Program

27–30 Jan 2025

Technical Meeting on Compilation and Evaluation of Nuclear Charge Radii

IAEA Headquarters, Vienna, Room C0343
Vienna International Center Wagramerstrasse 5 U-Bahn U1 Kaisermuhlen

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Monday 27 January

10:00

Session 1
Session

10:00–10:15 **Welcome**

Speakers
Tzanka Wheldon, Arjan KONING

10:15–10:35 **Introduction to the Nuclear Data Section**

Speaker
Paraskevi DIMITRIOU

10:35–11:20 **From total neutron cross sections to nuclear charge radii - Part 1**

Speaker
IstvÃ¡n ANGELI

11:20–12:05 **Charge Radii of Light Isotopes from Laser Spectroscopy of He-Like Atomic Systems**

Speaker
Wilfried Nörtershäuser

12:05–12:50 **Precise nuclear charge radii via bound electron g factor measurements**

Speaker
Fabian Heisse

13:00

13:00

Lunch break
Break

14:15

14:15

Session 2
Session

14:15–15:00 **Nuclear polarization in muonic atoms**

Speaker
Mikhail Gorshteyn

15:00–15:45
Recent improvements in the theory of heavy muonic atoms and their influence on nuclear radii

Speaker
Natalia Oreshkina

15:45–16:30 **Isomeric mean-square charge radii changes**

Speaker
Deyan Yordanov

17:15

Tuesday 28 January

09:00

Session 3
Session

09:00–09:45 **From total neutron cross sections to nuclear charge radii - Part 2**

Speaker
IstvÃ¡n ANGELI

09:45–10:30 **Vision and precision in radii estimations**

Speaker
Ben Ohayon

10:30–11:15
radbase: codes for non-linear least-squares analysis of the nuclear radius network - towards next generation recommended values of nuclear charge radii

Speaker
Hunter Staiger

11:15–11:45 **Nuclear databases and webtools at the IAEA**

Speaker
Paraskevi DIMITRIOU

12:30

12:30

Lunch break
Break

14:00

14:00

Roundtable I
Session

Description
Topics for discussion:
New experimental techniques and measurements
Evaluation methods and uncertainty quantification
The role of nuclear theory
Emerging needs and priorities
Revision and future maintenance of the nuclear charge radii tables

17:00

Wednesday 29 January

09:00

Session 4
Session

09:00–09:45 **Roles of atomic many-body methods for accurate determination of isotope shift constants**

Speaker
Bijaya Sahoo

09:45–10:15 **Nuclear charge radii vs. other experimental observables**

Speaker
Georgi Georgiev

10:15–11:00 **Isotope Shift and Charge Radii Measurements with the CRIS experiment at ISOLDE**

Speaker
Kieran Flanagan

11:00–11:30 **Nuclear charge radii of neutron-rich scandium and zinc isotopes**

Speaker
Xiaofei Yang

11:30–12:15 **Charge Radii of Nuclei by EUV and X-ray Spectroscopy of Highly Charged Ions**

Speaker
Endre Takacs

12:30

12:30

Lunch break
Break

14:00

14:00

Roundtable II
Session

Description
Topics for discussion:
New experimental techniques and measurements
Evaluation methods and uncertainty quantification
The role of nuclear theory
Emerging needs and priorities
Revision and future maintenance of the nuclear charge radii tables

17:00

18:30

Social Dinner
Session

21:30

Thursday 30 January

09:00

12:30

Drafting report

Session