Research Article

Journal of Robotics and Automation Research

Fluctuations of the planetary gravitational field and nonlinear interactions with matter as an element of artificial intelligence.

Michael Nitsche

Michael Nitsche Bachstraße 13 72415, Grosselfingen Deutschland

*Corresponding author
Michael Nitsche, Bachstraße 13 72415, Grosselfingen Deutschland.

Submitted: 30 Mar 2022; **Accepted:** 06 Apr 2022; **Published:** 13 Apr 2022

Citation: *Michael Nitsche. (2022). Fluctuations of the planetary gravitational field and nonlinear interactions with matter as an element of artificial intelligence. J Robot Auto Res, 3(1),124-130.*

Can the harmonics of the fluctuations of the planetary gravitational field be applied as an element of an AI for forecasting?

For the first time, extensive research has been done on the harmonics of the planetary gravitational field [1]. Gravity is a force that acts both on large scales, the planetary system, and on small scales, on the micro scale of atoms. The kinematics of the planets correspond to oscillators that have been stable and have been able to exert their effects over billions of years of evolution. The gravitational forces are weak and sensually only in the coupling of sun and moon in the tides directly noticeable. As in nonlinear optics, the special effects of the fluctuating gravitational field become visible only in the harmonics. A correlation function constructed to indicate the change in probabilities for stable (harmonic) and unstable (disharmonic) states is applied to a wide variety of situations and events. The found correlation function was used to study the structure formation of human intelligence, the stability of mental processes, human developmental psychology, social events and crises, and also the triggering of earthquakes [2].

The correlation function (derivative of function (1) see [1]) is a Fourier series expansion of a periodic process and can be optimized in its order as well as in its frequencies for the respective problem.

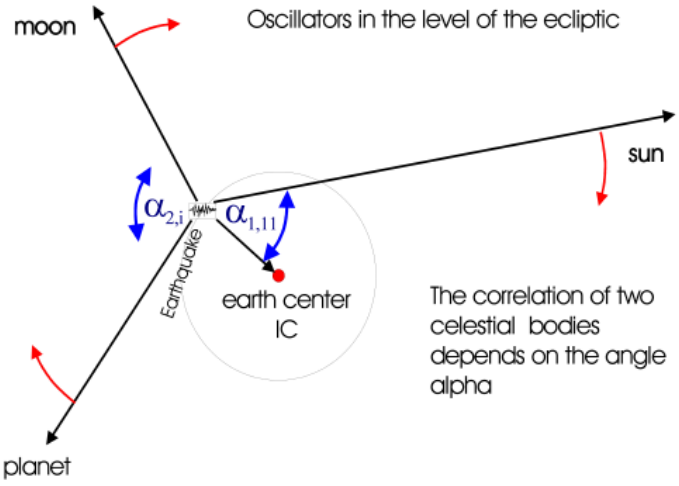


Figure 1: Angle a2,i is the distance between the moon and planet i. Angle a1,11 gives the angular difference between the sun and the center of the earth IC.

$$Hi,j = \sum_{s=1}^{N\cdot 12-1} a_k \cos(s\cdot\alpha); mit(k = s \bmod 12) \quad (1)$$

$$a_k = \{0,1,-2,3,-5,0,3,0,-5,3,-2,1\} \quad (2)$$

Hi,j - correlation of celestial bodies i and j; a angle under which the two celestial bodies appear from the Earth, calculation according to e.g. [9]; N - order of correlation; s,k - running indices.

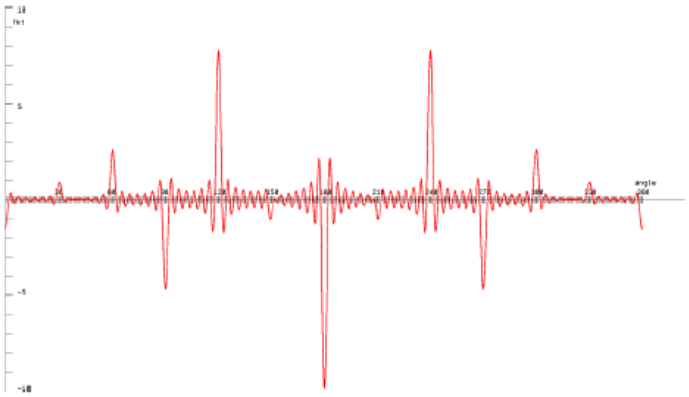


Figure 2: Correlation function hi,j 7th order according to equation (1) with n=7. the higher orders of the correlation function are suitable for resonance problems. positive values indicate harmony.

The research method using the example of triggering earthquakes. Earthquakes have various causes and can be triggered by different events, among others also by distant large earthquakes. There are already investigations about the interaction of gravity by sun and moon [3,4]. In the investigations known to me the harmonics of the large planets were not included.

Earthquakes are classified into groups in a certain period of time. An ordering point of view can be e.g. the magnitude. The following investigations refer to earthquakes in the years 1996 to 2002, a total of 588 earthquakes with a magnitude of m = 6.5 and greater or which caused severe damage [5]. For each event a correlation matrix is calculated according to formula (1). All events are superposed. Each element of the matrix consists of the superposition of 588 events. The matrix is mirrored at the diagonal. Thus, the element (4 column / 6 row) = -0.04 is the correlation Venus- Jupiter of 588 earthquakes in the period.

The values of the elements for the matrix tend to zero for the continuum and for large time periods. The greater the deviations from zero, the less random the events.

Computer printout of the research program freely available for research [6]:
Statistics 4: Probability of events: correlation matrix H
Order of the correlation: 4 ; time shift d: 0 h: 0;
GROUP-MEMBERS: 588 ; NUMBER OF THE GROUPS: 3000
Julian-date-start: 2450083.458333 Julian-date-end: 2452640.458345
Accidental selection; TEST: Number of accidental selection >= correlation

CORRELATION-MATRIX H AS INPUT

	1	2	3	4	5	6	7	8	9	10	11
1	*	0.04	-0.10	-0.06	0.06	-0.08	0.01	0.07	-0.00	0.00	0.09
2	0.04	*	0.04	0.02	-0.13	-0.02	-0.04	0.02	-0.12	0.08	-0.02
3	-0.10	0.04	*	0.11	-0.05	-0.06	-0.05	0.05	0.10	0.15	-0.08
4	-0.06	0.02	0.11	*	0.06	**-0.04**	-0.09	0.02	-0.06	-0.08	-0.15
5	0.06	-0.13	-0.05	0.06	*	-0.09	-0.17	0.21	0.12	-0.05	-0.08
6	-0.08	-0.02	-0.06	-0.04	-0.09	*	0.03	0.05	-0.02	0.09	0.04
7	0.01	-0.04	-0.05	-0.09	-0.17	0.03	*	0.10	0.32	-0.15	-0.14
8	0.07	0.02	0.05	0.02	0.21	0.05	0.10	*	-0.00	0.56	0.02
9	-0.00	-0.12	0.10	-0.06	0.12	-0.02	0.32	-0.00	*	-0.18	-0.04
10	0.00	0.08	0.15	-0.08	-0.05	0.09	-0.15	0.56	-0.18	*	-0.08
11	0.09	-0.02	-0.08	-0.15	-0.08	0.04	-0.14	0.02	-0.04	-0.08	*

The matrix below gives the probability versus the 3000 control groups of 588 random events each in the time period. The calculation is based on Monte Carlo simulation. Significant values are marked in blue. The value for the above element (4/6) is 88.90, indicating that 88.9% of the control groups have higher harmony. For the matrix sum 85.80 (85.80% of the control groups in this period have a higher harmonic) the earthquakes are not yet significantly disharmonic, individual elements are.

Matrix H of the probability of error:

	1	2	3	4	5	6	7	8	9	10	11		
1	*	29.47	67.13	**100.00**	25.33	93.60	48.90	17.10	50.40	50.23	10.10	PR	39.53
2	29.47	*	32.37	41.20	**96.83**	57.60	68.43	36.63	**95.10**	13.40	61.10	PR	70.90
3	67.13	32.37	*	46.40	82.60	62.93	75.17	61.37	33.97	12.40	86.30	PR	64.80
4	100.00	41.20	46.40	*	50.03	**88.90**	**94.67**	42.63	62.50	**98.40**	97.97	PR	**99.90**
5	25.33	96.83	82.60	50.03	*	25.03	19.87	33.27	7.57	**96.63**	86.27	PR	60.70
6	93.60	57.60	62.93	88.90	25.03	*	93.27	17.10	13.70	6.83	29.73	PR	35.00
7	48.90	68.43	75.17	94.67	19.87	93.27	*	**95.87**	5.13	28.30	**97.83**	PR	81.03
8	17.10	36.63	61.37	42.63	33.27	17.10	95.87	*	90.63	47.80	44.87	PR	43.47
9	50.40	95.10	33.97	62.50	7.57	13.70	5.13	90.63	*	70.57	71.23	PR	21.47
10	50.23	13.40	12.40	98.40	96.63	6.83	28.30	47.80	70.57	*	84.97	PR	49.67
11	10.10	61.10	86.30	97.97	86.27	29.73	97.83	44.87	71.23	84.97	*	PR	**97.50**

bigger are: 85.80 %
1=SUN; 2=MOON; 3=MERKUR; 4=VENUS; 5=MARS; 6=JUPITER; 7=SATURN; 8=URANUS; 9=NEPTUN; 10=PLUTO; 11=IC;
BEGIN: year: 1996 month: 1 day: 1 hour: 0 END: year: 2003 month: 1 day: 1 hour: 0

9 of 55 elements of the matrix are significant with <=5% p<=0.05 Probability of error: 0.0015
2 of 11 elements of row sums are significant with p<=2% p=0.025 Probability of error: 0.0296

If not the function H is considered but the superposition of the magnitudes of the superposed elements S|Hi,j| (representing the energy of the harmonics) and a weighting of the planets according to the strength of gravity is performed, the matrix I = S|Hi,j| is also significant with probability p = 1.47. If only the sun and moon are considered, the matrix becomes highly significant with p = 0.17 (Fig 3).Of the 10000 control groups, each with 588 randomly selected events, only 0.17% (17 control groups) have higher energy than the earthquake group. The further investigations of the 588 earthquakes showed that about 6% of the considered earthquakes can be triggered by sun, moon and major planets. This figure of 6% can certainly be increased if the energy level is optimized and other elements of the correlation function are added. The research program [6] also calculates the density function from.

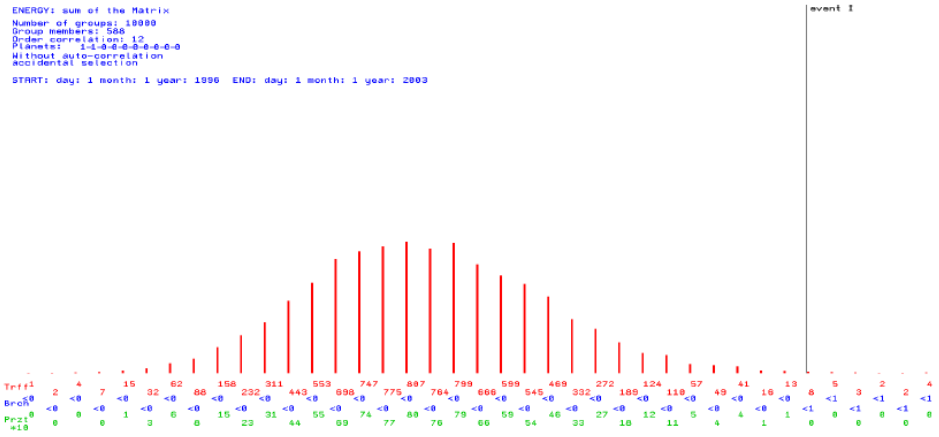


Figure 3: density function for 12th order energy of sun and moon for 588 earthquakes.

For further investigations, it can be hypothesized that a trigger or threshold energy exists that is constantly decreasing. Before this threshold energy becomes zero, small external disturbances (e.g. weather events) can have a triggering effect. But this can also be the fluctuations of the planetarym gravitational field in the higher frequencies. Earthquakes occur at all times. When the threshold energy drops, they can also be triggered by harmonics of the gravitational field. This seems to be a characteristic of highly complex nonlinear systems that small external energies can trigger large changes.

IQ stimulation during the period of a person's birth process.

The computer program [6] can also be used to examine other events and find characteristic patterns. The example below shows a grouping according to a mean IQ. It can be shown that a harmonic time, indicated by the correlation function H, positively influences the IQ of the human being in the period of birth. The IQ was determined with the performance test system LPS according to Horn [10].

In the following table the significant values are marked red and blue (evaluation of the computer program). Individuals highly gifted:

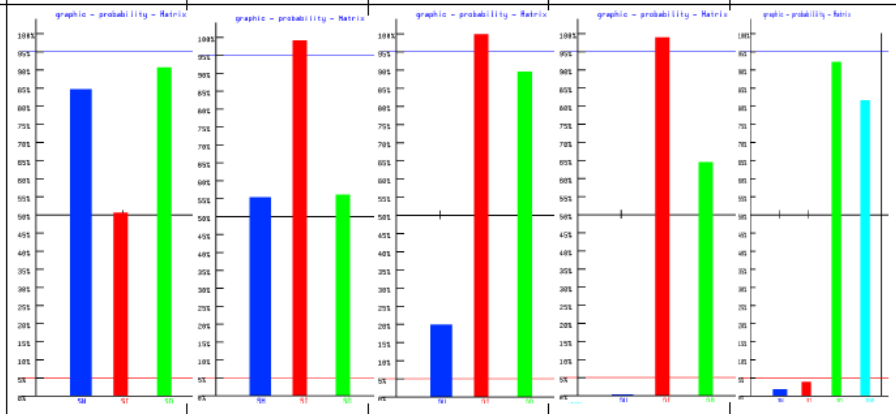
Grupp/ Probability	1 (46 Individuals)	2 (46 Individuals)	3 (47 Individuals)	4 (47 Individuals)	5 (62 Individuals) highly gifted
Correlation H	84,67	55,31	19,45	**0,23**	1,80
Energy I	50,54	**99,03**	**99,75**	**98,92**	3,80
Dynamic D	90,60	56,06	89,05	64,48	92,15
D absolute	**98,02**	94,29	**99,95**	**99,63**	81,50
medium IQ	96	100	109	122	>130
Data basis [1]					

Table 21: trend of correlation function for increasing IQ. The probability of error for harmony and energy (**p = 0.038**) of the highly gifted is only **0.008231.** D is the first derivative of H and DA is the superposition of the absolute values of D. The significance levels are plotted at 5% (red) and 95% (blue).

The human brain is a highly complex system of nerve cells whose organization and interconnection via synapses is neither genetically nor otherwise completely determined. Thoughts, feelings and strategies of the human intellect are not predetermined in all details.

Here, the intelligence of the brain is assumed to be a complex system performance for survival strategy characterized by stability and instability of the neuronal structures. A generally accepted definition of intelligence does not exist today.

The development of intelligence of a human individual depends on many influencing factors. Very important is the genetic constellation, which is given by the parents. In addition, many factors of the environment have an effect on this development. Last but not least, the psychological personality concept is also significantly involved in the further development of intelligence.

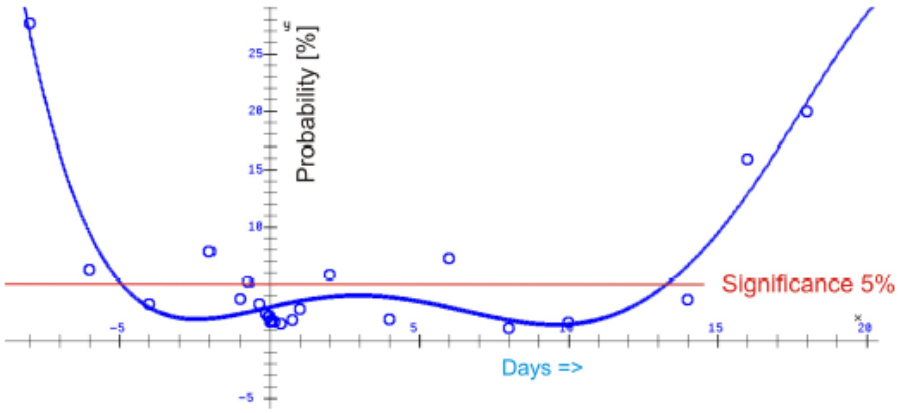


Figure 2: significance range of a harmonic correlation function H before and after birth for the studied group of highly gifted persons.

Important result of these studies: A harmonious and stable period before and after the birth of a human being has a promoting effect on the later intelligence of the child. This is consistent with other studies in the birth period.

Correlation with mental instabilities

Resonances of cosmic fluctuations are understood as interactions with existing patterns. These structures have originated in an earlier structure formation process of the planetary fluctuations and then have been "frozen" (e.g. In the period of the birth), so the hypothesis. An indication that such patterns exist will be shown by the following investigation. In this case, the correlation function (1) is related to a time point t0 . This point in time represents, so to speak, a "birth state" to which the correlations refer. In addition to the cross correlations of the planets Hi, j the self correlations Hi,i are added now.

Is the stability or instability of mental processes influenced by planetary fluctuations? The dynamic system of the brain, in order to be as adaptive as possible, must operate near a chaotic state. Such a point of instability could be the alternation between concentration and inattention. At the address: http://safire.net/sara/ a dissertation by Sara Klein Ridgley has been published on the Internet, which deals with accidents at work and their timing relative to the birthday of the accident victim. It evaluated 1005 accidents that resulted in hospitalization. The results of this study are shown in Fig 3. The original data of the birthdays and the accidents could not be obtained, so that the calculations with the correlation function (1) must be based on the figures given here. The disadvantage is that the accidents were each summed up to 1/12 of the year. This grid does not allow to investigate higher frequencies. The influence of a possibly disharmonious moon in autocorrelation is therefore not detectable.

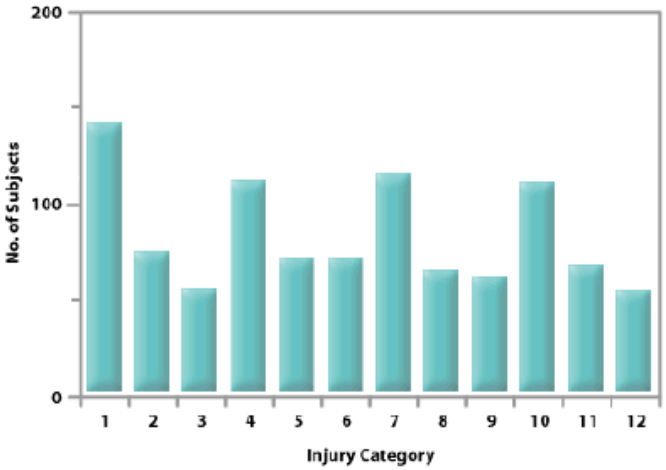


Figure 3: accident frequency relative to birthday according to a study by Sara Klein Ridgley. The number 1 indicates the period (1/12 of the year) around the birthday. The number 7 denotes the period (1/12 of the year) half a year away from the birthday. The deviations from the expected values are highly significant (according to Sara Klein Ridgley).

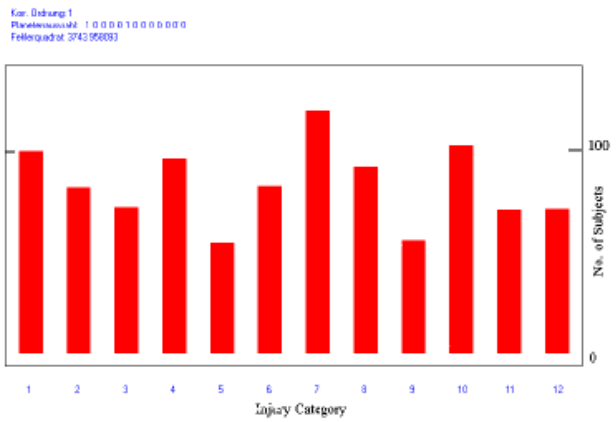


Figure 4: accident frequency relative to the birthday. This picture was calculated with the correlation function (1) for qualitative comparison with fig 3. These are the autocorrelations of sun and Jupiter. The number 1 indicates the period (1/12 of the year) around the birthday. The number 7 represents the period (1/12 of the year) , which is half a year away from the birthday.

The time around the birthday indicates a higher probability of accidents than would be expected from the interaction of the Sun and Jupiter. This may also be due to the fact that alcohol is sometimes involved on the birthday.

Temporal rhythms in society

The lower orders of the correlation function (1) are suitable for the consideration of larger periods of time. Do the stable (harmonic) or unstable (disharmonic) time qualities have an influence on social events? The investigations with the correlation function suggest this. It takes little time to find out that the rhythms of the planets Jupiter to Pluto, Neptune excluded, indicate a very large disharmony for the years 2009/2010/2011. The curves calculated with the program [6] for the time quality of the planetary rhythms are shown in Fig 5

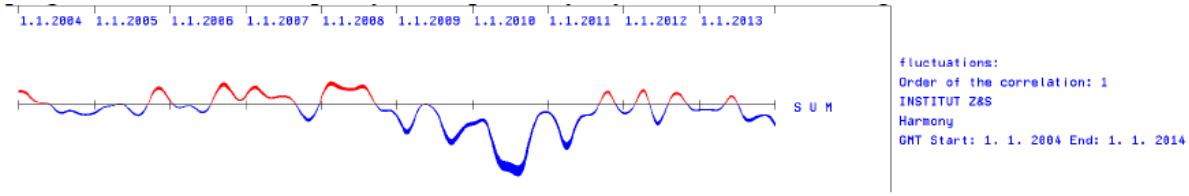


Figure 5: Time quality H from 2004 to 2014 of the planets Jupiter, Saturn, Uranus and Pluto.

If the topmost curve is below the center line (blue area) it indicates disharmonies. Above the center line (red area) harmonies determine the planetary rhythms.

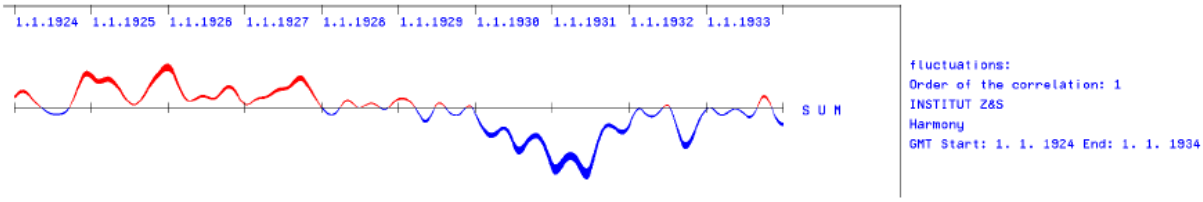


Figure 6: time quality H from 1924 to 1933 of the planets Jupiter, Saturn, Uranus and Pluto. If the topmost curve is below the center line (blue area), it indicates disharmonies. Above the center line (red area), harmonics determine the planetary rhythms.

Can similar major disharmonies in planetary rhythms be discerned for the future?

How do these crises behave over a larger period of time? For this purpose, 100 years are calculated. Fig. 7 shows the results:

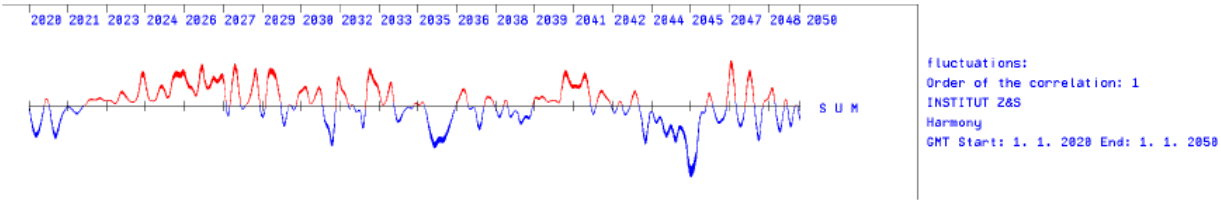


Figure 7: Time quality H from 2020 to 2050 of the planets Jupiter, Saturn, Uranus and Pluto.

In fact, a strong disharmony can be seen for the years 2043 to 2045. It is even the strongest disharmony of the whole century. If the oscillator Neptune, which played only a marginal role in the financial crises, is added, the character of the crisis changes only marginally.

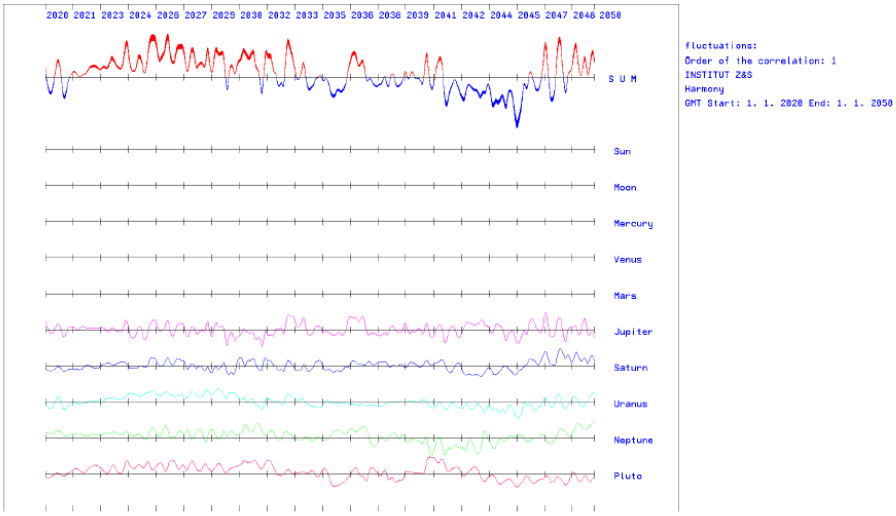


Figure 8: Time quality H 2020 to 2050 of the planets Jupiter, Saturn, Uranus Neptune and Pluto.

In the case of Pluto, gravitational effects are not expected to play a role. In this case it will probably be exclusively the orbital frequency. The year 2045 is the year of the apocalypse for the Fermi Paradox and also the year of the Technological Singularity according to Raymond Kurzweil [7]. The next 30 years will go down in history as a watershed period. [8]

Concluding remarks

In this article an attempt was made to open a new mathematical approach in the field of stability theory [11] and to apply it to the planetary system. This approach could be further extended by astronomy, for example concerning the variations of the intrinsic rotation of sun and planets. However, the presented work goes one step further. It is assumed that the fluctuations in the stability of the planetary system correlate on the one hand with fluctuations of processes on individual planets like the Earth. And by connecting series of events with qualifiable states on the earth with comparable qualifiable states in the planetary system, a statistically significant correlation results in surprisingly many and very different areas (earthquakes, social processes, individual psychological developments etc.). With it nothing is said about the causal connection! A computer program has been created, with which empirical investigations can be compiled, which also make forecasts possible to a certain extent. This could be important in the public interest, in the area of the environment (earthquakes, volcanoes, climate instabilities) as well as in the area of the society (social and political instabilities).

How could AI contribute?

The investigation presented here has made it probable that certain patterns recur in both the harmonic and disharmonic states of the planetary system. Similar relationships are present in phenomena and processes on planet Earth, for most events in our environment are multifactorial in nature and unfold within systems that strive to maintain equilibrium (steady state). If, on the basis of the model presented here, screening programs and then learning programs based on them are developed, then not only events with maximum discharge (such as earthquakes of very high magnitude) can be identified. Furthermore, the option arises to consider the selected processes with much higher resolution. In addition, the quality of the correlation can be confirmed and continuously improved. Nonlinear impulses (triggers) play a non-negligible role in this process. The method presented here not only on events of the past but can also be verified with forecasts.

References

1. https://www.researchgate.net/publication/359230689_Microgravity_-Fluctuations_of_the_planetary_gravitational_field_and_nonlinear_interactions_with_matter
2. Michael Nitsche. (2022). Triggering Earthquakes Fluctuations of The Planetary Gravitational Field and Nonlinear Interactions with Matter, Eart & Envi Scie Res & Rev. 5(1): 01-18.
3. Kennedy, M., Vidale, J. E., & Parker, M. G. (2004). Earthquakes and the moon: syzygy predictions fail the test. Seismological Research Letters, 75(5), 607-612.
4. Witze, A. (2016). Moon's pull can trigger big earthquakes. Nature News.
5. "Earthquakes of magnitude 6.5 or greater or ones that caused fatalities, injuries or substantial damage." Compiled by Waverly J. Person;SGS National Earthquake Information Center;http://neic.usgs.gov/neis/eqlists/significant.html
6. Computerprogram for free download: http://www.planetare-korrelation.eu/program-stro.htm
7. Raymond Kurzweil; https://de.wikipedia.org/wiki/Raymond_Kurzweil
8. Morris, I. (2011). Wer regiert die Welt. Warum Zivilisationen herrschen oder.
9. Meeus, J. (1992). Astronomische Algorithmen. Barth.
10. LPS nach Prof Horn; https://de.m.wikipedia.org
11. https://de.wikipedia.org/wiki/Stabilit%C3%A4tstheorie