ADVANCE status

David Brown (BNL),
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ADVANCE quality assurance system for ENDF

- **On every commit of every evaluation in ENDF**
  - Check out evaluation
  - Run through a battery of tests
  - Process with customer processing codes
  - Generate comparison plots
  - Generate HTML report of evaluation
- **Automation is better!**
  - Find data problems before the customers!
  - Far faster/better than old PHASE I review
- **Available at** **http://www.nndc.bnl.gov/endf/ b7.dev/qa/index.html**

The idea seems to be catching on

Nuclear Energy Agency

Building Enhanced Nuclear Data Services at the Data Bank

Development of an automated platform for verification, testing, processing and benchmarking of

Nuclear Data

F. Michel-Sendis, C.J. Díez, O. Cabellos
NEA Data Bank

F. Michel-Sendis, WONDER '15

Modest changes since mini-CSEWG in May

- **FUDGE**
  - Under active development, preparing for next major release, due ~Dec.
  - Therefore, it is currently "broken".
  - Several checks converted to "FIXME" status
    - Energy balance
    - Mass, threshold, Q-value
    - Normalizations
- **NNDC checking codes**
  - At least one bug has crept in and I haven't had time to track it down
- **NJOY2012:** up to revision 50, ADVANCE still at 10

Not all changes are in the wrong direction

- **M. Greene (Cheney Univ.) began standing up an automated benchmarking capability for ADVANCE**

- **COG (LLNL) wrapped in cnp_test_suite (LLNL)**

  - Understands material specifications in input decks and may search on them

  - Can parse COG outputs files

- **Have built relational database of test decks:**

  - Baseline results (keff)

  - 359 HEU cases

  - 145 Pu cases
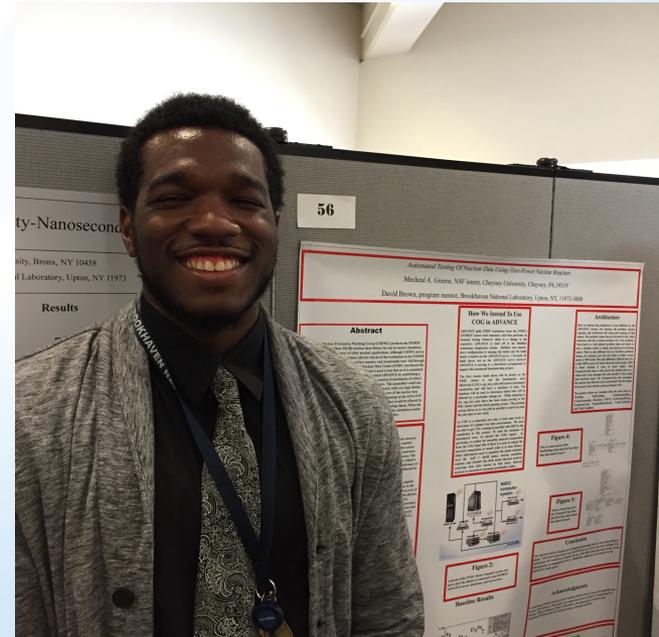
Typical results:
COG Baseline (ENDF/B-VII.1) vs. Van Der Marck
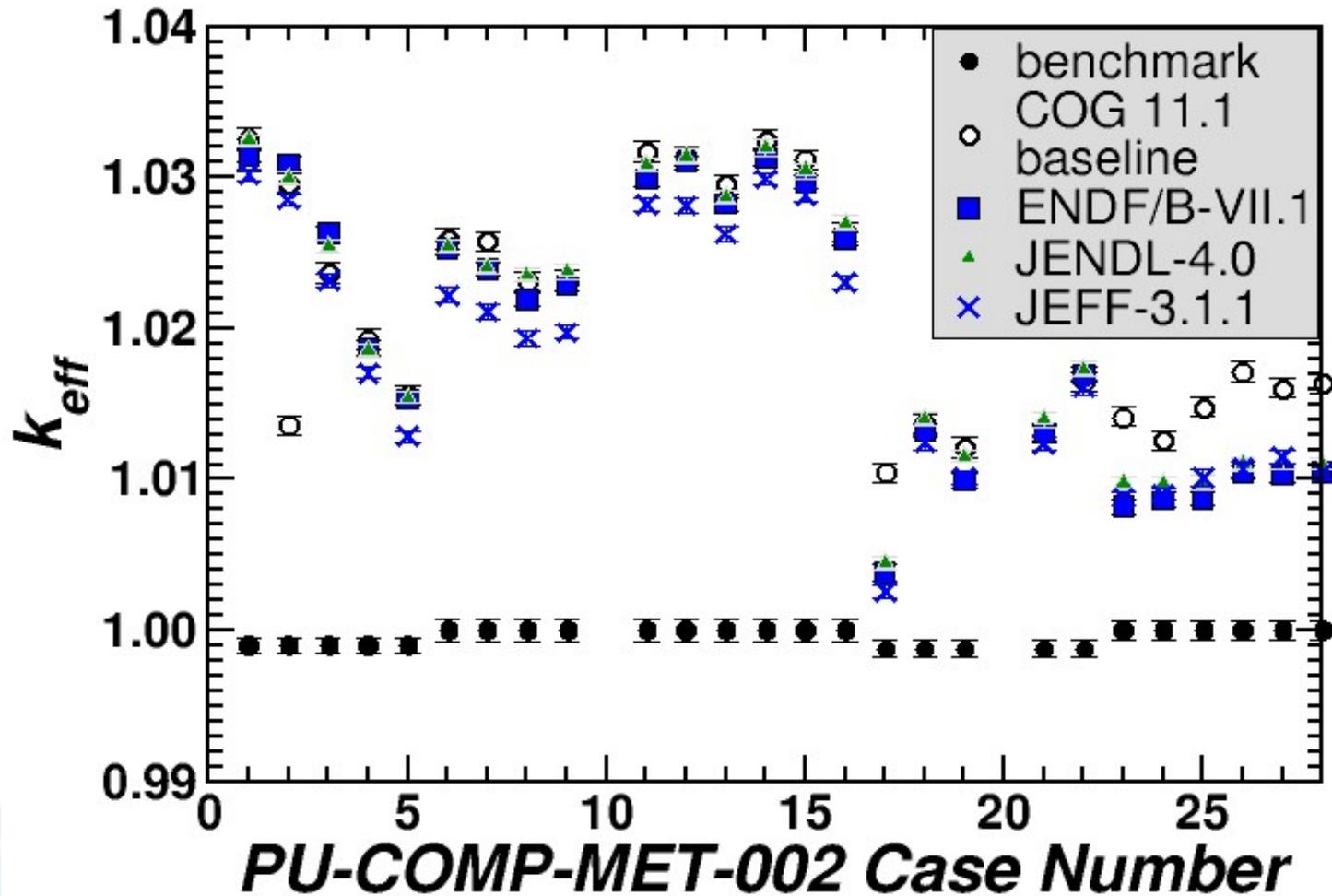
There is a lot to do yet, so hopefully Mecheal will be back next summer ;)

- **Connection to BuildBot**
- **Indexing of modified libraries by COG11.1-LibMaker**
  - For neutrons, this is "simple"
  - For TSL data, it is unclear what to do (yet)
- **Results database**
- **Integral validation report tab on ADVANCE website**
- **Maybe even starting on same capability for MCNP**

Thanks to

- **Dave Heinrichs and Chuck Lee (LLNL)**
  - COG11.1
  - COG11.1-LibMaker
  - COG's test suite

- **Pavlos Vranas, Marie-Anne Descalle, D.A. Brown (LLNL)**
  - cnp_test_suite

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