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What my tinnitus tries to tell me about the Milky Way

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Abstract: *A long-term sufferer from tinnitus describes unusually strong pulsed episodes experienced at nighttime. From April to October, the author (a light sleeper) is awakened several times nightly by pulses resembling strong tinnitus symptoms: the timing of successive pulses was very similar on successive nights. These sequential events were recorded nightly over periods of 1-2 weeks during 2012–2016. The last two pulses nightly occurred progressively earlier, with linear slopes (decimal hours/day) closely approached the 4 minutes on average earlier per night predicted for a phenomenon following a cosmic rather than a terrestrial scheduling. Pulses did not occur between October and the following April, which under this hypothesis, is consistent with the core of the Milky Way only being above the horizon from late spring to autumn. The hypothesis proposed is that an unspecified form of celestial radiation originating from the Milky Way, is reacted to by my auditory sense as a pulse of tinnitus sound. The core of the Milky Way is specified in the literature as a powerful sources of gamma, infrared and X-ray radiation, and is postulated here as a likely causative factor for my nighttime tinnitus-like symptoms, given the slopes of linear regressions of hour of occurrence-on-day, and its seasonal presence above the horizon. A hypothesis seeking to explain repeated pulses sensed at intervals of several hours could be that the source is only intermittently detectable, as might be the case if gaps in the star and dust cover only occasionally allow radiation to reach Earth. A possible reason for the author's sensitivity was a successful brain operation in February 2010 to remove a benign growth, leaving a permanent aperture (a burr) in the skull adjacent to the right ear. Literature suggests that this resembles a trepanned skull aperture, an operation applied in antiquity to priests and shamans.*

I. Introduction

I've suffered from a noisy companion for more than forty years, and his continual rampages have made me wish I could stop listening to him. Who am I talking about? - my tinnitus condition. The positive side of this malady is that due to 'him', I became more productive in my early specialization; ocean science. Only by keeping my mind active could I avoid focusing on his background noise, and strangely enough, this was an incentive for scientific productivity.

If you are also one of the afflicted, magazines and the television will tell you that your malady is incurable, but in the nineteen-seventies I tried an unconventional approach to moderating the impact of my tinnitus: I took a course in Transcendental Meditation. This removed 'him' from my center of attention and interested me in chi-related phenomena. Afterwards, I experimented with chi-related disciplines such as Qi Gong, shamanism, Pranic Healing and dowsing, and I attended the courses of Howard Lee, the energy sifu who cured Carlos Castaneda. Although none of these activities evicted my unwelcome guest, they made me aware of chi energy, that I became progressively able to sense. This led to another mystery: why does Science ignore a phenomenon with such incontrovertible reality?

Researchers are primarily persuaded by their own direct experiences, and personal experiments may lead to a multidimensional model of reality. It may be noted that I made no attempt to visually confirm my auditory experience, in part because the Milky Way is not often visible to the eye, but also because this might compromise the auditory phenomenon I am describing. The scientific validity of this type of first and second-person research on consciousness-related phenomena was stressed by Abreu et al. (2013) and complements later third-person laboratory or clinical studies which I am ready to undergo.

After this brief introduction, I return to tinnitus as a malady; which in my case, seems to have psi characteristics. The tone and volume of my unwelcome companion's noise depends on my state of mind, and the noise level around me. In an enthusiastic state, for example during a discussion, or when my aura was expanded, or on a beach or hillside with a fresh breeze blowing, my 'companion's 'song' is light, high, and I must admit, pleasurable! By contrast, distress, boredom, and when visiting localities where unpleasant events had happened or were happening, 'he' gives rise to louder, discordant tones.

My house is at the bottom of a steep valley with a prevalence of ground energy (Caddy and Elner 2015), and on damp nights I pick up visually a mist of chi particles close to the ground, and hear a continuous tinnitus signal, audible after dusk as a low pitched sound. I was already aware that 'ground energy' (see Madis 2013) generates auditory phenomena, by noting the synchrony between a strong dowsed signal for ground energy, and my tinnitus response. Tinnitus as a malady, is often a consequence of hairs in the cochlea being damaged by chemical contaminants or excessively loud noises, so that they continue to discharge even when silence prevails. This brings me to the main point of this article: 'objective observations' made in the summer

months when sleeping on the ground floor of my house near Ardea, south of Rome. Between late spring and autumn over the last 4 years, I have been woken during the night by apparently scheduled noise episodes resembling electronic vibrations, often accompanied by green coloured rapidly-moving images with no obvious significance.

Night-time observations on sound pulses

I am a light sleeper, and am often awakened by strong tinnitus-like sensations which typically last 20 minutes to three quarters of an hour. To help clarify this phenomenon, I wrote down the starting times of these episodes on a notepad next to my bedside without turning on the light. The total duration over which episodes of tinnitus-like sounds were experienced in nighttime was approximately 7-9 hours (see Fig.1). The first observations of the night were longer and fainter in sound and not as clear cut as the later ones.

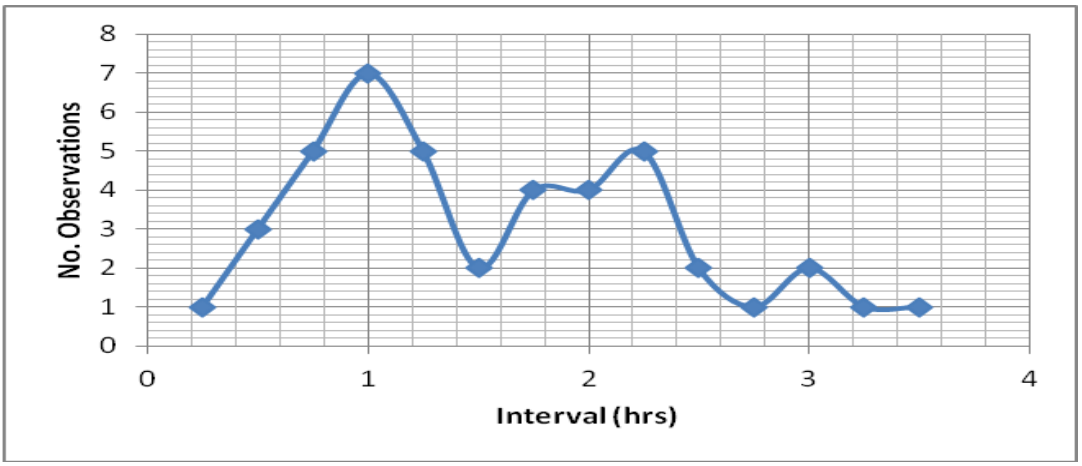


Fig 1. Histogram of time intervals in 2013 between sequential series of sound pulses in a night (from Caddy and Elner 2015).

It was easy to categorize individual sound pulses due to their regular timing on successive nights (Fig 2). In a joint paper (Caddy and Elner 2015), I reported on the timing of these pulses over a 2-week period in the spring of 2013 (Fig 2). In this paper I am reporting on repeated series of observations in order to deduce possible annual coverage.

My 'normal' tinnitus sound is a continuous high note with the blood pulsing faintly in the background, but the night time pulses were not typical of chaotic tinnitus episodes. They were repetitive bursts of sound: the volume rising to a crescendo over 20-30 min before fading out slowly. The early night episodes were weaker but more prolonged than the shorter, often uncomfortable pulses sensed later.

In searching for possible external inputs, as strongly suggested by the apparent scheduling of the phenomenon, I considered both seismic and celestial phenomena (see Caddy and Elner 2015). In 2013, northern Italy experienced earthquakes a month or so prior to my first 'tinnitus observations' at Ardea, 40 km south of Rome. Since the quake zones were 400 km north of my house, seismic events seemed unlikely as the source. The alternative hypothesis was that my tinnitus episodes were recording my sensitivity to some other external stimulus. Since these 'tinnitus' episodes persisted unchanged in 2014 - 2015 when ground tremors had ceased, it seems we were correct in the earlier paper to rejected seismic events as possible causes.

The significance of these regular nightly episodes was still not obvious, but from their apparent independence from other bodily sensations, I deduced that I was picking up signals generated outside my body, rather than randomly-generated spasms originating in my brain.

The Milky Way and sidereal and solar times

According to Wikipedia, the Galactic Centre of the Milky Way is marked by an intense radio source called Sagittarius A*. The motion of material around the center of the galaxy indicates that Sagittarius A* harbors a super-massive black hole, some 4.1–4.5 million times the mass of the sun. Although invisible from Earth, structures above and below the surrounding disc are visible to astronomers as globular clusters (Sokol 2016). For observers from the Northern Hemisphere between 65 degrees north to 65 degrees south on the Earth's surface, the core of the Milky Way is in the southern sky between April and October, and then disappears under the southern horizon until the following spring.

In astronomy, the concern is with how long it takes the Earth to spin with respect to the "fixed" stars, not the Sun. A sidereal day is about 4 minutes shorter than a solar day (Anon 2015; Spottiswoode 1997). This measures the time for one complete rotation of the earth relative to a particular star: (see: 'Sidereal Time' in

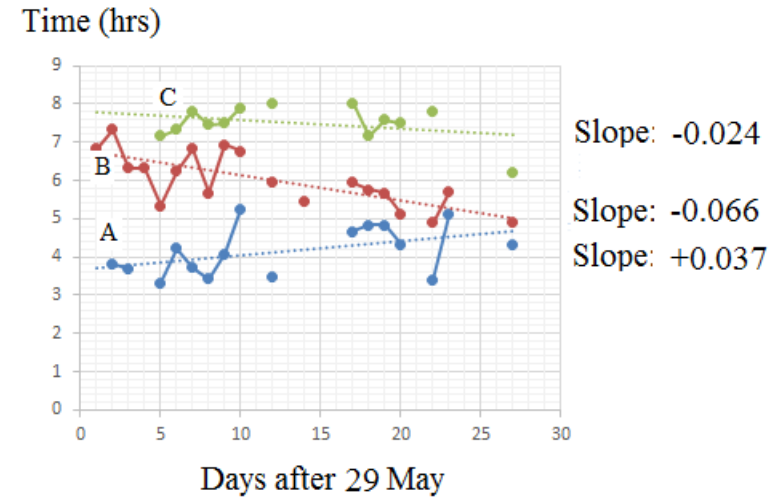
Wikipedia). Given my nighttime auditory sensibility, the possibility of a cosmic cause for my nocturnal disturbances could be determined by whether they occurred 4 minutes earlier each day. One example of a linked neural phenomenon was described by Spottiswoode, who used this characteristic to show that the time of disruption of experiments on telepathic communication at a particular hour of day was a statistical function of a cosmic phenomenon, in that disruptions occurred some 4 minutes earlier on successive days. These episodes of low telepathic success were noted when the Milky Way core was high in the sky.

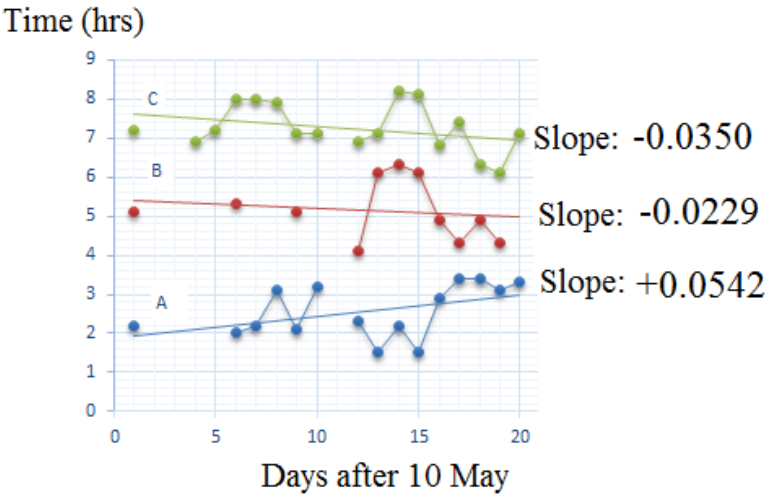
The time sequence of my night time tinnitus episodes

The series of observations made on my 'tinnitus episodes' in the spring-early summer of 2012 were hypothesized to be associated with a cosmic input. Later in May, three separate series of pulses were detected. The earliest 'tinnitus episode' was faint in sound but long-lived; lasting up to 40 min in duration. This series of early pulses showed a positive slope, occurring later in time on successive nights. However, the slopes of the times of later nightly sound pulses, in the autumn of 2015 and spring of 2016, had a negative slope, of the same order of magnitude as the predicted sidereal value (Table 1; Fig 2).

Opinions of experts are sought on this point, but one possibility is that in the first nightly experience, the observer was beginning to detect the Milky Way core as it rises above the horizon. If so, the observer's position may be represented by point A on Fig 3. This earliest nightly signal may have been weakened by a long transmission through the atmosphere, and possibly subject to diffraction as hypothesized in Figs 3 and 4, given that the postulated incoming radiation would have been tangential to the Earth's surface. Deviation of the trajectory of the radiation (Fig 4) may have allowed its detection just before it rose above the horizon, distorting its relative time of sensing?

As noted, the duration of signal perception was actually much longer for the earliest stimuli, when the observer was supposedly located at point A, than for later observations (B &C).





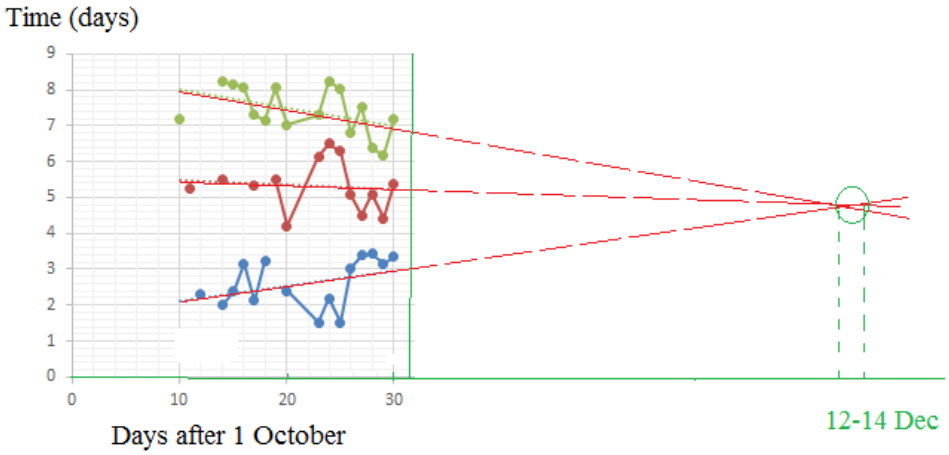


Fig 2: Times of occurrence in decimal hours for May 2012, late May – June 2015, and (bottom), October-November 2015 of nightly tinnitus-like phenomena waking me. The last graph for Oct-Nov 2015 shows how the three linear regressions converge: a phenomenon shown less perfectly for the other two groups of regression lines.

The time sequence of my night time tinnitus episodes

The observations on my 'tinnitus episodes' could be associated with a cosmic input, judging from the slope of the daily times of occurrence of the stronger pulses B & C, which moved forward by several minutes on successive nights throughout 2014 – 2016 (Table 1; Fig 2). The absence of tinnitus episodes in winter also reinforces the hypothesis of a causation associated with the Milky Way core being in the sky, since during this winter period it is below the horizon in the Northern hemisphere.

Table 1. Slopes of linear regressions on the timings in decimal hours of nightly sound pulses (A, B and C) perceived by the author in 2015 (including May 2012 data from Caddy and Elner 2015). The expected slope if cosmic time applies, would be -0.067).

DATE	A	B	C
May 2012	+0.037	-0.066	-0.024
May 2013	+0.054	-0.023	-0.035
May-June 2015	No Data	-0.063	-0.023
Oct 2015	+0.043	-0.013	-0.050

Seasonality

A convergence of 3 linear trends meeting on 12-14 December (Fig 2) seems evidence for a common source for the episodes detailed by the three regression lines; suggesting that this could be an estimate of when the source descends below the horizon in the latitude of Rome, Italy.

As observed in 2015-2016, a single nightly tinnitus pulse in late April-May preceded the multiple pulses shown in Fig 2, followed in summer by continuous sounds, giving way in autumn to multiple pulses once again. In late October of 2016, a prolonged single pulse became dominant, fading away gradually, so that by 26 October, a last lightly-perceived single pulse occurred at 0900 hr.

Analysis of the temporal sequence of the observations

No attempts were made to identify visually the source or type of radiation involved in my auditory anomaly, but one unresolved question is how to explain the three or more hour-specific sensibilities experienced nightly, especially if we assume the Milky Way core is the source? First, the core of the Black Hole or its 'associated blobs' of gamma and X-ray radiation might be only detectable when there are gaps in the star and dust cover hiding it (Fig 5). (The hypothesis that radiation from the Milky Way affects life forms on Earth, has already been discussed by astronomers: see NASA 2015). The slopes of all regression estimates for the second and third nightly episodes are shown in Fig 3. These are smaller than the 4 min anticipation of the previous night's timing, but for lines B and C were of the same order of magnitude.

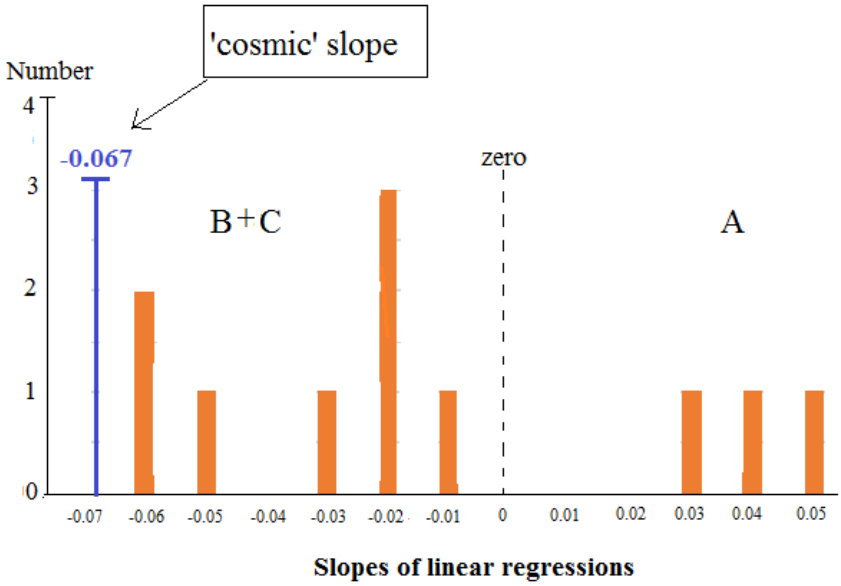


Fig 3: Slopes of 11 linear regressions on timings of late night 'tinnitus-like' pulses, made over a week to 10 days, showing the 'cosmic value' (in blue) for comparison. (The hypothesized position of observations A, B and C is shown in Fig 5).

According to the literature, (see e.g. Andrew Rhodes's web site on photography of the Milky Way), between late October until at least April-May the following year, the Milky Way core is below the southern horizon of the Northern Hemisphere. The coincidence of its seasonal presence above the horizon with my nightly tinnitus-like episodes, (and also the absence of symptoms between late autumn and late spring), suggests that the Milky Way core is involved in the timing of the pulses I have been perceiving.

My last pulse experience in 26 October 2016, delayed to around 0800 hr, coincides with peak viewing hours in autumn given by Rhodes. More careful attention was paid in the spring of 2016 when tinnitus-like pulses recommenced nightly on 31 March 2016 (see Fig 4). For the next 12 days, starting in predawn hours, I experienced a single prolonged pulse, but from the 15th April onwards, multiple nightly pulses were detected once again. In the summer the tinnitus effect extended for hours and could not be easily timed, but in the autumn, there was a return to the multiple pulses typical of late spring. As a hypothesis, the slopes of each series of pulses meeting the earth's surface may vary according to the time, and hence, angle of arrival (see hypothesis illustrated in Fig 5).

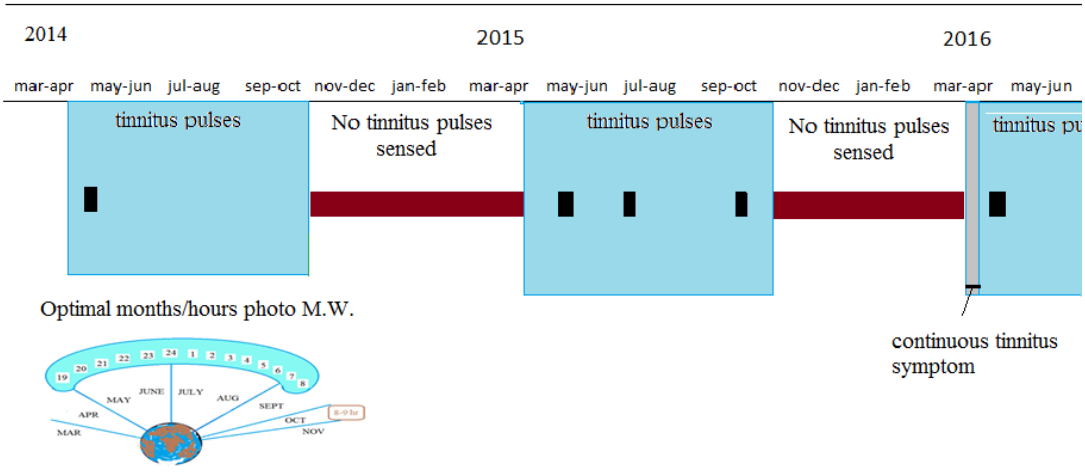


Fig 4. In the three years of observations, the nighttime 'tinnitus' episodes do not occur between late autumn and the end of April. Black rectangles represent nighttime timing episodes, but these pulses can be sensed any time in the 'blue' zone (Figure below is from a web page suggesting when the Milky Way is visible in the Northern hemisphere 'Guide to the Milky Way' – Andrew Rhodes).

As a hypothesis, the angle of interception of the unspecified type of radiation at the Earth's surface may lead to variations in the regression slopes for cosmic time (see hypothesis illustrated in Fig 5), but negative slopes of late night regressions (B+C) are of the same order of magnitude as the predicted slope (0.067 hr/day) corresponding to a 4 minute anticipation.

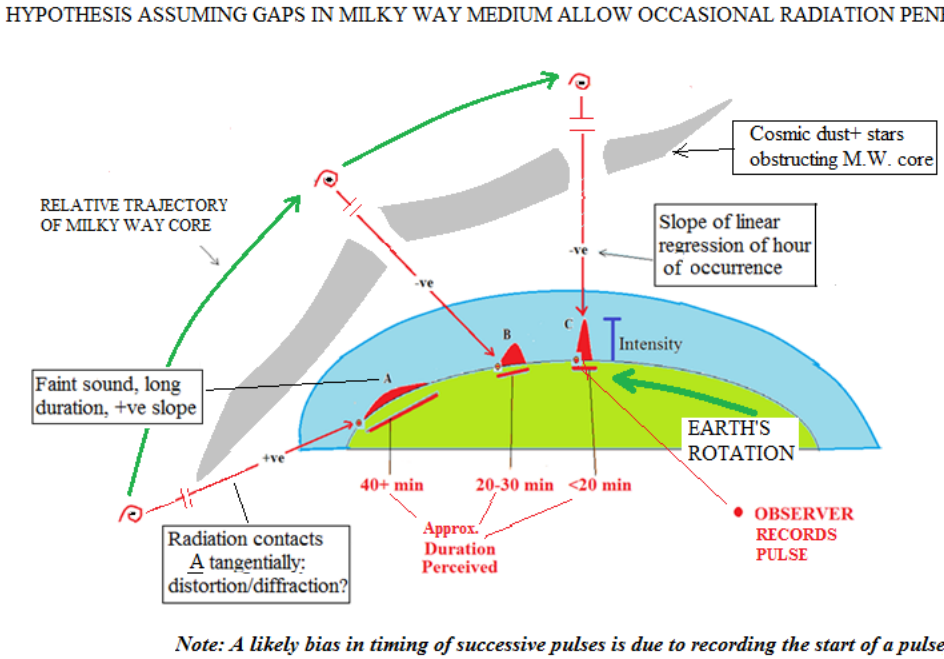


Fig 5. Hypothesizing how radiation reaching the Earth's surface from the Milky Way tangentially, may change the relative time of arrival to the observer at A. Might atmospheric distortion change the perceived time of arrival of the first nightly tinnitus episodes when these occur just as the M.W. is on the horizon, unlike when the M.W. is overhead? (The subjective impression is that pulse duration is inversely related to its intensity).

Symptoms of tinnitus sufferers

Over 50 million Americans experience tinnitus, and about 2 million patients are reported to be so seriously debilitated they find it difficult to hear, work or sleep. It was believed that damage to the cochlea lead to tinnitus, but recent evidence suggests that for many, tinnitus noise is generated in the central nervous system (US 2006). Vernon (1998) reported on a survey of 1,113 tinnitus sufferers who were asked if tinnitus episodes interfered with their sleep. 78% replied in the positive, and it was concluded that sleep interference could be one of the factors contributing to the severity of this condition. Tinnitus episodes are heard more loudly and clearly under the quiet conditions normally prevailing at night while in the horizontal position, but no reference was made by Vernon to any possible external causes. It should be in the interest of habitual tinnitus sufferers to check my personal results, since if this phenomenon is generally diffused but unrecognized, my symptoms could be of wider significance.

My medical history

The following may be relevant: in 2012, an operation removed a meningioma pterionale from the right fronto-temporal lobe of my brain. This had no negative effects and no loss of sensitivity - in fact, perhaps the opposite? As recently as February 2016, my surgeon confirmed that I had fully recovered from the operation. The excised skull segment was replaced after the operation, and held in place by titanium screws (Fig 6a). The white scar tissue can be seen in the cranial TAC in Fig 6b, and in a subsequent TAC, this area is more transparent to X-rays than the rest of the skull. The burr hole (Fig 6a) was left open after the operation; apparently a commonly-followed precaution in case of post-operative bleeding. I ask: could an external source of radiation enter the brain more readily through this area transparent to X-rays than through the intact skull?

This procedure effectively left me 'trepanned': the oldest documented surgical modification documented for our species; (See Costandi 2007 and Wikapedia: 'Trepanning'). This operation was carried out extensively in the Stone Age: some 15% of Neolithic skulls found show evidence of this operation; many of them successfully, judged from bone regrowth. (Amanda Feilding in 2013 reported that the Hindu god Shiva, in his human incarnation, was trepanned by monks in Tibet). An illustrated history of trepanation posted on June 2007 under Anthropology: 'History of Neuroscience', concluded that it is almost certain that this archaic operation was believed to ameliorate the link between the brain and behavior. Although the purpose was

unspecified in the anthropological literature, I has been suggested that priests and shamans often underwent this operation. Prior to 1915, it was a treatment for chronic headaches and epilepsy in developed countries, but is now considered obsolete. Trepanning was said to restore the pulse pressure of the heartbeat in the brain, and promote elimination of toxins in the cerebral spinal fluid (John Mitchell 1959). Further investigations on possible external causes of tinnitus are recommended for other sufferers, particularly where this varies in intensity over a 24hr cycle.

Identifying the specific source of a cosmic influence on living organisms on earth is impossible without synchronized astronomical observations while the subjects are experiencing such episodes. Other neurological conditions showing seasonality of occurrence and a fixed timing, may have a linked cause. One possibility causing severe pain is referred to as the 'cluster headache', mentioned by 'The Migraine Trust (https://migrainetrust.org): 'In about 80% of people with cluster headaches the bouts of pain (occur) often at the same time and often in the spring or autumn. The reason for the seasonal timing is not completely known…and may involve a brain area called the hypothalamus'.

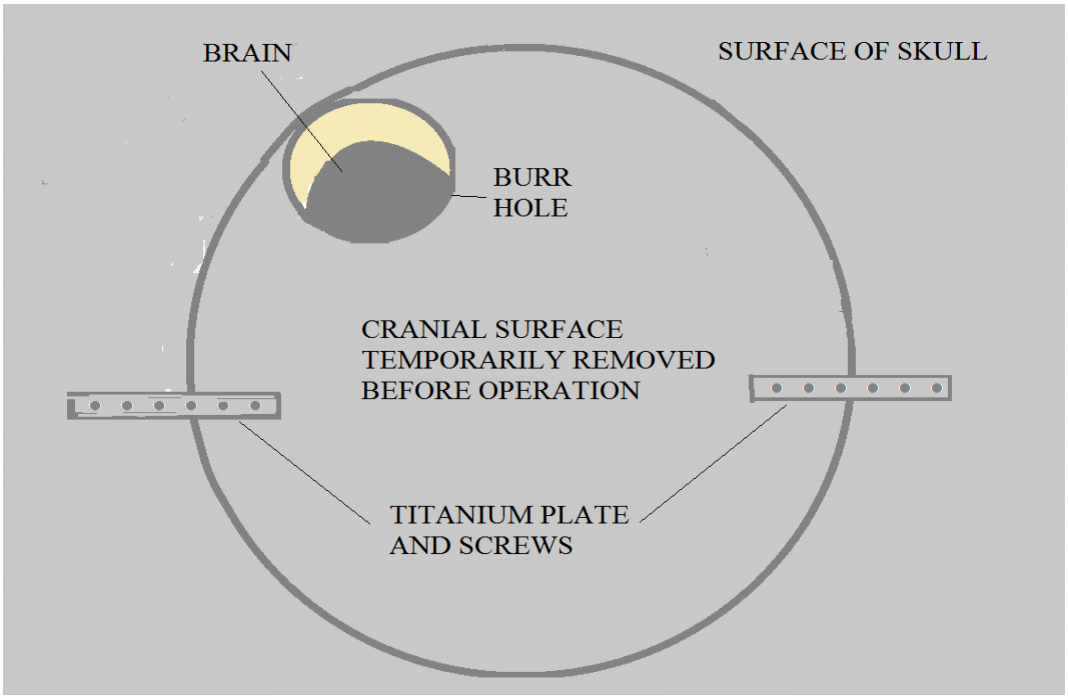


Fig 6a) *The skull plate was replaced after the intervention and held in place with titanium plates and screws – the original burr hole which was opened to allow removal of the skull plate, is conventionally left open after such operations.*

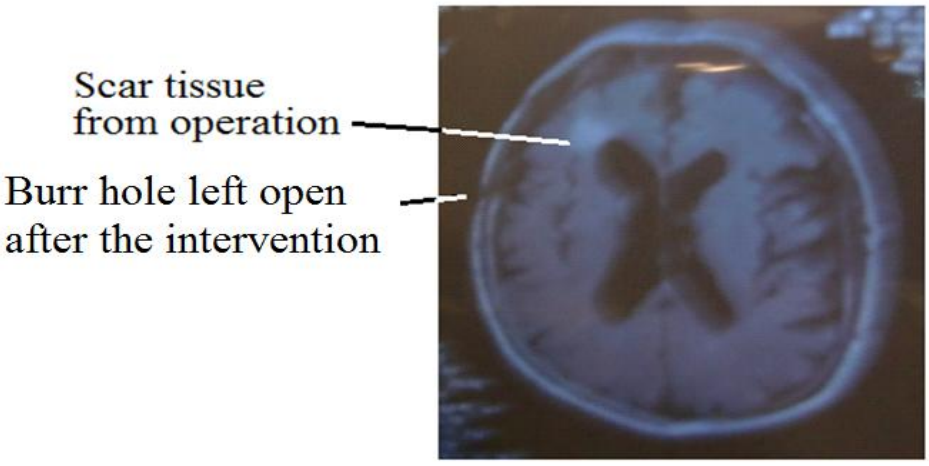


Fig 6b): Cross section from a TAC of the author's brain following an operation to remove a benign mass of cells. This shows the apparent gap in the skull registered by a subsequent TAC scan.

II. Discussion

Radiation from the Milky Way?

As David Thompson of NASA Goddard noted: 'Our galaxy is filled with many different types of particles and energy sources, including protons, electrons…most of which have not been accurately measured'. In September 2015, a NASA report noted that 'radiation from the Milky Way could have had a profound effect on mutation rates'. Our view of the center of our galaxy from Earth (Sagittarius A*: the star close to or coincident with the 'Black Hole), is obscured by stars and cosmic dust (Osterbrock and Ferland 2006). More recently astronomers have documented twin clouds of gamma and X-ray radiation above and below the center of the Milky Way. These are suspected to originate from the Black Hole, and might be perceived sources of radiation.

Spottiswoode (1997) concluded from his statistical analysis of diurnal changes in psi capabilities that the observed timing of pulses was not inconsistent with a cosmic phenomenon. Despite the change in slope over time of the nightly occurrence, which may depend on the angle of interception of incipient radiation, the same phenomenon may be responsible for my 'tinnitus pulses'. Some confirmation for this view is that the seasonal cessation of the tinnitus pulses between late autumn and late spring coincides with the period when the core of the Milky Way is below the horizon of the Northern Hemisphere. To my knowledge, no one has suggested that a tinnitus condition may, on occasions, be a form of extrasensory perception, but that is my conclusion.

This paper is principally intended to raise interest in an unusual extrasensory phenomenon that may be affecting, unheeded, other persons suffering from night time tinnitus attacks. The hypothesized radiation may be acting directly, or by stimulating ground energy upsurges such as were documented by Caddy and Elner (2015). In either case, the phenomenon itself is not imaginary! It seems worth noting here that given the strength of the phenomenon in my case, other phenomena in nature may be coordinated or initiated under the seasonal influence of the Milky Way.

Trepanning

This surgically-obsolete operation exposes the brain to outside radiation, and one mystery is why 15% of Neolithic skulls are reported to have holes drilled in them, and bone regrowth showed that this first form of surgery was often successful. If in addition to physical protection of the brain, the skull may also operate as a 'Faraday Cage', protecting the brain from external radiation, then speculation on the utility of this operation is invited in light of my personal experience. In the Neolithic Era when construction of 'observatories' for registering cosmic phenomena has been widely documented, apparently the lack of a formal calendar for seasonal events was urgently felt. The arrival of the Milky Way core on a specific date in spring could have been useful information if it advised the tribe when to plant seeds or prepare for spring floods?

Possible current relevance of this study

Tinnitus incidence is now widely spread, and for example, 50 million Americans share this malady. Two million are seriously debilitated, finding it difficult to hear, work or sleep, and there are no treatments for most sufferers. While not supposing they all have my night time symptoms, some of them may do. Further surveys of the night time timings of tinnitus pulses would seem a worthwhile research activity.

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