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**Memo CP-S/003**

**Date:** 12 September 2019

**To:** Distribution

**From:** Jimin Wang, Tao Xi, N. Otsuka

**Subject:** **EXFOR outliers detected during global optical model analysis**

During global optical model analysis of alpha elastic scattering [1], CNDC found some problems in EXFOR entries.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **Problem** | **Target** | **Energy (MeV)** | **Angle (deg)** | **Entry** | **Note** |
| 1 | Wrong cross sections at some angles | 16O | 104 | 47.949.150.351.5 | D0216.007 |  |
| 24Mg | 172.5 | 23.17 | D0213.003 |  |
| 58Ni | 104 | 36.11 | D0216.010 |  |
| 60Ni | 104 | 16.4427.08 | D0216.012 |  |
| 172.5 | 6.2910.5636.25 | D0256.004 |  |
| 2 | No data in Entry (STATUS=UNOBT) | 27Al |  |  | C0742.003 | 1 |
| 28Si |  |  | O1900.002 | 2 |
|  |  | O1945.002 | 3 |
| 58Ni |  |  | C1025.004 | 4 |
| 3 | Absolute cross sections coded with “RTH” | 90Zr |  | F0561.004 |  |
| 94Zr | F0561.006 |  |

Note

1. Fig.2 (middle) of J.A.Leavitt+,J,NIM/B,15,296,1986.

2. Fig.1 of T.Lonnroth+,J,JP/G,38,35107,2011. Not suitable for digitization. Angle is not specified on the figure.

3. Figs.4+7 (bottom) of T.Lonnroth+,J,EPJ/A,46,5,2010. Not suitable for digitization.

4. Fig.5 of P.Darriulat+,J,PR,134,B42,1964.

Reference

[1] Z.Zhang, R.R.Xu, Z.Y.Ma, Z.G.Ge, Y.Tian, D.Y.Pang, X.D.Sun, Y.L.Jin, X.Tao, Y.Zhang, J.M.Wang, Nucl. Phys. A **990** (2019) 1.

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