The Joint Evaluated Fission and Fusion nuclear data library - JEFF

5th UPM/CEIDEN Workshop on "Impact of recent nuclear data evaluations on energy and non-energy nuclear applications"

Arjan Plompen, chair of the JEFF Coordination Group

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The JEFF project

- OECD Nuclear Energy Agency
- Databank
- Oecd-nea.org/dbdata/jeff
- Developed by
  o Databank members
  o Invitees
- 2 meetings per year
- 40-100 participants
- Resources of contributors
- Collaborative (EU projects, …)

JEFF-3.3 paper

The joint evaluated fission and fusion nuclear data library, JEFF-3.3

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- Latest release JEFF-3.3
  - November 2017
  - Eur. Phys. J. A (2020) 56:181, 108 pp
- 80 authors
- 36 organizations, 30 EU
- Description of the library
  - JEFF-3.3 and JEFF-3.2
- Benchmarking and impact
- True joint effort

DATA BANK

NEA NUCLEAR ENERGY AGENCY

European Commission

Participants

Recommendations JEFF Stakeholder meeting

I. **Ensure JEFF-4 is developed targeting its potential use in future industry applications**

- New fuel development: ATF, higher enrichment, innovative FC
- Small modular reactors
- Decom., waste, final disposal
- ADS (MYRRHA,…)
- Fusion (IFMIF/DONES etc.)
- Non-energy applications
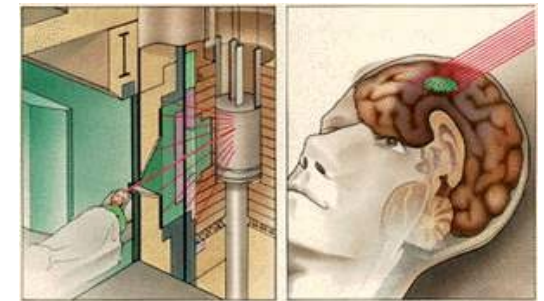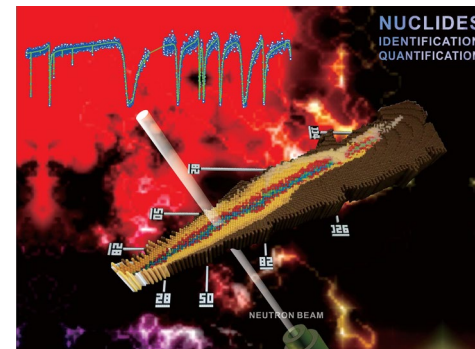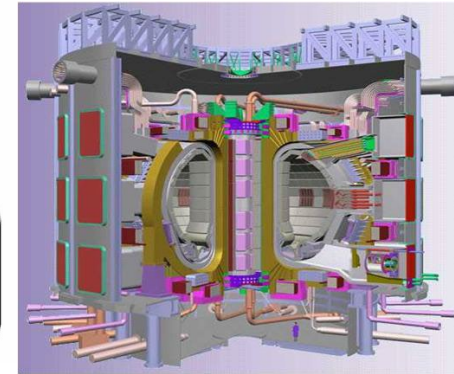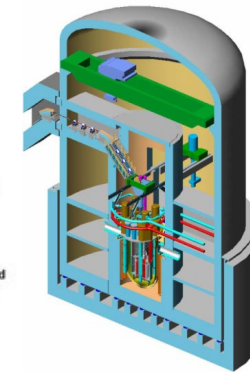 - Medical (radionuclides production)
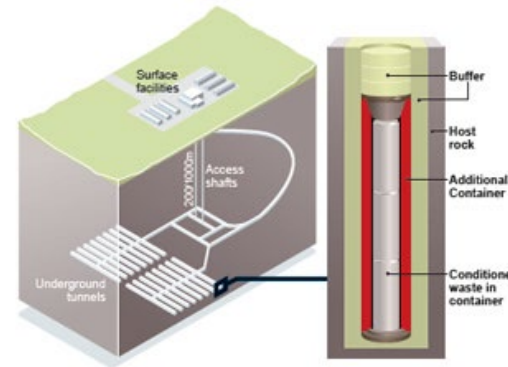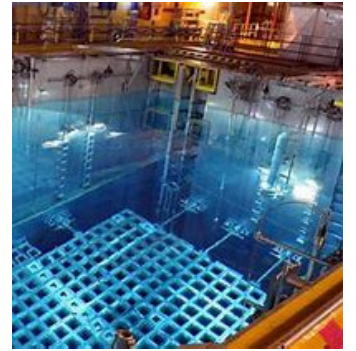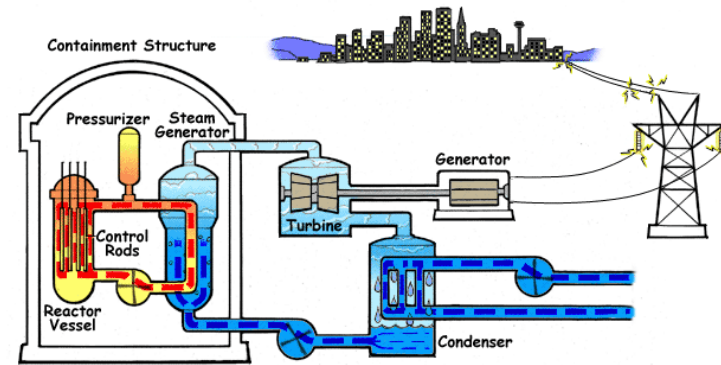 - Academia (astrophysics, …)

II. **Demonstrate the impact, in applications of interest, of a new JEFF library**

III. **NEA Data Bank: Strengthen the QA infrastructure dedicated to JEFF and actively manage the JEFF user base**

- *Enhance the co-ordination role of the Data Bank JEFF – stakeholders*
- Enhance role Data Bank in pre-release V&V phases of JEFF libraries

European Commission

JEFF-4

- Target date: December 2024
- Status: JEFF-4T2, Dec-Feb 2023
- Goals
  - True general purpose
    - Broaden range of application
  - Best available science for users
  - Improved focus on stakeholders
  - Improved production methods
  - Improved uncertainty estimation

Thank you

European Commission