

Manual ASTRO-basis

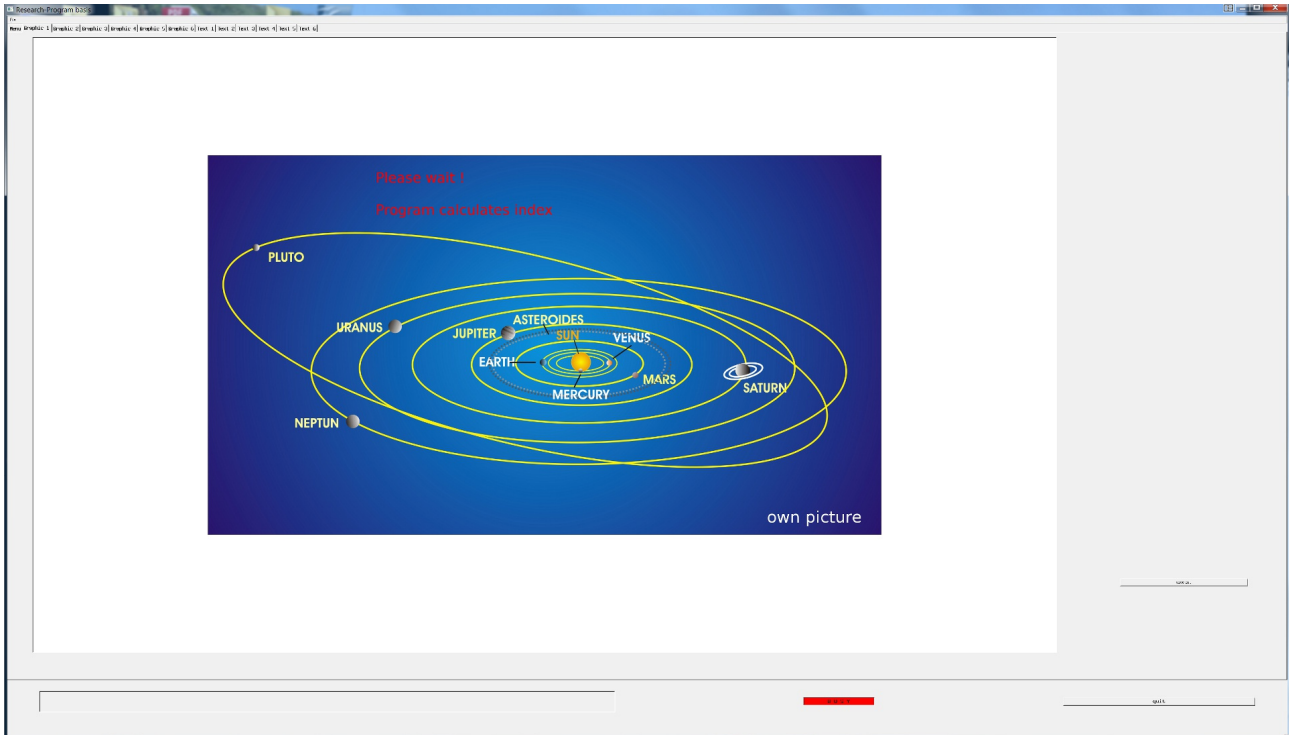
The program calculates the gravitational interactions of the Sun, Moon and the planets up to Pluto. Asteroids are not calculated. The calculated correlation function can be interpreted as a vector field with higher harmonics.

1 Starting the program

The program "astro-basis.exe " is started by double-clicking in the ASTRO directory.

Important: The files already existing in the directory must not be changed.

The start screen appears

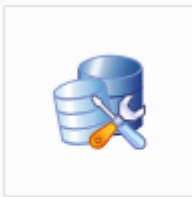


Before the input can be started, the program calculates the lists for the orders 1 to 12 of the correlation function.

This calculation is displayed in the upper left corner and in the lower right corner. The duration of these calculations depends on the performance of the computer. Once these calculations have been completed, the actual investigations can begin. The following example is calculated for this purpose.

2 Calculation for the 41 earthquakes

2.1 Statistics 1 - Continuum



events1-41-1900-2000n.dbf

The file of the earthquakes is saved in the database format dbf. It can also be edited with the OpenOffice.org Writer. Other formats are not processed.

It is useful to label the database with the number of events and the time period.

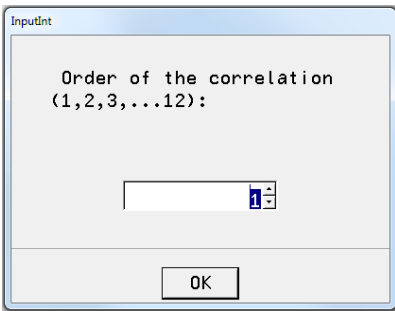
Calculations on this in "Microgravity; Chapter 2.1 An initial study of 41 of the strongest earthquakes".

	A	B	C	D	E	F	G	H	I	J	K	L
1	NAME,C,200	VORNAME,C,20	ORT,C,200	LAENGB	BREITB	ZEITB	DATUM,C,2	ZEIT,C,20	S	KATEGORIE	TYP,C,30	NOTIZEN,C,0
2	China	Tangshan	Peking	116.25	39.55	8	28.7.1976	03:42:00	0			
3	Japan	Yokohama	Yokohama	141.15	41.4	10	1.9.1923	11:58:00	0			
4	China	Gansu	Peking	116.25	39.55	8	16.12.1920	20:06:53	0			
5	Peru	Norden	Lima	-77.3	-12.3	-5	31.5.1970	11:23:00	0			
6	Iran	Nordwesten	Teheran	51.26	35.4	3	21.6.1990	00:30:00	0			
7	Tuerkei	Osten	Ankara	32.52	39.56	2	27.12.1939	01:57:00	0			
8	Chile	Chillan	Santiago	-70.4	-33.27	-5	24.1.1939	23:32:00	0			
9	Iran	Nordosten	Teheran	56.55	33.35	3	16.9.1978	19:38:00	0			
10	Armenien	Nordwesten	Jerewan	44.30	40.11	4	7.12.1988	11:41:00	0			
11	Guatemala	Guatemala	Guatemala City	90.77	14.6	-6	4.2.1976	03:02:00	0			
12	Indien	SW	Bombay	72.5	18.58	5	30.9.1993	03:56:00	0			
13	Chile	Valparaiso	Santiago	-70.4	-33.27	-5	16.8.1906	19:55:00	0			
14	Mexico	Mexico	Mexiko City	-99.9	19.24	-6	19.9.1985	07:18:00	0			
15	Japan	Kobe	Tokyo	139.46	35.42	9	17.1.1995	05:46:00	0			
16	Afghanistan	NO	Kabul	70.0	35.0	4	4.2.1998	10:33:00	0			
17	Tuerkei	XY	Ankara	32.52	39.56	2	17.8.1999	03:02:00	0			
18	L1-1	Nordjapan	Nordjapan	148.50	44.30	9	6.11.1958	22:58:00	0			
19	L1-2	Kurilen	Kurilen	161.0	53.0	10	3.2.1923	16:01:00	0			
20	L1-3	Mitteljapan	Mitteljapan	144.50	39.20	9	2.3.1933	17:30:00	0			
21	L1-5	Mongolei	Mongolei	98.0	49.0	6	23.7.1905	2:46:00	0			
22	L1-4	Mongolei	Mongolei	99.0	49.0	6	9.7.1905	9:40:00	0			
23	L1-6	Molukken	Molukken	130.50	-5.20	9	1.2.1938	19:04:00	0			
24	L1-7	Chile	Chile	-70.0	-28.50	-4	11.11.1920	4:32:00	0			
25	L1-8	Kurilen	Kurilen	149.50	44.80	10	13.10.1963	5:17:00	0			
26	L1-9	Nordindien	Nordindien	96.50	28.60	6	15.8.1950	14:09:00	0			
27	L1-10	Aleuten	Aleuten	178.60	51.30	13	4.2.1965	5:01:00	0			
28	L1-11	Kolumbien	Kolumbien	-81.50	1.0	-5	31.1.1906	15:36:00	0			
29	L1-12	Nordkurilen	Nordkurilen	161.0	52.30	12	4.11.1952	16:58:00	0			
30	L1-13	Aleuten	Aleuten	-175.80	51.30	-11	9.3.1957	14:22:00	0			
31	L1-14	Alaska	Alaska	-147.60	61.10	-10	28.3.1964	3:36:00	0			
32	L1-15	Chile	Chile	-74.50	-39.50	-4	22.5.1960	19:11:00	0			
33	L2-1	China	China	77.0	40.0	8	22.8.1902	3:00:00	0			
34	L2-2	Japan	Japan	143.0	42.50	9	4.3.1952	6:03:00	0			
35	L2-3	Ecuador	Ecuador	-76.80	-8.0	-5	16.11.1907	10:10:00	0			
36	L2-4	Marianen	Arianen	143.0	22.0	10	24.11.1914	11:53:00	0			
37	L2-5	Samoa	Samoa	-173.0	-15.50	-10	26.6.1917	5:49:00	0			
38	L2-6	Nicobaren	Nicobaren	92.50	12.50	5	26.6.1941	11:52:00	0			
39	L2-7	S	S	131.0	28.0	10	15.6.1911	12:00:00	0			
40	L2-8	S	S	-158.0	55.50	-10	10.11.1938	20:18:00	0			
41	L2-9	Westchina	westchina	77.50	43.50	8	3.1.1911	23:25:00	0			
42	L2-10	Nordneuseeland	Nordneuseeland	-176.40	-28.10	-12	20.10.1986	6:46:00	0			

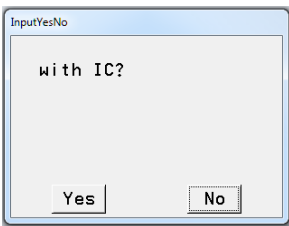
To create your own databases, it is important that at least column A (name), D (longitude), E (latitude), F (time zone) G (date) and H(time of the event) are entered.

	A	B	C	D	E	F	G	H	I
1	NAME,C,200	VORNAME,C,20	ORT,C,200	LAENGB	BREITB	ZEITB	DATUM,C,2	ZEIT,C,20	S
2	China	Tangshan	Peking	116.25	39.55	8	28.7.1976	03:42:00	0

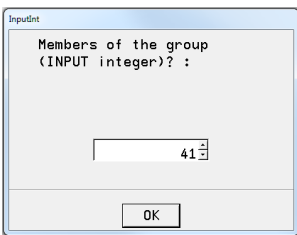
For statistical investigations, the calculations always start with the Statistics 1 - Continuum program.



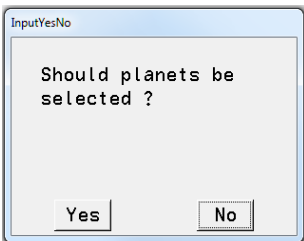
First the order is requested. For general time qualities the lower orders are used, for triggering events the higher orders.



Query for the IC (direction to the center of the earth). The IC is only calculated if the earth is to be examined. It brings the highest frequencies in the correlation function and is not suitable for trends.



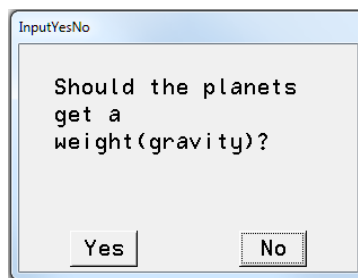
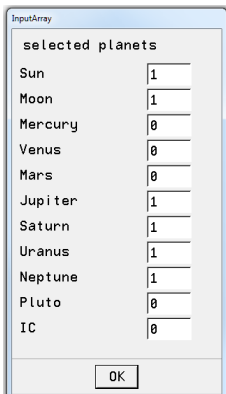
Next, the number of events is requested.



Should only certain planets be selected?

If this question is answered with Yes:

If this question is answered with No:



Planets can be selected here with 1 or deselected with 0.

However, there can also be a weighting in the Number format 12.05 must be entered.

If this question is answered with Yes, appears:

gravity planets	
Sun	57.2
Moon	10.2
Mercury	0.31
Venus	0.77
Mars	0.3
Jupiter	1.87
Saturn	0.84
Uranus	0.28
Neptune	0.22
Pluto	0.01
IC	0

These are approximately the square roots of the gravitational effect. However, this weighting has proved to be of little use, as other interactions are relevant here. These numbers can be changed.

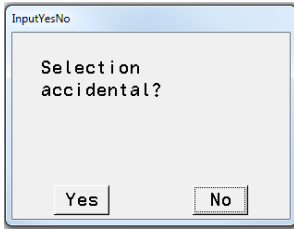
This query is usually answered with **No** for statistical studies.

The following entries define the time period in which the mean value for the correlation function is to be calculated.

Start of calculations:

End of calculations:

This input determines the number of calculations in the previously selected time interval. The size 100 000 is preselected and is calculated by most computers in a reasonable time.

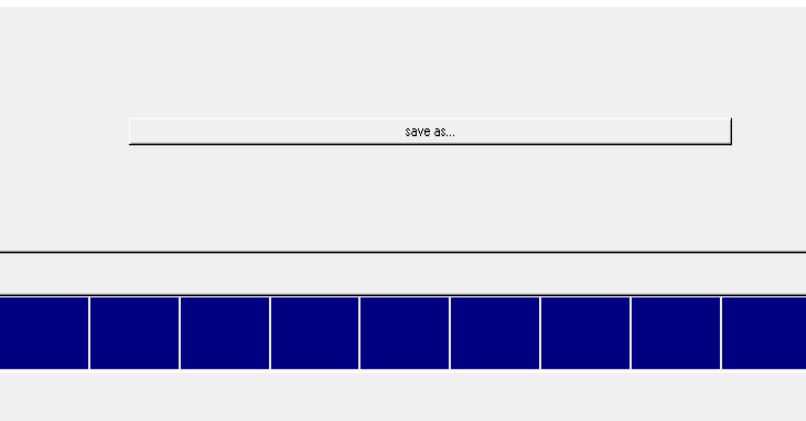
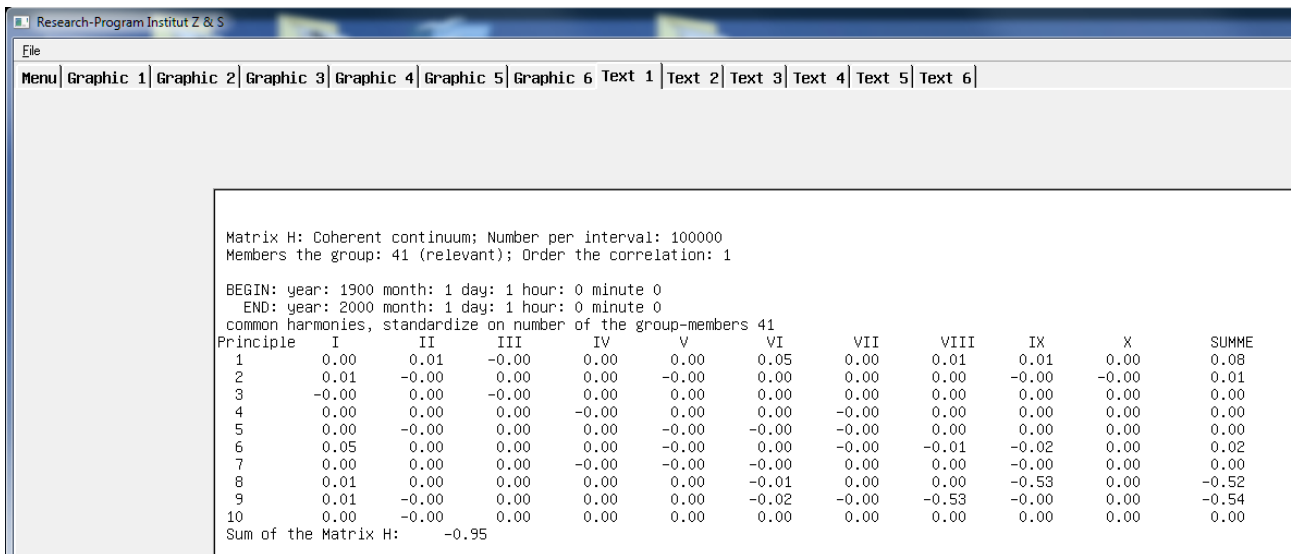


One last question is asked before the calculation begins. Should events in the period be calculated randomly or continuously (with equal intervals)? This question can be answered with No. The differences are small.

The blue bar shows the progress of the calculation:

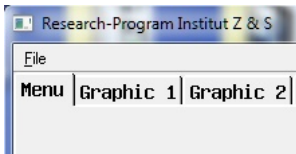


The results can be found in the text field Text 1:

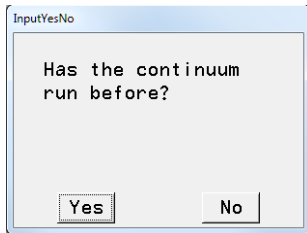


The results of the calculation can now be saved as a text file with "save as..."

2.2 Event Analysis

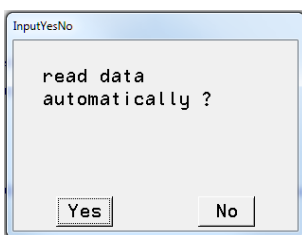


After the program Statistic 1- Continuum is finished, the program "Event Analysis" is called via the button Menu.

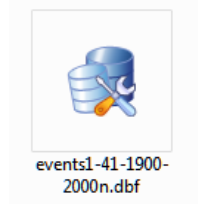


If the continuum has already been calculated, the queries are simplified and the already stored values are taken over. If the question is answered with No, the entries must be made again.

Please run the Statistics 1 - Continuum program beforehand so that the event analysis can be evaluated.

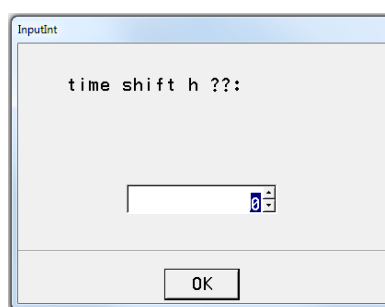
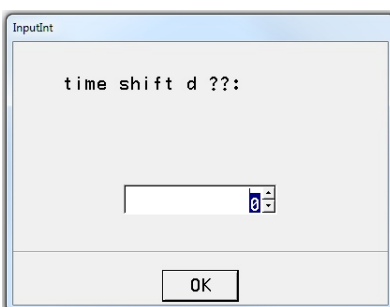


The events are read in automatically if this query is answered with Yes. If the answer is No, the events must be selected by double-clicking.

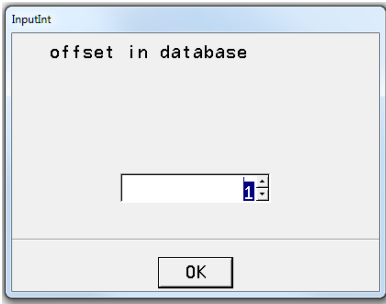


Double click or click once and then click open at the bottom to open the file.

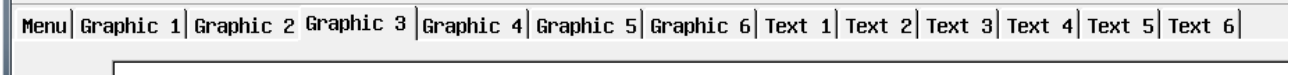
Before the calculations start, it is possible to postpone the calculation of the correlation function before or after the actual event. With these following boxes the events can be shifted by days and hours.



The following query determines the beginning of the data in the events file.



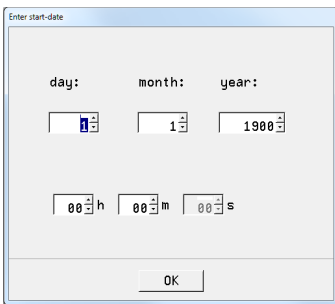
If the file contains only the events to be examined, the offset will usually be 1. However, several groups can also be combined in one file. Then the offset is the line where the group starts. The results are in Graphic 3 and Text 2 and can be saved with save as...



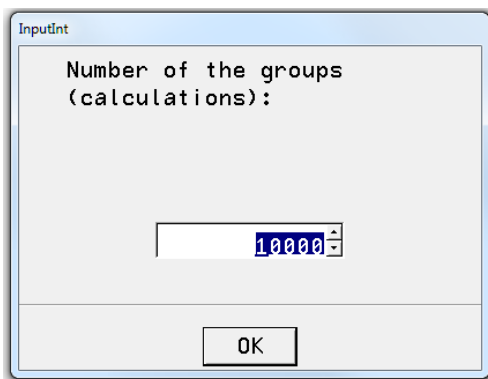
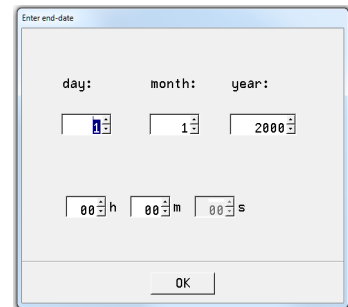
2.3 Statistics 2 - Density Function

This module calculates the density function and thus gives a first pictorial representation of the special properties of the events under investigation. If the correlation function lies at the edge of the (almost Gaussian) distribution, then the group of events is not random in this time period.

This module does not need to be calculated if only the probabilities are to be calculated. This module is not a prerequisite to start the *Statistics 3 - probability* module.

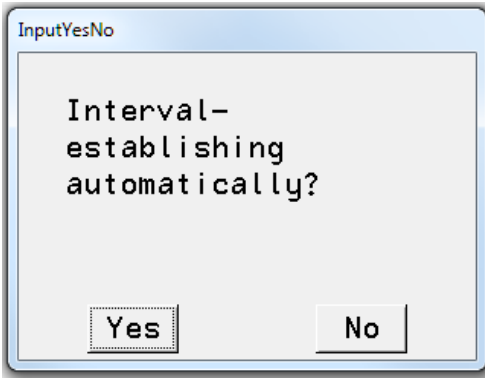


At the beginning the time range of the events is queried again. If no changes to the time period are necessary (normal case), the displayed data need only be accepted with OK.



Next, the control groups to be calculated are queried. The number of control groups should not be less than 1000 (*per mille range*), otherwise the probabilities become uncertain.

Should the intervals for the tests be set automatically?



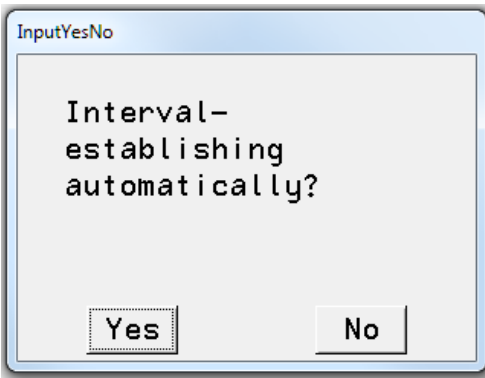
This question must normally first be answered with Yes. If the results in the graphs do not meet expectations because the density curve is too narrow or too wide, the program must be started again.

The program has remembered the maximum and minimum values during the calculation. These values can now be entered manually to better fit the curves into the given graphic.

These values can be found in the Manual. For this case it is recommended to enter the following values:

```
!!! Limits:
minH: -15.97 maxH : 16.02
minI: 64.78 maxI: 88.82
minD: -109.76 maxD : 85.65
minDA: 445.34 maxDA: 590.25
```

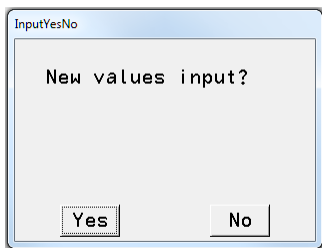
```
H:  -16      16.1
I   64.5     89
D   -109     86
DA  445     591
```



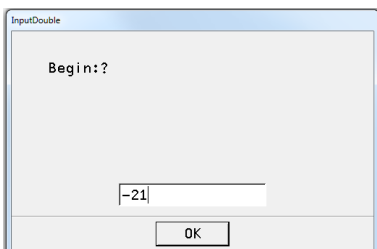
The module is now restarted. The query for the interval setting is now answered with No. The automatically generated values appear in the Manual (lower left corner):

```
automatically generated values (matrix-sum - Amplitude)
Begin= -25.014753 End= 23.300213
```

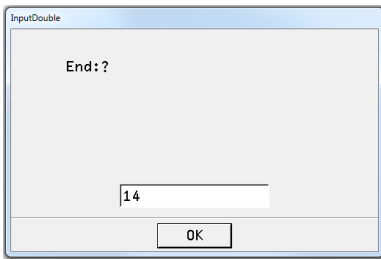
The following window asks whether these values should be entered again.



If the values are to be entered again, this question is answered with Yes and the input window for the start of the interval appears.



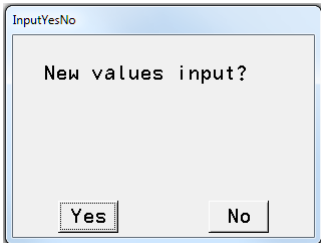
The new value can now be entered here.
For the above example -16



After OK the window for the end of the interval is opened.

According to the above example, 16.1 is entered here

This concludes the input for correlation function H (matrix harmony) and prompts for correlation function I (matrix I).



This is repeated until the values for the matrix DA (dynamics absolute) are entered.

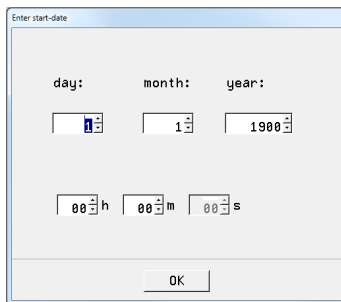
After the somewhat longer calculation, the results are in the graphic fields Graphic 1 to Graphic 4. These graphics can each be selected individually with the button:



are stored.

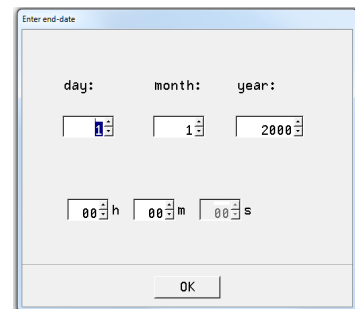
2.4 Matrix Probability

This module compares the group of events with randomly selected groups of the same strength in the selected time period (Monte Carlo simulation).

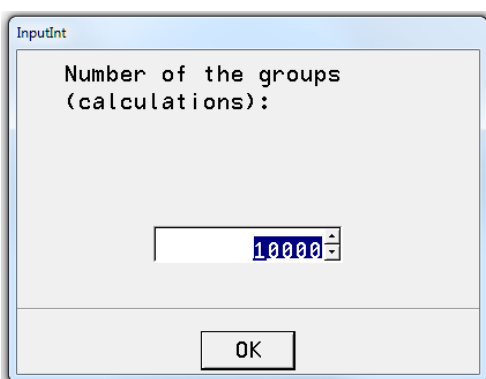


At the beginning the time period is queried again. *If the Continuum module has run, this only needs to be confirmed with OK.*

The **Event Analysis** module must have been calculated before (at some point!).

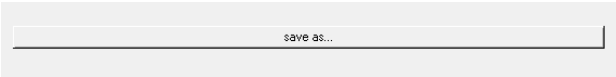


The final query is:



The program was now calculating and with a high number of events per group it can take a little longer.

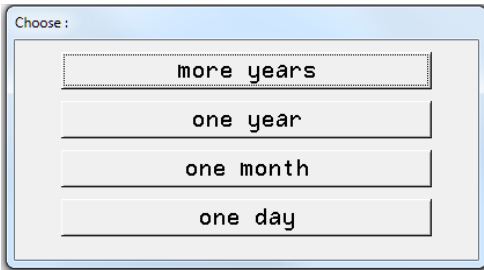
The results can be found in Text 3 and Graphic 1 to Graphic 4. They can be displayed again with the button



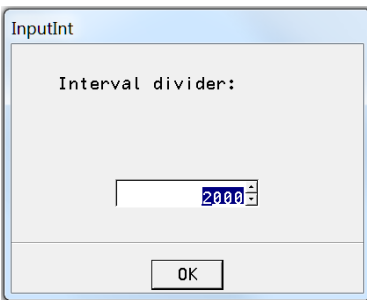
stored individually.

2.5 Planetary Fluctuations - time quality

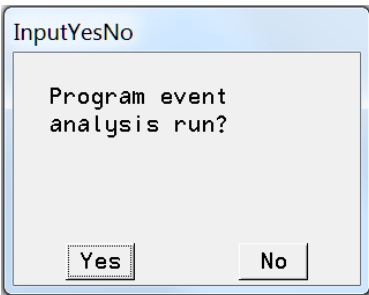
This module calculates the correlation function for a selected time period.



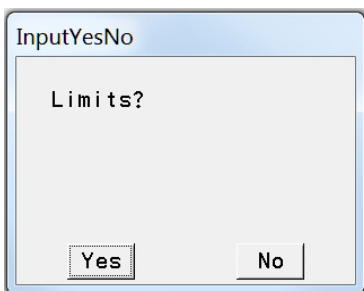
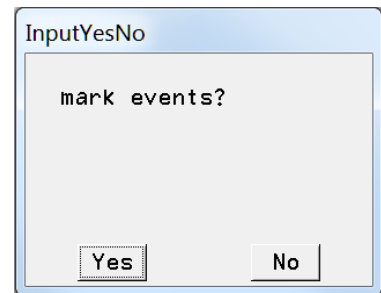
The first query defines the interval to be calculated. Attention: The resolution of the graphic is limited (1920 x 1080). Therefore it must be noted that the high frequencies (IC Moon, Mercury, Venus) can only be calculated meaningfully for small time periods such as day and month. In the example **one year** is chosen.



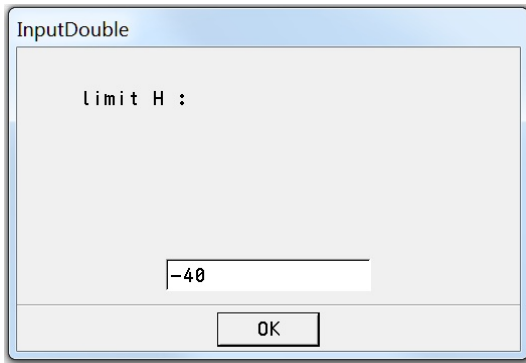
The graph has a horizontal extension of 1920 bits. It is normally not necessary to increase the interval divider. However, it should not be smaller than 1920 either.



If the program "event analysis" has run before, the events can be displayed as vertical lines in the graphic. To do this, the following entry must be answered with Yes.



This module can calculate for the events in this period how many events overwrite a limit value. Here it can be useful to select the "Interval divider" larger (up to 100 000).



The limit values for H, then for I, D and DA are queried.

In this example:

limit H = -40

limit I = 80

limit D = -220

limit DA = 750

```
year 1911.00 month 6.00 day 15.00 hour 1.00 minute 59.00
i=37 event H -41.319
year 1911.00 month 1.00 day 3.00 hour 15.00 minute 24.00
i=39 event H -38.072
** limit H: -40.00 events: 2 * 1 events over limit **
```

The curves are in Graphic 1 to 4, the limits in Text 1 to Text 4.

The numbers of the events in the list and the value of the matrix are given.

Good luck with the application of the program!

If you have any problems or suggestions for improvement, please contact:

michael.nitsche@lettris.de

or go to the homepage: www.planetare-korrelation.eu

The book and the program are free.

If you think it's worth it, I would appreciate a donation!

https://www.paypal.com/donate?hosted_button_id=MF7RSPA943W2J