Release notes for ENDF/B Development e-073_Ta_000 evaluation

October 13, 2016

- `fudge-4.0` Warnings:
  1. Mislabled emitted particle
     Reading ENDF file: ../e-073_Ta_000.endf (Error # 0): ZAP messed up

     ```
     WARNING: photon most likely labelled as an electron (ZAP = 11), converting to ZAP = 0
     ```
  2. FIXME: Generic fudge unimplemented message
     reaction label 1: e- + Ta + gamma [bremsstrahlung] / Product: e- (Error # 0): Generic unimp (c)

     ```
     WARNING: Checking not yet implemented for energyLoss type data
     ```
  3. FIXME: Generic fudge unimplemented message
     reaction label 2: e- + Ta [excitation] / Product: e- (Error # 0): Generic unimp (c)

     ```
     WARNING: Checking not yet implemented for energyLoss type data
     ```
- `fudge-4.0` Errors:
  1. Calculated and tabulated thresholds don't agree
     reaction label 0: e- + Ta [large angle Coulomb scattering] / Cross section: (Error # 0): Threshold mismatch

     ```
     WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 10. eV!
     ```
  2. Calculated and tabulated thresholds don't agree
     reaction label 1: e- + Ta + gamma [bremsstrahlung] / Cross section: (Error # 0): Threshold mismatch

     ```
     WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 10. eV!
     ```
  3. Calculated and tabulated thresholds don't agree
     reaction label 2: e- + Ta [excitation] / Cross section: (Error # 0): Threshold mismatch

     ```
     WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 10. eV!
     ```
  4. Calculated and tabulated thresholds don't agree
     reaction label 3: e- + e- + Ta1s1/2 / Cross section: (Error # 0): Threshold mismatch

     ```
     WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 67565. eV!
     ```
  5. Calculated and tabulated thresholds don't agree
     reaction label 4: e- + e- + Ta2s1/2 / Cross section: (Error # 0): Threshold mismatch

     ```
     WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 11656. eV!
     ```
  6. Calculated and tabulated thresholds don't agree
     reaction label 5: e- + e- + Ta2p1/2 / Cross section: (Error # 0): Threshold mismatch

     ```
     WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 11163. eV!
     ```
  7. Calculated and tabulated thresholds don't agree
     reaction label 6: e- + e- + Ta2p3/2 / Cross section: (Error # 0): Threshold mismatch

```
WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 9879.200000000001 eV!
```

8. Calculated and tabulated thresholds don't agree
   reaction label 7: e- + e- + Ta3s1/2 / Cross section: (Error # 0): Threshold mismatch

```
WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 2684.7 eV!
```

9. Calculated and tabulated thresholds don't agree
   reaction label 8: e- + e- + Ta3p1/2 / Cross section: (Error # 0): Threshold mismatch

```
WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 2461.4 eV!
```

10. Calculated and tabulated thresholds don't agree
    reaction label 9: e- + e- + Ta3p3/2 / Cross section: (Error # 0): Threshold mismatch

```
WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 2184.1 eV!
```

11. Calculated and tabulated thresholds don't agree
    reaction label 10: e- + e- + Ta3d3/2 / Cross section: (Error # 0): Threshold mismatch

```
WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 1802.3 eV!
```

12. Calculated and tabulated thresholds don't agree
    reaction label 11: e- + e- + Ta3d5/2 / Cross section: (Error # 0): Threshold mismatch

```
WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 1741.6 eV!
```

13. Calculated and tabulated thresholds don't agree
    reaction label 12: e- + e- + Ta4s1/2 / Cross section: (Error # 0): Threshold mismatch

```
WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 554.65 eV!
```

14. Calculated and tabulated thresholds don't agree
    reaction label 13: e- + e- + Ta4p1/2 / Cross section: (Error # 0): Threshold mismatch

```
WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 461.41 eV!
```

15. Calculated and tabulated thresholds don't agree
    reaction label 14: e- + e- + Ta4p3/2 / Cross section: (Error # 0): Threshold mismatch

```
WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 397.36 eV!
```

16. Calculated and tabulated thresholds don't agree
    reaction label 15: e- + e- + Ta4d3/2 / Cross section: (Error # 0): Threshold mismatch

```
WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 242.48 eV!
```

17. Calculated and tabulated thresholds don't agree
    reaction label 16: e- + e- + Ta4d5/2 / Cross section: (Error # 0): Threshold mismatch

```
WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 230.72 eV!
```

18. Calculated and tabulated thresholds don't agree
    reaction label 17: e- + e- + Ta4f5/2 / Cross section: (Error # 0): Threshold mismatch

```
WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 36.14 eV!
```

19. Calculated and tabulated thresholds don't agree
    reaction label 18: e- + e- + Ta4f7/2 / Cross section: (Error # 0): Threshold mismatch

    ```
    WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 34.04 eV!
    ```

20. Calculated and tabulated thresholds don't agree
    reaction label 19: e- + e- + Ta5s1/2 / Cross section: (Error # 0): Threshold mismatch

    ```
    WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 78.81 eV!
    ```

21. Calculated and tabulated thresholds don't agree
    reaction label 20: e- + e- + Ta5p1/2 / Cross section: (Error # 0): Threshold mismatch

    ```
    WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 51.15 eV!
    ```

22. Calculated and tabulated thresholds don't agree
    reaction label 21: e- + e- + Ta5p3/2 / Cross section: (Error # 0): Threshold mismatch

    ```
    WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 41.89 eV!
    ```

23. Calculated and tabulated thresholds don't agree
    reaction label 22: e- + e- + Ta5d3/2 / Cross section: (Error # 0): Threshold mismatch

    ```
    WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 7.01 eV!
    ```

24. Calculated and tabulated thresholds don't agree
    reaction label 23: e- + e- + Ta5d5/2 / Cross section: (Error # 0): Threshold mismatch

    ```
    WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 6.3 eV!
    ```

25. Calculated and tabulated thresholds don't agree
    reaction label 24: e- + e- + Ta6s1/2 / Cross section: (Error # 0): Threshold mismatch

    ```
    WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 7.31 eV!
    ```

- `xsectplotter` Warnings:

  1. Mislabled emitted particle
     Error: ZAP messed up

     ```
     stderr while processing crossSection

           WARNING: photon most likely labelled as an electron (ZAP = 11), converting to ZAP = 0
     ... [4 more lines]
     ```