

International Nuclear Data Evaluation Network on Light Elements (INDEN-LE)

6th Meeting on R-Matrix Codes for
Charged-Particle Reactions in the Resolved Resonance Region
15-16 March 2021
(virtual event)

3rd Meeting of the
International Nuclear Data Evaluation Network (INDEN)
on the Evaluation of Light Elements
17-19 March 2021
(virtual event)

Adopted Agenda

Monday, March 15th: R-matrix calculations for charged-particle reactions in the RRR

15:00 – 18:00 CET

15:10 Welcome address – Arjan Koning, SH-NDS
Election of chairman and rapporteur, Adoption of agenda, administrative matters

Presentations:

15:20 Introduction: Status of project(s), P. Dimitriou (IAEA)
15:30 Results of global evaluation of all light systems up to A=23, Z. Chen (Tsinghua Univ.)
16:15 Results of Test 2 and Test 3, I.J. Thompson (LLNL)
17:15 Bayesian analysis of the ⁷Be compound system, D. Odell (Ohio Univ.)

Break as needed

18:00 *End of Day One*

Tuesday, March 16th: R-matrix calculations for charged-particle reactions in the RRR

15:00 – 18:00 CET

Presentations cont'd:

15:00 Reduced R-matrix formalism on n+⁹Be system, H. Leeb (TU Vienna)
15:30 Novel R-matrix formalism for three-body breakup reactions in light nuclei,
B. Raab (TU Vienna)

16:00 Roundtable Discussions

Topics:

1. Test 2 results/conclusions/publication
2. Experimental database
3. Be-7 evaluations: how to proceed
Common to INDEN-LE
4. how to extend to higher projectile energies
5. how to deal with conflicting data
6. how to treat gamma production

Break as needed

18:00 *End of Day Two*

Wednesday, March 17th: INDEN-Light Elements

15:00 – 18:00 CET

Presentations:

- 15:00 Improvement perspectives for ^{23}Na in the RRR, P. Tamagno (CEA)
- 15:15 Report on $n+^{14}\text{N}$ system, J. deBoer (Notre Dame Univ.)
- 15:30 Report on $n+^{16}\text{O}$ system, M. Pigni (ORNL)
- 16:00 EDA R-Matrix Evaluations Report on $n+^9\text{Be}$ and $n+^{16}\text{O}$, M. Paris (LANL)
- 16:30 Towards R-Matrix evaluations of $n + ^{14}\text{N}$ and other reactions producing ^{15}N , I.J. Thompson (LLNL)

Break as needed

18:00 *End of Day Three*

Thursday, March 18th: (alpha,n) reactions

15:00 – 18:00 CET

Presentations:

- 15:00 (α,n) data for applications, astro-particle physics and detector simulation codes, D. Cano-Ott (CIEMAT)
- 15:30 (α,n) reactions for nuclear astrophysics, A. Tarifeño (Univ. Politécnic de Cataluña)
- 15:45 Updates on the $\alpha+^{17,18}\text{O}$ reactions, M. Pigni (ORNL)
- 16:15 New reaction cross section measurement of $^{13}\text{C}(\alpha,n)$ using the 4pi HeBGB detector, Z. Meisel (Ohio Univ.)
- 16:45 Measurements of partial and differential cross sections of the $^{13}\text{C}(\alpha,n)$ reaction, J. deBoer (Notre Dame Univ.)
- 17:15 Update and plans for LENZ $^{16}\text{O}(n,\alpha)$ data, H.Y. Lee (LANL)

17:35 Discussions

Break as needed

18:00+ *End of Day Four*

Friday, March 19th: INDEN-Light Elements

15:00 – 18:00 CET

Roundtable discussions:

Topics:

1. EXFOR + shared experimental database
2. Status of evaluations
3. Review of assignments/list of actions
4. How to proceed – next meeting(s)

Cont'd:

5. How to extend to higher projectile energies
6. How to deal with conflicting data
7. How to treat gamma production

Break as needed

18:00 *End of meeting*