



CSEWG 101

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National Nuclear
Data Center

CSEWG Meeting, Nuclear Data Week 2025

6-9 January, 2026



@BrookhavenLab

Before ENDF

By 1960, there were many data efforts worldwide

- different formats
- often hard-coded libraries
- proprietary data
- Notable efforts: UKNDL (AWE, UK), NDA library (US), ENDL (LRL, US)

~1962 H. Honeck (BNL), A. Henry (Westinghouse), G. Joanou (GA) met at Colony Restaurant in DC decided on action

- requested Reactor Mathematics and Computation Division of ANS to sponsor 2 meetings to link databases



<http://www.streetsofashington.com/2013/10/fine-dining-in-washington-dc-in-1950s.html>



The Cross Section Evaluation Working Group produces ENDF/B library



- Formed 1966 & Chaired by BNL
- Currently ~200 members of the collaboration from 25 institutions
 - US programs, industry and international partners
 - If you see something in the library, at some point a sponsor somewhere wanted it
- All steps of nuclear data pipeline coordinated through CSEWG
- Depending on what needs done, getting required data in library can be major effort

We are always open to new users and collaborators



Mini-CSEWG meeting, Fuller Lodge, Los Alamos, NM, Aug. 2024

(this is about 1/3 of CSEWG)

CSEWG Mission

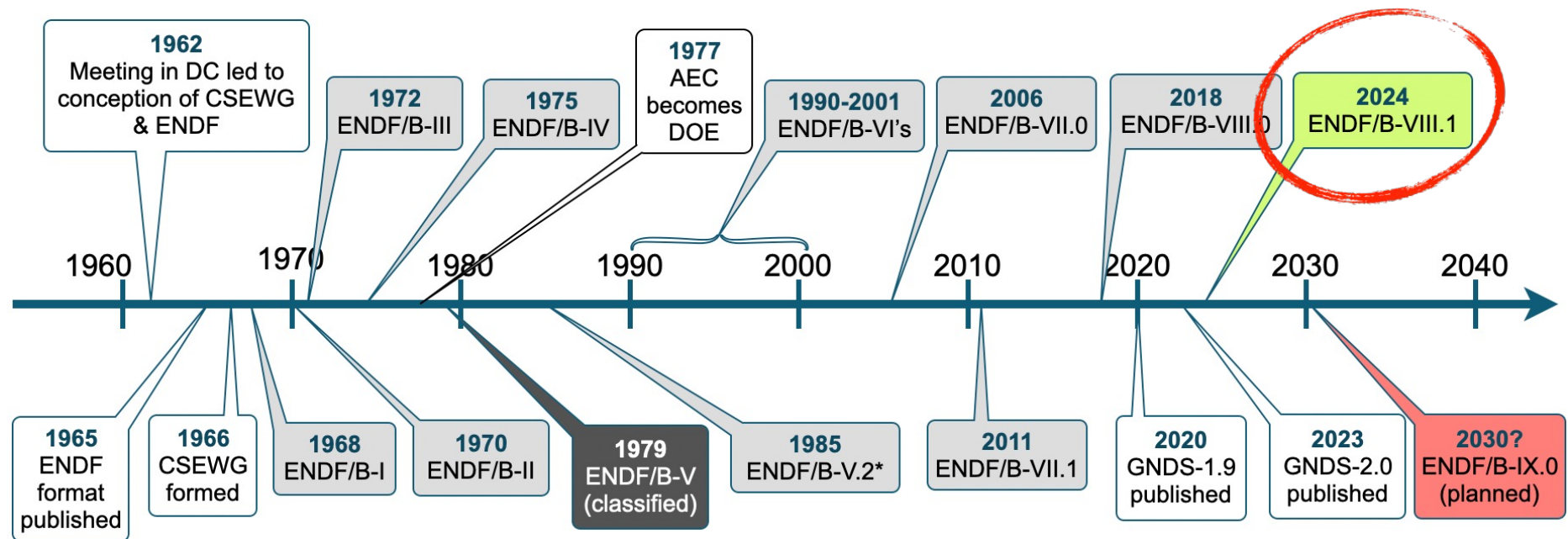
The Cross Section Evaluation Working Group (CSEWG) maintains, updates, extends, validates, verifies, and documents the reference library Evaluated Nuclear Data File Version B (ENDF/B) and establishes standard formats and procedures for its use. CSEWG coordinates differential and integral testing of ENDF/B and utilizes the information for determining the validity of ENDF/B data. CSEWG provides a forum for review of new differential and integral experiments, evaluations and codes that are needed and develops information on specific topics such as Nuclear Data Standards, resonance region formalisms, nuclear model codes, secondary libraries, adjustment results informing future libraries, uncertainty quantification standards, etc. as related to the use of ENDF/B. CSEWG is responsible for distributing this evaluated data and promoting its correct use. CSEWG collaborates and coordinates with other evaluation projects to ensure the success of its mission.

Translation:

- CSEWG makes ENDF
- CSEWG makes *the best* ENDF
- CSEWG does stuff to make ENDF even more useful
- CSEWG distributes ENDF & wants to make sure ENDF is used correctly
- CSEWG is collaborative

Adapted from S. Pearlstein Memo "NNCSC-CSEWG Flowchart" (1972).

ENDF Timeline

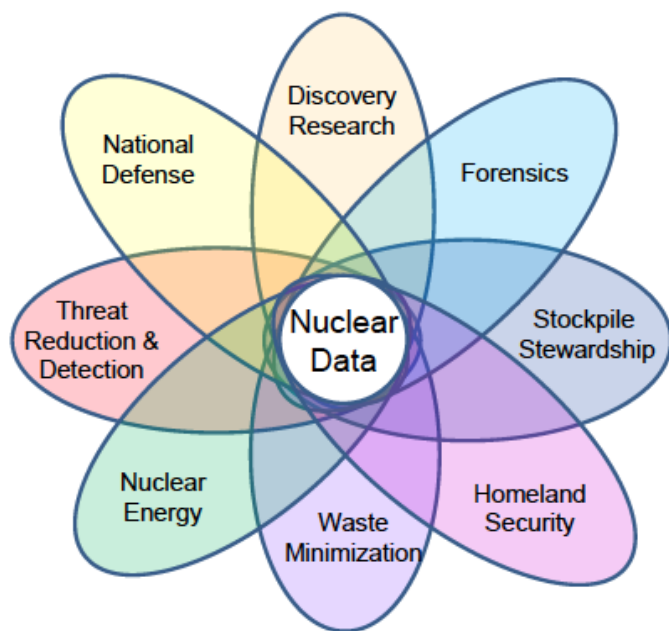


* everybody's favorite release

Timeline courtesy of Dave Brown

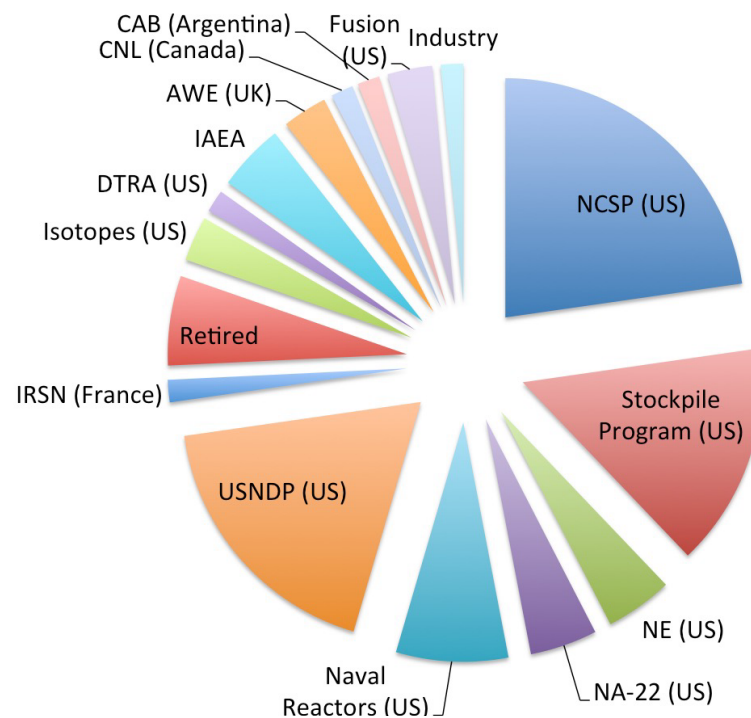
CSEWG is a long standing collaboration between the data users who are also the biggest content providers

Intersections in Nuclear Data



Dr. Timothy Hallman, Associate Director of the Office of Science for Nuclear Physics
April 5, 2015

Fraction of evaluations provided for
ENDF/B-VIII.0



By sharing through CSEWG many sponsors reap the benefit of collaboration

Program	Measurement	Theory	Compilation	Evaluation	QA (V&V, IE)	Infrastructure (gitlab, etc.)
DTRA	✓					
International (IAEA,NEA,...)	✓	✓	✓	✓	✓	✓
NA-22	✓	✓		✓		
Naval Reactors	✓			✓	✓	
NCSP	✓	✓		✓	✓	✓
Nuclear Energy					✓	
Other (IP, Fusion, ...)	✓	✓				
Defense Programs	✓	✓		✓	✓	✓
USNDP	✓	✓	✓	✓	✓	✓

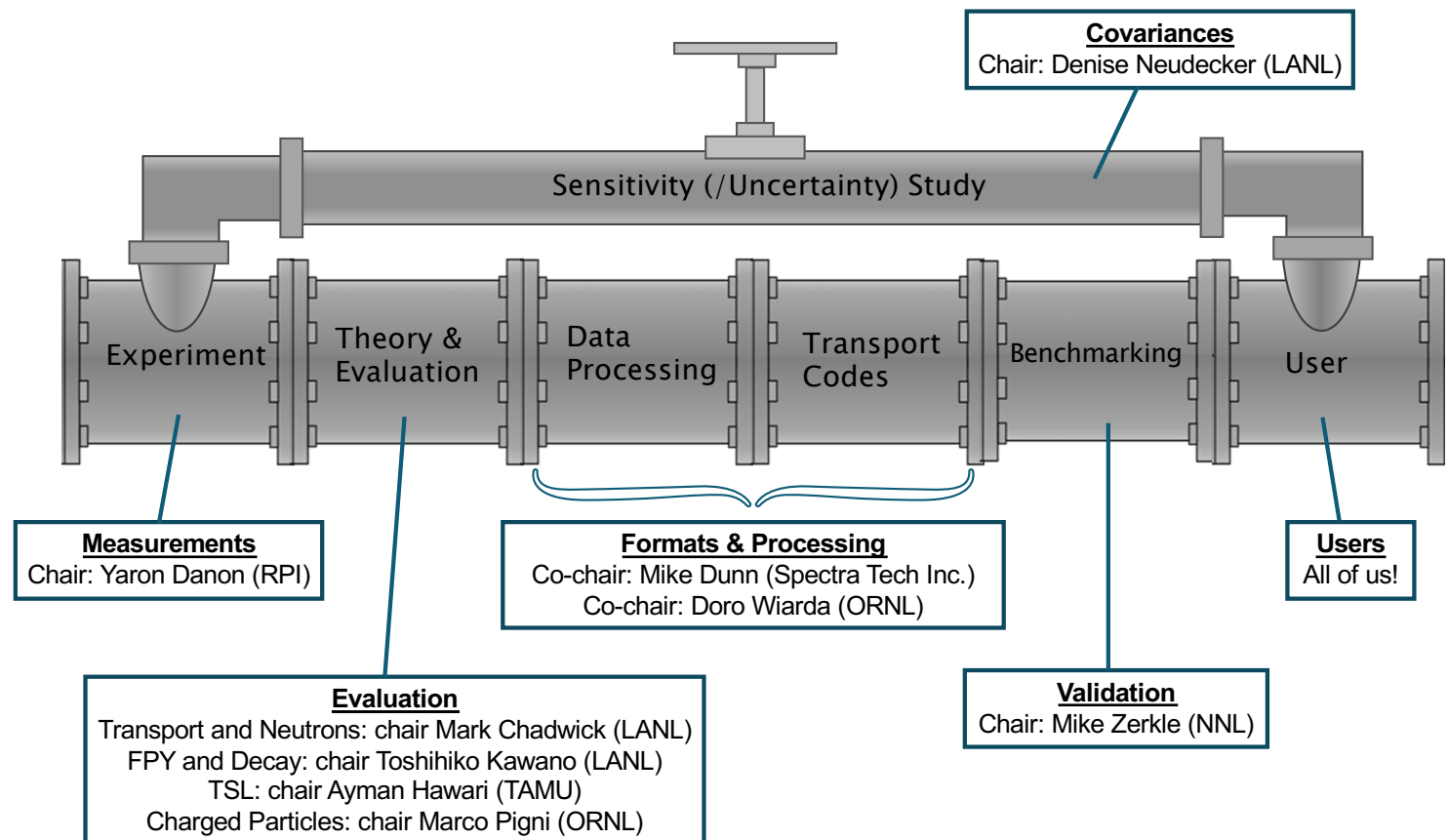
All steps of nuclear data pipeline are coordinated through CSEWG

Chair:

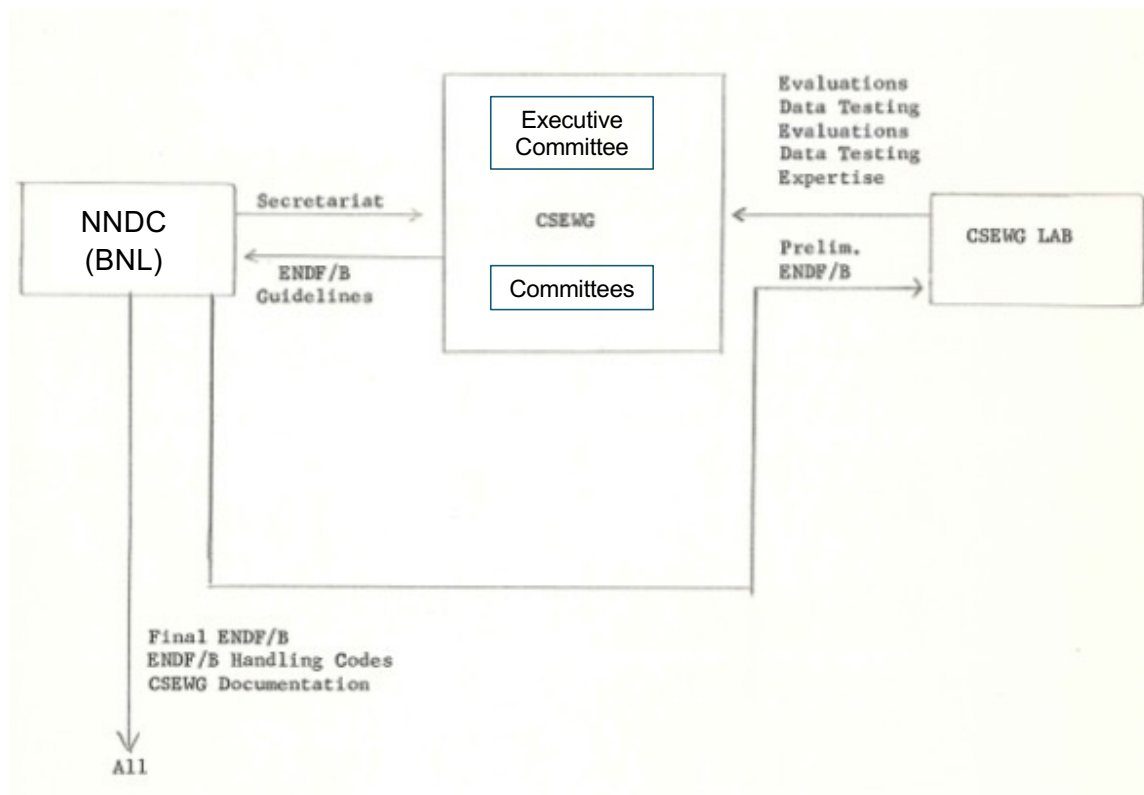
David Brown (BNL)
dbrown@bnl.gov

Library Manager:

Gustavo Nobre (BNL)
gnobre@bnl.gov



CSEWG organization



Members (current best guess):

ANL, **AWE**, **BNL**, CEA Cadarache, CNL, JSI, KAERI, IRSN, **LANL**, LBNL/UCB, **LLNL**, IAEA, NIST, **NCSU**, **NNL**, **ORNL**, PNNL, **RPI**, SpectraTech, **Studsvik**, UTK, Westinghouse

Highlighted CSEWG labs have lab reps and are “core members”

While nominally a US collaboration, CSEWG has traditionally been open to outside participation

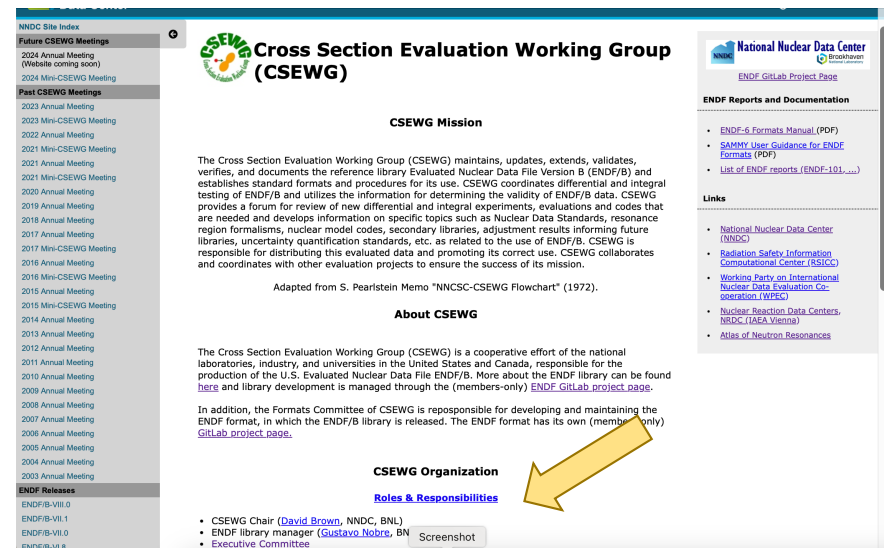
Executive Committee

Consists of the CSEWG Chair, committee chairs, and additional members selected by the CSEWG Chair with the approval of the Executive Committee to provide broader representation of the CSEWG member organizations.

- [David Brown](#), BNL, chair
- [Gustavo Nobre](#), BNL, *ENDF library manager*
- Committee Chairs:
 - Mark B. Chadwick, LANL & Roberto Capote, IAEA
 - Yaron Danon, RPI
 - Michael Dunn, Spectra Tech Inc
 - Dorothea Wiarda, ORNL
 - Denise Neudecker, LANL
 - Michael Zerkle, NNL
 - Marco Pigni, ORNL
 - Ayman Hawari, TAMU
 - Toshihiko Kawano, LANL
- Lab Representatives:
 - Mark Cornock, AWE-NST
 - David Brown, BNL
 - Nathan Gibson, LANL
 - Yaron Danon, RPI
 - Ayman Hawari, TAMU
 - Jo Ressler, LLNL
 - Jason Thompson, NNL
 - Marco Pigni, ORNL
 - Charles Wemple, Studsvik
- At Large Members:
 - Allan D. Carlson, NIST
 - Catherine Percher, LLNL
 - Luiz Leal, ORNL
 - Ian Thompson, LLNL

Roles & Responsibilities

- Latest version at <https://www.nndc.bnl.gov/csewg/docs/CSEWG-Roles-and-Responsibilities-v4.pdf>
- Key Roles:
 - Executive Committee: Cabal of SME's, lab reps & committee chairs
 - Chairs organize meetings & coordinate activities
 - Lab reps rally the troops
 - SME's are just smart
 - Committees
 - NNDC is secretariat
 - CSEWG Labs (traditionally, membership in CSEWG is *by lab*, not by people!)



The screenshot shows the CSEWG website with a sidebar on the left containing a list of future and past meetings. The main content area includes the CSEWG logo, mission statement, and organizational structure. A yellow arrow points to the 'CSEWG Organization' section, which lists the CSEWG Chair (David Brown, NNDC, BNL), the ENDF library manager (Gustavo Nobre, BNL), and the Executive Committee. The right sidebar contains links to ENDF reports and documentation, including the ENDF-6 Formats Manual, SAMMY User Guidance, and a list of ENDF reports.

<https://www.nndc.bnl.gov/csewg/>

As BNL Visits can last for at most 2 years, we will need to renew the membership every two years. 30

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- Follow Codes of Conduct
- Participate in meetings & events
- Maintain BNL Guest Appointments (as needed)
- Follow data and paper release procedures

NL guest
lab access and
date.

representatives will
specifically they

21

Membership is opt-in, unless you are already serving on the Executive Committee or already have gitlab access.

Please see Gustavo or I to get the process started!