



INTERNATIONAL ATOMIC ENERGY AGENCY

# NUCLEAR DATA SERVICES

DOCUMENTATION SERIES OF THE IAEA NUCLEAR DATA SECTION

---

**IAEA-NDS-0143**

**Rev. 1, March 1998**

## WIND and WIND-2

**WIND: Neutron nuclear data library for isotopes of U, Np, Pu  
up to 100 MeV with one file of proton nuclear data for U-238**

**WIND-2: Neutron activation data for Pu-239 at energies up to 2 GeV**

**A.Yu. Konobeyev et al., Obninsk, Russia**

**with a Summary documentation**

**by H.D. Lemmel and O. Schwerer**

**Abstract: The WIND nuclear data library ("Waste Incineration Nuclear Data") contains evaluated data of neutron induced fission and threshold reactions for isotopes of U, Np, and Pu, and one file of proton induced reactions for U-238, in the energy range up to 100 MeV, primarily designed for the study of incineration of longlived radioactive materials. For Pu-239, a new (WIND-2) evaluation is available for energies up to 2 GeV. The data library is available from the IAEA Nuclear Data Section, costfree, upon request.**

Revised by P.K.McLaughlin IAEA/NDS Jan. 2005

The file was revised to conform with ENDF/B format standards.. The merged file was corrected for format errors and processed through the code CHECKR to ensure, as far as possible, format compatibility.

---

Nuclear Data Section  
International Atomic Energy Agency  
P.O. Box 100  
A-1400 Vienna  
Austria

e-mail: [services@iaeand.iaea.org](mailto:services@iaeand.iaea.org)  
fax: (43-1) 26007  
cable: INATOM VIENNA  
telex: 1-12645  
telephone: (43-1) 2600-21710  
Web: <http://www-nds.iaea.org>

---

**Note:**

The IAEA-NDS-reports should not be considered as formal publications. When a nuclear data library is sent out by the IAEA Nuclear Data Section, it will be accompanied by an IAEA-NDS-report which should give the data user all necessary documentation on contents, format and origin of the data library.

IAEA-NDS-reports are updated whenever there is additional information of relevance to the users of the data library.

For citations care should be taken that credit is given to the author of the data library and/or to the data center which issued the data library. The editor of the IAEA-NDS-report is usually not the author of the data library.

Neither the originator of the data libraries nor the IAEA assume any liability for their correctness or for any damages resulting from their use.

96/11

**Citation guideline:**

**This data library is to be cited as follows:**

**A.Yu. Konobeyev, Yu.A. Korovin, P.E. Pereslavcev, V.I. Plyaskin, A.Yu. Stankovsky, "WIND nuclear data library for transactinides at energies up to 100 MeV", report INC(CCP)-384 (International Atomic Energy Agency, 1995). WIND data library received from the IAEA Nuclear Data Section.**

## Contents

- Summary: 1. WIND  
2. WIND-2
  - Description and Index for WIND
  - Description of WIND-2 (Pu-239)
- 

## Summary

### 1. WIND

**Neutron nuclear data library for isotopes of U, Np, Pu  
up to 100 MeV with one file of proton nuclear data for U-238**

**A.Yu. Konobeyev et al., Obninsk, Russia**

The WIND nuclear data library ("Waste Incineration Nuclear Data") contains evaluated data of neutron induced fission and threshold reactions for isotopes of U, Np, and Pu, and one file of proton induced reactions for U-238, in the energy range up to 100 MeV, primarily designed for the study of incineration of longlived radioactive materials. The data library is available from the IAEA Nuclear Data Section, costfree, upon request.

The format of the data library is close to ENDF-6, however with a free choice of MT numbers for defining the reactions.

The data library includes a total of 576 reactions taking place in the neutron irradiation of U-232 to 238, Np-237, 239, Pu-236 to 244, plus 32 reactions for protons on U-238.

The data are resulting from theoretical calculations which were fitted, where possible, to the evaluated data contained in ENDF/B-6.

Attached are the front pages of a report provided by the authors which was published as report INDC(CCP)-384.

References:

For full information see:

**A.Yu. Konobeyev, Yu.A. Korovin, P.E. Pereslavcev, V.I. Plyaskin, A.Yu. Stankovsky, "WIND nuclear data library for transactinides at energies up to 100 MeV", report INC(CCP)-384. The introductory pages of this report are attached.**

See also:

**Yu.A. Korovin, A.Yu. Konobeyev, P.E. Pereslavcev, V.I. Plyaskin, Proc. Int. Conf. on Nuclear Data for Science and Technology, Gatlinburg, USA, p. 655. The paper presented at this conference is given in the last pages of the present document.**

## **2. WIND-2**

**Neutron activation data for Pu-239 at energies up to 2 GeV. This evaluation contains neutron-induced fission cross sections, cross sections for threshold reactions and fission-product yields, in strict ENDF-6 format. The cross sections are presented through the combination of File 3 and File 6 data with MT (Reaction Type) = 5. The data below 100 MeV correspond physically to those given in WIND but are given in this new (different) representation. The file is available in 2 sizes: the "ordinary" files is restricted to cross section  $\geq 10^{-5}b$ , the full file contains all data. See Summary at the end of this document.**

**OBNINSK INSTITUTE OF NUCLEAR POWER  
ENGINEERING  
RUSSIAN FEDERATION**

**NEUTRON ACTIVATION DATA FOR  $^{239}\text{Pu}$  AT THE ENERGIES UP TO 2 GeV**

**Description**

**Yu.A. Korovin, A.Yu. Konobeyev, P.E. Pereslavytsev  
A.Yu. Stankovsky**

**December 1996**