

# *LLNL Report for USNDP*

Nuclear Data Week, November 2019

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# LLNL contributions to USNDP

- 0.25 FTE for \$134k
- Coordinate LLNL nuclear data efforts with CSEWG
- Make, Verify, Validate R-matrix evaluations
  - With IAEA, R-matrix workshops, and GNDS-interchange codes.
- Leverage LLNL programmatic funding to provide evaluations for inclusion in ENDF

## FY19 Metrics Table

NSR Compilations	0
EXFOR Compilations	0
XUNDL Compilations	0
ENSDF Evaluations submitted	0
ENDF Evaluations	12 (see below)
Disseminations (in thousands)	5 (approx)
Articles	2
Reports	0
Invited Talks	2

**ENDF evaluations in FY19:  
12 candidates submitted**

## FY19 FTE Table

PhD Permanent	0.20
PhD Temporary	0
Tech. & Admin.	0.05
Grad. Student	0
Total	0.25

\$134k FY20 funding

\$12k FY18 carry over

\$122k FY19 total costs

\$24k rollover into FY20

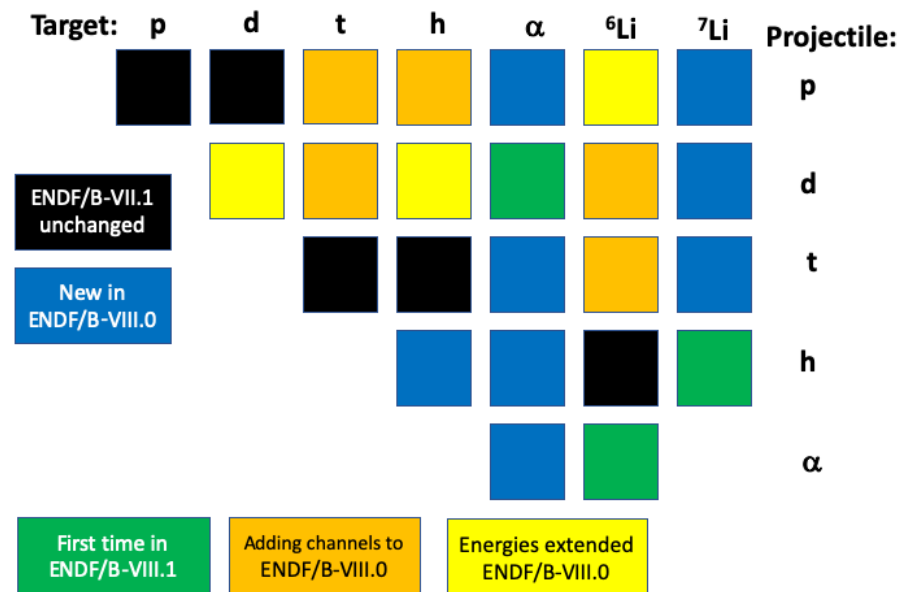
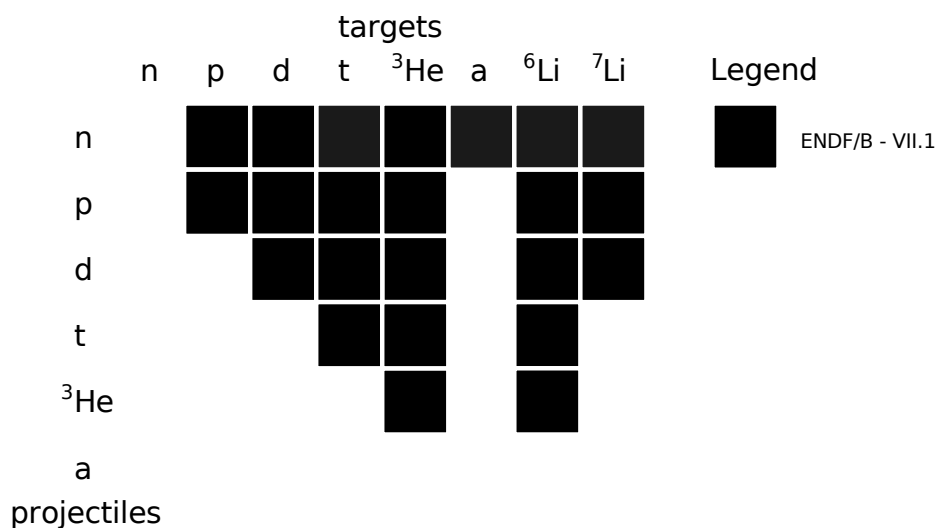
'Proposed scenario':  
additional \$50k/yr for Sofia Quaglioni

# Activity with Current Funding

- National Coordination
  - Coordinate Nuclear Data Efforts with USNDP/CSEWG
    - Attend USNDP/CSEWG meetings
  - Use R-matrix GNDS tools to translate, verify and improve proposed evaluations
  - R-matrix methods: encourage use of Brune basis (soon in SAMMY!)
  - Helping LLNL prepare R-matrix parameters for release to CSEWG
- International Coordination
  - Attend IAEA consultants meetings on R-matrix methods
  - Attend INDEN evaluators meeting on light-ion neutron evaluations
    - Projects underway for new evaluations  $n+^9\text{Be}$ ,  $n+^{14}\text{N}$ ,  $n+^{15}\text{N}$ ,  $n+^{23}\text{Na}$ .
- Provide LLNL evaluations for ENDF
  - USNDP funds the translation over to ENDF
  - Delivered LLNL charged-particle evaluations for ENDF/B-VIII release

# ENDF Evaluations

- Charged Particle Evaluations by LLNL
  - submitted to CSEWG November 2018.



Used in ENDF/B-VIII.0:  
 p+a, t+a, h+a, a+a, p+<sup>7</sup>Li,  
 d+<sup>7</sup>Li, t+<sup>7</sup>Li, h+h

Proposed for ENDF/B-VIII.1:  
 p+t, p+h, p+<sup>6</sup>Li, d+d, d+t, d+h, d+a, d+<sup>6</sup>Li  
 t+<sup>6</sup>Li, h+<sup>7</sup>Li, a+<sup>6</sup>Li.