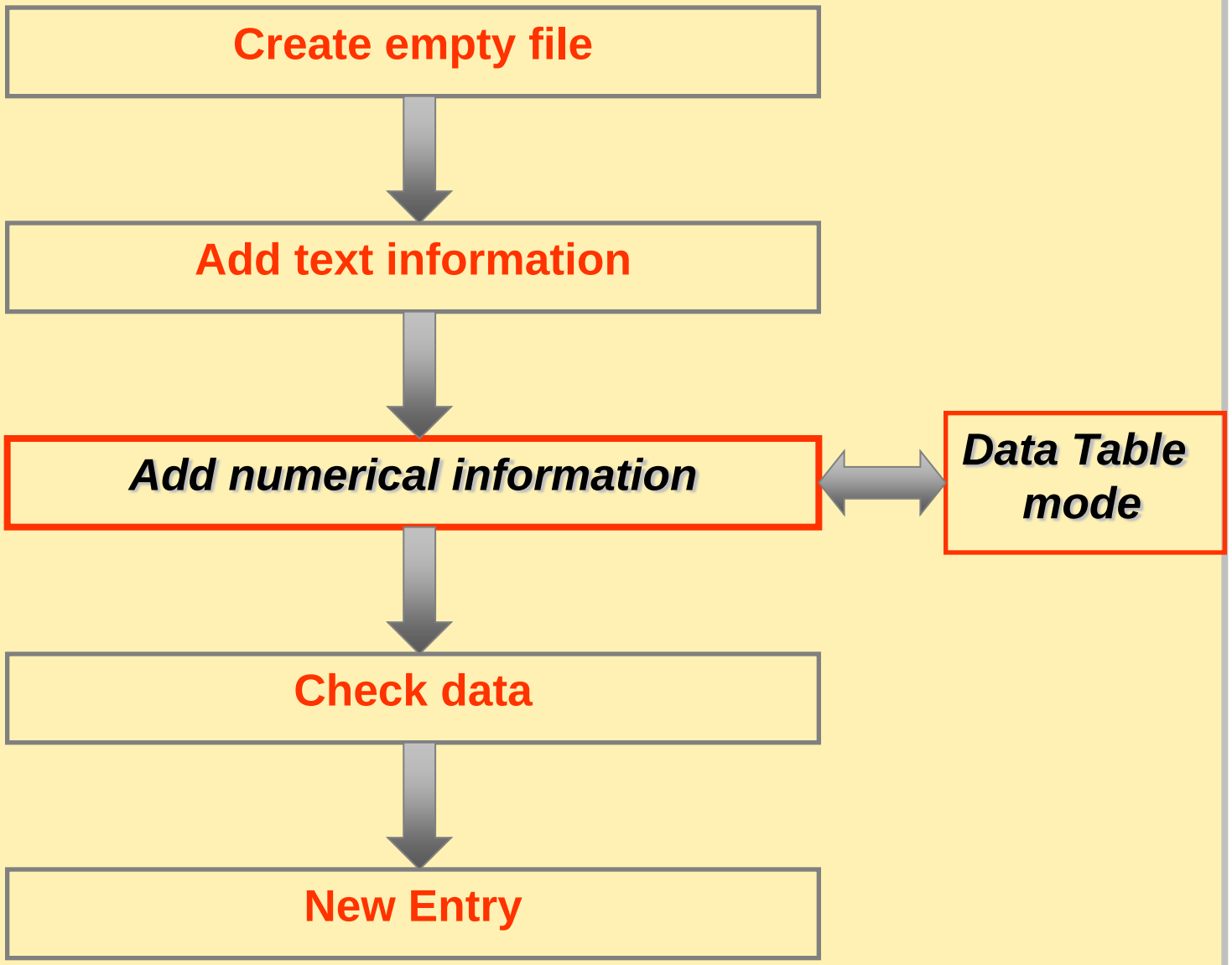
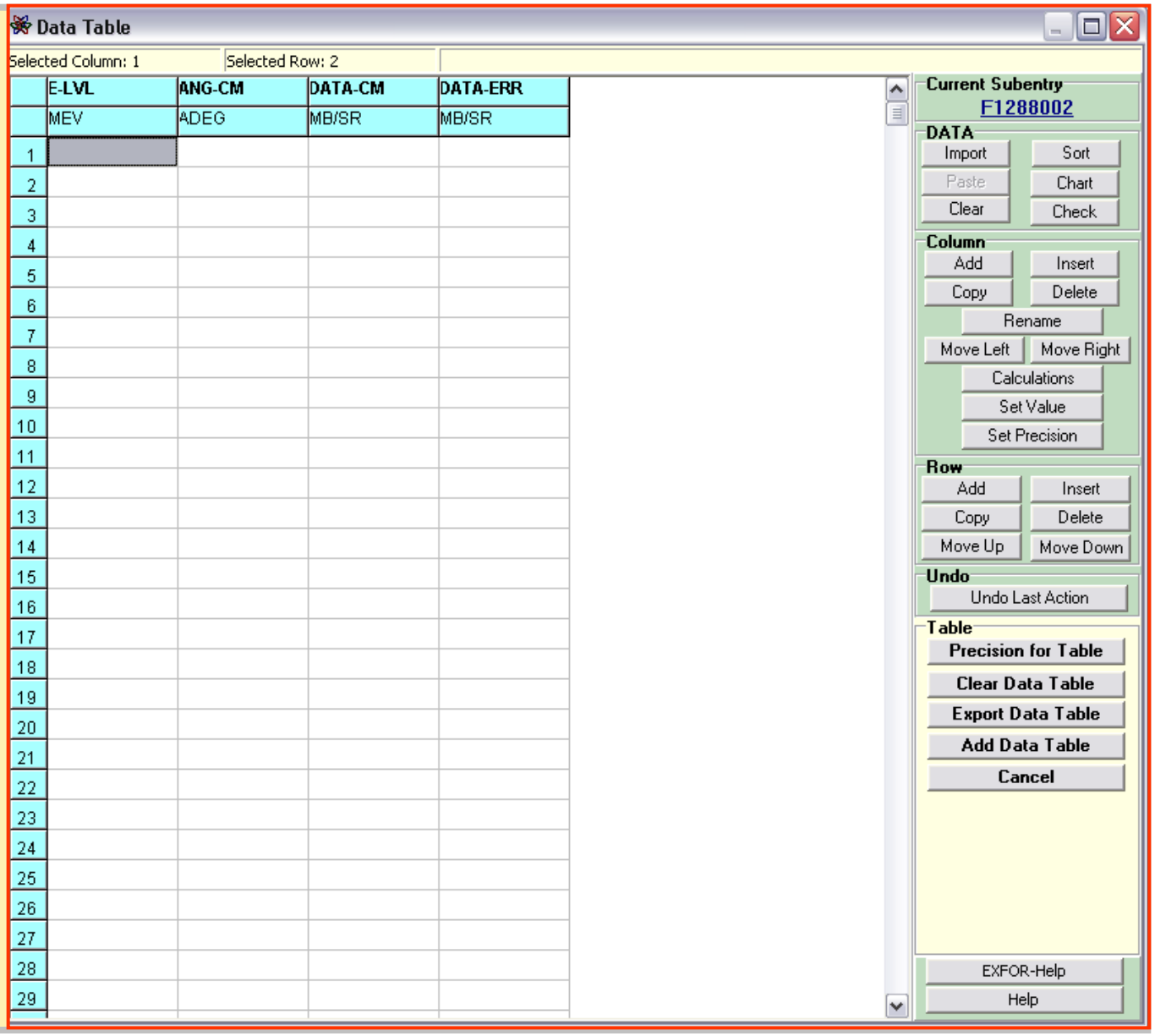
Practice of Data Table mode usage

New Entry


Create empty file
Add text information
Add numerical information
Data Table mode
Check data
New Entry

Data Table mode

The main advantage of this mode consists in providing different procedures of data editing in the same window.



L.I.Galanina et al. «Angular correlations in the $^{27}Al(p,\alpha\gamma)^{24}Mg$ reaction at Ep=7.4 MeV»

SIG0.txt

161.4	1.92	9.E-02
32.0	6.7E-01	5.E-02
37.3	7.2E-01	5.E-02
42.6	7.1E-01	5.E-02
26.7	6.4E-01	3.E-02
47.9	7.4E-01	5.E-02
58.3	6.6E-01	4.E-02
53.1	7.4E-01	4.E-02
63.5	5.5E-01	4.E-02
73.8	4.5E-01	3.E-02
78.9	4.2E-01	3.E-02
68.7	5.4E-01	4.E-02
84.0	5.6E-01	
89.1	5.7E-01	
94.1	6.1E-01	
104.0	5.6E-01	
113.8	6.7E-01	
99.1	6.5E-01	
123.5	7.1E-01	
142.6	1.25	
152.0	1.77	
133.1	8.3E-01	

SIG1.txt

32.2	3.159	8.7E-02
37.5	2.525	1.14E-01
48.1	2.497	1.11E-01
58.6	3.002	1.24E-01
42.8	2.385	1.10E-01
53.4	2.732	8.2E-02
26.9	3.715	6.0E-02
63.8	3.025	1.25E-01
69.0	3.114	1.27E-01
74.2	2.487	6.9E-02
79.3	2.461	6.6E-02
89.4	2.387	4.7E-02
94.4	2.362	6.1E-02
99.4	2.164	5.2E-02
104.4	2.193	7.1E-02
84.4	2.410	7.2E-02
114.2	2.378	7.6E-02
123.8	3.059	9.6E-02
142.8	5.580	1.32E-01
133.4	4.202	1.14E-01
152.2	6.073	1.40E-01
161.5	5.162	1.29E-01

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Original Russian Text © L.I. Galanina, N.S. Zelenskaya, V.M. Lebedev, N.V. Orlova, A.V. Spassky, 2016, published in Izvestiya Rossiiskoi Akademii Nauk. Seriya Fizicheskaya, 2016, Vol. 80, No. 3, pp. 338–346.

Angular Correlations in the $^{27}Al(p, \alpha_1\gamma)^{24}Mg$ Reaction at $E_p = 7.4$ MeV

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Skobeltsyn Institute of Nuclear Physics, Moscow State University, Moscow, 119991 Russia
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Abstract—The results from measuring the $^{27}Al(p, \alpha)^{24}Mg$ reaction's differential cross sections at E_p = 7.4 MeV with the formation of the final nucleus in the ground and first excited (2^+, 1.369 MeV) states are presented. The differential cross sections are obtained in the 25°–160° (lab) range of α-particle emission angles. Double-differential cross sections for the $^{27}Al(p, \alpha_1\gamma)^{24}Mg$ reaction are measured at the same proton energy for several α-particle angles in the forward hemisphere. All even components of the density matrix spin tensors of the ^{24}Mg nucleus in the 2^+ (1.369 MeV) state are reconstructed and its orientation characteristics are determined. The experimental results are compared with calculations for the triton pickup mechanism using coupled channels, and in the the statistical limit of the compound nucleus model.

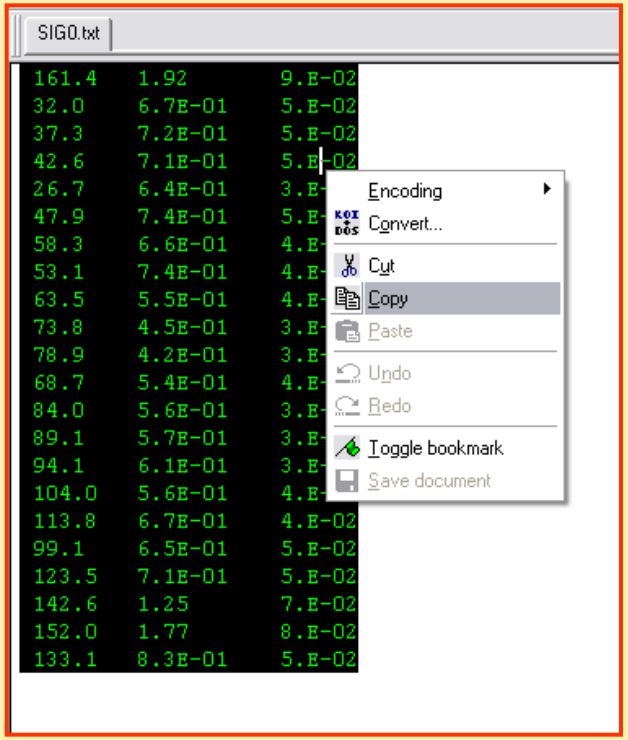
DOI: 10.3103/S1062873816030126

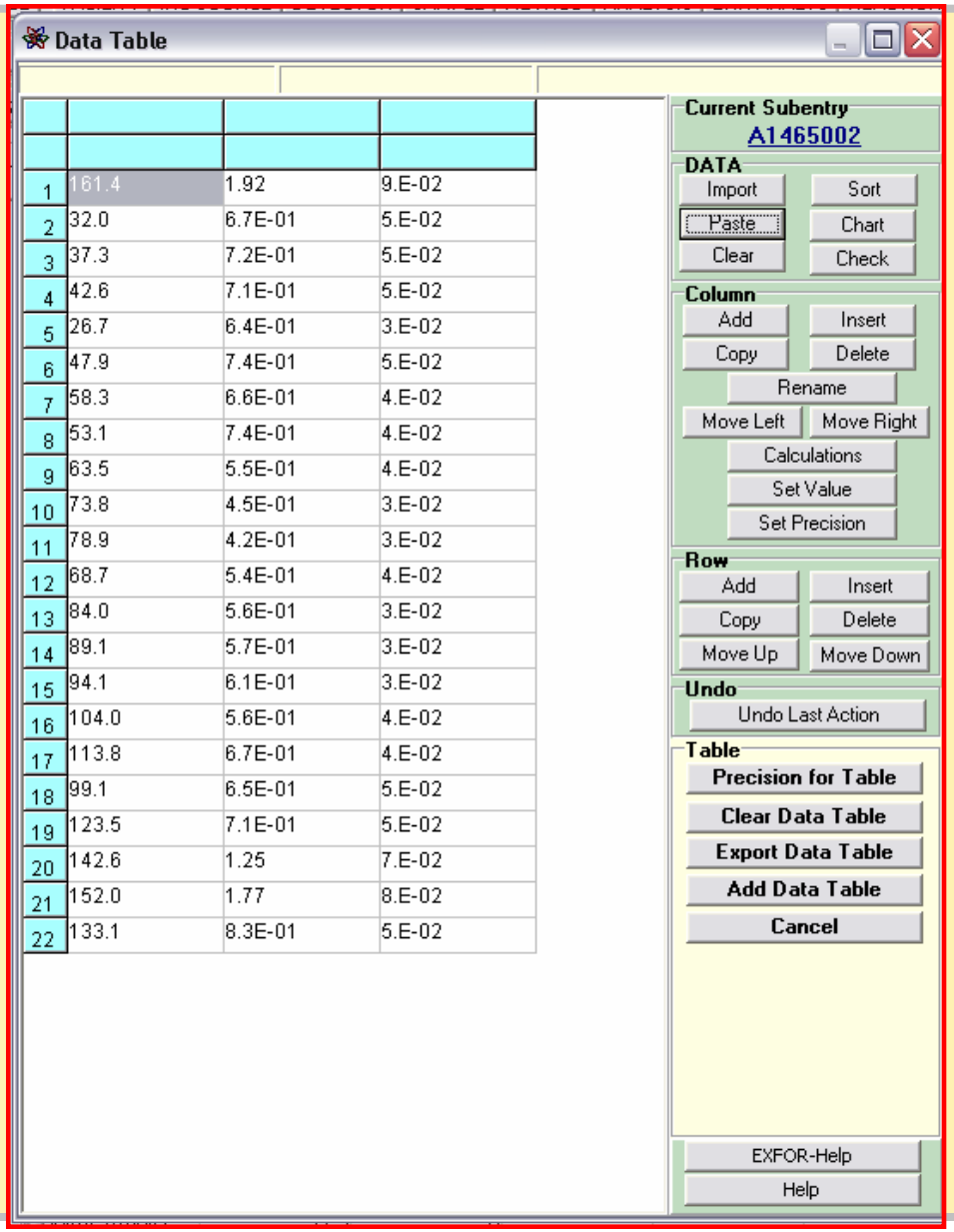
INTRODUCTION

A great many experimental and theoretical studies have been devoted to studying the mechanism of the $^{27}Al(p, \alpha)^{24}Mg$ reaction [1]. Such studies are conducted in the wide energy range from several to hundreds of MeV. This reaction was studied at $E_p = 5–10$ MeV in several works. In [2], the angular distributions of the

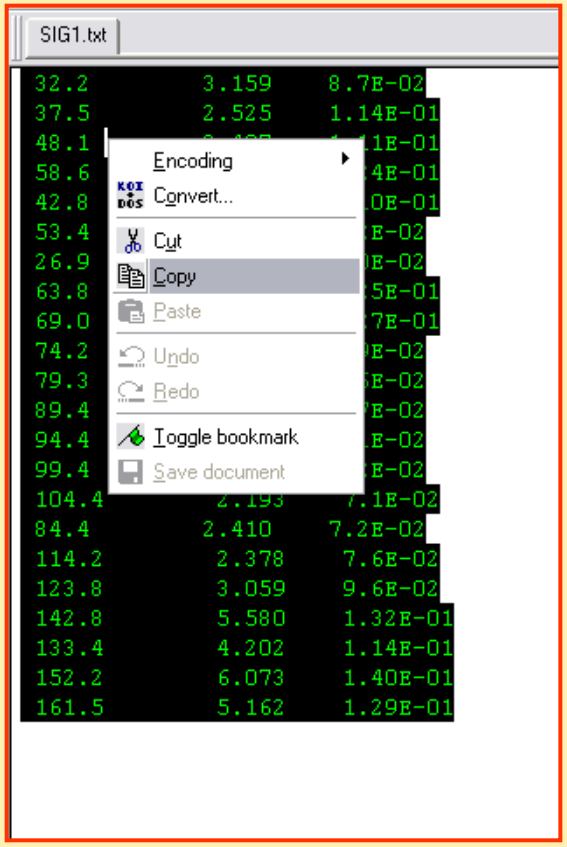
The function of the angular αγ-correlation of $^{27}Al(p, \alpha_1\gamma)^{24}Mg$ at $E_p = 6.4$ MeV was measured in [5]. The correlation was measured only in the reaction plane and at one angle, $\theta_\alpha = 135°$ (lab). It was shown that the resulting function of the angular correlation was anisotropic, and it was concluded that the mechanism of the reaction has a resonant nature (with Erickson fluctuations, the αγ-correlation must be

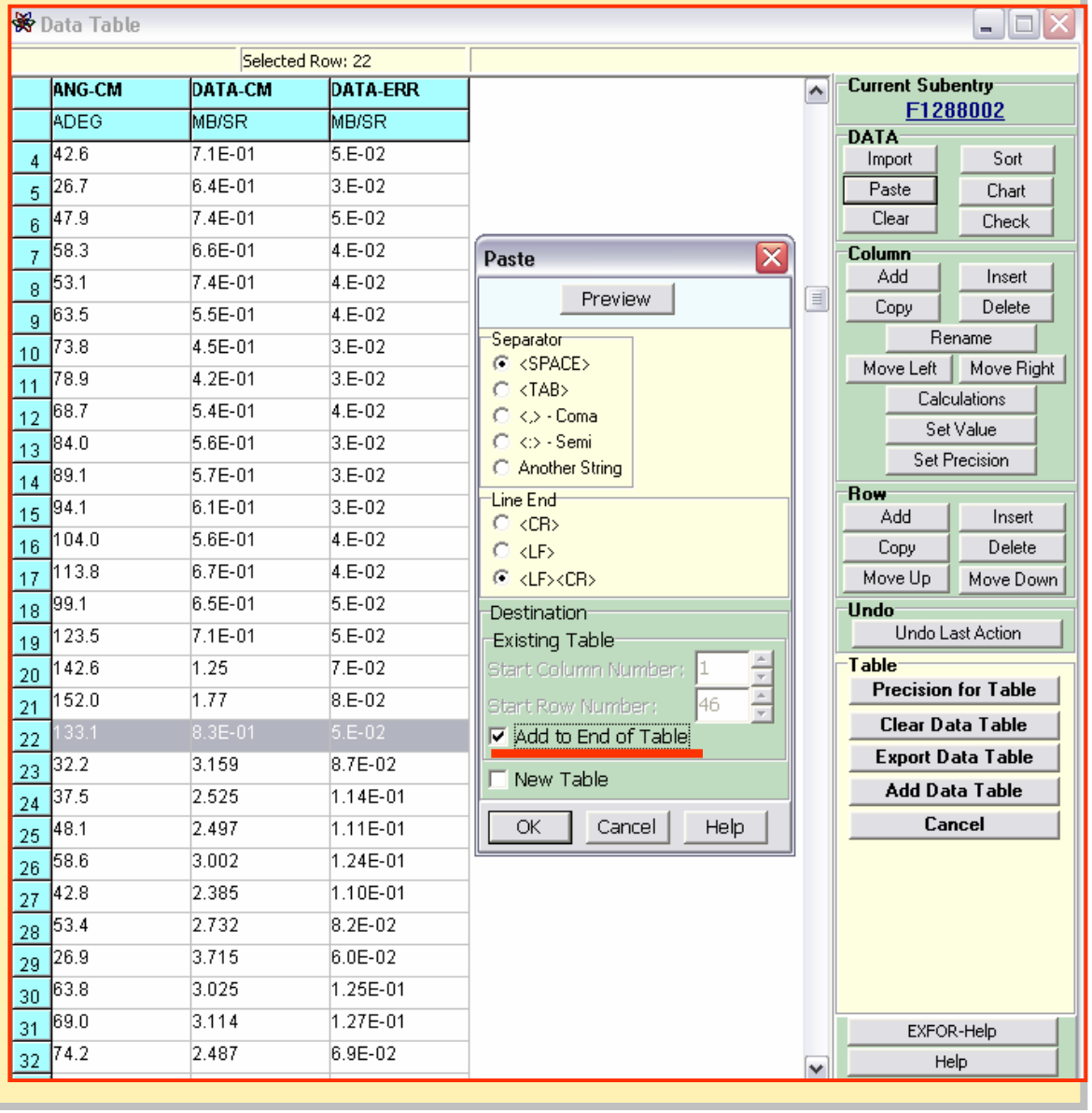
Paste data from external file



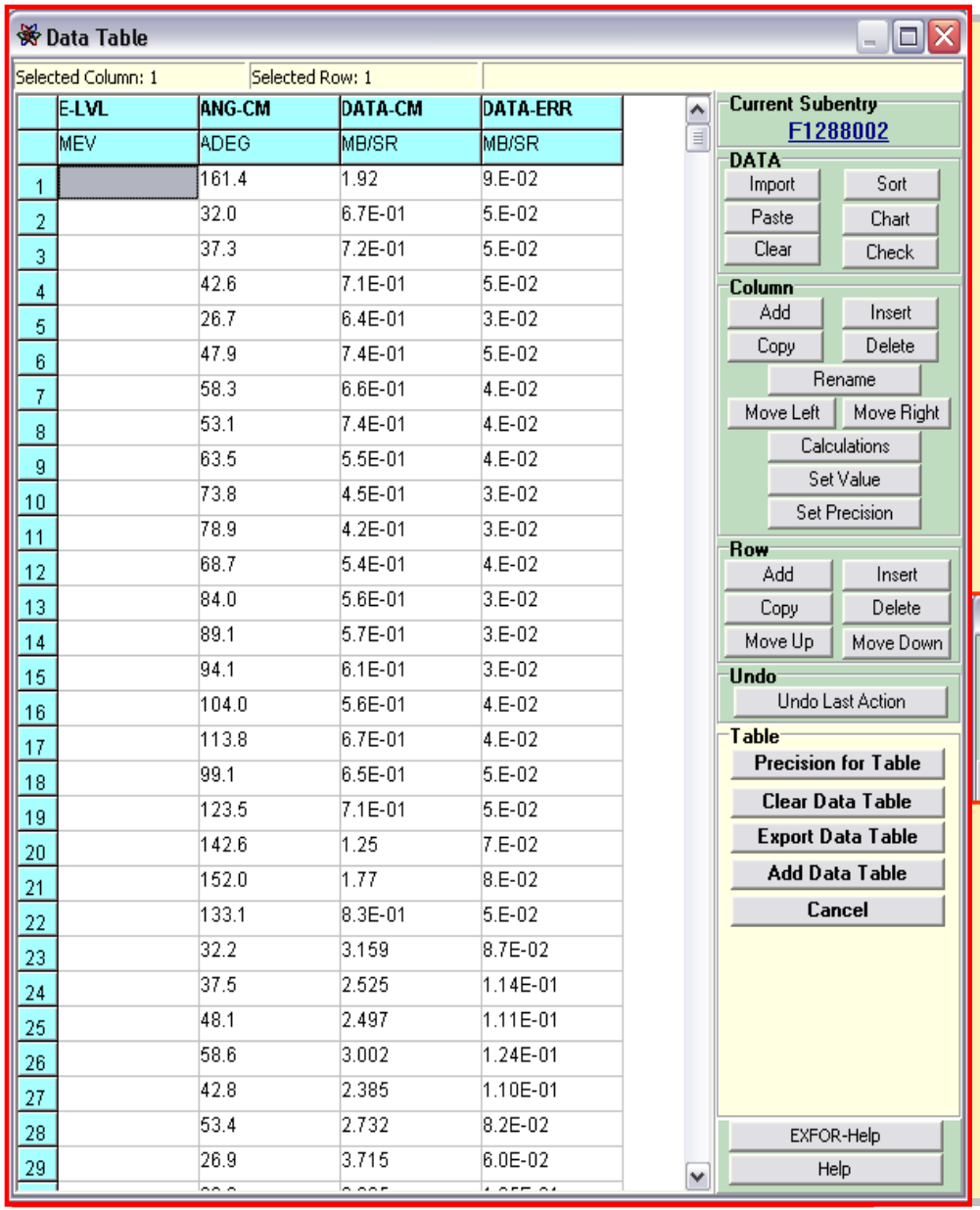


Paste data from external file

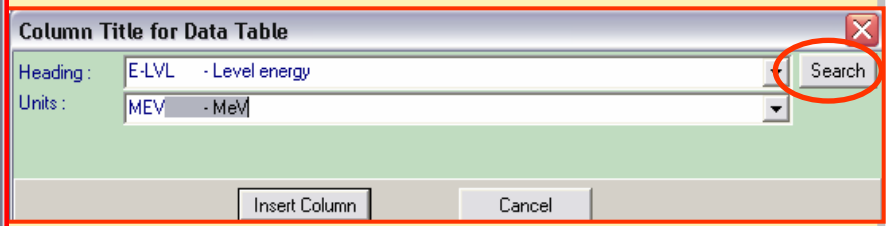




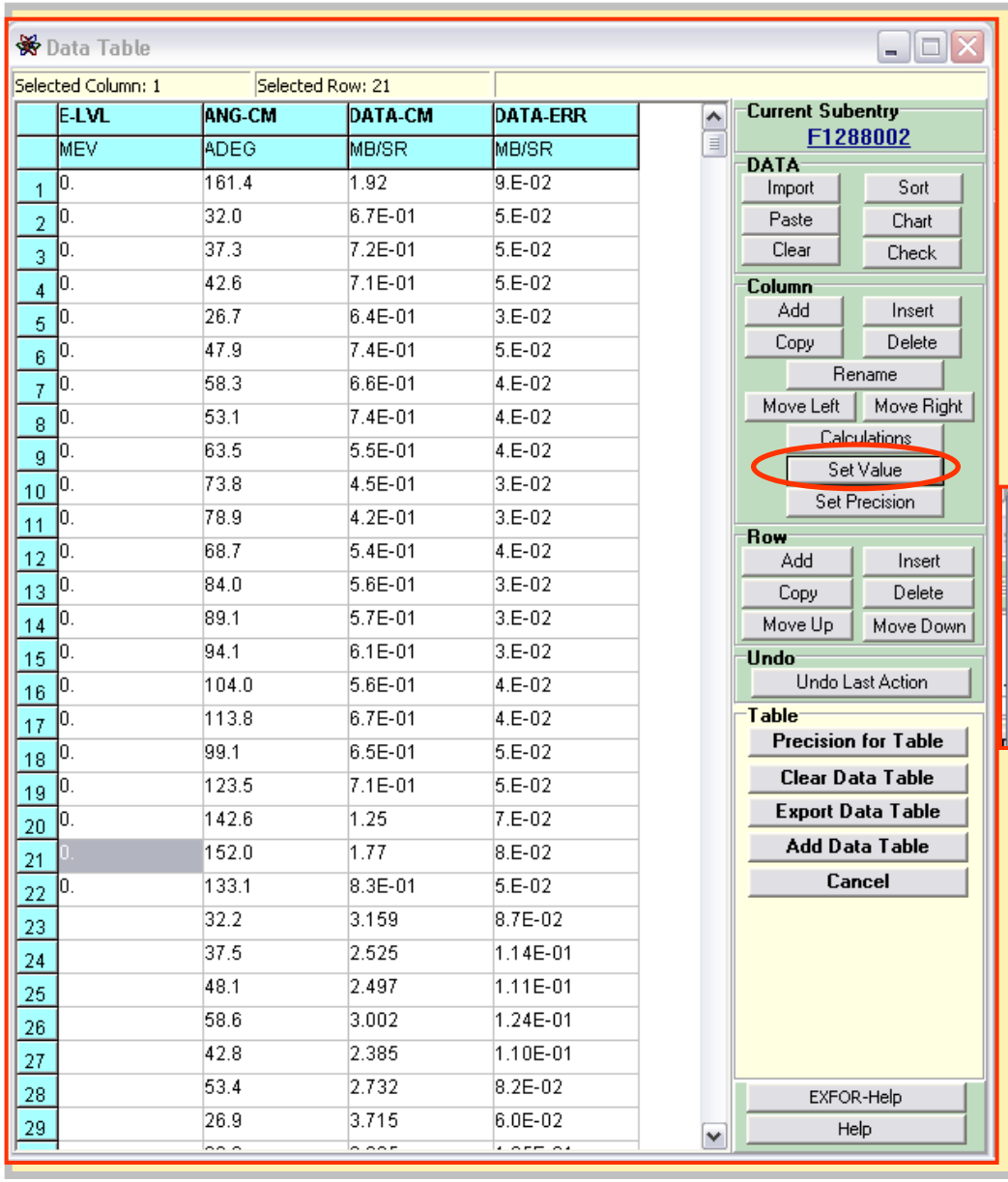
Insert column



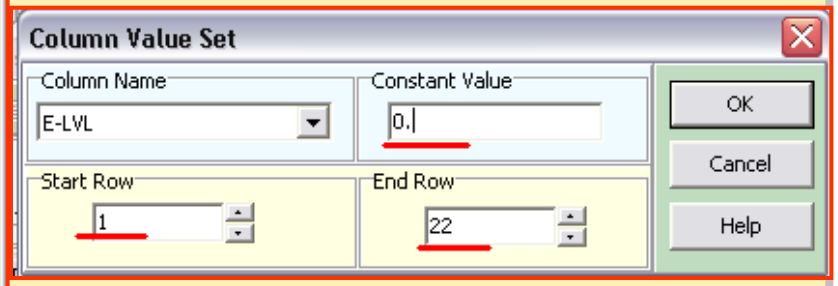
- Insert new column in selected position;
- Set column headings and units;
- Use dictionary for search of headings and units.



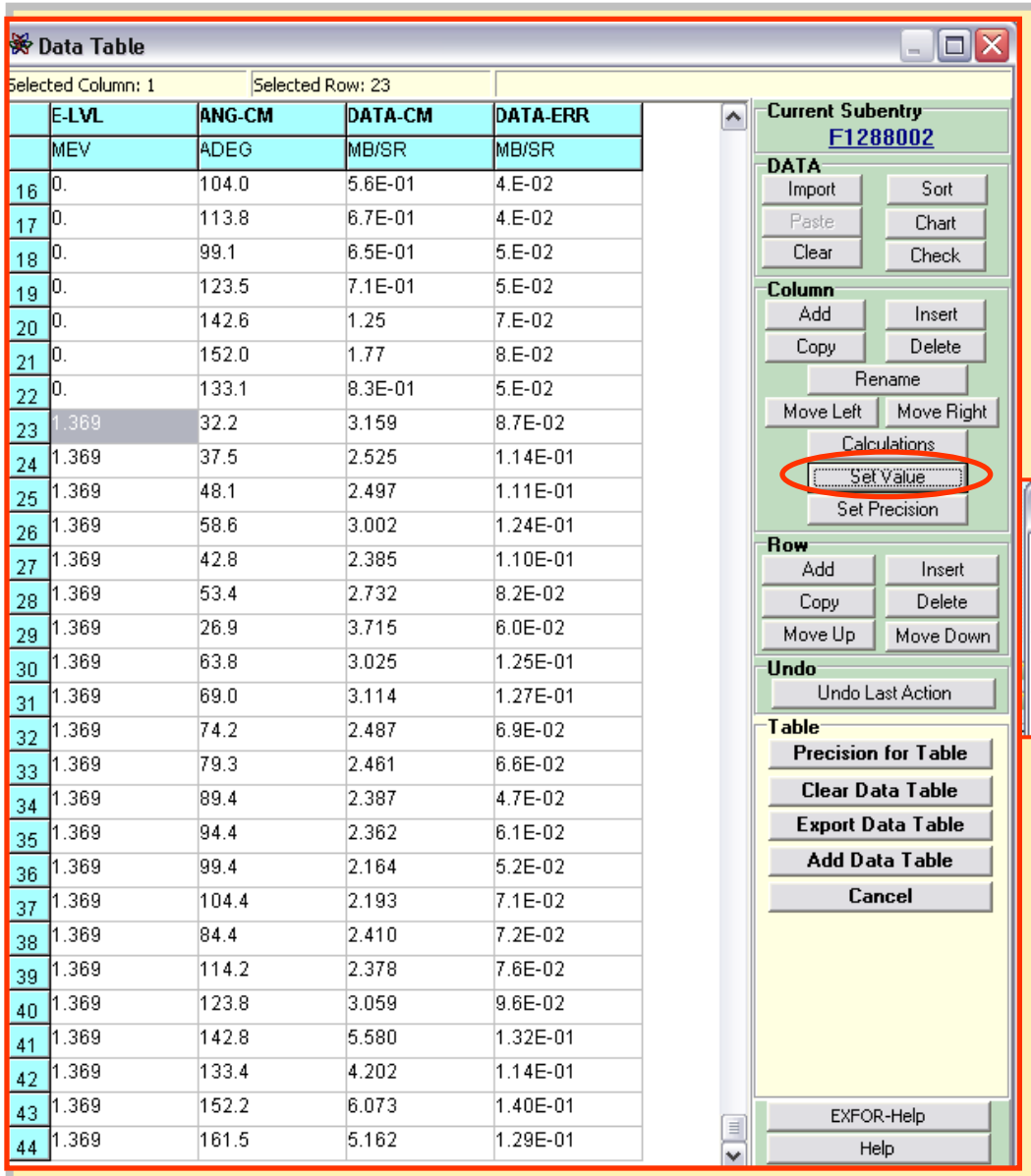
Column value set



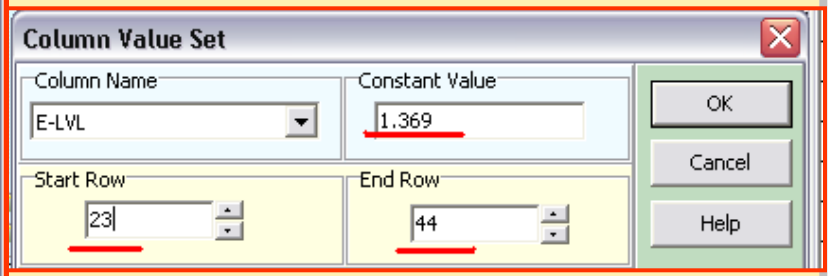
- Set constant value for selected column;
- Set constant value in selected rows.



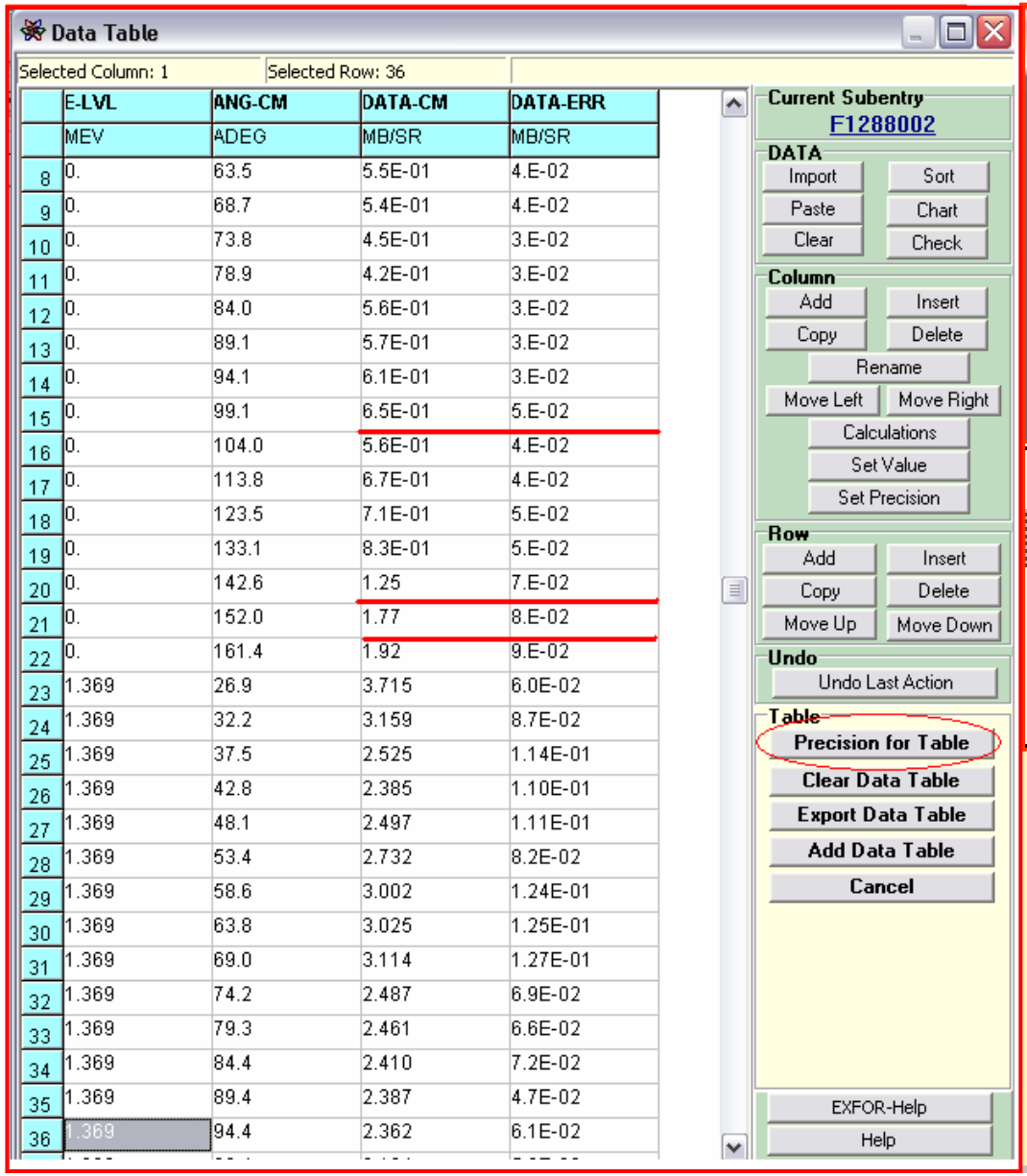
Column value set

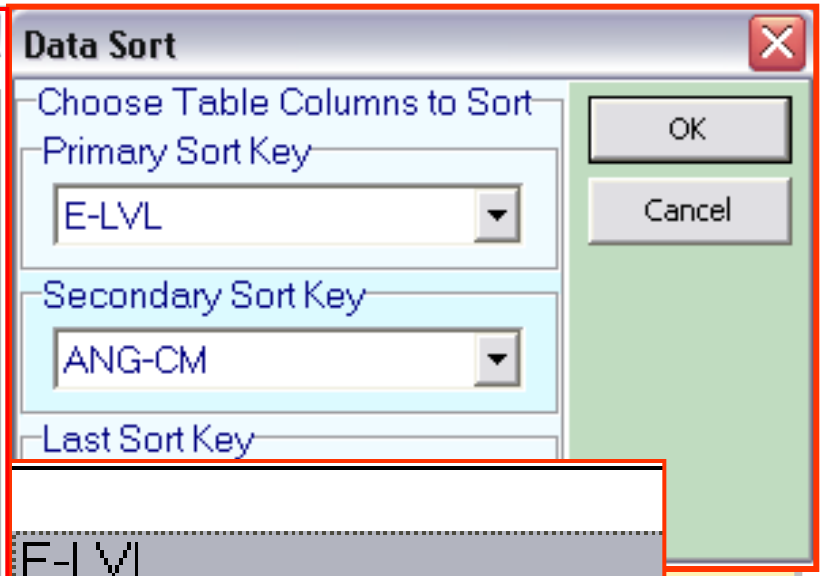


- Set constant value for selected column;
- Set constant value in selected rows.



Data sort

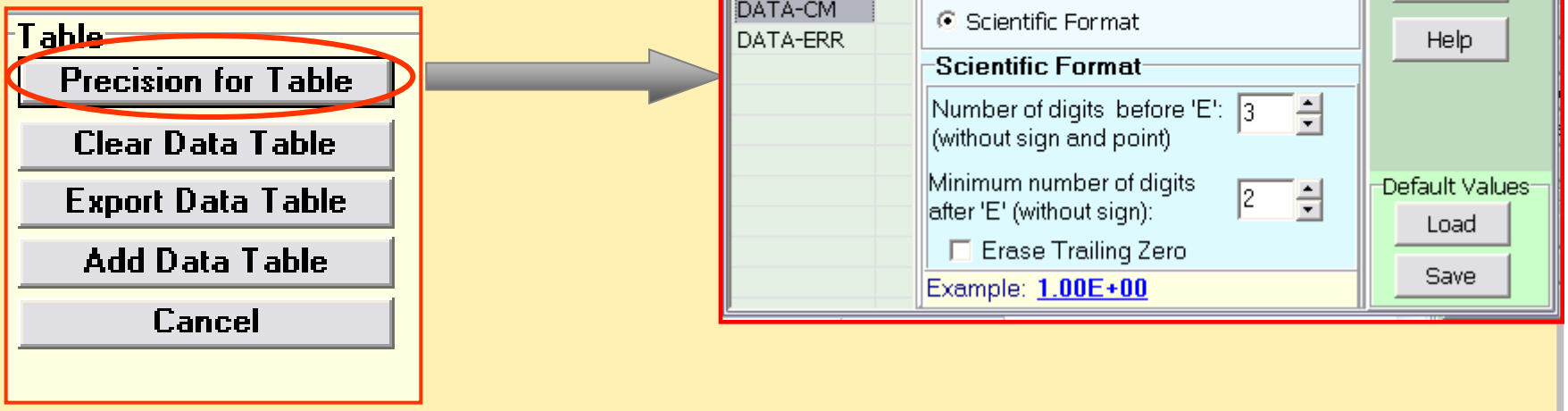




Data sorting was done using E-LVL and ANG-CM sort keys.

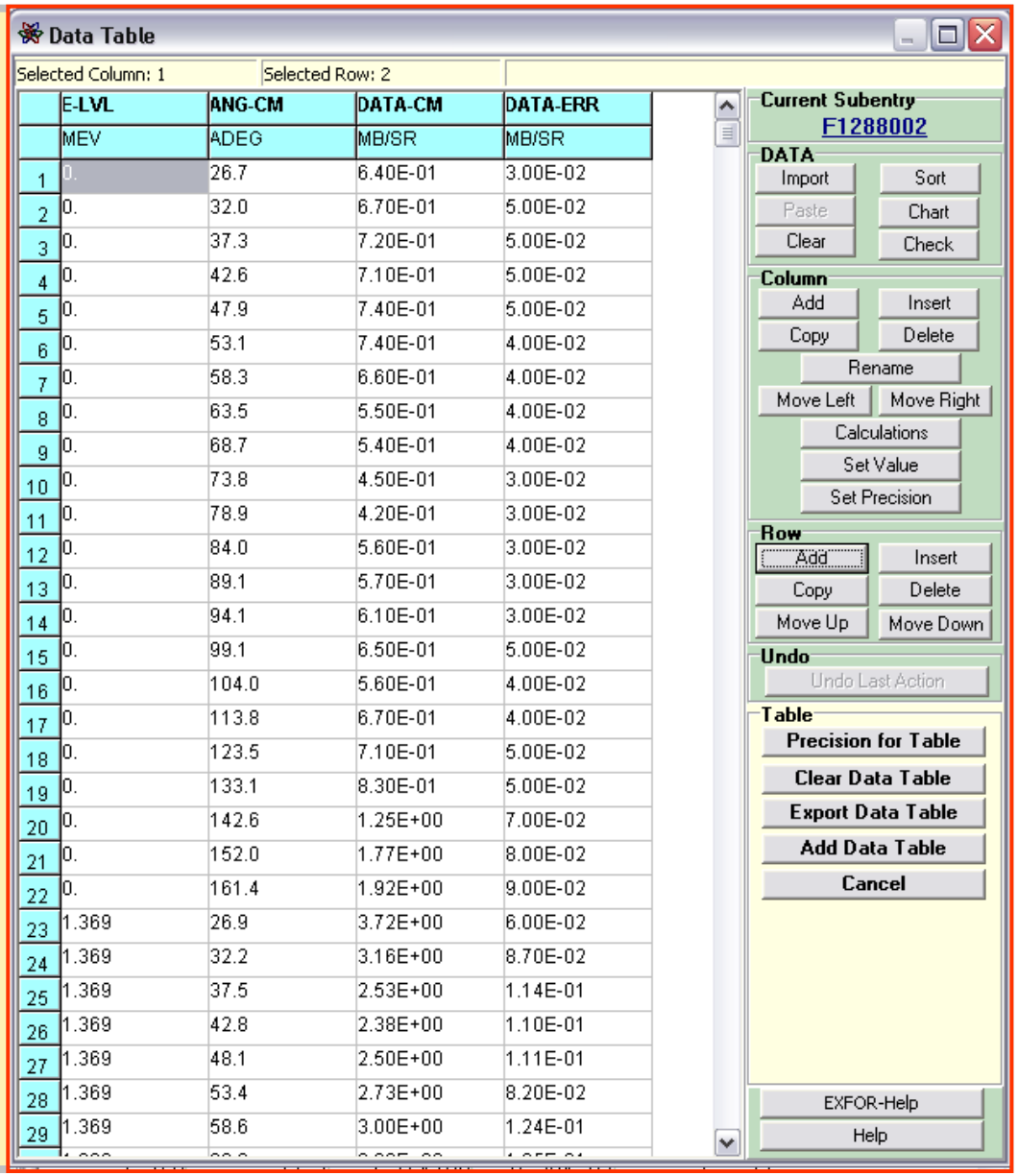
Precision for Table

- Set data presentation format;
- Set parameters for precision.

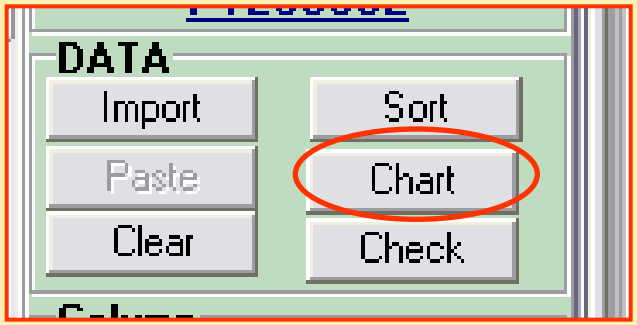


Precision for Table

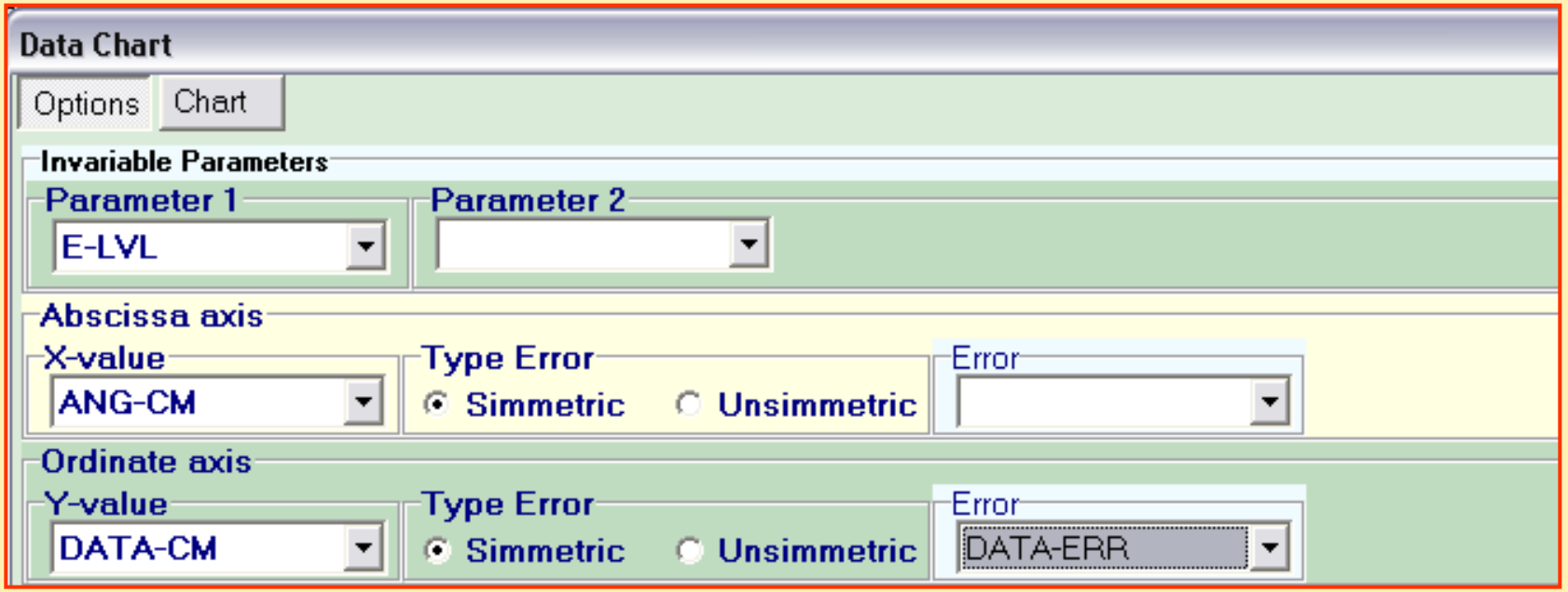
- Set data presentation format;
- Set parameters for precision.



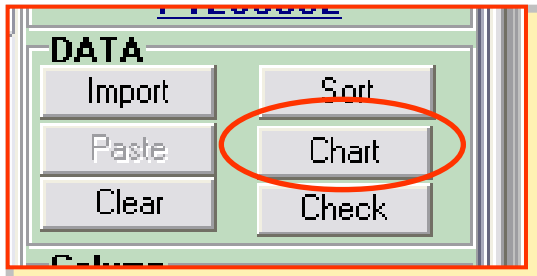
Data Chart



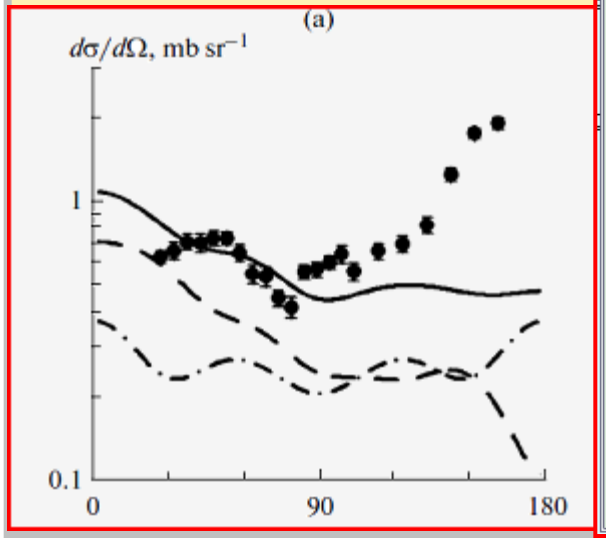
- Set invariable parameters;
- Set axes parameters;
- Set errors.

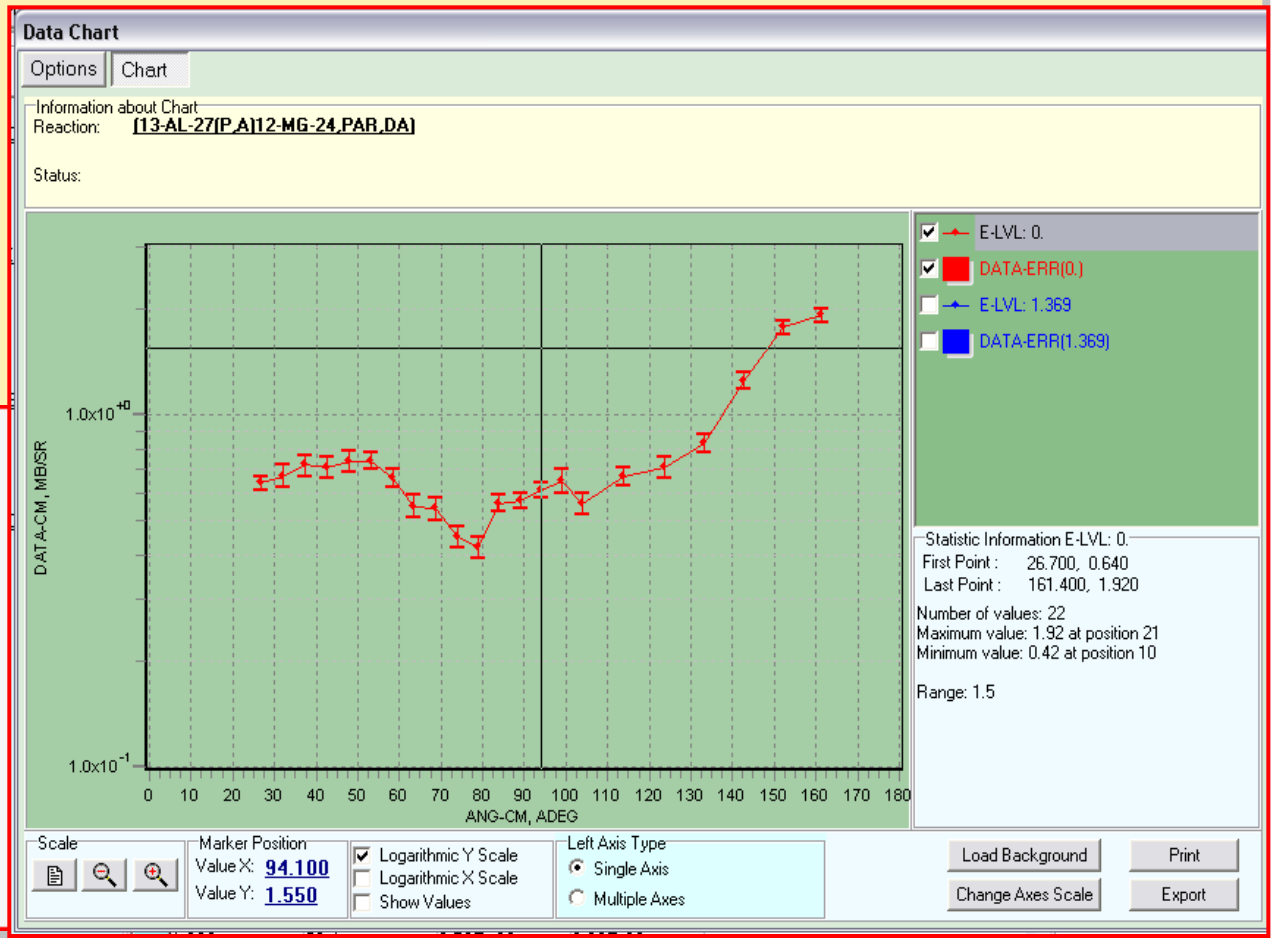


Data Chart

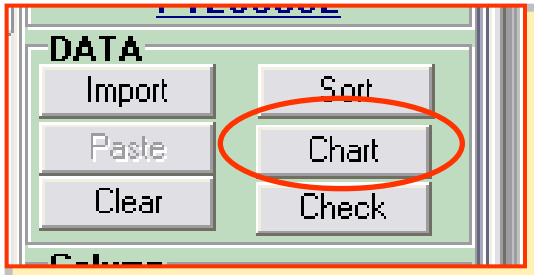


Plotted data. **E-LVL=0 MeV**

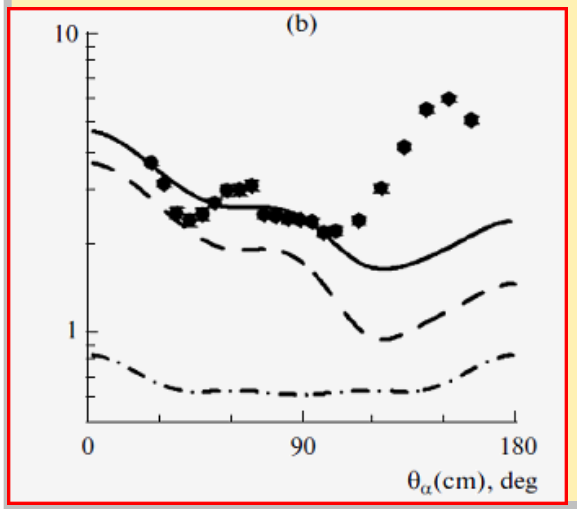


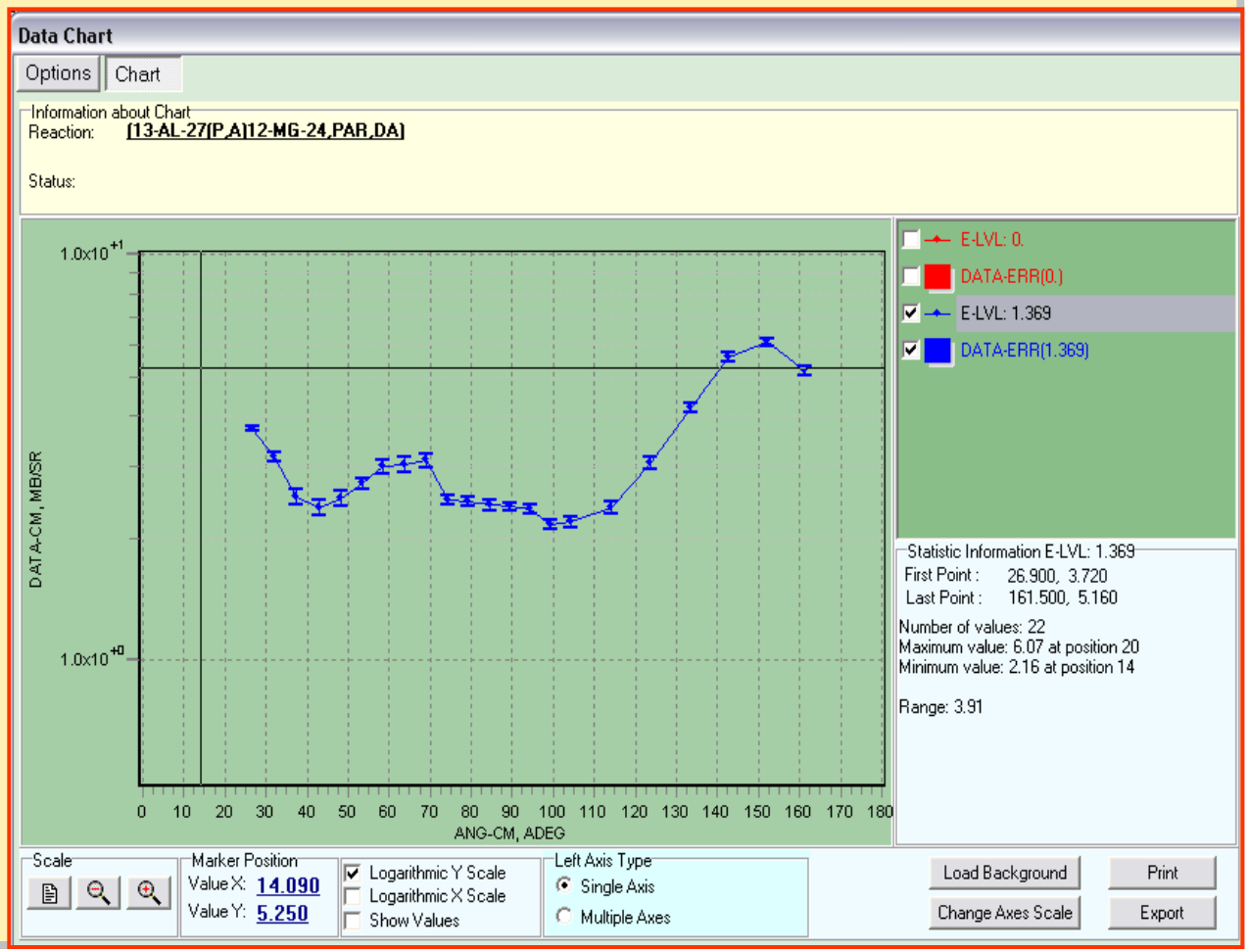


Data Chart



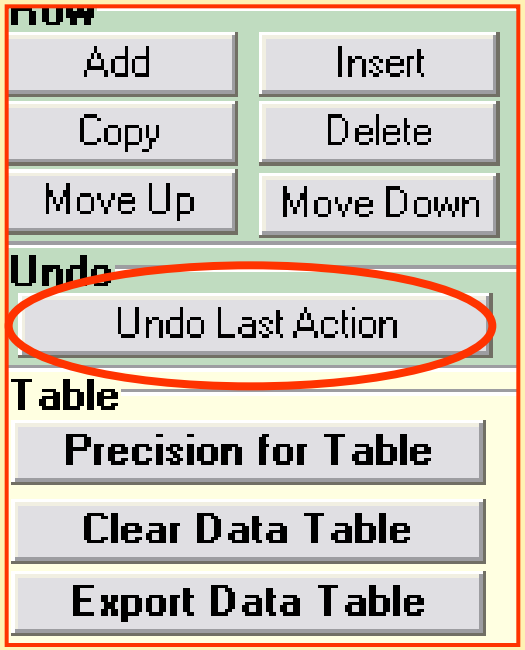
Plotted data. E-LVL=1.369 MeV

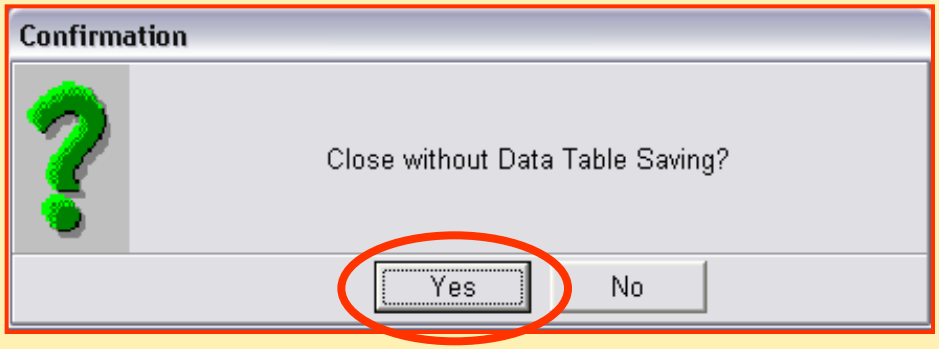




Exit from Data Table mode

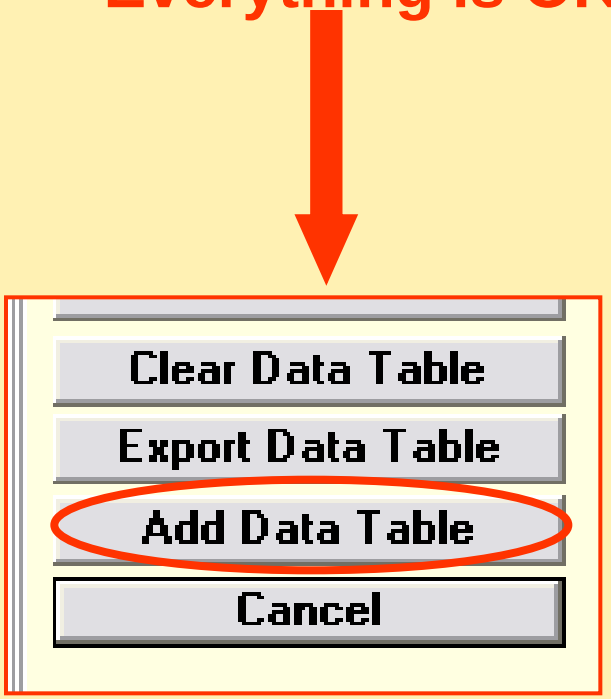
Incorrect data have been entered





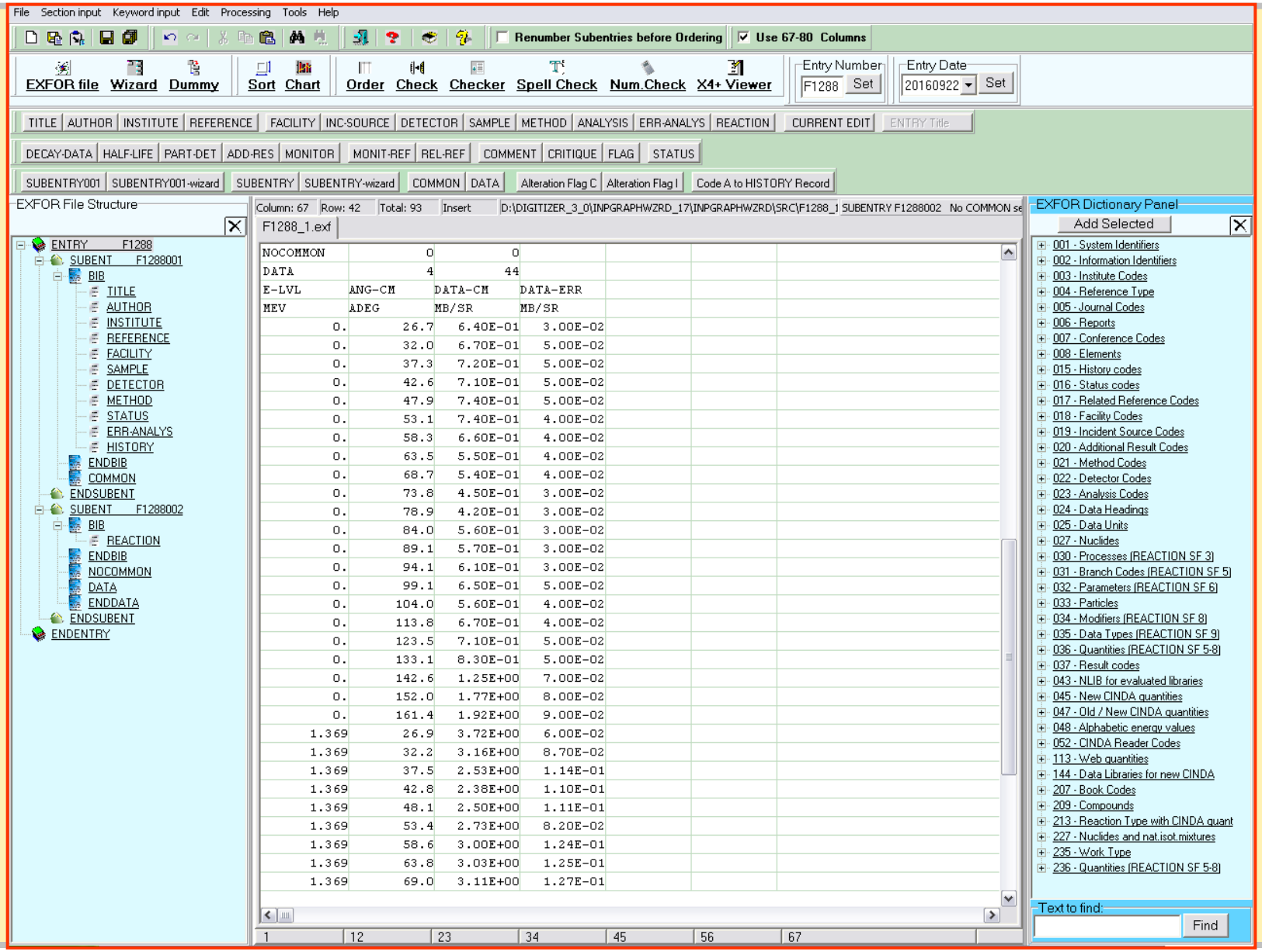
Exit from Data Table mode

Everything is OK



NOCOMMON	0	0	
DATA	4	44	
E-LVL	ANG-CM	DATA-CM	DATA-ERR
MEV	ADEG	MB/SR	MB/SR
0.	26.7	6.40E-01	3.00E-02
0.	32.0	6.70E-01	5.00E-02
0.	37.3	7.20E-01	5.00E-02
0.	42.6	7.10E-01	5.00E-02
0.	47.9	7.40E-01	5.00E-02
0.	53.1	7.40E-01	4.00E-02
0.	58.3	6.60E-01	4.00E-02
0.	63.5	5.50E-01	4.00E-02
0.	68.7	5.40E-01	4.00E-02
0.	73.8	4.50E-01	3.00E-02
0.	78.9	4.20E-01	3.00E-02
0.	84.0	5.60E-01	3.00E-02
0.	89.1	5.70E-01	3.00E-02
0.	94.1	6.10E-01	3.00E-02
0.	99.1	6.50E-01	5.00E-02
0.	104.0	5.60E-01	4.00E-02
0.	113.8	6.70E-01	4.00E-02
0.	123.5	7.10E-01	5.00E-02
0.	133.1	8.30E-01	5.00E-02
0.	142.6	1.25E+00	7.00E-02
0.	152.0	1.77E+00	8.00E-02
0.	161.4	1.92E+00	9.00E-02
1.369	26.9	3.72E+00	6.00E-02
1.369	32.2	3.16E+00	8.70E-02
1.369	37.5	2.53E+00	1.14E-01
1.369	42.8	2.38E+00	1.10E-01
1.369	48.1	2.50E+00	1.11E-01
1.369	53.4	2.73E+00	8.20E-02
1.369	58.6	3.00E+00	1.24E-01
1.369	63.8	3.03E+00	1.25E-01
1.369	69.0	3.11E+00	1.27E-01

Exfor-Editor main window



Conclusion

- Data Table mode usage for Exfor library has been presented;
- The following data procedures have been demonstrated:
  - Paste data from external file;
  - Insert new column;
  - Set constant value;
  - Data sort;
  - Precision for data table;
  - Data chart.

Thank you!