Release notes for ENDF/B Development e-093_Np_000 evaluation

October 13, 2016

- `fudge-4.0` Warnings:
  1. Mislabled emitted particle
     Reading ENDF file: ../e-093_Np_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- + Np + 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- + Np [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- + Np [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- + Np + 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- + Np [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- + Np1s1/2 / Cross section: (Error # 0): Threshold mismatch

     ```
     WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 1.192e5 eV!
     ```
  5. Calculated and tabulated thresholds don't agree
     reaction label 4: e- + e- + Np2s1/2 / Cross section: (Error # 0): Threshold mismatch

     ```
     WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 22440. eV!
     ```
  6. Calculated and tabulated thresholds don't agree
     reaction label 5: e- + e- + Np2p1/2 / Cross section: (Error # 0): Threshold mismatch

     ```
     WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 21702. eV!
     ```
  7. Calculated and tabulated thresholds don't agree
     reaction label 6: e- + e- + Np2p3/2 / Cross section: (Error # 0): Threshold mismatch

```
WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 17626. eV!
```

8. Calculated and tabulated thresholds don't agree
   reaction label 7: e- + e- + Np3s1/2 / Cross section: (Error # 0): Threshold mismatch

```
WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 5712.2 eV!
```

9. Calculated and tabulated thresholds don't agree
   reaction label 8: e- + e- + Np3p1/2 / Cross section: (Error # 0): Threshold mismatch

```
WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 5365.5 eV!
```

10. Calculated and tabulated thresholds don't agree
    reaction label 9: e- + e- + Np3p3/2 / Cross section: (Error # 0): Threshold mismatch

```
WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 4421.6 eV!
```

11. Calculated and tabulated thresholds don't agree
    reaction label 10: e- + e- + Np3d3/2 / Cross section: (Error # 0): Threshold mismatch

```
WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 3859.2 eV!
```

12. Calculated and tabulated thresholds don't agree
    reaction label 11: e- + e- + Np3d5/2 / Cross section: (Error # 0): Threshold mismatch

```
WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 3668.1 eV!
```

13. Calculated and tabulated thresholds don't agree
    reaction label 12: e- + e- + Np4s1/2 / Cross section: (Error # 0): Threshold mismatch

```
WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 1478.9 eV!
```

14. Calculated and tabulated thresholds don't agree
    reaction label 13: e- + e- + Np4p1/2 / Cross section: (Error # 0): Threshold mismatch

```
WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 1319.5 eV!
```

15. Calculated and tabulated thresholds don't agree
    reaction label 14: e- + e- + Np4p3/2 / Cross section: (Error # 0): Threshold mismatch

```
WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 1070.8 eV!
```

16. Calculated and tabulated thresholds don't agree
    reaction label 15: e- + e- + Np4d3/2 / Cross section: (Error # 0): Threshold mismatch

```
WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 812.9400000000001 eV!
```

17. Calculated and tabulated thresholds don't agree
    reaction label 16: e- + e- + Np4d5/2 / Cross section: (Error # 0): Threshold mismatch

```
WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 767.29 eV!
```

18. Calculated and tabulated thresholds don't agree
    reaction label 17: e- + e- + Np4f5/2 / Cross section: (Error # 0): Threshold mismatch

```
WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 426.75 eV!
```

19. Calculated and tabulated thresholds don't agree
reaction label 18: e- + e- + Np4f7/2 / Cross section: (Error # 0): Threshold mismatch

```
WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 414.6 eV!
```

20. Calculated and tabulated thresholds don't agree
reaction label 19: e- + e- + Np5s1/2 / Cross section: (Error # 0): Threshold mismatch

```
WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 336.25 eV!
```

21. Calculated and tabulated thresholds don't agree
reaction label 20: e- + e- + Np5p1/2 / Cross section: (Error # 0): Threshold mismatch

```
WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 272.95 eV!
```

22. Calculated and tabulated thresholds don't agree
reaction label 21: e- + e- + Np5p3/2 / Cross section: (Error # 0): Threshold mismatch

```
WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 212.56 eV!
```

23. Calculated and tabulated thresholds don't agree
reaction label 22: e- + e- + Np5d3/2 / Cross section: (Error # 0): Threshold mismatch

```
WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 118.48 eV!
```

24. Calculated and tabulated thresholds don't agree
reaction label 23: e- + e- + Np5d5/2 / Cross section: (Error # 0): Threshold mismatch

```
WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 109.47 eV!
```

25. Calculated and tabulated thresholds don't agree
reaction label 24: e- + e- + Np5f5/2 / Cross section: (Error # 0): Threshold mismatch

```
WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 10.12 eV!
```

26. Calculated and tabulated thresholds don't agree
reaction label 25: e- + e- + Np5f7/2 / Cross section: (Error # 0): Threshold mismatch

```
WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 9.029999999999999 eV!
```

27. Calculated and tabulated thresholds don't agree
reaction label 26: e- + e- + Np6s1/2 / Cross section: (Error # 0): Threshold mismatch

```
WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 54.39 eV!
```

28. Calculated and tabulated thresholds don't agree
reaction label 27: e- + e- + Np6p1/2 / Cross section: (Error # 0): Threshold mismatch

```
WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 35.52 eV!
```

29. Calculated and tabulated thresholds don't agree
reaction label 28: e- + e- + Np6p3/2 / Cross section: (Error # 0): Threshold mismatch

```
WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 25.25 eV!
```

30. Calculated and tabulated thresholds don't agree
    reaction label 29: e- + e- + Np6d3/2 / Cross section: (Error # 0): Threshold mismatch

    ```
    WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 4.75 eV!
    ```

31. Calculated and tabulated thresholds don't agree
    reaction label 30: e- + e- + Np6d5/2 / Cross section: (Error # 0): Threshold mismatch

    ```
    WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 4.11 eV!
    ```

32. Calculated and tabulated thresholds don't agree
    reaction label 31: e- + e- + Np7s1/2 / Cross section: (Error # 0): Threshold mismatch

    ```
    WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 5.88 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]
     ```