



Horia Hulubei National Institute for R&D
in Physics and Nuclear Engineering

Evaluation activities of the Bucharest NSDD Centre

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Current situation

The whiteboard contains handwritten notes and diagrams illustrating particle physics processes:

- 1 EF Compton:** A diagram shows an incident photon (foton incident) interacting with an atom. An electron is ejected (electron de recul) and a scattered photon (foton împrăștiat) is produced.
- 2 EF Anihilare:** A diagram shows a positron (e^+) and an electron (e^-) annihilating. The energy is converted into a photon (γ) with energy E_γ .
- 3 Gamma pozitron:** A diagram shows a photon (γ) interacting with an atom, producing a positron (e^+) and an electron (e^-).

Additional notes include:

- Foton - cantitate de lumina care se comporta ca o particula, dar nu are masa de repaus.
- Energy Anihilării - direct proporț cu frecvența și invers proporț cu lungimea de undă ($E = h\nu$).
- Tipuri de dez. (Types of decay):
 - Des β^- - un neutron în curs de uzură emite un e^- și un antineutrino.
 - Des β^+ (emisia de pozitron) - un proton în curs de uzură emite un e^+ și un neutrino.

interacțiune	$\sim 10^{24}$	
electroni	$\sim 10^{25}$	
interacțiune	$\sim 10^{30}$	

→ 1.022

Manpower

- In general: 0.4 FTE: Sorin Pascu + Alexandru Negret
- Temporary situation: reduced manpower caused by other obligations of both evaluators
- A postdoc is being trained on evaluation techniques (since the beginning of 2024)



Responsibilities of the Bucharest Data Centre

Mass	Last published evaluation	Responsible evaluator	Status
57	NDS 85, 415 (1998)	A. Negret	Under evaluation by A. Negret, B. Singh and R. Firestone
58	NDS 111, 897 (2010)		
59	NDS 151, 1 (2018)		
117	NDS 95, 679 (2002) - updated 2009	S. Pascu	
118	NDS 75, 99 (1995)		Under evaluation by S. Pascu, A. Negret, and E. McCutchan
119	NDS 110, 2945 (2009)		



Evaluation activities

- A=130: by S. Pascu, B. Singh, A. Rodionov, G. Shulyak - post review
- A=101: by J. Timar, Z. Elekes, A. Negret, S. Pascu - post review (since 2023)
- A=86: by B. Singh, A. Negret - post review (since 2024)
- Reviewed one mass chain (second half on 2023)
- CTBTO project (IAEA):
 - A. Negret: decay of ^{133}I - final
 - S. Pascu: decay of ^{140}La - under review
 - A. Negret: performed the review of ^{143}Ce decay (evaluator: B. Singh, J. Chen)



02

Plans for near future



Plans for the future

- A=86 - post-review corrections (A. Negret)
- A=101 - post-review corrections (J. Timar, Z. Elekes, A. Negret, S. Pascu)
- A=130 - post-review corrections (S. Pascu)
- A=57 - post-review corrections (A. Negret, H. Singh)
- A=118 - complete the evaluation (E. McCutchan, S. Pascu, A. Negret)

- Training of a postdoc on ENSDF evaluation: Himanshu Singh - **support from the network?**



Thanks

Do you have any questions?

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