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ANU activities (2017-2019)

T. Kibèdi and Ben Coombes (ANU)

ENSDF and horizontal evaluations

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Mass chain evaluations

172	B. Singh, T. Kibèdi	Review completed (Dec 2018) Final revision in May
173	T. Kibèdi	In preparation
174	E. Browne, J.K. Tuli, T. Kibèdi	Z=66-69 (EB, JKT, first review completed) Z=70 Yb (TK in progress) Z=71-80 (Tk in 2019)

Horizontal evaluation of E0 and mixed E0+E2+M1 transitions

(with Adam Garnsworthy and John Wood)

- Update of 2005Ki02 evaluation of pure E0
- Evaluation of E0+E2+M1 between J>0 states (1999Wo07)
- E0 transition intensity ratios from CE and pair conversion measurement
- L.J. Evitts, et al., Phys. Lett. B779 (2018) 396
- L.J. Evitts, et al., Phys. Rev. C 99, 024306 (2019)
- J. Dowie et al., ADNDT (to be submitted)

Nuclear Data related Meetings and Workshops

- **ICTP-IAEA Workshop on Nuclear Structure and Decay Data: Experiment, Theory and Evaluation** (15-26 Oct 2018, Trieste)
- **TM on ENSDF codes** (IAEA, 3-7 Dec-2018)
- **TM on Medical Applications** (IAEA 10-13 Dec-2018)
  - J.W. Enge et al., Nucl.Data Sheets 155, 56 (2019)
  - F. Tarkanyi et al., J. Rad. And Nucl. Chem., 319 (2019) 487.
  - F. Tarkanyi et al., J. Rad. And Nucl. Chem., 319 (2019) 533.
  - A. Hermanne et al., Nucl.Data Sheets 148, 338 (2018)
- **INDC** (IAEA, June-2018)
- **ESNT** - Shape coexistence and electric monopole transitions in atomic nuclei (23-27 Oct, 2017, CEA Saclay)
- **ANSTT** - Advanced Nuclear Science and Technology Techniques (5-9 March, 2018, iThemba, South Africa)
- **EPSM 2018** – Engineering and Physical Sciences in Medicine (Adelaide, 28-30 October 2018)

BrIcc

BrIcc v2.3:

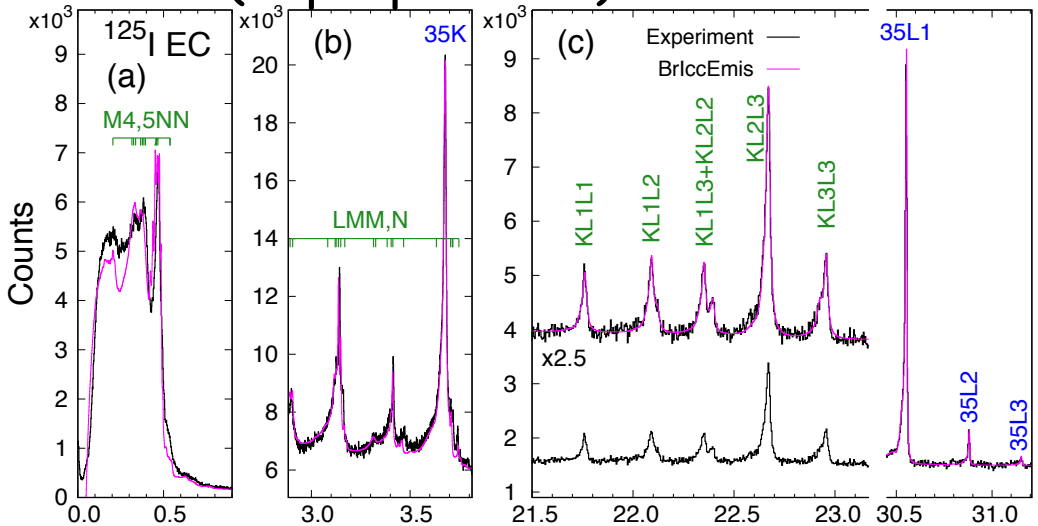
- ❑ Improved protocol to handle CC(DCC) fields
- ❑ Calculate CC for E0+E2+M1 as E2+M1
- ❑ Final testing

BrIcc v3.1: (Thursday)

- ❑ New CE data table for Z=5-126
- ❑ New E0 electronic factors tabulations
  - Ω_{CE}(E0) for Z=5-126 (J. Dowie, ANU)
  - Ω_{IPF}(E0) for Z=4-100 (T.K. Eriksen, ANU)
- ❑ ADNDT paper ready for submission

BrIccEmis (Thursday)

- High resolution (~5 eV) measurements of Auger/CE ratio in ^{125}I
- EADL / experiment ratio lower by 20%
- No Atomic effect in K or L Auger emission
  - M. Alotiby et al., Phys. In Med. and Biol. 63 (2018) 1.
  - J. Fonslet et al., Phys. In Med. and Biol., 63 (2018) 1.
  - M. Alotiby et al., J. El. Spect. and Rel. Phenom. 232 (2019) 73.
  - B. Tee et al., δ mixing ratio and λ penetration parameter of the 35 keV M1+E2 in ^{125}Te; (in preparation)



ENSDF code development

GABS: (Thursday)

- Operation modes: calculate normalisation, calculate %IG and mark transitions to g.s.
- Completely re-written
- New protocol for rounding uncertainties (Tuesday afternoon)

NS_Radlist (Wednesday)

- Calculation of Auger and X-ray yields and spectra from ENSDF
- Creates and inserts new atomic radiation records into ENSDF

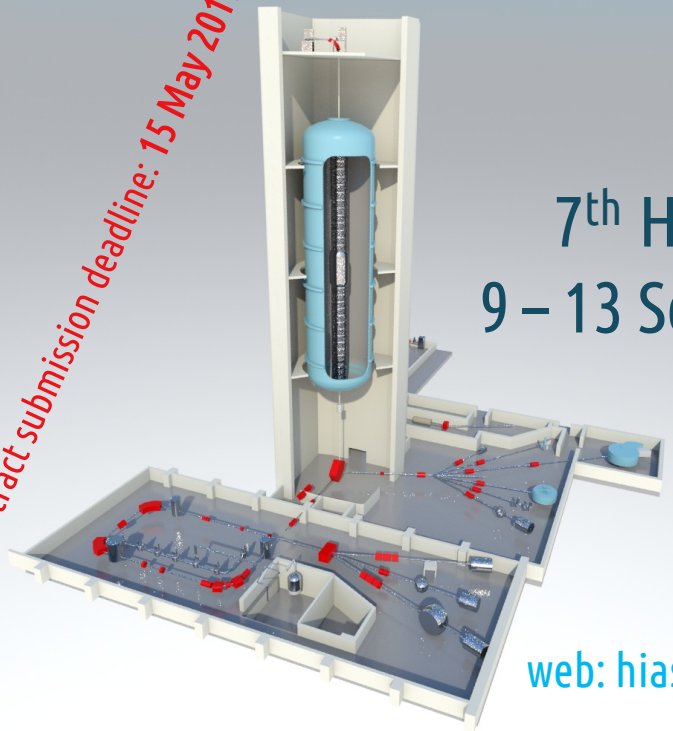
UncTools (Thursday)

- Uncertainty propagation using Monte Carlo

Australian National University

DEPARTMENT OF NUCLEAR PHYSICS
Research School of Physics & Engineering
ANU College of Science

Abstract submission deadline: 15 May 2019



HIAS

7th Heavy Ion Accelerator Symposium
9 – 13 September 2019, Canberra, Australia

- Nuclear Structure and Nuclear Data
- Accelerator Mass Spectrometry Applications
- Nuclear Astrophysics
- Nuclear Reactions
- New Instrumentation for Nuclear Science and Applications

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