



**The Abdus Salam  
International Centre for Theoretical Physics**



**2358-3**

**Joint ICTP-IAEA Workshop on Nuclear Structure Decay Data: Theory and  
Evaluation**

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**Procedure and Policies**

J.K. Tuli

*Brookhaven National Laboratory, U.S.A.*

# Purpose/Philosophy

Jagdish K. Tuli

National Nuclear Data Center

Brookhaven National Laboratory

Upton, NY 11973, USA

Brookhaven Science Associates  
U.S. Department of Energy



# Purpose/Philosophy

- Present set of critically evaluated properties of nuclides based on best known experimental information to date
- Present best data available for each type of experiment
- Present best info for each nuclide
- Concise, consistent, and well-documented

# Minimum Standards

- A-Chain completeness – All nuclides
- Nuclide Completeness – All data sets
- Data Set Completeness – ID to END record

Decay Data Sets: Parent record

Adopted sets: Q record

etc.

Uncertainty, units, documentation

# Physical Properties

- Adopted Properties
  - General – Q, History, XREF, Comments
  - Levels-E, J<sub>pi</sub>, T<sub>1/2</sub>, branching, static mom
  - Gammas-E, branching, mult, cc, BLW
- Decay Properties
- Nuclear Reaction Properties

# Guidelines-extraction of data

- Quote authors' measured quantities
- Document any deviations
- Note authors' assumptions
- Check for missed references
- Check authors' quoted older values

# Guidelines-presentation of data-1

- Order of Comments
- E= not needed for reaction
- Target JPI should be given
- Keyno: measured, etc.
- Do not combine different kind of data sets
- Specify source of data

# Guidelines-presentation-2

- Gammas order by increasing  $E_g$
- Significant digits
- Uncertainty limited to 25
- Multiplets
- Xsection, Analyzing-power, A2, A4 not given
- BEL up for levels, down for gammas
- Delayed gammas-give as IT decay



# Guidelines-presentation-3

- Normalization condition should be given
- Parent record, all fields should be given
- Replace `/` by `:` for multiple ratios
- Unresolved discrepancies should be pointed out
- Uncertainty not error
- $E(ec)$ ,  $E(b^-)$  only when accurate, measured

# Guidelines-Systematics

- $\text{Log}T_{1/2}(\alpha)$  vs  $\text{Log} E(\alpha)$  is linear
- Takahashi's gross beta decay theory reliable to better than a factor of 3
- Alpha Decay HF
- Certain pairs of conf lead to isomeric transitions
- GS feeding from local systematics
- Mass syst from Audi

# Guideline-Style

- APS style adopted
- Accepted abbreviations
- Key no. is plural. Space after