 permanent researchers**
- **They are also involved in the experimental neutron data measurements at the Kyiv research reactor**

Compilation

Continue collection and compilation of experimental data

New/renew entries sent to NDS:

- for neutron data: **3 entries**
- for charged particle: **7 entries**
- for photonuclear data: **11 entries**

Compilation (continue)

Review of compilation scope in

home journals and scientific issues:

- Nuclear Physics and Atomic Energy
- Ukrainian Journal of Physics
- Problems of Atomic Science and Technology,
Series: Nuclear Physics Investigations
- **Uzhhorod University Scientific Herald, Series: Physics;**
- **Bulletin of Taras Shevchenko National University of Kyiv**
Series: Physics & Mathematics
- East European Journal of Physics

in the journal

Bulletin of the Russian Academy of Sciences, Series: Physics

Collaboration

Continue collaboration with the PD of the Taras Shevchenko National University of Kyiv:

The teaching course "Nuclear Data for Science and Technology and Modern Computer Codes for Nuclear Data Processing" (38 hours) was lectured in 2017 for the fifth-course students

Collaboration (continue)

Continue collaboration with the Power Systems Physics Department

of the Physics and Technology Institute of National Technical University of Ukraine "Kyiv Polytechnic Institute":

The teaching course "Nuclear and Thermonuclear Power " (48 hours) is lectured in 2017 for fourth-year students of this department

Customer Services

The data from ENDF, ENSDF and EXFOR libraries was prepared and adapted on demand of the users from:

- **Department of Nuclear Physics of the INR of NASU**
- **Uzhgorod Institute of Electron Physics of NASU**
- **Research Nuclear Reactor Department**

UKRNDC site is operating - for students and Ukrainian customers, who wish to prepare special libraries self-dependently.

Address:

http://ukrndc.kinr.kiev.ua/!!!site_ukrndc/index_ukr.html

Experimental & Computational Activity

- **A method of experimental determination of the quantity of hydrogen in hydrides using the filtered neutron beams was developed. The method was demonstrated on titanium hydride (calculation and measurement).**
- **Determination of the total neutron cross section for natural hafnium on the filtered neutron beam with energy 2, 54, 59, and 145 keV was done.**
- **The method of experimental determination of the resonance parameters from a set of the average total neutron cross sections, received at the shifted neutron lines, was developed. The method was demonstrated on the Cr-52 measurements.**

Thank You

for Your attention!

e-mail: ogritzay@kinr.kiev.ua
ogritzay@ukr.net