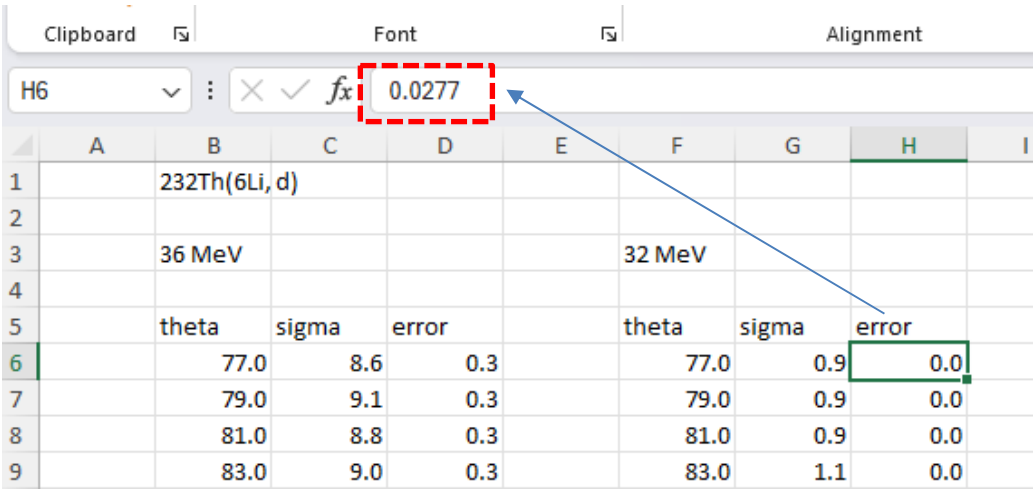
Correction of datasets having zero values for area 3, D, G and V entries

(N. Otsuka, 2025-02-28, Memo CP-D/1127)

Following the recommendation to NDS from the Vienna EXFOR workshop 2024 "*Register some items in Tables 2 to Table 5 of WS2024-02 to the EXFOR Feedback List.*", I went through Tables 4 and 5 of the working paper (=Memo 4C-4/0242) **for area 3, D and G entries**, and registered selected items in the Feedback List as summarized at the end of this memo. Other centres are invited to do the same for the entries listed in Tables 4 and 5 maintained by the centres.

General remarks:

- "EXFOR Updates and Archives" of the NDS EXFOR web retrieval system displays comparison with old versions of each EXFOR entry, and it was very useful for this analysis.
- Deletion of zero errors from digitization is systematically suggested in this memo.
- For some of the cases not registered in the Feedback List, the originating centre may want to look into the data files received from the author. (It is indicated by **ATOMKI** and **CNDC** in the tables.)
- I found that two cases (30395.005 and 30470.002) are due to automatic cancellation of the vector common and one case (30204.002) is also due to automatic processing.
- When error = 0 is due to too strong rounding, we should think to add more digits. See an example below for EXFOR D6311.004. (Fortunately, the EXCEL file received from the author has been kept at NDS for this case).



	A	B	C	D	E	F	G	H	I
1		232Th(6Li, d)							
2									
3		36 MeV				32 MeV			
4									
5		theta	sigma	error		theta	sigma	error	
6		77.0	8.6	0.3		77.0	0.9	0.0	
7		79.0	9.1	0.3		79.0	0.9	0.0	
8		81.0	8.8	0.3		81.0	0.9	0.0	
9		83.0	9.0	0.3		83.0	1.1	0.0	

Table 4 (ERR-T)

Dataset #	**Registered correction proposal (*or remark if not registered*)**	**Centre**
30470.002	Restore the dataset in TRANS.3033.	
30532.039	Delete data lines with DATA=0 (c.f. Table II)	
30985.006	(*0.0 in Table 2*)	
31461.002	(*0.00 in Table I*)	
31605.004	(*0.0 in data file from Xichao Ruan*)	CNDC
32001.019	(*Data compiled at TU Dresden*)	
32625.004	ERR-T: Delete 0.00000. (digitization)	
32682.003	(*Data received from author*)	CNDC
32742.002	(*Data received from R. Han*)	CNDC
32774.002	(*Data received from Yaling Zhang*)	CNDC
D0754.006	(*0.000 in the R33 file compiled by the first author.*)	
D0796.002	(*0.000 in the R33 file compiled by the first author.*)	
D4046.003.2	0.04+/-0.00 mb -> 0.042+/-0.005 mb at 2.95 MeV (c.f. Table 3).	
D4055.004.2	ERR-T: 0. mb -> 0.5 mb at 26.4 MeV (c.f. Table 3)	
D4141.008	ERR-T: 0.0 mb -> 0.1 mb at 5.1 MeV (c.f. Table 3)	
D4167.005.1	(*Data received from F. Tarkanyi*)	ATOMKI
D4173.004.1	(*0.0+/-0.0 mb in Table 2*)	ATOMKI
D4189.002.1	ERR-T: 0.00 mb -> 0.004 mb at 14.91 MeV; 0.00 mb -> 0.005 mb at 17.81 MeV (c.f. Table 3)	
D4209.006	(*0.0+/-0.0 mb in Table 2*)	ATOMKI
D4228.009	(*0.04+/-0.00 mb in Table 2*)	ATOMKI
D4231.003	ERR-T: 0.0 mb -> 0.04 mb at 9.7 MeV (c.f. Table 2a). Should we swap the DATA sections of 002 and 003 according to the article table??	
D4333.011	ERR-T: 0.0 mb -> 0.04 mb at 43.1 MeV; 0.0 mb -> 0.05 mb at 44.8 MeV (c.f. Table 3)	
D4368.007	0.3+/-0.0 mb -> 0.33+/-0.04 mb at 28.7 MeV (c.f. Table 4)	
D4369.017	(*0.00+/-0.00 mb in Table 3*)	ATOMKI
D4376.010	0.02+/0.00 mb -> 0.017+/-0.004 mb at 10.88 MeV (c.f. Table 5)	
D4397.014	(*0.1+/-0.0 mb in Table 4*)	ATOMKI
D4401.015	(*0.00+/0.00 mb in Table 4*)	ATOMKI
D4407.008	(*0.2+/-0.0 mb and 0.3+/-0.0 mb in Table 2*)	ATOMKI
D4409.002	(*1.2+/-0 mb in Table 2*)	ATOMKI
D4409.005	(*3.5+/-0 mb, 1.1+/-0 mb etc. in Table 3*)	ATOMKI
D4411.009	(*100.3+/-0.0 mb in Table 4*)	ATOMKI
D7038.006	ERR-T: 0 mb -> 0.04 mb at 11.68 MeV (comment by M. Shahid, 28 Feb. 2025)	
D8096.002	(*Data compiled by the first author*)	KAZMON
G0038.003	(*0.0000+/0.000 mb in the data file from the first author*)	

Table 5 (DATA-ERR)

Dataset #	**Registered correction proposal (*or remark if not registered*)**	**Centre**
30204.002	Restore the dataset in TRANS.3008.	
30358.002.3	DATA-ERR: 0.00 eV -> 0.003 eV at 2.010 keV (c.f. Table 3).	
30395.005	Restore the dataset in TRANS.3046.	
30508.002	Delete DATA-ERR=0.00 at MASS=111 (c.f. Table I).	
30508.003	Delete DATA-ERR=0.00 at MASS=126 (c.f. Table II).	
30508.004	Delete DATA-ERR=0.00 at MASS=111 (c.f. Table I).	
30508.005	Delete DATA-ERR=0.00 at MASS=126 (c.f. Table II).	
30623.003	(*Negative signs in Table 1*)	
30828.003	Delete DATA-ERR=0.000E+00 at 13.34 eV (digitization)	
30908.002	(*0.12+/-0.00 in Table 1*)	
30908.003	Delete DATA=ERR=0.000 at 1488.9 and 2655.0 keV (c.f. Table 2)	
31729.002	(*0.0000 in the data file from the corresponding author*)	
31729.003	(*0.0000 in the data file from the corresponding author*)	
31729.004	(*0.0000 in the data file from the corresponding author*)	
31729.005	(*0.0000 in the data file from the corresponding author*)	
31729.006	(*0.0000 in the data file from the corresponding author*)	
31816.121	Delete the data point at 81.91 keV. (c.f. table in p.242)	
31816.146	Delete the data point at 67.8 keV. (c.f. table in p.272)	
31816.147	Move data point at 1211.0 keV under DATA-MAX (c.f. table in p.277)	
31816.158	Move data point at 144.0 keV under DATA-APRX (c.f. table in p.296)	
32868.004	(*Negative uncertainties in the data file from Hu Ji-Feng*)	CNDC
33026.004	DATA-ERR: 0.000 -> 0.020 for 58-CE-146 (c.f. Table 1)	
33167.002	(*0 in the data file from the first author*)	
D0076.010	Delete the data point at 11.73 MeV. (Digitization of the same point twice)	
D0171.003	(*0.00 in the data file from an author*)	
D0207.004	(*0 in the data file from Deon Steyn*)	
D0207.007	(*0 in the data file from Deon Steyn*)	
D0493.024	DATA-ERR: 0 mb -> 30 mb at 84.3 MeV (c.f. Table V)	
D0579.003	(*Question sent to J.-C. David who submitted the data file to the IAEA spallation model benchmark.*)	
D0620.009	(*0.0 in Table 4.8*)	
D0620.010	(*0.0 in Table 4.9*)	
D0659.004	(*Negative signs in Table II*)	
D0813.003	DATA-ERR: 0.0 -> 0.016 at 106.49 MeV (c.f. Table II)	
D0839.002	(*Problematic DATA-ERR value not seen*)	
D0878.002	(*.000E+0 +/- 0.00E+0 in p.23 of the report*)	
D0905.002	(*0.0000000 in the data file from V.Zagatto*)	
D0940.002	(*0.0 in Table 16*)	
D0940.003	(*0.0 in Table 16*)	
D0975.002	(*0.00E+00 in the data file from Acharya*)	
D0975.003	(*0.00E+00 in the data file from Acharya*)	
D0991.004	DATA-ERR: Delete 0.00E+00 (digitization)	
D0991.005	DATA-ERR: Delete 0.00E+00 (digitization)	
D0992.003	(*0.000 in the data file from A.Lepine-Szily*)	
D4242.006	(*0.01+/-0.00 mb in Table 2*)	ATOMKI
D4260.012	(*The cross section uncertainty is missing in Table 4!*)	ATOMKI

D4260.014	(*0.0 in Table 4*)	ATOMKI
D4325.021	(*0.0+/-0.0 mb in Table 4*)	ATOMKI
D5196.002	(*1.2+/-0.00 in Table 2*)	
D6021.019	DATA-ERR: Delete 0.000E+00 at 22.54 MeV (digitization)	
D6021.034	DATA-ERR: Delete 0.000E+00 at 43.88 deg (digitization)	
D6058.003	DATA-ERR: -0.04 -> 0.04 at 4th data point (c.f. Table 1)	
D6065.006	DATA-ERR: Delete 0 for 53-I-131,132,133,134 (c.f. Table 2)	
D6112.002	(*Data received from Dhruba Gupta but file not available*)	
D6112.003	(*Data received from Dhruba Gupta but file not available*)	
D6112.004	(*Data received from Dhruba Gupta but file not available*)	
D6112.005	(*Data received from Dhruba Gupta but file not available*)	
D6158.002	DATA-ERR: Delete 0.00E+00 (digitization)	
D6166.003	DATA: Delete 0.0000E+00 (digitization)	
D6222.002	(*Data received from an author*)	
D6224.005	(*Data received from first author?*)	
D6224.009	(*Data received from first author?*)	
D6224.012	(*Data received from first author?*)	
D6224.013	(*Data received from first author?*)	
D6224.018	(*Data received from first author?*)	
D6224.019	(*Data received from first author?*)	
D6229.002	(*Data received from author*)	
D6229.003	(*Data received from author*)	
D6235.016	(*Data received from author*)	
D6235.017	(*Data received from author*)	
D6235.019	(*Data received from author*)	
D6243.004	(*Data received from author*)	
D6243.005	(*Data received from author*)	
D6245.002	(*Data received from author*)	
D6245.003	(*Data received from author*)	
D6311.004	DATA and DATA-ERR: Add more digits in the EXCEL file from the author to avoid DATA-ERR=0.0.	
D8047.006	(*Data received from Salvatore Calabrese*)	
G0003.006	(*Corrected in TRANS.G053*)	
G0003.007	(*Corrected in TRANS.G053*)	
V0002.003-008, 011-015, 017-023	(*Lapenas's book is not available. These zeros are seen in TRANS.V001.*)	