Welcome and Overview

D. Brown, BNL

BROOKHAVEN NATIONAL LABORATORY

a passion for discovery

U.S. DEPARTMENT OF ENERGY | Office of Science

What if there is an emergency

- **Shelter in place:** don’t move, you are already here
- **Outdoor assembly:** across street, in front of building 830

Wi fi access

- You have 15 min. to register before we kick you out
- Turn on wi-fi, then open a browser
- Here's the access code:

NE-24992

Food at BNL

- **Berkner Cafeteria**

- **Building 400**
  - Coffee stand
  - Mini-Mart (24 hr)

Social outing tonight!

- Lombardi’s by the Bay, in Patchoque

Goals

- The hierarchy should **reflect our understanding of nuclear reactions and decays**, and **clearly and uniquely specify all data**.
- It should support **storing multiple representations of the same quantity simultaneously** (e.g. evaluated and processed data).
- Should support **both inclusive and exclusive reaction data** (i.e., discrete reaction channels as well as sums over those channels).
- It should **eliminate redundancy where possible**.
- It should make **use of the general-purpose data containers** designed by the first SG38 project group.

Bonus goals

(1) Support all data and all forms in ENDF format and all ENDF-formatted libraries

(2) Fix (or at least document) all of the corners cut in the development of ENDF

Use cases to keep in mind

- **Particle Transport:**
  - All cross sections
  - All outgoing energy and angle probabilities for all emitted particles for chosen reactions that are energetically possible
  - Multiplicities for all emitted particles if not constant.
- **Isotope Burn-Up:**
  - cross sections and
  - optionally outgoing spectra for chosen reactions that are energetically possible
  - all produced particles decay so that a time dependent isotope inventory may be computed.
- **Web Retrieval:** data will only most likely be visualized