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Список присутствующих, зарегистрировавшихся на заседании:

1. Билык А.
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11. Шишка Д.

1. **СЛУШАЛИ:** Доклад: Пугач А.Ф. Приборная иидикация неизвестных воздействий

В докладе украинский ученый, к.ф.м.н., с.н.с., сотрудник Главной астрономической обсерватории НАНУ и член Координационного совета, соучредитель УНИЦА «Зонд» Пугач А.Ф. представил основные результату работы по регистрации нетривиальных воздействий при астрономических и других событиях, а также продемонстрировал мобильную установку регистрации и ее работу в действии.
Доклад сведен в прилагаемую публикацию на английском языке.

ТОРСИНД – ИНДИКАТОР НОВЫХ ЭНЕРГИЙ

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Summary

A preliminary analysis of the four-year quasi-continuous observations for the reaction of the ultra-light disc torsion balance (the so-called torsind) has been performed. It is shown that the torsind response to the unidentified natural phenomenon in the period 2009-2013 have increased by about two orders of magnitude.

It is found that besides the well-known responses to solar/lunar eclipses and other astronomical configurations the torsind sometimes responds very clearly to signals of unknown nature causing continuous rotation of the torsind`s disc. Some descriptions of these phenomena called “spikes” are given including examples of actual observations. Also parameters of several spikes are indicated.

Keywords: *torsion balance, torsind, solar activity, spikes, spiral vortex radiation from the Sun*

INTRODUCTION.

In recent years astronomers began to use a new device – torsind that allows some unconventional astronomical observation. It is able to record that is inaccessible for other astrophysical equipments. In particular, it “feels” the sunrise and sunset events, a transit of Venus across the sun`s disk, the Moon-planet connections, and very clearly responds to the lunar and solar eclipses. A solar one causes a torsind reaction even when the unit is located deep under the ground, and the eclipse occurs on the opposite side of the globe.

Special studies have established that the torsind perceives an unexplored influence which can be associated neither with gravity nor electromagnetism. Perhaps it is responding to a new kind of solar radiation being unknown to modern science. The special significance of this radiation is that it transfers a torque which causes a torsind disk to rotate.

This article aims to show that the power of this hypothetical radiation has increased by at least two orders of magnitude in recent years.

Torsind Description

Torsind is a specific type of torsion balance that uses a very light metal disc instead of the linear beam of a classical unit, suspended from a monofilament made from natural silk, instead of quartz or a rigid suspension. The housing of the torsind is made from a quartz cylinder (Fig. 1). The design of such a balance makes it insensitive to variations in gravitational potential and ensures that it is unaffected by gravitational (tidal) influences from any direction

A web-camera monitors the disc rotation. The webcam connected to a computer is mounted above the upper face of the cylinder. The device used is fully automated one and does not require the presence of an observer. A detailed description of the device may be found in [1].

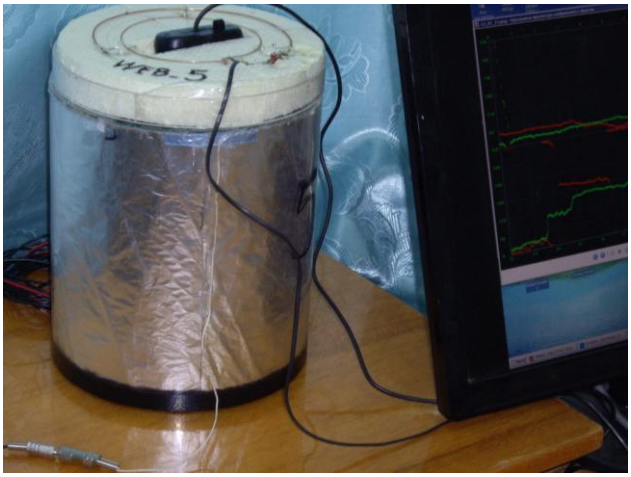

Fig. 1. A general view of the torsind.

Since mid-2008 the torsind has been sited in Main Astronomical Observatory (Kiev, Ukraine) in an isolated, shaded room with tightly closed doors and windows, the entrance being disbarred to outsiders. Our observations were performed in very favorable conditions:

- the device was installed on the 4th floor of the not operated telescope tower;
- absence of any mechanisms within 50 m, such as motors and generators or moving mechanical objects;
- absence of electrical and wireless devices (except for one computer);
- no mechanical vibrations;
- complete silence and absence of strong light and heat radiation.
- closed room, no visitors. Access to the room was only available to the leader of the experiment.

Over the past 3 years neither instruments themselves, nor measuring method have not been subjected to any significant changes.

Results of the observations

The purpose of the observations was to continuously detect the rotation of the torsind disk. One measurement was taken each minute. Thus, the 1440 readings were being obtained provided smooth operation of the device during the day. Changing of these readings over time was showing a diurnal dynamics of the disk rotation. Fig. 2 shows an example of a diagram when the torsind behavior was relatively calm, and the amplitude of the variations did not exceed 360 degrees.

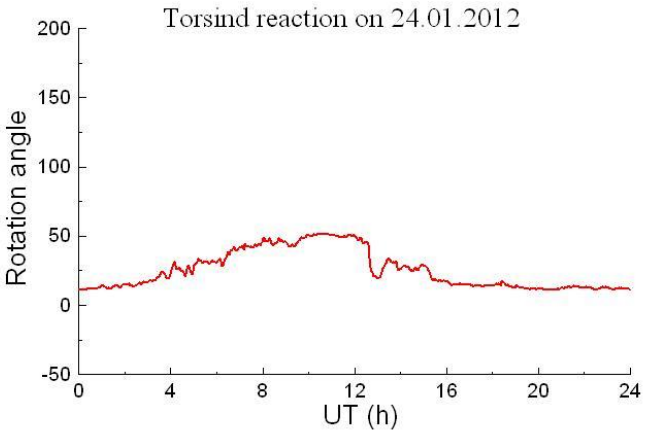

Fig. 2. The typical torsind reaction within a day

If during a day torsind disk took a few revolutions, then the raw unprocessed diagram has the form shown in Fig. 3. The fact is that a scale of the device was only scaled from 0 to 360 degrees.
In that case if the disk of the device made more than one revolution, then a discontinuity appeared at the point 0=360 (in Fig. 3 three such gaps are seen on the diagram). Such a curve should be made continuous, eliminating gaps at 0=360 degrees.

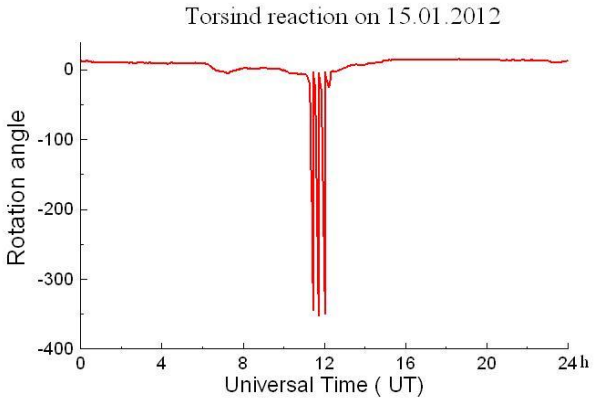

Fig. 3. A raw unprocessed diagram

For this, all values lying after break point must be changed by ± 360 degrees, depending on which a direction of the disk rotating is CW or counterclockwise.
Following this treatment a revised continuous diagram for diurnal observation looked as shown in Fig. 4. It should be borne in mind that the Y- ordinate has not absolute zero point. Therefore, all the readings can be shifted along the axis Y by an arbitrary number of (n * 360) degrees.

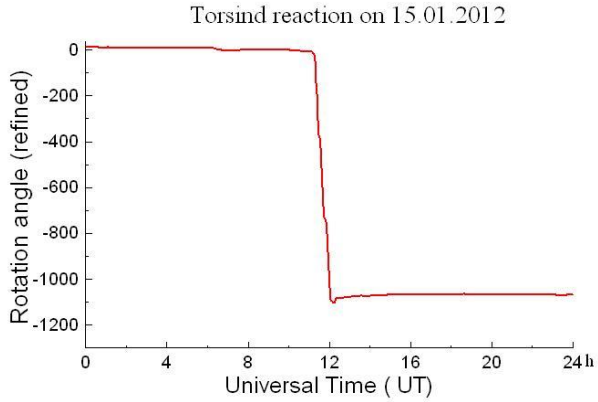

Fig. 4. The refined diagram for observations shown in Fig. 3.

A number of such refined daily measurements were considered to be a random sequence, and for this numerical sequence simple statistical methods were applied. We determined the average value $\mathbf{a_0}$ of a random variable and a standard deviation **SD** (in degrees) for each day. The parameter **SD** such determined can be considered as an indicator of the instrument response or as a degree of activity of the process, which causes the torsind disc to rotate.

The primary purpose of this publication is the determination of the parameter **SD**. Studies have shown that on an average the values **SD** increased over the period 2009-2013, as indicated by the graph in Fig. 5.

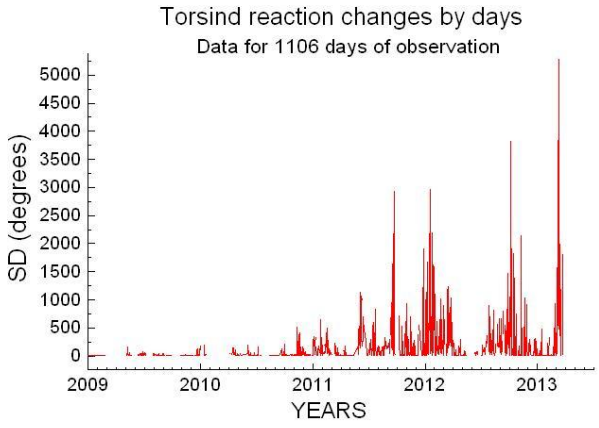

Fig. 5. Change of the parameter SD over time

COMPARATIVE ANALYSIS

As can be seen from Figure 5, the parameter SD has grown at around two orders of magnitude over the past years. We had reason to believe that the growth of SD may be associated with an increase in solar activity. Then a comparison of the SD parameter with the solar activity index SN was carried out. This index SN depends on the number of sunspots. Fig. 6 shows the variation of the index of solar activity according to the Solar Influences Data Analysis Center (SIDAC) at the Royal Observatory of Belgium.

Comparison of Figures 5 and 6 suggests their similarity. However, the attempt to find a direct correlation between the parameters SD and SN did not lead to positive results. Despite the general trend towards an increase the most of the individual peaks or minima on the curves do not match.

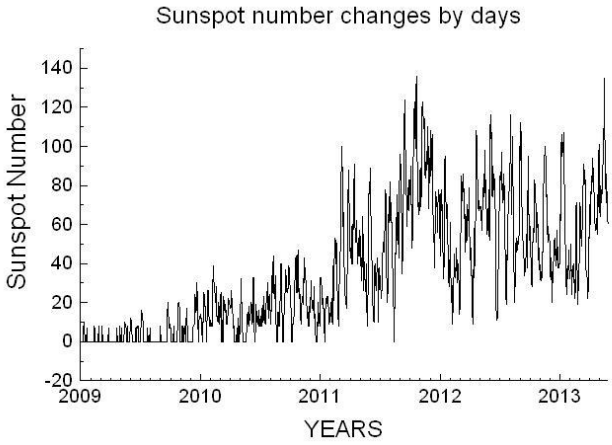

Fig. 6. Change of the Solar Number (SN) over time

Approximately the same pattern is observed when comparing the monthly averaged SD and SN data. Monthly averages data for torsind measurements and solar activity index are shown in Fig. 7, and Fig. 8 accordingly.

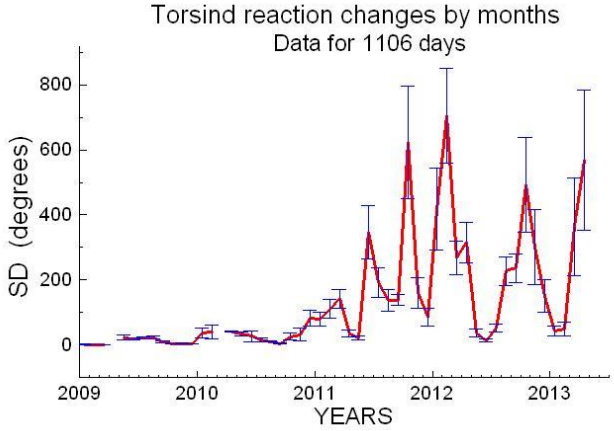

Fig. 7. Monthly averaged data presented in Fig. 5

When comparing Figures 7 and 8, one can see the similarity of the both curves which tend to increase. Each of the graphs clearly distinguished several significant peaks of increasing amplitude.

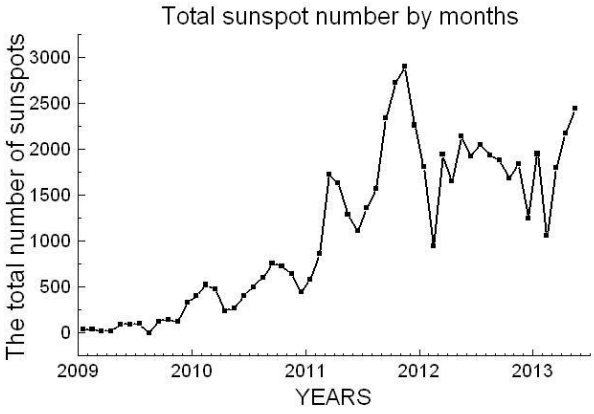

Fig. 8. Monthly averaged data presented in Fig. 6

However, the peaks in the figures 7 and 8 do not coincide with other, and also have the different widths. One of the reasons why the peaks do not coincide in time, and also have different widths will be discussed below.

SPIKES

A cursory analysis of our observations indicates that torsind responds not only to the planet-sun configuration. In some cases it a reaction to certain factors, not associated with astronomical phenomena, seems to be much stronger.

High torsind activity in separate date (see, eg, Fig. 4) is due to the very powerful effects that can be described by the word "spike". Conventionally, the spike is an event when the torsind disk makes 2-3 or more consecutive revolutions. However, in some cases, the amplitude of a spike can reach several thousand degrees!

A spike is called “double” when the disk rotation in one direction is then replaced by a rotation in the opposite direction after reaching the extreme point. If such a change was not, and the disc was rotating in one direction, the spike is “single”.

Clockwise rotation of the torsind disk is conditionally called "right-handed". Rotation in the opposite direction is left-handed. Thus, the double spike necessarily includes right and left directions.

If the beginning of a spike corresponds to the left rotation (i.e. reduction of the readings) such a spike is called "negative."

Fig. 9 shows a plot of a double negative spike recorded on October 12, 2011. On this day the torsind initially made 10 full revolutions CCW for 6.3 hours, and then from 11.9 UT it did 7 revolutions in the opposite direction.

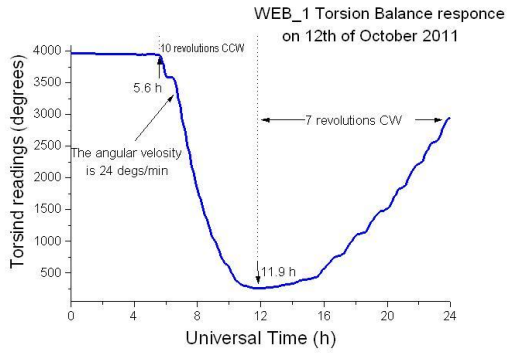

Рис. 9. Пример двойного отрицательного спайка

A double positive spike of very high amplitude was registered on 16.01.2012 (see Fig. 10). Its characteristics are indicated in the figure itself.

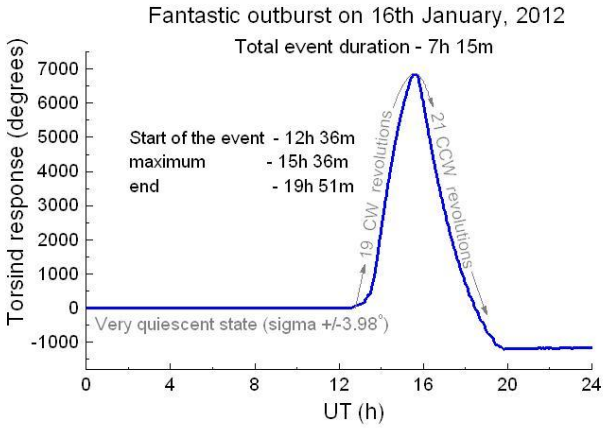

Рис. 10. Пример двойного положительного спайка

It is noteworthy that prior to the spike torsind disk remained at approximately the same position for a few hours. At that time, he showed only small fluctuations with a standard deviation σ □ ±4°. Then from 12h 36m to 15h 36 m the disc accomplished 19 full CW revolutions. Attention is drawn to this sharp transition from almost absolute rest to a very high activity.

ОПРЕДЕЛЕНИЕ СТАТИСТИЧЕСКОГО ПАРАМЕТРА АКТИВНОСТИ

Поскольку между фрагментами непрерывных измерений, представленных на рис.2, существуют разрывы и пробелы, то из них нельзя получить полное представление об общем характере переменности сигнала, регистрируемого торсиндом. Для полноты описания этого параметра мы использовали простые статистические методы.

Все суточные измерения (от 0 до 24 часов UT) рассматривались как рядовая выборка случайной величины и для нее вычислялись элементарные статистики: среднее значение и стандартное отклонение SD. Величина SD рассматривалась как мера реакции прибора, отвечающего на некое воздействие окружающей среды. Носитель этого воздействия, его природа, причины появления и механизм взаимодействия с прибором в данной статье не обсуждаются по причине недостаточной изученности. Рассматривается только вопрос о количественной стороне этого воздействия, точнее – о его изменении во времени.

Результаты измерений и вычислений за 2009-2012 г.г. графически представлены на рисунке 5.

Здесь параметр D – это стандартное отклонение суточного ряда случайной величины, в качестве которой выступает азимут, на который указывает маркер торсинда. При обработке исходного ряда учитывалась следующая особенность торсинда. Дело в том, что круговая шкала торсинда имеет формальный разрыв в точке 0-360 градусов. Если диск прибора делает больше одного оборота, то приходится искусственно "достраивать" градусную шкалу, прибавляя к отсчетам значение (n-1)*360°, где n – количество сделанных оборотов, включая неполный. Такая процедура исключает точки разрыва значений, делая суточный ряд случайной величины непрерывным. Именно такие данные отображены на рис. 2, а стандартное отклонение суточного ряда обозначено символом D.

DISCUSSION

Before analysing the data it is necessary to recall some specific features of the torsind.

As a result of long term research with the device it has been found that the torsind does not respond to effects of gravitational or electromagnetic nature. For example torsind does not “feel” the tidal effect caused by the gravitational pull of the Moon. If it he had responded, we would have observed a 12-hour period, caused by the motion of the tidal wave around the Earth. This period has never been observed.

However the torsind, which was located underground at that time, had distinctly felt a solar eclipse happening on the opposite

side of the globe. Further, the torsind registered very clearly the transit of the planet Venus. The distance to Venus at that time exceeded 50 million kilometers! Each of these facts excludes the possibility that the instrument responded to any gravitational/electromagnetic interaction.

We can assume that the torsind as an extremely sensitive device detects a new non electromagnetic solar radiation, which is still unknown to scientists. The following facts imply that the source of this radiation is the Sun itself.

First, the reaction of the torsind is usually high in the daytime, when the Sun shines. Figure 2 partially illustrates this statement.

Second, the torsind responds to sunrise and sunset.

Third, the torsind reacts to solar and lunar eclipses, when the intensity of the radiation coming from the Sun changes.

Finally, the torsind registered clearly the moment of change of intensity of the incoming solar radiation during the Venus transit across the Sun`s disk.

С другой стороны, торсинд совершенно четко реагирует на события, так или иначе ассоциированные с Солнцем: восходы и заходы светила, солнечные и лунные затмения, прохождения планет по диску Солнца. Из настоящего исследования также следует, что реакция торсинда в последние годы усиливается наряду с повышением солнечной активности, определяемой по индексу солнечных пятен. Это обстоятельство несомненно указывает на связь параметра D именно с Солнцем.

From the viewpoint of mechanics the torsind reaction means that solar energy carries a certain torque. In what other way could the disk rotate around a vertical axis?

We assume that the so-called solar spiral vortex emanation (SSVE) is present in the solar radiation. The SSVE idea was suggested by Leningrad professor G.A. Nikolsky 9, 10 . This hypothesis is consonant with our results in the sense that it allows the transfer of a mechanical angular momentum by the fluxes of the solar radiation. And, thus, it can be accepted as a first approximation to explain the reason of the disk rotation.

This type of radiation is not well explored. Perhaps its study will lead to the discovery of new mysteries of the solar radiation.

CONCLUSIONS

Using of the torsind opens completely new possibilities for the study of unconventional phenomena observed in the space environment.

With a very high sensitivity and low inertial mass, the torsind can detect astronomical phenomena which are not yet available for the study by the other methods. In particular, in recent years some evidences were obtained which confirm the increasing intensity of the new energies, presumably associated with the Sun. These energies are interesting because they carry angular momentum, which can be used in practical human activity.

Simultaneous basic observations using a lot of torsinds distributed throughout the world, represent the special interest in our view.

This idea was proposed by Dr. Alan Stout (*give the name of the organization*) and supported by colleagues of the author of this publication.

This idea may seem ambitious. However, exploiting the up-to-date electronics, the resources of the 'open source' community and a crowd-sourced approach it should be easily possible. The scientists of the world who are interested in participating in this program may, through the author of this article, to address his questions of how to get methodological assistance, how to make or obtain the necessary equipment, as well as other matters related to the organization of our crowd-sourcing measurements.

The results of such collective measurements will bring the fundamentally important information about the reasons that cause the rotation of the torsind disk.

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Предложено провести подобный паралельный эксперимент на базе ФАКС НТУУ «КПИ» под руководством УНДЦА «Зонд» при регистрации нетривиальных воздействий ожидаемого солнечного затмения 03-11-2013.

ПОСТАНОВИЛИ: Поблагодарить А.Пугача за интересный доклад. Организационно приступить к планированию эксперимента на базе ФАКС НТУУ при регистрации нетривиальных воздействий ожидаемого солнечного затмения 03-11-2013: провести необходимую организационную работу (ответственны — системно-аналитический и информационно-технический отделы), подготовить материально-техническую базу (ответственный экспериментально-конструкторский отдел).

СЛУШАЛИ: В Центр подана анкета-заявка участника организации Гринюк И. который специализируется на электромагнетизме, и прошел собеседование в УНИЦА.

ГОЛОСОВАЛИ:
ЗА – 6 (шесть)
ПРОТИВ – 0 (ноль)
ВОЗДЕРЖАЛИСЬ – 0 (ноль)
КВОРУМ - 4

ПОСТАНОВИЛИ:
Принять Гринюк И. в «доблестные ряды звездного флота империи...» (цитата из НФ).

2. СЛУШАЛИ: Относительно следующего Заседания.
Предложено провести очередное Заседание Центра 23.10.2013.

ПОСТАНОВИЛИ:
Организационно подготовить проведение очередного Заседания Центра 23.10.2013.

Глава координационного совета Центра

Билык А.

Второй зам. главы координационного совета Центра, зав. информационно-технического отдела

Кириченко А.