

# Japan Nuclear Reaction Data Centre (JCPRG)

## Progress Report

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<http://www.jcprg.org>*

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### **0. General**

The Japan Nuclear Reaction Data Centre (JCPRG) is a research center for nuclear data activities in Hokkaido University Sapporo. The main objectives of JCPRG are as follows:

- a) Compilation of nuclear reaction data for two databases, NRDF and EXFOR
- b) Evaluation of nuclear reaction data
- c) Development of software and systems for compilation and evaluation
- d) Education of the graduate school students

### **1. Compilation**

#### **1.1 NRDF**

NRDF database is the original nuclear reaction database of JCPRG. Our initial EXFOR entries were provided by converting the NRDF format to the EXFOR format. Nowadays, both NRDF and EXFOR formats are generated simultaneously using the database creation editor HENDEL. From May 2021 to May 2022, we have compiled 32 new papers of charged particle and photonuclear reaction data.

#### **1.2 EXFOR**

Since the last NRDC meeting, we have transmitted 32 new and 2 revised entries as 4 trans files (E131-E134) to the NDS open area. Our transmissions are summarized in Tables 1.

**Table 1. EXFOR E-entries transmitted from JCPRG to NDS IAEA in 2021.**

TRANS	TRANS Status	ENTRY Tot.	ENTRY New	ENTRY Rev.
E131	Final (2021/06/07)	10	10	0
E132	Final (2021/06/22)	11	11	0
E133	Prelim (2022/01/20)	2	0	2
E134	Prelim (2022/03/05)	11	11	0

## **2. System Development**

### **2.1 Data Retrieval System**

We have 3 data retrieval systems mentioned below.

- NRDF (<http://www.jcprg.org/nrdf/>)
- NRDF/A (<http://www.jcprg.org/nrdfa/>)
- EXFOR/ENDF (<http://www.jcprg.org/exfor/>)

The relational database management system MySQL has been adopted for the databases to search and retrieve NRDF, EXFOR and ENDF data. For EXFOR, new trans files are copied from the NDS open area, and the MySQL database is updated periodically.

### **2.2 Coding Software**

We have a coding editor and digitizing software applicable for the coding purpose

- Coding editor "HENDEL" (<https://www.jcprg.org/manuals/hendel/>)
- Digitization software "GSYS" (<https://www.jcprg.org/gsys/2.4/>)