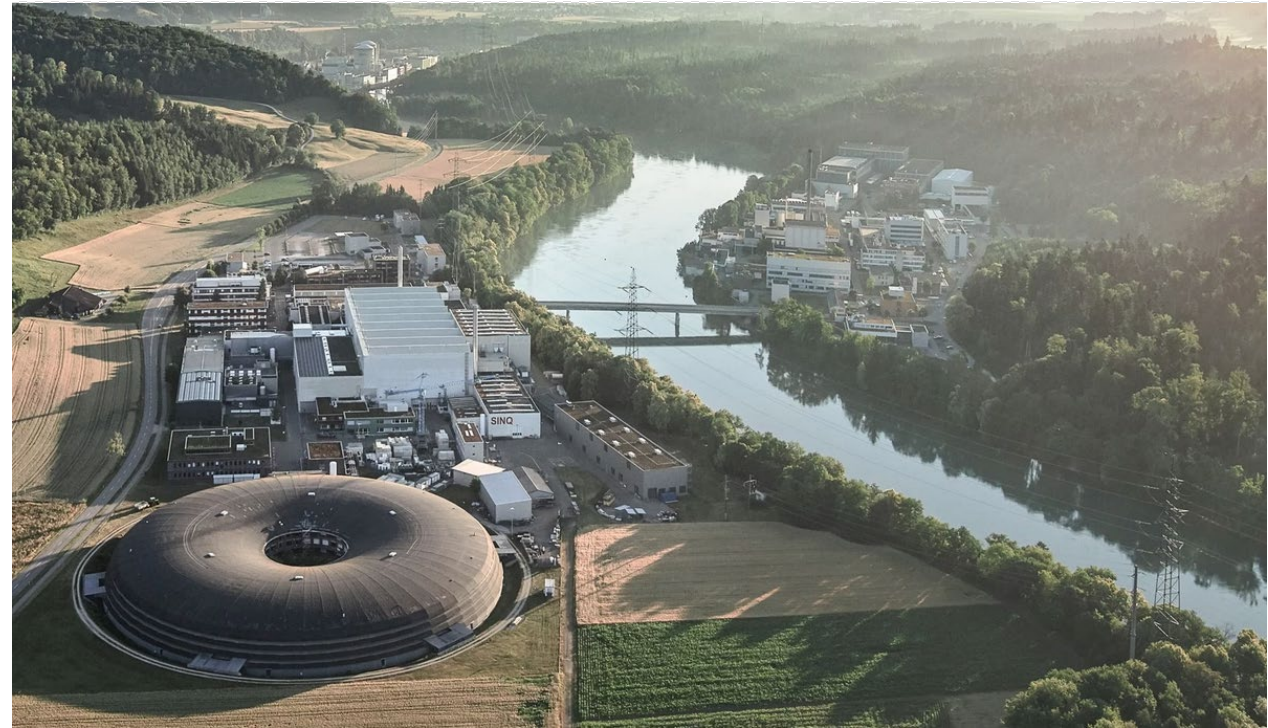


**PSI** Center for Nuclear Engineering  
and Sciences

# Overview of SANDA WP4



D. Rochman

SANDA meeting, CIEMAT, Madrid, July 5<sup>th</sup>, 2024

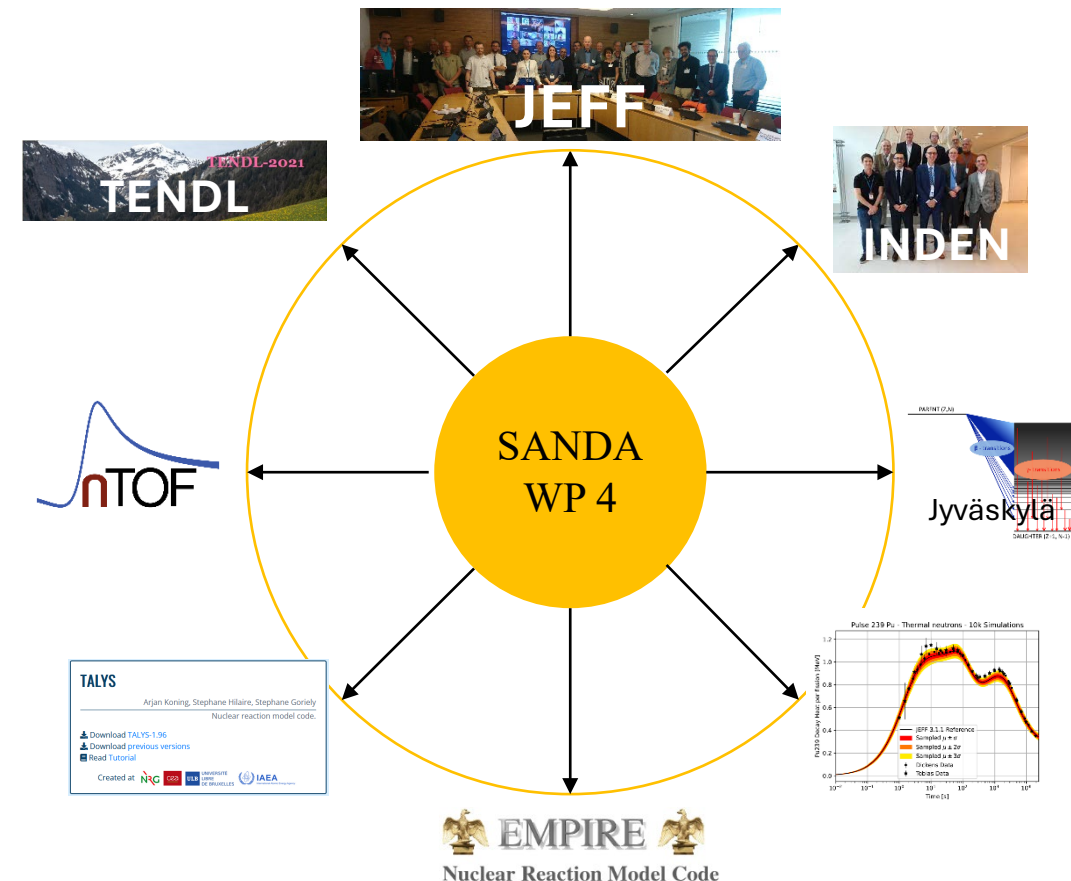
In this work package, it is proposed (1) to continue the development of open-source evaluation tools by improving the phenomenological and microscopic models (TALYS and EMPIRE for reaction nuclear data; and specific codes for decay and structure data, as well as fission yields), (2) to perform evaluation work for important isotopes (actinides and fission products, to be proposed to different international libraries), (3) to provide processed data ready to be used by simulation codes for validation purposes, (4) to provide sensitivity vectors for feedback analysis, and (5) to recommend a set of preferred systems (or benchmarks) for the validation of the new evaluations (see WP5).

<b>Work package 4</b>							<b>Lead beneficiary</b>	PSI
<b>Work package title</b>	Nuclear data evaluation and uncertainties							
<b>Participant number</b>	1	2	3	5	10	14	21	
<b>Short name of participant</b>	CIEMAT	Atomki	CEA	CNRS	IFIN-HH	JSI	<i>PSI</i>	
<b>Person-months per participant</b>	16.6	8.6	43.2	11.5	5	7.2	6	
<b>Participant number</b>	24	25	26	32	33	35		
<b>Short name of participant</b>	Sofia	TUW	UB	UPM	USC	UU		
<b>Person-months per participant</b>	5.3	5	35	11.8	5	13		
<b>Start month</b>	1			<b>End month</b>	48			

- MS30: Availability of TALYS modules
  - Due on 30/04/22,
  - Done on 15/12/21
  
- MS31: Availability of new EMPIRE modules/models
  - Due on 30/04/22,
  - Done on 30/11/22
  
- MS32: Availability of evaluated files for important actinides
  - Due on 30/04/22,
  - Done on 30/11/22
  
- MS33: Availability of evaluated files for important fission products
  - Due on 30/04/22,
  - Done on 30/09/22

- D4.1: Report on code development and methods
  - Due on 31/12/22,
  - Done on 04/05/23
- D4.2: Report on new nuclear reaction data evaluation
  - Due on 31/08/23,
  - Done on 12/12/23
- D4.3: Report on evaluation for fission yields
  - Due on 31/08/22,
  - Done on 28/08/23
- D4.4: Report on the evaluation for nuclear structure and decay data
  - Due on 31/08/22,
  - Done on 23/08/23
- D4.5: Report on the processing and sensitivity analysis
  - Due on 31/08/22,
  - Done on 29/06/23
- D4.6: Report on the applications: recommendation
  - Due on 31/08/22,
  - Done on 28/04/23
- D4.7: Report on the possibility to generalize the high-energy model uncertainties methodology
  - Due on 31/08/23
  - Done on 04/08/23

- WP allows to articulate collaboration between many European institutes
- A large number of outcomes (codes, presentations, papers, evaluated files)
- Important collaboration with international institutions (NEA, IAEA) and strong links institutes outside the EU (US, Japan)
- Outcomes used in energy application, astrophysics, accelerator technology
- Support both applied and theoretical developments
- Originally some delays due to COVID (PhD student not available & experimental facility not available)



# Many thanks

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- Questions ?

