Report of the 9th Workshop on Asian Nuclear Reaction Database Development

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Abstract

The 9th workshop on Asian Nuclear Reaction Database Development (AASPP2018) was held in Gyeongju, Republic of Korea, from November 12 to 15, 2018. The 30 participants of the workshop from 8 countries gave presentations of their EXFOR compilation activity and own researches on nuclear data. A brief summary of the workshop is reported.

1 Introduction

The 9th workshop on Asian Nuclear Reaction Database Development was organized by Nuclear Data Center, Korea Atomic Energy Research Institute in cooperation with the International Atomic Energy Agency (IAEA). It was held in Gyeongju, Republic of Korea from November 12 to 15, 2018. The 30 participants in total came from 13 cooperating institutes in 8 countries, Austria, China, India, Japan, Kazakhstan, Korea, Mongolia and Vitenam (Fig. 1).

The purposes of this workshop are to promote the EXFOR compilation activity in each Asian nuclear data centre and theoretical and experimental nuclear data researches among the participants. The main topics of the workshop were:

- Nuclear Data Activities in Asian Nuclear Data Centers
- Progress in EXFOR Compilation
- Development of the Asian Nuclear Reaction Database Network
- Nuclear Data Measurement and Experimental Facilities
- Nuclear Data Evaluation and Validation

In the workshop, 24 presentations related to the topics were given by the participants. Questions, comments and discussion among the participants were followed. In this report, a brief summary of the workshop is reported.

Fig. 1: Group photo of the conference

2 Sessions and presentations

There were seven sessions in the workshop as listed in Table 1. The first session was devoted to the EXFOR compilation and the others were for the presentations of the participants.

The first session was called "EXFOR session" and held for one and a half days. In the session, we compiled several papers and discussed related technical problems.

From the afternoon of the second day, the sessions I-VI for presentations of the participants were started, following the welcome address of Dr. Young-Ouk Lee (KAERI). In the session I, there were five presentations mainly to introduce compilation activities in IAEA and Asian centres of China, India, Japan and Korea. In the session II, five presentations on nuclear data researches of participants were given. The session III in the third day had three presentations on theoretical and experimental researches on nuclear data. The session IV was devoted to the presentations of Korean participants. In the session V, the experimental activities in Japan and Korea were reported. The last session had four presentations related to their theoretical activities and software development. In the last day, there was a facility tour in a proton linear accelerator (KOMAC) and an excursion in Gyeong-ju city.

The more details of the workshop are summarized in the proceedings [1].

3 Summary

The 9th workshop on Asian Nuclear Reaction Database Development was held in Gyeongju, Republic of Korea, on November 12-15, 2018. The total number of the participants was 30 from 7 Asian

and 1 European countries. The participants gave presentations on compilation and nuclear data research activities. The workshop was satisfactory to the participants and successfully finished. The next workshop in 2019 was proposed to be held in Almaty, Kazakhstan.

Acknowledgment

The authors are grateful for the financial support from the Nuclear Reaction Data Centre (JCPRG), Hokkaido University to attend the workshop.

References

[1] Eds.; S. C. Yang and N. Otuka. Proceedings of Ninth AASPP Workshop on Asian Nuclear Reaction Database Development, IAEA INDC(KOR)-006, (2018)

Appendix

The programme of the workshop.

	Nov. 12
10:00-18:00	**EXFOR session**

	Nov. 13
10:00-12:00	**EXFOR session (Cont.)**
12:00-13:00	Lunch
13:00-13:50	Registration
13:50-14:00	Opening & Welcome Address, Y.O. Lee (KAERI)
	Session I. Chairperson: C.S. Gil (KAERI)
14:00-14:20	Compilation and dissemination of fission product yields, N. Otsuka (IAEA)
14:20-14:40	Activity of nuclear reaction data in JCPRG, D. Ichinkhorloo (JCPRG)
14:40-15:00	Status of EXFOR activity in India and evaluation of neutron induced cross section, V. Devi (IET, India)
15:00-15:20	EXFOR compilation at CNDC and systematics of thermal neutron fission cross sections, J. Wang (CIAE)
15:20-15:40	EXFOR compilation and nuclear data measurement at KAERI/NDC, S.C. Yang (KAERI)
15:40-16:00	Coffee break
	Session II. Chairperson: N. Otsuka (IAEA)
16:00-16:20	Evaluation of photonuclear cross sections at KAERI, Y.S. Cho (KAERI)
16:20-16:40	Mass yield distribution in the ^{232}Th(n,f) reaction based on the ^{9}Be(p,n) reaction, H. Naik (BARC)
16:40-17:00	Study of nuclear reaction ^{141}Pr(γ,2n)^{139}Pr and ^{141}Pr(γ,pn)^{139}Ce induced with bremsstrahlung end-point energy in the range 50-70 MeV, Nguyen Van Do (VAST)
17:00-17:20	KAERI neutron time-of-flight (nTOF) facility - introduction and current status, J.W. Kim (KAERI)
17:20-17:40	Development of 9 MeV electron accelerating tube for radiotherapy machine, M.W. Lee (DIRAMS)
18:00-20:00	Welcome dinner

	Nov. 14
	Session III. Chairperson: G.N. Kim (KNU)
10:00-10:20	The first unbound states of mirror 9B and 9Be nuclei in the complex scaling method, M. Odsuren (NUM)
10:20-10:40	Refraction effects in the a and 3He scattering on light nuclei at energies about 50 MeV, T. Zholdybayev (INP)
10:40-11:00	Analysis of the 16O(p,pn)15O reaction using the CDCC method, D. Ichinkhorloo (JCPRG)

11:00-11:20	Coffee break
	Session IV. Chairperson: Y.S. Cho (KAERI)
11:20-11:40	The status of nuclear data measurement in KNU G.N. Kim (KNU)
11:40-12:00	Neutron Data Production System, S.W. Hong (SKKU)
12:00-12:20	Development of a semi-empirical model for calculation of fission product yields, J.H. Lee (KAERI,SKKU)
12:20-14:00	Lunch
	Session V. Chairperson: T.Y. Song (KAERI)
14:00-14:20	Systematic study on charged-particle induced reaction for medical radioisotopes production, M. Aikawa (Hokkaido Univ.)
14:20-14:40	Proton induced reaction cross section of natW with proton beam of 45 MeV, Nguyen Thi Hien (KNU)
14:40-15:00	Measurements of cross-section for the theranostic radionuclide 67Cu, J.K. Park (KAERI)
15:00-15:20	Measurement of neutron capture yield and average capture cross section of Dysprosium isotopes at J-PARC, J.E. Lee (DAU)
15:20-15:40	Coffee break
	Session VI. Chairperson: M. Aikawa (Hokkaido U.)
15:40-16:00	Laser spectroscopy and atomic structure calculations for nuclear properties, D.H. Kwon (KAERI)
16:00-16:20	Theoretical study on the production of new neutron-rich isotopes in multi-nucleon transfer reactions, M.H. Mun (KISTI)
16:20-16:40	Validation of thermal neutron scattering cross sections for heavy water based on molecular dynamics simulation, H.L. Hyun (KAERI)
16:40-17:00	Visualization of fission product yield by NDPlot Y. Jin (CIAE)
17:00-18:00	**Closing session**
18:00-20:00	Dinner

	Nov. 15
9:30-12:00	Facility tour: proton linear accelerator (KOMAC)
12:00-14:00	Lunch
14:00-17:00	Sightseeing in Gyeong-ju