

**Japan Charged-Particle Nuclear Reaction Data Group  
(JCPRG)**

Progress Report to the NRDC Meeting  
May 28-30, 2001

The Executive Committee of JCPRG

**General**

In 2000, we have carried out the following businesses:

1. Compiling the CPND(Charged Particle Nuclear Reaction Data) (15 papers) produced in Japan with the NRDF(Nuclear Reaction Data File) format.
2. Translating the NRDF data into the EXFOR data. (Revised 30 papers, New 8 papers)
3. Making retrieval systems using internet and the InteligentPad for the CPND in both of NRDF and EXFOR,
4. Distributing the CPND and promoting utilization in Japan.
5. Making a new system to transform from NRDF to EXFOR based on the InteligentPad.

In 2000 much of our effort was concentrated on the second and fifth subjects mentioned above. We also completed a preliminary version of a new electric editor system for compiling and inputting the NRDF data.

**NRDF Data Compiling Activity**

In 2000 we newly compiled 15 entries (95 tables, 0.30 MB) based on the data obtained with the accelerators in Japan.

**List of Data-entries Installed into NRDF in 2000**

1. D1720  
Title: LIFETIME MEASUREMENT OF THE FIRST EXCITED STATE OF  $^{64}\text{GA}$   
First Author: M. TANIGAKI  
Journal: Eur. Phys. J. A 6 p119 1999
2. D1721  
Title: QUADRUPOLE DEFORMATION OF  $^{12}\text{BE}$  STUDIED BY PROTON INELASTIC SCATTERING  
First Author: H. IWASAKI  
Journal: Physis Letters B481 p7 2000
3. D1722  
Title: REACTION MECHANISM AND CHARACTERISTICS OF  $T_{20}$  IN  $\text{D}+^3\text{HE}$  BACKWARD ELASTIC SCATTERING AT INTERMEDIATE ENERGIES  
First Author: M. TANIFUJI  
Journal: Physical Review C61 p024602 1999

4. D723  
Title: PRECISE MEASUREMENT OF DP ELASTIC SCATTERING AT 270 MEV AND THREE-BUCLEON FORCE EFFECTS  
First Author: H. SAKAI  
Journal: Physical Review Letters B84 p5288 2000
5. D1724  
Title: CORE-EXCITED STATES IN THE DOUBLY MAGIC 68NI AND ITS NEIGHBOR  $^{69}\text{Cu}$   
First Author: T. ISHII  
Journal: Physical Review Letters B84 p39 2000
6. D1725  
Title: REACTION MECHANISM OF  $^6\text{Li}$  SCATTERING AT 600 MEV  
First Author: K. SCHWARZ  
Journal: Eur. Phys. J. A 7 p367 2000
7. D1726  
Title: POLARIZATION CORRELATION COEFFICIENT FOR THE  $^3\text{He}(D,P)^4\text{He}$  REACTION  
First Author: T. UESAKA  
Journal: Physics Letters B467 p199 1999
8. D1727  
Title: ( $^6\text{Li}, ^6\text{He}$ ) REACTION AT 100 MEV/NUCLEON AS A PROBE OF SPIN-EXCITATION STRENGTHS  
First Author: H. UENO  
Journal: Physics Letters B465 p67 1999
9. D1728  
Title: LIFE TIME MEASUREMENTS OF MEDIUM-HEAVY LAMBDA HYPERNUCLEI  
First Author: H. PARK  
Journal: Physical Review C61 p054004 2000
10. D1729  
Title: LEVEL STRUCTURE IN  $^{143}\text{Nd}$   
First Author: X. H. ZHOU  
Journal: Physical Review C61 p014303 1999
11. D1730  
Title: TENSOR POLARIZATION OF  $12\text{C}[2_1^+]$  in the  $^{16}\text{O}(^{13}\text{C}, ^{12}\text{C})^{17}\text{O}$  REACTION AT 50 MEV  
First Author: N. IKEDA  
Journal: Eur. Phys. J. A 7 p491 2000
12. D1731  
Title: ASYMMETRY IN THE NONMESONIC WEAK DECAY OF POLARIZE  $^5_{\Lambda}\text{He}$  HYPERNUCLEI  
First Author: S. AJIMURA  
Journal: Physical Review Letters B84 p4052 2000

13. D1732  
Title: FUSION OF DEFORMED NUCLEI IN THE REACTIONS OF  $^{76}\text{Ge}+^{150}\text{Nd}$  AND  $^{28}\text{Si}+^{198}\text{Pt}$  AT THE COULOMB BARRIER REGION  
First Author: K. NISHIO  
Journal: Physical Review C62 p014602 2000
14. D1733  
Title: DOUBLE-PION PRODUCTION INDUCED BY DEUTERON-PROTON COLLISIONS IN THE INCIDENT DEUTERON MOMENTUM RANGE 2.1-3.8 GEV/C  
First Author: T. TSUBOYAMA  
Journal: Physical Review C62 p034001 2000
15. D1734  
Title: NANOSECOND ISOMERS IN NEUTRON-RICH  $^{67}\text{Cu}$  AND  $^{64}\text{Co}$  AND A FAST E3 TRANSITION IN  $^{67}\text{Cu}$   
First Author: M. ASAI  
Journal: Physical Review C62 p054313 2000

### **EXFOR Translation from NRDF**

In 2000, we have concentrated our much effort in the field of translation from NRDF to EXFOR. In order to solve the problems that the translation efficiency by the computational translation system is not high, we had discussions in which O. Schwerere joined. He stayed one month in Sapporo and helped our learning how to make EXFOR file by manual. As a result, we revised E016 (31 entries), E017 (9 entries) and E018 (7 entries) which were pointed to have some problems. Furthermore, we made a new file of E019 (12 entries) during stay of Schwerere in Sapporo, and are now making another new file of E020 (10 entries).

We are now going to have two ways of making EXFOR files from NRDF ones; (1) by manual in addition to the old translational system, and (2) by a new translational system which is constructing by Chiba. To translate from NRDF to EXFOR smoothly, we found that the NRDF dictionary must be completed comparing EXFOR codes. However, it is worthwhile to indicate that there are no problems, in principle, in making EXFOR files based on the NRDF data except for several data concerning evaluation and deduced data in NRDF. Furthermore, several codes, for instance Institute Codes, should be proposed as the EXFOR Codes.

### **Customer Services**

Retrieval services of NRDF and EXFOR data are available by using computers in the Hokkaido University Computing Center. In addition to these services, the WWW homepage (<http://nucl.sci.hokudai.ac.jp/~nrdf/index.html>) has been opened to public. In order to extend the NRDF data service, we have studied a developed retrieval system based on the IntelligentPad.

## ANNEX: Organization and members of JCPRG

### Advisory committee:

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