Release notes for ENDF/B Development e-086_Rn_000 evaluation

October 13, 2016

- `fudge-4.0` Warnings:
  1. Mislabled emitted particle
     Reading ENDF file: ../e-086_Rn_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- + Rn + 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- + Rn [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- + Rn [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- + Rn + 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- + Rn [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- + Rn1s1/2 / Cross section: (Error # 0): Threshold mismatch

     ```
     WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 98764. eV!
     ```
  5. Calculated and tabulated thresholds don't agree
     reaction label 4: e- + e- + Rn2s1/2 / Cross section: (Error # 0): Threshold mismatch

     ```
     WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 18042. eV!
     ```
  6. Calculated and tabulated thresholds don't agree
     reaction label 5: e- + e- + Rn2p1/2 / Cross section: (Error # 0): Threshold mismatch

     ```
     WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 17396. eV!
     ```
  7. Calculated and tabulated thresholds don't agree
     reaction label 6: e- + e- + Rn2p3/2 / Cross section: (Error # 0): Threshold mismatch

```
WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 14619. eV!
```

8. Calculated and tabulated thresholds don't agree
   reaction label 7: e- + e- + Rn3s1/2 / Cross section: (Error # 0): Threshold mismatch

```
WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 4447.7 eV!
```

9. Calculated and tabulated thresholds don't agree
   reaction label 8: e- + e- + Rn3p1/2 / Cross section: (Error # 0): Threshold mismatch

```
WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 4147.6 eV!
```

10. Calculated and tabulated thresholds don't agree
    reaction label 9: e- + e- + Rn3p3/2 / Cross section: (Error # 0): Threshold mismatch

```
WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 3517.9 eV!
```

11. Calculated and tabulated thresholds don't agree
    reaction label 10: e- + e- + Rn3d3/2 / Cross section: (Error # 0): Threshold mismatch

```
WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 3021.6 eV!
```

12. Calculated and tabulated thresholds don't agree
    reaction label 11: e- + e- + Rn3d5/2 / Cross section: (Error # 0): Threshold mismatch

```
WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 2889.3 eV!
```

13. Calculated and tabulated thresholds don't agree
    reaction label 12: e- + e- + Rn4s1/2 / Cross section: (Error # 0): Threshold mismatch

```
WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 1072.7 eV!
```

14. Calculated and tabulated thresholds don't agree
    reaction label 13: e- + e- + Rn4p1/2 / Cross section: (Error # 0): Threshold mismatch

```
WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 938.51 eV!
```

15. Calculated and tabulated thresholds don't agree
    reaction label 14: e- + e- + Rn4p3/2 / Cross section: (Error # 0): Threshold mismatch

```
WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 779.39 eV!
```

16. Calculated and tabulated thresholds don't agree
    reaction label 15: e- + e- + Rn4d3/2 / Cross section: (Error # 0): Threshold mismatch

```
WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 559.5 eV!
```

17. Calculated and tabulated thresholds don't agree
    reaction label 16: e- + e- + Rn4d5/2 / Cross section: (Error # 0): Threshold mismatch

```
WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 529.8200000000001 eV!
```

18. Calculated and tabulated thresholds don't agree
    reaction label 17: e- + e- + Rn4f5/2 / Cross section: (Error # 0): Threshold mismatch

```
WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 241.16 eV!
```

19. Calculated and tabulated thresholds don't agree
    reaction label 18: e- + e- + Rn4f7/2 / Cross section: (Error # 0): Threshold mismatch

    ```
    WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 233.87 eV!
    ```

20. Calculated and tabulated thresholds don't agree
    reaction label 19: e- + e- + Rn5s1/2 / Cross section: (Error # 0): Threshold mismatch

    ```
    WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 211.69 eV!
    ```

21. Calculated and tabulated thresholds don't agree
    reaction label 20: e- + e- + Rn5p1/2 / Cross section: (Error # 0): Threshold mismatch

    ```
    WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 162.29 eV!
    ```

22. Calculated and tabulated thresholds don't agree
    reaction label 21: e- + e- + Rn5p3/2 / Cross section: (Error # 0): Threshold mismatch

    ```
    WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 128.37 eV!
    ```

23. Calculated and tabulated thresholds don't agree
    reaction label 22: e- + e- + Rn5d3/2 / Cross section: (Error # 0): Threshold mismatch

    ```
    WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 56.49 eV!
    ```

24. Calculated and tabulated thresholds don't agree
    reaction label 23: e- + e- + Rn5d5/2 / Cross section: (Error # 0): Threshold mismatch

    ```
    WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 51.84 eV!
    ```

25. Calculated and tabulated thresholds don't agree
    reaction label 24: e- + e- + Rn6s1/2 / Cross section: (Error # 0): Threshold mismatch

    ```
    WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 25.72 eV!
    ```

26. Calculated and tabulated thresholds don't agree
    reaction label 25: e- + e- + Rn6p1/2 / Cross section: (Error # 0): Threshold mismatch

    ```
    WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 13.69 eV!
    ```

27. Calculated and tabulated thresholds don't agree
    reaction label 26: e- + e- + Rn6p3/2 / Cross section: (Error # 0): Threshold mismatch

    ```
    WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 9.640000000000001 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]
     ```