

Developments of academic bases of nuclear data research in Asia

JCPRG

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NRDC meeting 2012.4.19

Overview

- Since 2010, we have been going ahead with developments of academic bases of nuclear data researches in Asia under Asia and Africa Science Platform Program (AASPP) of Japan Society for the Promotion of Science (JSPS). (K.Kato → M.Aikawa)

One of the important goal of this program is to build a close relationship and to develop collaboration of nuclear data activities among Asian nuclear data centres



The screenshot shows the homepage of the JCPRG (Japan Center for Nuclear Reaction Data) website. The header includes the JCPRG logo and the text '北海道大学大学院理学研究院附属 原子核反応データ研究開発センター Hokkaido University Nuclear Reaction Data Centre'. Below the header, there is a navigation bar with links: 'NRDF | EXFOR | CINDA | ENDF | English | Japanese | Internal'. The main content area is titled 'Hokkaido University Nuclear Reaction Data Centre (JCPRG) R&D Platform Formation of Nuclear Reaction Data in Asian Countries (2010-2013)'. It lists three workshops:

- Asian Nuclear Data Workshop 2011 -For further development of Asian collaboration-
 - Sapporo, Japan
 - 10-12 November, 2011
- AASPP Workshop, the 2nd Asian nuclear reaction database development workshop
 - Beijing, China
 - 5-9 September, 2011
- AASPP Workshop, the 1st Asian nuclear reaction database development workshop
 - Hokkaido University, Sapporo, Japan
 - 25-29 October, 2010

<http://jcprg.org/aaspp/index.html>

Collaborations

- China Institute of Atomic Energy (Zhigang GE)
- Korea Atomic Energy Research Institute (Young - Ouk LEE)
- Bhabha Atomic Research Centre(Srinivasan GANESAN)
- RIKEN
- Japan Atomic Energy Agency (JAEA),
- International Atomic Energy Agency (IAEA),
- Kyungpook National University,
- the Maharaja Sayajirao University of Baroda,
- National University of Mongolia
- Kazakh National Pedagogical University.



I. AASPP workshop

- Asian nuclear reaction database development workshop
- -1st Workshop was held at Sapporo, Japan in 2010.
- -2nd Workshop was held at Beijing, China in 2011.
- -3rd Workshop will be held at Korea in 2012

Candidate : 2012.8.27 ~30

Place: Kyungpook National University, Daegu, Korea

Thanks to support and collaboration: From AIEA, Korea group



In this workshop,

- we have presentations of nuclear data center activities at each center.
- Presentation of research topic
- **EXFOR/NRDF compilation training course** which is included the explanation of digitize software GSYS.

II. Theoretical work

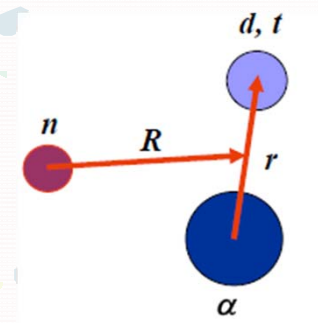
- Evaluated database for nuclear astrophysics
- Applications for the nuclear power field

D.Ichinkhorloo, M.Odsuren, Vidya.Devi, N.Furutachi, T.Matsumoto, K.Yamamoto, K.Tsubakihara, M.Kimura, K.Kato, M.Aikawa

By Ichinkhorloo-san,

- The breakup of $6,7\text{Li}$ nucleus into $\alpha + d$ and $\alpha + t$ and their inverse reactions in the low relative energy region are of a great interest from the astrophysics point of view.
- Lithium isotopes will be used as a tritium breeding material in fusion reactors, and accurate nuclear data are required for n - and p -induced reactions.

cross sections for $6\text{Li}(n,n')6\text{Li}^*$ and $7\text{Li}(n,n')7\text{Li}^* \rightarrow t + \alpha$ reactions are evaluated by using the microscopic coupled-channels method



III. Experimental work

- Evaluated database for nuclear astrophysics
- Applications for the nuclear power field

K.Kato, A.Makinaga, M.Aikawa, T.Kamiyama, S.Goko, Y.Kiyanagi, H.Akimune, M.Fujiwara, G.N.Kim, H.Naik, M.W.Lee, S.C.Yang

Neutron experiment and Bremsstrahlung experiment have been developed at Hokkaido University with Korean group, Indian group. This year, we plan to collaborate with mongolia group.



A piece of white paper with a deckled edge is centered on a red, marbled background. The white paper is covered with numerous colorful paint splatters in shades of blue, purple, green, yellow, orange, and pink. The splatters are of various sizes and shapes, some appearing as small dots and others as larger, elongated streaks. The text "Thank you very much" is written in a black, serif font across the middle of the white paper.

Thank you very much