

Ukrainian Nuclear Data Centre

Progress Report, 2016/17

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Introduction

UkrNDC is subdivision within the Neutron Physics Department at 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: **2 entries**
- for charged particle: **9 entries**
- for photonuclear data: **4 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 2016 for the fifth-course students*
- *The teaching courses "Experimental Methods at Atomic Power Engineering" (38 hours) is lectured in 2017 for third-year 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 Data" (38 hours) is lectured in 2016 for fifth-year students of this department*
- *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**

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

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

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 by the example of titanium hydride.**
- **Determination of the total neutron cross section for natural hafnium on the filtered neutron beam with energy 2 keV was done.**
- **We continue to develop the method of determination of the resonance parameters from a set of the average total neutron cross sections, received at the shifted neutron lines.**

Thank You

for Your attention!

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