Release notes for ENDF/B Development e-060_Nd_000 evaluation

October 13, 2016

- `fudge-4.0` Warnings:

  1. Mislabled emitted particle
     Reading ENDF file: ../e-060_Nd_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- + Nd + 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- + Nd [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- + Nd [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- + Nd + 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- + Nd [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- + Nd1s1/2 / Cross section: (Error # 0): Threshold mismatch

     ```
     WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 43597. eV!
     ```

  5. Calculated and tabulated thresholds don't agree
     reaction label 4: e- + e- + Nd2s1/2 / Cross section: (Error # 0): Threshold mismatch

     ```
     WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 7093.3 eV!
     ```

  6. Calculated and tabulated thresholds don't agree
     reaction label 5: e- + e- + Nd2p1/2 / Cross section: (Error # 0): Threshold mismatch

     ```
     WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 6727.4 eV!
     ```

  7. Calculated and tabulated thresholds don't agree
     reaction label 6: e- + e- + Nd2p3/2 / Cross section: (Error # 0): Threshold mismatch

```
WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 6200.7 eV!
```

8. Calculated and tabulated thresholds don't agree
   reaction label 7: e- + e- + Nd3s1/2 / Cross section: (Error # 0): Threshold mismatch

```
WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 1551.8 eV!
```

9. Calculated and tabulated thresholds don't agree
   reaction label 8: e- + e- + Nd3p1/2 / Cross section: (Error # 0): Threshold mismatch

```
WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 1392.8 eV!
```

10. Calculated and tabulated thresholds don't agree
    reaction label 9: e- + e- + Nd3p3/2 / Cross section: (Error # 0): Threshold mismatch

```
WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 1287.1 eV!
```

11. Calculated and tabulated thresholds don't agree
    reaction label 10: e- + e- + Nd3d3/2 / Cross section: (Error # 0): Threshold mismatch

```
WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 1007.3 eV!
```

12. Calculated and tabulated thresholds don't agree
    reaction label 11: e- + e- + Nd3d5/2 / Cross section: (Error # 0): Threshold mismatch

```
WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 984.3200000000001 eV!
```

13. Calculated and tabulated thresholds don't agree
    reaction label 12: e- + e- + Nd4s1/2 / Cross section: (Error # 0): Threshold mismatch

```
WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 313.58 eV!
```

14. Calculated and tabulated thresholds don't agree
    reaction label 13: e- + e- + Nd4p1/2 / Cross section: (Error # 0): Threshold mismatch

```
WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 252.76 eV!
```

15. Calculated and tabulated thresholds don't agree
    reaction label 14: e- + e- + Nd4p3/2 / Cross section: (Error # 0): Threshold mismatch

```
WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 229.72 eV!
```

16. Calculated and tabulated thresholds don't agree
    reaction label 15: e- + e- + Nd4d3/2 / Cross section: (Error # 0): Threshold mismatch

```
WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 128.68 eV!
```

17. Calculated and tabulated thresholds don't agree
    reaction label 16: e- + e- + Nd4d5/2 / Cross section: (Error # 0): Threshold mismatch

```
WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 124.62 eV!
```

18. Calculated and tabulated thresholds don't agree
    reaction label 17: e- + e- + Nd4f5/2 / Cross section: (Error # 0): Threshold mismatch

```
WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 8.32 eV!
```

19. Calculated and tabulated thresholds don't agree
    reaction label 18: e- + e- + Nd4f7/2 / Cross section: (Error # 0): Threshold mismatch

    ```
    WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 7.85 eV!
    ```

20. Calculated and tabulated thresholds don't agree
    reaction label 19: e- + e- + Nd5s1/2 / Cross section: (Error # 0): Threshold mismatch

    ```
    WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 44.8 eV!
    ```

21. Calculated and tabulated thresholds don't agree
    reaction label 20: e- + e- + Nd5p1/2 / Cross section: (Error # 0): Threshold mismatch

    ```
    WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 28.12 eV!
    ```

22. Calculated and tabulated thresholds don't agree
    reaction label 21: e- + e- + Nd5p3/2 / Cross section: (Error # 0): Threshold mismatch

    ```
    WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 24.88 eV!
    ```

23. Calculated and tabulated thresholds don't agree
    reaction label 22: e- + e- + Nd6s1/2 / Cross section: (Error # 0): Threshold mismatch

    ```
    WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 4.96 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]
     ```