

# Kepler's Conjunction for Two Strong Earthquakes in Türkiye in February 2023

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**How to cite this paper:** Safronov, A.N. (2023) Kepler's Conjunction for Two Strong Earthquakes in Türkiye in February 2023. *Open Journal of Earthquake Research*, 12, 27-43.

<https://doi.org/10.4236/ojer.2023.122002>

**Received:** April 20, 2023

**Accepted:** May 28, 2023

**Published:** May 31, 2023

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## Abstract

This work is devoted to the study of the relationship between strong earthquakes and planetary configurations using the example of two consecutive strong earthquakes that occurred in Türkiye (Turkey), on February 6, 2023. It is shown that at the time of the earthquakes, linear alignment of the planets along the Jupiter-Venus-Sun line was observed, that is, the astronomical trigger belonged to the generalized Kepler conjunction scheme (gKc), when the Earth does not participate in the linearization scheme. It is shown that for the first earthquake that occurred at 01:17 UTC, the ratio of the distances between Jupiter-Earth and Jupiter-Mars was close to an integer value equal to 5.993. For the second earthquake that occurred on the same day at 10:25 UTC, no integer resonance ratios were detected, however, it was found that the terrestrial e UTC line at the time of the earthquake passed through the position of Mercury. Recall that the 12-hour line of the eUTC chart is always oriented towards the Sun. The conclusions of the work once again confirm the correctness of the theories of Archimedes and Kepler and convince us of the existence of a gravitational phenomenon that does not depend on the distances and masses of planets, has a pronounced inertial and wave character and does not fit into the general theory of relativity, developed in the last century by Albert Einstein.

## Keywords

Earthquake, Archimedes Lever, Kepler Conjunction, Inertia, Gravitational Waves, Titius-Bode Law, Interference

## 1. Introduction

The purpose of this study is once again to test the relationship between the planetary geometry and strong earthquakes. Thus, this work, as well as the author's previous studies [1] [2] and [3], are not original since they represent a reworking

of the knowledge of the great ancient philosophers, astronomers and mathematicians, such as Pythagoras, Philolaus, Eudoxus, Plato, Archimedes, Aristotle, Hypatia and many others.

The astronomical method of long-term seismic prediction of seismic activity was often used together with seismoacoustic observations in underground tunnels that were cut under temples and other religious buildings, which were usually located near active geological faults in the Ancient World. In different periods of time and in different regions, this astronomical method of long-term seismic forecasting was called differently. In Ancient Egypt, this was called the Sirius principle or the Orion belt, due to the fact that the three stars of Orion and Sirius form a linear configuration in the celestial firmament.

In Ancient Greece this method was called the Pythagorean theory of musical strings (570-490 BC). Recall that the school of Pythagoras (570-490 BC) was at the Temple of the Muses, which was allocated in Crotona, in southern Italy. The Temple of the Muses was built over a geological crack, and there is a seismoacoustic tunnel under this temple. In Sicily and later in the Roman Republic and Empire the method has used at an Archimedes' level. In particular, it is well-known Archimedes' expression (Archimedes, Syracuse, 287-212 BC):

*“Give me a place to stand on, and with a lever I will move the earth.”*

If we move further on a historical scale, we will remember that the conflict of Neo-Platonism led to dramatic events. As it is known, Hypatia, the daughter of the famous mathematician and astronomer Theon, lived in Alexandria in 350/370-415 AD. According to historical records, she taught mathematics and astronomy at the Academy of Neo-Platonism. One of her students failed the geometry exam, got angry at Hypatia, killed her and set fire to the world-famous library in Alexandria. Another black date for ancient seismology and volcanology is the moment when pagan temples were closed by the Emperor Constantine I (272-337 AD). The Temple of Plutonium in Hierapolis, in south-western Anatolia, was one of the last to be closed at ~333 AD. A geological fault passed right under this Temple. The fault under this Temple is active to the present, and in this complex, there was a seismological tunnel called the Pluto Gate. Thus, the system of ancient seismic prognostic stations existed in the Mediterranean for ~550 years after Archimedes, who lived in 287-212 BC, and for at least ~200 years before Archimedes.

Later in Europe, Kepler investigated the effect of the conjunction of planets on the behavior of the Sun [4]. Over the past decades, the planetary-solar-terrestrial interaction and the correlation between earthquakes and the rotation of the Earth have been studied in the following chronology of research: Bollinger (1952), Tomaschek (1959), Burr (1960), Simpson (1968) [5] [6] [7] [8], series publications of Gribben and colleague (1971-1976): [9]-[14], as well as Wood (1972), Condon and Schmidt (1975), Ip (1976), Hughes (1977), please see [15] [16] [17] [18]. In some of these studies, the influence of the planet alignments on the earthquakes and sunspots has been called the *“Jupiter effect”*. In particular, in 1997, Geller wrote a critical review on earthquake prediction [19] [20], in

which it was contended that earthquakes could not be predicted.

Many studies have attempted to find a way out of the crisis. However, it should be noted that mostly the researchers again wrote about the tidal effect at planet alignment [21]-[30]. The conclusion of the community of geophysicists on the planetary-solar-terrestrial interaction was summarized in the works of Mörner *et al.* (2013), serial works of Scafetta, Okhlopkov (2014), Stefani with colleagues in 2016 and 2019, Marchitelli *et al.* (2020), and Safronov (2022), please see [31]-[39], and references in the cited studies. It is also necessary to pay some attention to the recently published reviews of Scafetta and Bianchini on the planetary theory of solar activity and climatic oscillations [40] [41]. Thus, the work of J. Kepler [4], published in 1606, has not been forgotten.

A number of attempts have been made to explain the influence of planetary configurations on solar activity, as well as seismic activity and volcano activity by modifying existing theories of gravity, i.e. within the framework of existing theory of relativity, please see the works published by Wilson (2013), Sidorenkov and Wilson (2017), Greco and Krasnyy (2021), Mouel *et al.* (2023) [42] [43] [44] [45], and the references given in them. However, in this study, as well as in the previous ones [3] and [39], the author assumes that the cause of these phenomena is of an inertial-gravitational nature, that is, it goes beyond the general theory of relativity.

The main opponents of these studies are supporters of Albert Einstein's theory. Billions of dollars were spent on substantiating Albert Einstein's theory of gravity. However, the ambiguous results obtained by the LIGO and VIRGO teams give reason to believe that the general theory of relativity, developed in the last century by Albert Einstein, is incorrect. The joint work of LIGO, Virgo and KAGRA reported that 35 gravitational wave events were detected between November 2019 and March 2020, 32 of which were most likely mergers of black holes (mBH), in which two black holes spiral around each other and finally join together, the event, which emits a gravitational wave burst by GWTC-3 Team (2021) [46]. Thus, these teams detect regular collisions of 3 mBH for two weeks. Note that this frequency is more similar to the frequency of bursts at shale gas mining than to the gravitational tsunami from black hole collisions.

On the other hand, numerous publications on the presence of planetary frequencies in climatic trend, in volcanic and seismic activity are well known; please see the discussion in [3]. On the other hand, numerous publications on the presence of planetary frequencies in the climatic trends, in volcanic and seismic activity are well known. Please note that the crisis, which currently has a long history for the geosciences, is also slowly brewing in parallel within various branches of astrophysics. In the solar activity, planetary variations are known until 1980. However, astrophysicists ignore this phenomenon. Secondly, since 2005, astrophysicists have begun to ban all publications about Titius-Bode law. Although it is well known that in the wave mechanics, the interference maxima or minima are observed at integer values between interference paths. However, such "*planetary numerology*" is not held in high esteem by some astrophysicists.

Note that the generalized Titius-Bode law is useful for describing the evolution of the planets of the Solar System, the formations of Saturn's rings and the spatial distributions of the satellites of Jupiter, Saturn, and Uranus, and is also used to predict the position of Plutinoes (objects beyond Pluto) in the Kuiper belt. In addition, new methods of astronomical observation have made it possible to explore remote exoplanets. Thus, the crisis of Albert Einstein's theory has spread to the latest studies of exoplanets, which confirm the verity of the Titius-Bode law. About Titius-Bode law please see e.g. [47]-[53].

Thus, the purpose of this study is to test the relationship between the planetary geometry and powerful earthquakes. Thus, this work develops the great ancient philosophers, astronomers and mathematicians and presents the principle of Archimedes planet levers or Kepler planet conjunctions at the modern level of knowledge.

## 2. Data and Methods

### 2.1. Study Objects

The object of our research is two strong earthquakes that occurred in Türkiye on February 6, 2023. The first earthquake destroyed towns and villages at 01:17:35 UTM, and the second earthquake occurred in the general area at 10:24:49 UTM. The epicenters of the earthquakes were located close to each other, respectively, at points with coordinates (37.174°N, 37.032°E) and (38.024°N, 37.205°E). The epicenters of these earthquakes were located at a depth of 17.9 and 10 km. According to the USGS, the magnitude of the earthquakes was  $M_w$  7.8 and 7.5 [54].

### 2.2. Astronomical Data and Instruments

To investigate the causes of earthquakes, we need to measure astronomical angles and distances between planets. Just like in [3], the Orbit Viewer java applet from Osamu and Ron [55] was used, which was created by Osamu Adjiki (AstroArts Inc.) in 1996 and modified by Ron Baalke (NASA/Jet Propulsion Laboratory, below JPL) in 2000-2001. The original Orbit Viewer is an interactive applet that displays the orbits of small bodies, such as comets and asteroids in the Solar System, in 3D projection. The orbits can be shown forward or backward. For example, the visualization of comet 1 P/Halley was presented in the JPL Small-Body Database Browser [56]. For simplicity, all the figures below are presented in a 2D projection in the planetary plane. In this projection, the direction of rotation of the planet is counter clockwise (CCW). The applet Orbit Viewer was adapted to measure the angles between the planets of the Solar System and determine the proportions in the arrangement of the planets. The following abbreviations were used in this study: Venus-V, Earth-E, Mars-M, and Jupiter-J.

The planets located along the line are designated as Planet<sub>1</sub>-Planet<sub>2</sub>-Planet<sub>3</sub>, in order of distance from the Sun. The calculation of the angle (in degrees) between the three planets was made when the vertex of an angle is located on a more distant planet.

Thus, maximum interference can be expected when the distances between the planets  $D_1$  and  $D_2$  are multiples, please see **Figure 1(b)**. In this study, the ratio of distances between planets was designated as  $\text{Planet}_1\text{-Planet}_2/\text{Planet}_3\text{-Planet}_4$ . Since we are investigating the processes of wave interference, we are looking for a situation in which the spatial ratio of distances between planets is close to integer value.

### 2.3. Studying Method

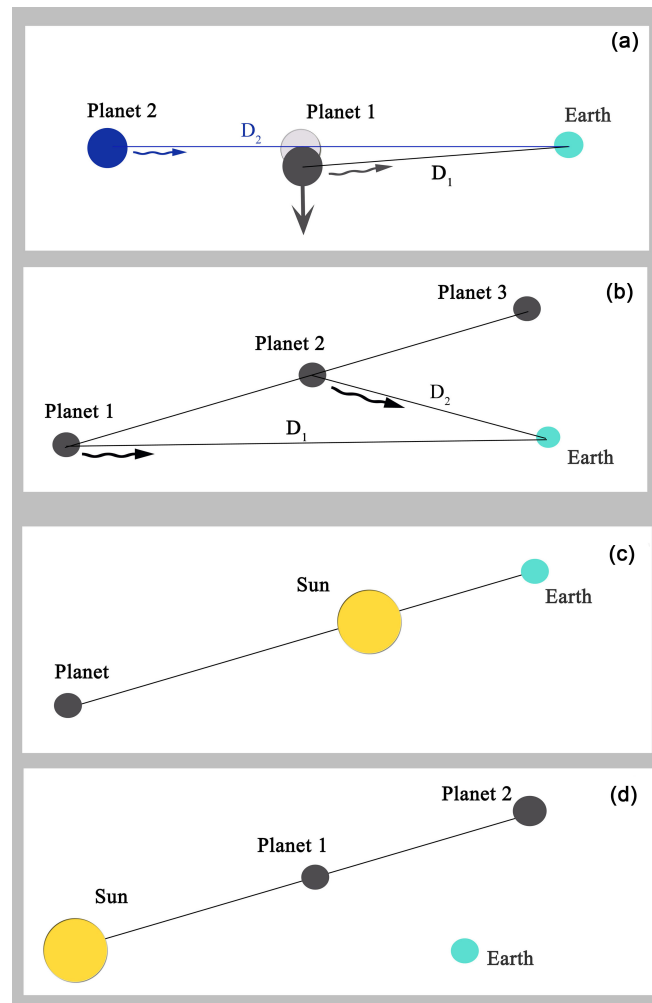
The four main alignment schemes of the planets and the Sun are shown in **Figure 1**. **Figure 1(a)** shows a planetary linear scheme, which in history was called as the Archimedes lever (AL). In this scheme, only planets participate in alignment process. **Figure 1(b)** below shows a diagram of triangular planetary interference. Due to the fact that the Earth does not participate in the alignment process, this scheme is called the generalized Archimedes lever scheme (gAL). Further, the study suggests that gravitational perturbations (vortexes) were originally created by the shading zones behind the planet due to incomplete compensation. Thus, maximum or minimum interference can be expected when the distances between the planets  $D_1$  and  $D_2$  are multiples, please see **Figure 1(a)** and **Figure 1(b)**. In history, it has happened that the contiguous or opposite heliocentric alignment scheme with the star-Sun was called the Kepler conjunction (Kc). **Figure 1(c)** shows such an opposite KC scheme. **Figure 1(d)** shows another alignment scheme of the Sun, in which the Earth is excluded from the linear alignment. This scheme is called the generalized Kepler conjunction scheme (gKc). The last catcher Remote Signal scheme is not shown in **Figure 1**, please see [3].

## 3. Results

### 3.1. Two Strong Earthquakes in Türkiye in 2023

This section explores the configurations of planets for two strong earthquakes, which were obtained by using the JPL Small-Body Database Browse java-script. Two strong earthquakes occurred on February 6, 2023 at 01:17:35, and at 10:24:49 UTC in south-western Türkiye. The configurations of the planets are shown in **Figure 2(a)** and **Figure 2(b)**, respectively. It is clear from **Figure 2** that these earthquakes occurred on the Jupiter-Venus-Sun alignments (J-V-Sun  $\sim 0^\circ$ ). Once again remind that planets in **Figure 2** are moving in a counter clockwise direction (CCW). The red lines and the red label in **Figure 2(a)** indicate the ratio of the resonance distances. The ratio of EJ/EM is equal to 5.993. The margin lines in **Figure 2(a)** and **Figure 2(b)** correspond to the terrestrial earthquake UTC time. Below this line is marked as eUTC-line. We remind you that the eUTC-line at noon (12 UTC) always ends in the Sun.

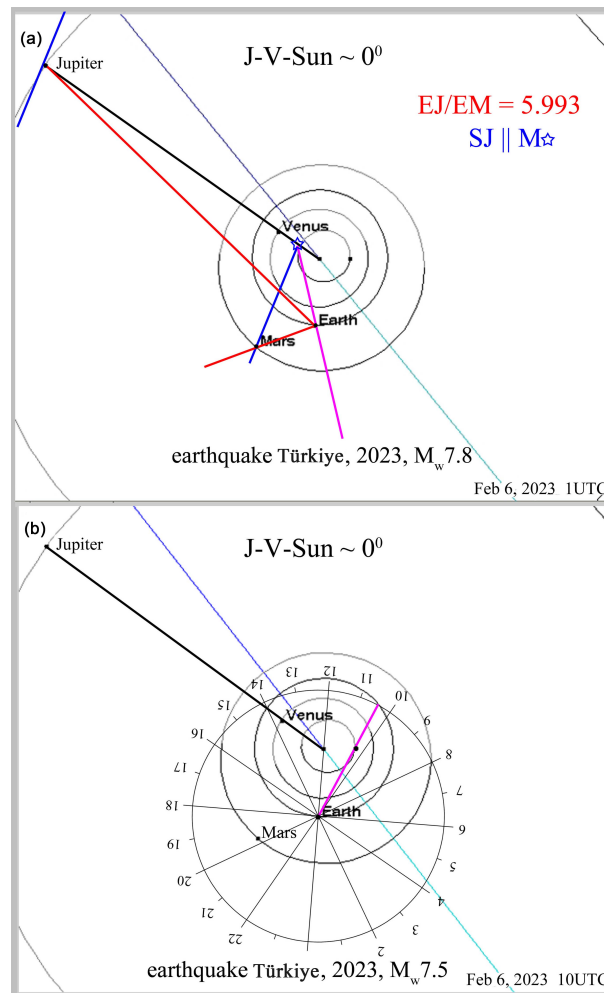
As shown in **Figure 2(a)**, the continuation of the eUTC-line crosses the position of pseudo source (blue star). This pseudo-source is located in the middle of Venus and Sun when the Jupiter-Venus-Sun alignment line (black line) crosses



**Figure 1.** Four schemes of alignment of planets and the Sun are shown: (a) a planetary linear scheme, which in history was called as the Archimedes' lever (AL); (b) a triangular scheme of planetary interference. This scheme is designated as the generalized Archimedes lever scheme (gAL). It is assumed that gravitational perturbations (vortexes) were created by the shading zones behind the planet due to incomplete compensation. Thus, maximum interference can be expected when the distances between the planets  $D_1$  and  $D_2$  are multiples of; (c) contiguous or opposite heliocentric alignment scheme, in history was designated as the Kepler conjunction (Kc); (d) another alignment scheme of the Sun, in which the Earth is excluded from the linear alignment. This scheme is called the generalized Kepler conjunction (gKc).

the orbit of Mercury. Also note that this point is the intersection between the blue line and the initial Jupiter-Venus-Sun alignment line. The blue lines indicate parallel lines, one of which is Saturn-Jupiter, and the other is Mars and a pseudo source (blue star). For the second earthquake, which occurred on the same day at 10:25 UTC, no integer resonance relationships were found.

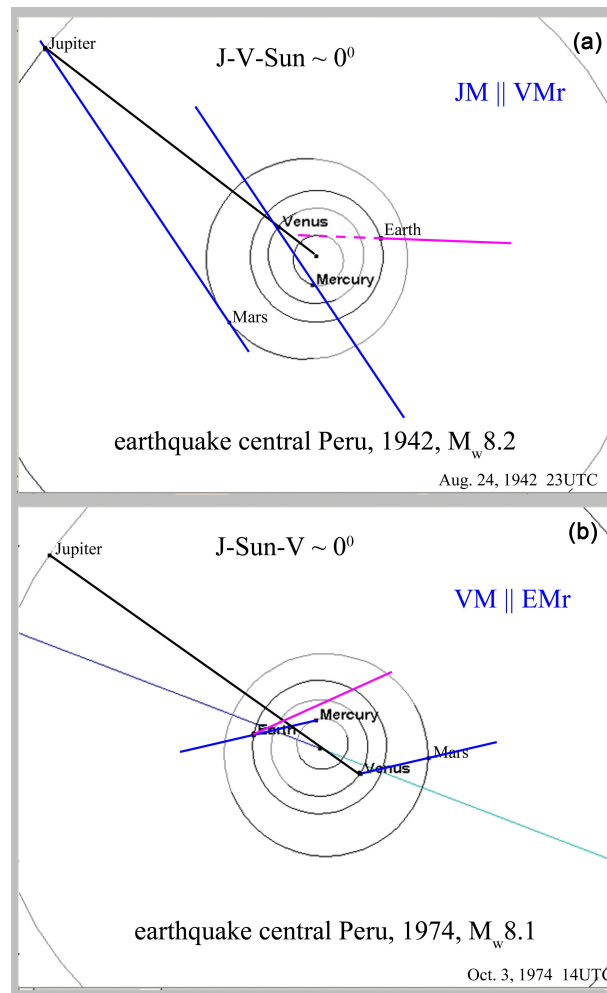
However, it is interesting to emphasize that the eUTC-line for the second earthquake intersects the position of Mercury, **Figure 2(b)**. For clarity of the eUTC-line destination the 24-hours polar eUTC-axis-diagram is presented in **Figure 2(b)** additionally.



**Figure 2.** The Jupiter-Venus-Sun alignment for two strong earthquakes that occurred in southwestern Türkiye on February 6, 2023 at 01:17:35, and at 10:24:49 UTC is shown in Figures (a) and (b), respectively. The planets in the Figures are moving in a counter-clockwise (CCW) direction. The red lines and red marks in Figure (a) indicate the ratio of the resonant distances. The axis of the galaxy was drawn in blue-green colors; these colors correspond to the center-anticenter directions. The 24-hour polar eUTC-axis is shown in Figure (b) additionally. The position of the eUTC-axis at noon UTC (12 UTC) is the direction to the Sun. The margin lines in Figures (a) and (b) correspond to the location of the terrestrial earthquake UTC (eUTC-line). In Figure (a), the continuation of the eUTC-line represents the transverse position of the pseudo source (blue star). In Figure (b), the eUTC-line is crosses Mercury position.

### 3.2. Similar Planetary Configurations

In this section, we compare the above-obtained configurations of planets for earthquakes in Türkiye, presented above, with other studied cases of strong earthquakes. Two strong earthquakes that occurred in Peru in 1942 and 1974 are shown in **Figure 3**. Both earthquakes occurred in the central part of Peru. The earthquake in Peru (1942) occurred on 24.08.1942 at 22:50 UTC and had a magnitude of  $M_w$  8.2 on Richter scale. Another earthquake in Peru (1974) occurred on 03.10.1974 at 14:21 UTC and had  $M_w$  8.1. As we could see from the results of

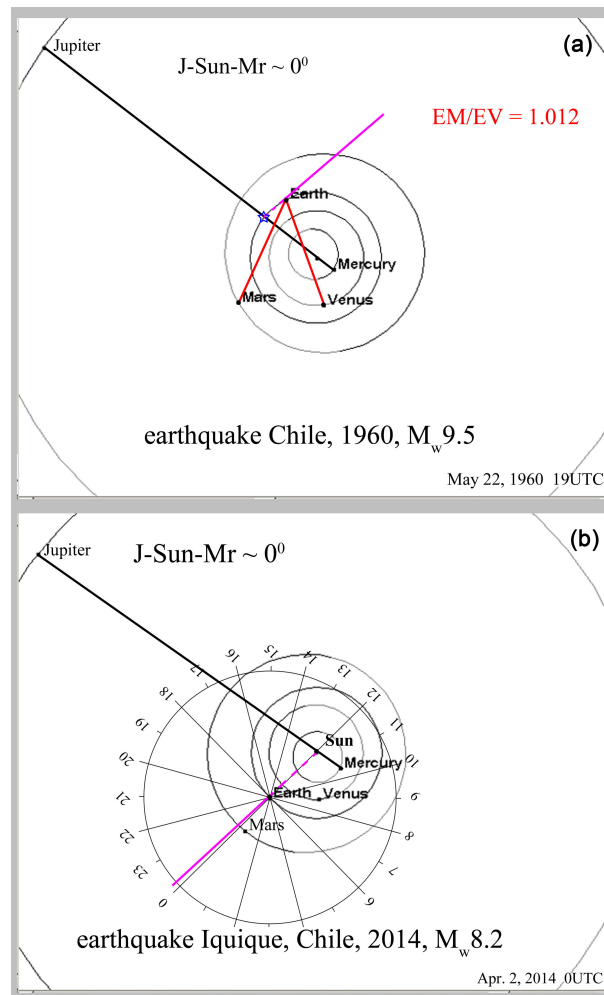


**Figure 3.** Two strong earthquakes in the central part of Peru in 1942 and 1974 with the Jupiter-Venus-Sun (a) and Jupiter-Sun-Venus (b) alignments are presented. There is inversion in the planet allocations; Earth and Venus are located on the opposite side of the Sun. The parallelism is highlighted with blue lines (blue lines). The margin eUTC-line is the terrestrial earthquake UTC location. As was shown in Figure (b) for Peru (1974) the eUTC line is directed to the position of Mercury, but the pass beside Mercury is at a temperate distance.

planet simulations, these earthquakes occurred with Jupiter-Venus-Sun (**Figure 3(a)**) and Jupiter-Sun-Venus (**Figure 3(b)**) alignments, but these selected earthquakes occur with inversion in the planet allocations. Venus in **Figure 3(a)** and **Figure 3(b)** is on opposite sides of Sun. As well as for first studying earthquake in Türkiye (**Figure 2(a)**), the pseudo-source of earthquake in Peru (1942) is located near the intersection of the alignment line of Jupiter-Venus-Sun and the orbit of Mercury. Once again, we remind that the blue lines in the Figure are highlighted by parallelism, and the margin lines correspond to the terrestrial eUTC line. For Peru (1974), the eUTC line is directed to the position of Mercury, but the pass beside Mercury is at a temperate distance (**Figure 3(b)**).

Two more cases of alignment of strong earthquakes are shown in **Figure 4**. These earthquakes occurred in Chile and have the same Jupiter-Sun-Mercury





**Figure 4.** Two cases of strong earthquakes with the Jupiter-Sun-Mercury alignments are shown: (a) earthquake in Chile, 1960 with a magnitude  $M_w$  9.5; (b) earthquake in Iquique, Chile, 2014 with  $M_w$  8.2. The margin eUTC-line is the terrestrial earthquake UTC location. The red lines and red marks in Figures (a) and (b) indicate the ratio of resonant distances.

alignments. The earthquake in Chile (1960), which occurred on 22.05.1960 at 19:11 UTC, had a magnitude of  $M_w$  9.5. The second earthquake in Chile, which occurred in Iquique (Chile) on 01.04.2014 at 23:46 UTC, had a magnitude of  $M_w$  8.2. The margin eUTC-line of the earthquake in Chile (1960) crosses a pseudo-source position (blue star in **Figure 4(a)**), which represents the line of intersection with the Earth's orbit. The margin eUTC-line of Chile (2014) illustrated in **Figure 4(b)** that signal to the Earth came from the Sun. The red lines and red labels in **Figure 4(a)** and **Figure 4(b)** indicate the ratio of resonance distances. Thus, during the earthquake in Chile (1960), Mars and Venus are in resonance.

#### 4. Discussion

In this section we will discuss two aspects. First, we will consider the question of what is the difference between the tidal and the planet alignment that cause

earthquakes. As it is known, in 1997 Geller published a critical review on the possibility of earthquake prediction [19]. In this review, Robert Geller mentions the works of Gibbin and his colleagues, which explore the possibility of predicting earthquakes by the alignment of the planets, see [9]-[14] and [57]. However, in later works this method of alignment is no longer mentioned; see, for example e.g. [58]-[62].

In addition to solar system planet alignments, another astronomical factor affecting earthquakes is mentioned in the literature. This is the tidal triggering of earthquakes. In particular, it is written in [61] that the tide is a road to earthquake prediction. Note that many of tidal works are devoted to the study of the tidal effects of earthquakes, see, for example, [63] [64] [65] [66] [67], and references in its. In a recently published review published by Yan with colleagues [68], the reader will find a detailed overview on this issue.

An important milestone in earthquake forecasting was the strong earthquake that occurred in Tohoku, Japan in 2011. After the Tohoku earthquake, Stein and his colleagues in a review [69] raised the question of why earthquake hazard maps often fail and what to do about it, also, please see the comment in [70]. In response to the question: what can go wrong, the following reasons are considered in detail: bad physics, incorrect assumptions, incorrect data or bad luck. However, despite the complete fiasco with earthquake prediction, neither Stein et al nor Frankel in [69] nor [70] do mention the influence of the astronomical factors specified above. Quite often these two astronomical factors are confused, so the differences between earthquake-causing tidal forces and the alignments of the planets of the solar system are presented in **Table 1**.

A secondary aspect requiring discussion is the relationship between “*reanalysis*” and “*forecasting*” and the statistical significance of the results obtained using these methods. As you know, the catastrophic earthquake in Türkiye in February 2023 was not predicted by the Turkish seismic services, which led to numerous casualties. However, F. Hoogerbeets from the Solar System Geometry Survey (SSGEOS), the Netherlands, made a timid attempt to predict strong earthquakes in Türkiye using the alignment of the planets [71].

So, we have to answer the question: is it possible to predict a strong earthquake using alignments of the planets of the solar system? In fact, we are discussing the relationship between reanalysis and forecasting methods. In mathematics, this is called the relation between a forward and backward statement; if the forward statement is true, is the inverse statement also true? Since this issue is causing a heated debate in seismology, for simplicity, we will consider it on the basis of a well-studied relationship between clouds and thunderbolts.

It is well known that in more than 99% of cases lightning events occur in the presence of clouds during regular thunderstorms. The remaining part of the lightnings, less than one percent corresponds to pyrolightnings that occur during severe wildfire storms, the volcanic eruption ash lightnings, the human-induced lightning, and several other exotic species. Thus, the direct statement reads as follows: since regular thunderstorms and lightning are observed in

**Table 1.** Comparison of tidal forces and alignments of the planets of the solar system impacts on earthquakes.

	Impact on the earthquakes	
	Tidal triggering of earthquakes	Solar system alignments triggering
Distance	Depend on distances between solar system objects	Does not depend on distance
Mass	Depend on masses of tide involved bodies	Does not depend on planet masses
Duration	Long duration, stress slowly changes	Short and sudden stroke
Angle	Any angle can be between planets	The angle must be equal to $\sim 0^\circ$
Physics	Law of gravity	Law of inertia + Titius-Bode law
Planets	Less than at tidal impact of Moon	The interference condition is required
Moon	More than at tidal impact of planets	None
Sun	None	The same effect such as at the planet alignments

the presence of clouds, therefore, the nature of thunderstorms and lightnings is determined by the physical processes in clouds. This direct statement is true and is beyond doubt. The opposite statement about the prediction of thunderstorm and lightning activity will be as follows: if someone saw a cloud in the sky, does this mean that there will be a thunderstorm with lightning? The answer, of course, is negative. Statistically significant correlation between thunderstorms/lightnings and rain clouds will be observed only in tropical and subtropical latitudes. However, there will be no statistically significant correlation between these phenomena in polar, subpolar and in some areas at temperate latitudes. This is due to the fact that in these regions there are no powerful convective flows that contribute to the rise of water vapor upwards. Simply put, there are many rainy days in England, but severe thunderstorms are rare.

Thus, even if the forward statement is true and statistically significant, the reverse statement may be statistically insignificant. The presence of clouds is not a basis for forecasting the activity of thunderstorms and lightning. To predict thunderstorm activity, it is necessary to know the state of water vapor in the cloud, the presence of ice crystals, the formation of charges, the features of charge accumulation and the magnitude of the electric potential between clouds and the Earth's surface. It is all simple and obvious.

Let's go back to our objects. By analogy, the alignment of the planets of the solar system corresponds to "*cloudiness*", and an earthquake event corresponds to "*lightnings and thunderstorm*". Recall that the solar system alignments during earthquakes were observed in 70% of cases of strong earthquakes, and the remaining ~30% of cases fall on catcher schemes [3]. Thus, repeated analysis clearly shows that the nature of earthquakes is determined by gravitational physical processes. However, the solar system alignment is only a necessary con-

dition for the occurrence of an earthquake, as well as the presence of clouds in the previous example. In addition, as in the situation in the previous example, the opposite statement is incorrect, that is, the presence of solar system alignment does not guarantee the success of earthquake prediction. Simply put, Hoogerbeets was lucky because, in addition to the solar system alignment, the resonance conditions were met. The creation of an astronomical earthquake forecasting system is at the beginning of the road, and in the future it will require more significant efforts from seismologists.

Please note that, in addition to the external planetary triggers of earthquakes, they can also be initialized by internal anthropogenic sources. In particular, Usmanova and Sattarov in [72] studied the strongest triple earthquakes in Gazli in 1976 and 1984 with  $M = 7.0 - 7.3$ , which were preceded by natural and technogenic triggers. It is indicated that the technogenic triggers included a 40-year gas pumping at the Gazli fields and two underground nuclear explosions in 1966 and 1968 produced near the epicenter of the tectonic Gazli earthquakes of 1976 and 1984. Further, Varotsos and Skordas in [73] investigated the ambient noise tomography by using the Green's function. In this study, it was proposed that the ambient noise tomography methodologies could demonstrate the potential of hydrocarbon entrapment in the study area. It is shown that it to be of usefulness in the study of earthquakes in the identification of the fractal dimension of the earthquake epicenters projected onto the Earth's surface. Therefore, it is necessary to investigate a variety of causes, including technogenic triggers that can also lead to the initialization of strong earthquakes.

## 5. Conclusions

The relationship between strong earthquakes and planetary configurations in the example of two consecutive strong earthquakes that occurred in Türkiye on February 6, 2023 is the object of this study. It is shown that during earthquakes, the linear alignment of the planets along the Jupiter-Venus-Sun line was observed. This alignment scheme refers to the generalized Kepler binding scheme (gKc). We once again emphasize that alignment is only a necessary condition for the occurrence of earthquakes, volcanic eruptions or a splash in solar activity [3] [39]. The phenomenon is enhanced by planetary numerology, that is, it consists of a real integer ratio of distances between planets. It was found that for the first earthquake that occurred on February 6, at 01:17 UTC, the ratio of distances between Jupiter-Earth and Jupiter-Mars was close to an integer value equal to 5.993. Also, we confirm that parallelism in the configuration of planets also has a certain effect. Further planetary configurations repeat after a while, so the statistics of earthquakes, eruptions and solar activity should have a periodic character with a certain planetary periodicity.

For the first earthquake, the continuation of the terrestrial eUTC line passes through a point that is the intersection of the Jupiter-Venus-Sun alignment line and the orbit of Mercury. For the second earthquake, which occurred on the

same day (February 6) at 10:25 UTC, no integer resonance dependences were detected. However, it was found that the terrestrial eUTC line at the time of the earthquake passes through the position of Mercury.

Thus, we have demonstrated that the strong earthquakes that occurred in February 2023 in Türkiye fit into the framework of studies published earlier in [3] [11] [27] [31] and [74]. The main conclusion of this study is as follows: we once again confirm the correctness of the theories of Archimedes and Kepler, which convince us of the existence of a gravitational phenomenon that does not depend on the distances and masses of planets, has a pronounced inertial and wave interference character. This phenomenon does not fit into the general theory of relativity, developed in the last century by Albert Einstein. Anyway, the reason for strong earthquakes should be sought in a wave astronomical nature.

### Conflicts of Interest

The author declares no conflicts of interest regarding the publication of this paper.

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