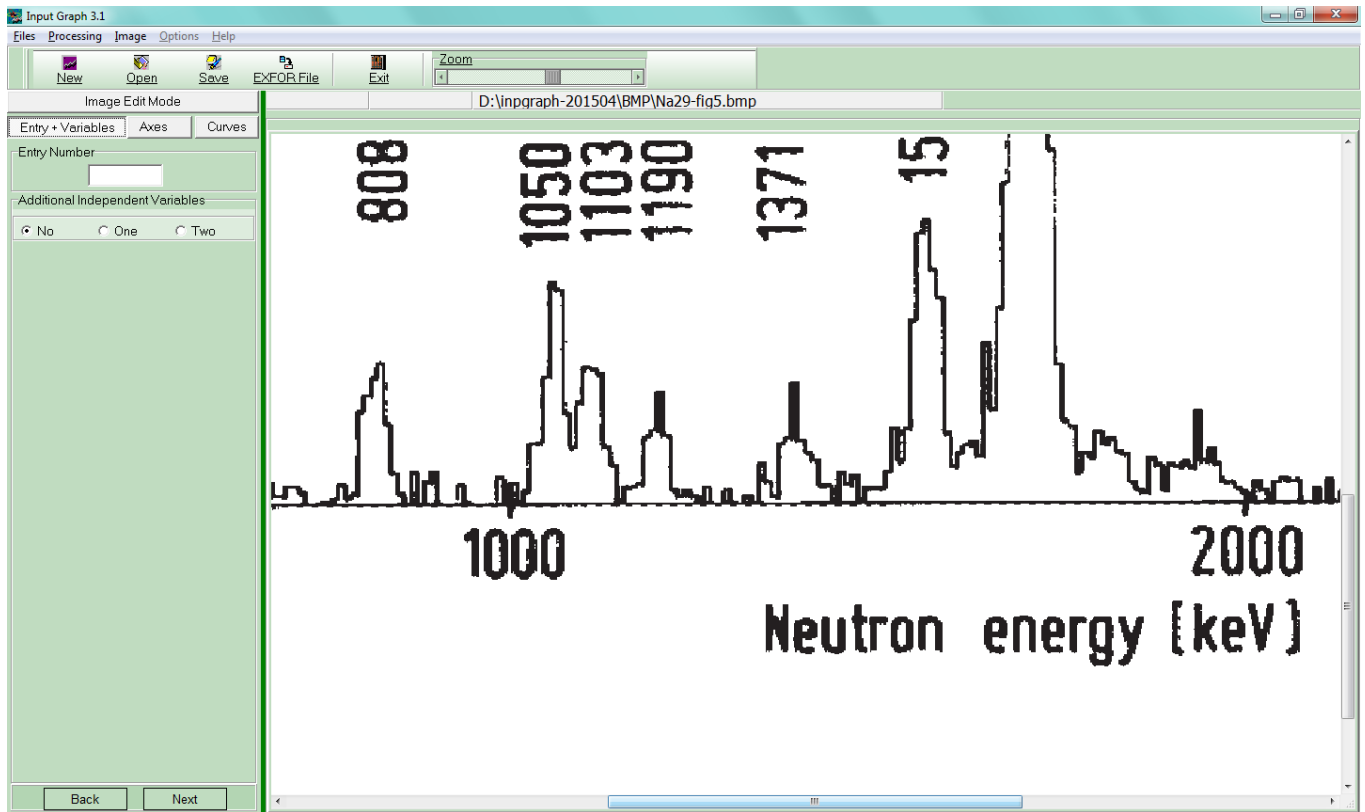


Comments on InpGraph digitizer (Sarov)

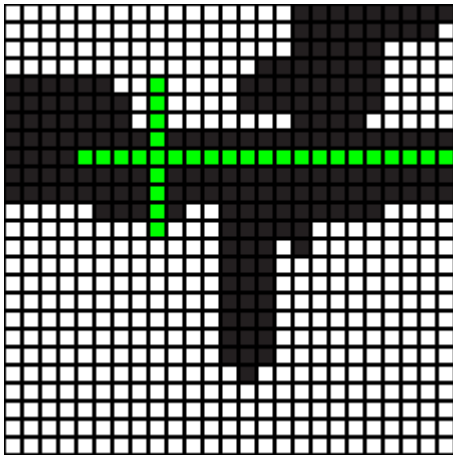
3.1 (2015):

- if compiler defined units of scale and then heading, the units are disappeared.



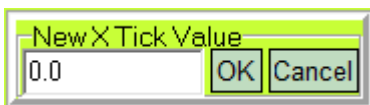
When compiler introduces ticks values:

- This window overlaps the part of figure which is increased and compiler does not see more details and can not move this window

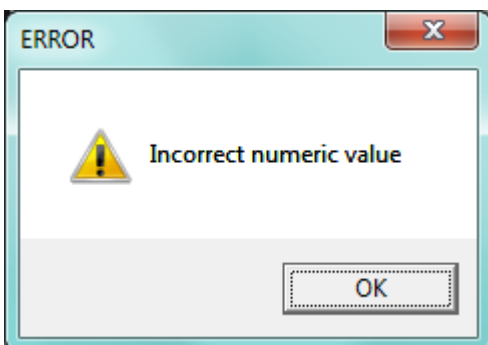


If I put the point then this window disappears and I do not see the exactly is this point put correctly or not.

And when I define the first value as:



And then put "OK" and I see:



So work of digitization is stopped at this step and I could not continue:



Conclusion – for my work of digitization this version is useless. I do not know a reason, may be the digitizer was influenced by virus when I copied it from web-site. But may be there are some mistakes in this version of digitizer.

2.5 (2014)

I use the older version of digitizer 2.5 (2014 year).

- Line of scale is defined by only two points as direction.
- I stacked with a problem when digitized a figure, where were low values of data (beta delayed neutron spectra) near the X axes. The figure was scanned from old article in the journal.



9 points were put, 8 of them are upper than line of X axes, last right point is directly on line of axes.

I expected that 8 points values will be positive and last – zero.

But I obtained five negative values! :

E DATA

KEV ARB-UNITS

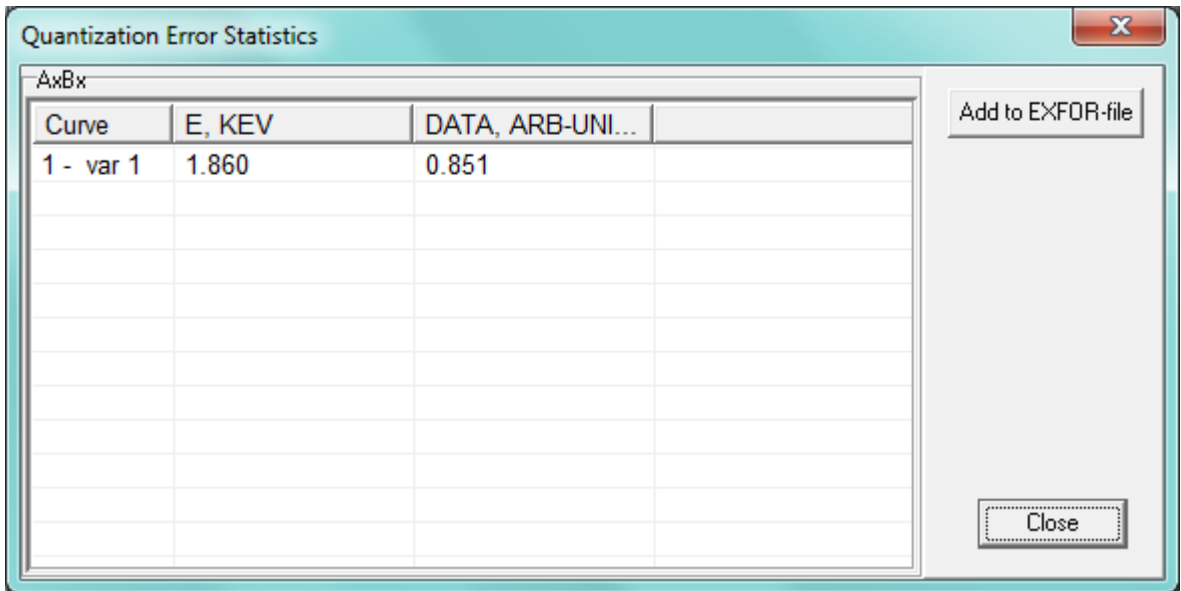
```

2981.0  -.97479
3008.9  -1.0389
3008.9   2.3681
3020.1   2.3425
3020.1  -.21276
3029.4  -.23412
3029.4   2.3211
3038.7   2.2998
3040.5  -1.9633

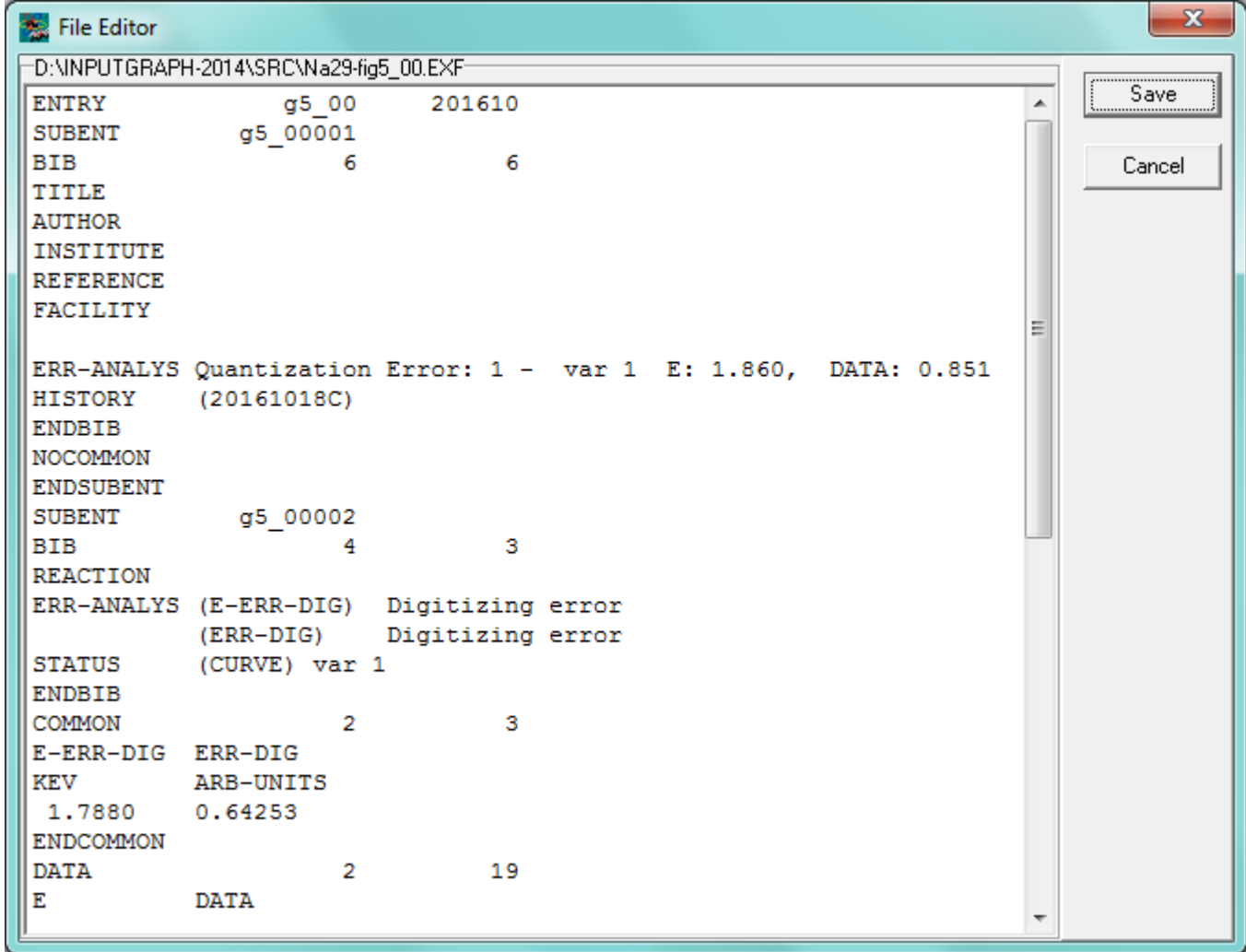
```

Even I put ticks point directly on the line of axes X.

- And I added quantization errors in EXFOR file:



but they were added without units in EXFOR file:



It has to be:

ERR-ANALYS Quantization Errors: E: 1.860 keV, DATA: 0.851 ARB-UNITS

- In this case I obtained the digitization errors:

Quantization Errors: E: 1.860 keV, DATA: 0.851 ARB-UNITS

Digitization errors: E-ERR-DIG=1.7880keV, ERR-DIG=0.64253 ARB-UNITS

Let us compare with the last point value: at 3040.5 keV data value -1.9633 arb-units.

As you see this point lies directly on X axes line, so it's data value has to be 0. in range of digitization errors for DATA. Sum of quantization and digitization errors is

$0.851+0.64253=1.49353$ arb-units,

What is less than 1.9633 arb-units.

So , real error of digitization is higher than the sum of two digitization errors in this case.

This is just an example.

As I suppose, the reason(s) can be analyzed and some improvements could be made.

And/or some advances (how to avoid such cases) could be produced for compilers.

Errors at digitization (for discussion) :

- each line (two scales, ticks on scales), each data point (symbol) could be drown by quantization error – at preparation of figure;

- at digitization process – compiler again put points as a symbol (e.g. cross “+”) to define scales, ticks, data points and all these points could be put with quantization error;

- error due to non-linearity of scale line for both scales;

-errors due to that the angle between axes is not 90 degrees.

How we have to estimate all these errors and how they could be combined into one “total” error of digitization?