



北海道大学
HOKKAIDO UNIVERSITY



Nuclear Reaction
Data Centre (JCPRG)
Faculty of Science, Hokkaido University

JCPRG progress report

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*Nuclear Reaction Data Center (JCPRG)
Hokkaido University*

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Objectives

Nuclear Reaction Data Centre (JCPRG) is a research center for nuclear data activities in Hokkaido University

- **Compilation** of charged-particle reaction data in Japan
- **Evaluation** of nuclear reaction data
- **Collaborations** with domestic and interactions institutions
- **Education** of graduate students



Personnel in 2023

JCPRG members

Staff

K. Nomura

Senior researchers & supporting staffs

M. Aikawa, K. Kato, H. Noto, T. Katayama

Graduate students

S. Watanabe

Steering committees

H. Kubo (math.), K. Nomura, H. Arimura (info. sci.),
Y. Hirabayashi (Info. center), T. Kamiyama (eng.)

Compilation working group

EXFOR

S. Watanabe, M. Aikawa

NRDF

M. Aikawa, Katayama, K. Kato, H. Noto

EXFOR compilation statistics

83 transmissions which include 33 new and 50 revised entries were finalized since the last NRDC meeting

TRANS	TRANS Status	ENTRY Total	New ENTRY	Revised ENTRY
E137	Final (30/06/23)	12	2	10
E138	Final (04/10/23)	9	9	0
E139	Final (09/11/23)	8	6	2
E140	Final (14/11/23)	16	1	15
E141	Final (16/03/24)	23	6	17
E142	Prelim. (16/03/24)	9	9	0
K022	Final (07/03/24)	6	0	6
Total		83	33	50

System development

Data Retrieval System

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

... using MySQL

Softwares for Database Coding

- Editor “HENDEL”, <http://www.jcprg.org/manuals/hendel/>
- Digitizer “GSYS”, <http://www.jcprg.org/gsys/gsys-e.html>

About myself

Interests

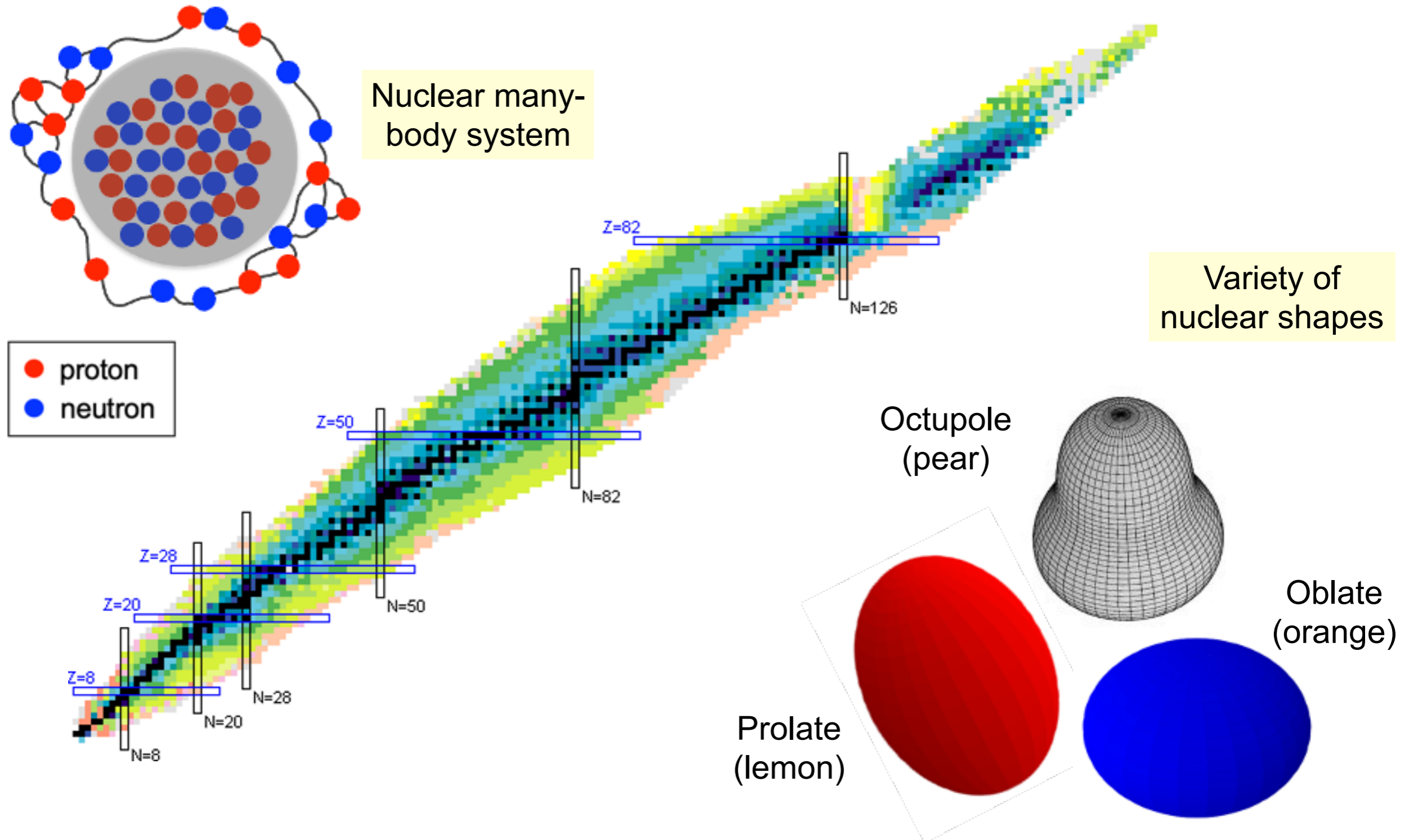
- Theoretical nuclear physics
- Low-energy nuclear structure, Nuclear many-body problems

Brief CV

- 2012: Ph.D., The University of Tokyo
- 2012-2018: Postdoc, Univ. Cologne, GANIL, Univ. Zagreb
- 2019-2023: Assis. Prof., Univ. Zagreb
- 2023-Now: Assoc. Prof., Dept. Phys., & Director, JCPRG, Hokkaido Univ.

Microscopic study of nuclear structure

Exploring thousands of nuclear systems, their regularities and symmetries arising from the complex inter-nucleon interactions based on microscopic quantum many-body theory



Summary

- JCPRG will continue complications of EXFOR as a member of NRDC
- Compilation of charged-particle reaction data in Japan 83
EXFOR entries were compiled since the last NRDC meeting
- Evaluation of nuclear reaction data
e.g., Nuclear data evaluation using ML is in progress

Thank you