

# Seismic activity and air traffic safety

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Once is an accident, twice is a coincidence,  
three times is a pattern. Ian Fleming.

It has been almost two years since the tragic crash of Germanwings Flight 9525. The cause of the crash was ruled to be co-pilot's suicide. A huge media frenzy followed the announcement with numerous 'experts' in aviation, psychology, and every other imaginable field offering their analysis and advice. What has not been mentioned by the media is that the crash was only one of at least six mysterious airplane crashes in the same geographical region:

1) Germanwings Flight 9525 crashed on March 24, 2015 at 9:41 at  $44.28^{\circ}N, 6.44^{\circ}E$ <sup>1,2</sup>. After an unprecedentedly short investigation of less than two days<sup>3,4</sup>, it was announced that the mentally sick 28-year-old co-pilot Andreas Lubitz barricaded himself inside the cockpit and deliberately rammed the plane into the Alps. But why would the physically fit and smiling 28-year old co-pilot running marathon(s), as shown on the Internet pictures, who just purchased a brand new car, commit suicide? Those who knew him insisted Lubitz was not suicidal<sup>5</sup>. Many witnesses reported explosion and smoke before the plane plunged into the Alps and debris was found upstream from the crash site suggesting that at least one piece of fuselage had "been detached from the aircraft before impact"<sup>6</sup>; which can only happen if the plane exploded in the air.

2) Air France Flight 178 crashed on September 1, 1953 at 23:30 Paris time at practically the same place as the previous flight at  $44.29^{\circ}N, 6.7^{\circ}E$ <sup>7</sup> amidst violent storms after "the flight had deviated from the planned course for unknown reasons".

3) Crossair Flight 498 crashed on January 10, 2000 at 16:54 at  $47.47^{\circ}N, 8.47^{\circ}E$ <sup>8</sup>. The investigation concluded that "... pilot Pavel Gruzin's body revealed traces of the tranquilizer Phenazepam ... an open packet of the Russian-made drug in baggage belonging to Gruzin ... commander took

<sup>1</sup>All coordinates in text are rounded off to two digits after the decimal points, coordinates in the pictures may be given with more precision. All time is in UTC unless otherwise stated.

<sup>2</sup>[http://en.wikipedia.org/wiki/Germanwings\\_Flight\\_9525](http://en.wikipedia.org/wiki/Germanwings_Flight_9525)

<sup>3</sup><http://www.ibtimes.co.uk/andreas-lubitz-white-christian-germanwings-crash-pilot-should-be-called-terrorist-1493716>; <http://edition.cnn.com/2015/03/26/europe/germanwings-plane-crash-pilots/> are dated March 26, 2015

<sup>4</sup>According to <http://www.ibtimes.com/germanwings-pilot-andreas-lubitz-was-framed-friends-allege-lufthansa-crash-cover-1864914> antidepressants prescribed to treat a serious "psychosomatic illness" were found in the co-pilot's home.

<sup>5</sup><http://www.independent.co.uk/news/world/europe/germanwings-plane-crash-andreas-lubitz-supporters-claim-co-pilot-has-been-framed-by-airline-to-cover-10146685.html>

<sup>6</sup><http://www.ibtimes.co.uk/germanwings-a320-plane-crash-explosion-smoke-before-airbus-plunged-into-french-alps-1493351>

<sup>7</sup>[http://en.wikipedia.org/wiki/Air\\_France\\_Flight\\_178](http://en.wikipedia.org/wiki/Air_France_Flight_178)

<sup>8</sup>[http://en.wikipedia.org/wiki/Crossair\\_Flight\\_498](http://en.wikipedia.org/wiki/Crossair_Flight_498); [http://www.airliners.net/aviation-forums/general\\_aviation/read.main/220648/](http://www.airliners.net/aviation-forums/general_aviation/read.main/220648/); <http://www.breakingnews.ie/world/death-crash-pilot-was-on-tranquillisers-65210.html>.

the aircraft into a spiral dive to the right because ... he had lost spatial orientation ... ", eerily similar claims were made about the co-pilot of Germanwings 9525<sup>4</sup>.

4) Swissair Flight 330 exploded on February 21, 1970 at 12:15 at  $47.05^{\circ}N, 8.3^{\circ}E$ <sup>9</sup>, very close to the previous crash site. The explosion was attributed to a bomb; yet, the only time in history, no one has ever claimed responsibility for the bombing nor have the perpetrators of the bombings ever been determined.

5-6) Air India Flight 245 crashed on November 3, 1950 at 9:43 am at  $45.83^{\circ}N, 6.86^{\circ}E$  amidst stormy weather<sup>10</sup> and Air India Flight 101 crashed on January 24, 1966 some time after 7:00 am at practically the same place at  $45.88^{\circ}N, 6.87^{\circ}E$ <sup>11</sup>. Both crashes were essentially attributed to pilots' lack of skill in flying in the mountains, even though these were Air India pilots who regularly flew across the Himalayas and the smaller mountain ranges surrounding the Himalayas. There are claims<sup>12</sup> that Air India Flight 101 carried 41,000 tonnes of fuel when it crashed, the combustion of so much fuel close to the ground should have caused a huge fire and a thunder-like explosion; neither was observed suggesting that the aircraft exploded high above the ground at the altitude where the depletion of oxygen would have prevented combustion. There were news reports that at about the same time an Italian aircraft had gone missing, with some speculating that the two planes collided; but no remnants of a second airplane have been found near the crash site of Air India Flight 101. There were, however, two reported crashes of F-104G on January 24-25, 1966 near Rome, and on January 25, 1966 near Accumoli close Rome<sup>13</sup>; the two crashes might have been the same crash reported differently.

Nor has the media mentioned that the Germanwings 9525 crash was preceded by two very similar almost-crashes: on December 15, 2014 in UK Loganair Flight BE6780<sup>14</sup> was struck by ball lightning, autopilot ignored the pilot's commands and sent the plane into the sea at 9,500 feet/minute, merely 1,100 feet above the water the pilot wrestled back control; 2) on November

<sup>9</sup><http://aviation-safety.net/database/record.php?id=19700221-1>

<sup>10</sup>[http://en.wikipedia.org/wiki/Air\\_India\\_Flight\\_245](http://en.wikipedia.org/wiki/Air_India_Flight_245) and <http://pazhayathu.blogspot.com/2010/06/air-india-most-crashes-could-have-been.html>

<sup>11</sup><http://aviation-safety.net/database/record.php?id=19660124-0> and [http://en.wikipedia.org/wiki/Air\\_India\\_Flight\\_101](http://en.wikipedia.org/wiki/Air_India_Flight_101)

<sup>12</sup><http://www.dnaindia.com/mumbai/report-was-homi-bhabha-s-plane-hit-by-italian-aircraft-1248198>

<sup>13</sup><http://theaviationist.com/2009/04/21/air-india-101-conspiracy-theory/>; [http://www.916-starfighter.de/F-104\\_AMI\\_losses.htm](http://www.916-starfighter.de/F-104_AMI_losses.htm)

<sup>14</sup><http://news.stv.tv/north/303736-plane-hit-by-lightning-while-flying-from-aberdeen-to-shetland-airport/>; [http://www.dailymail.co.uk/news/article-3034472/Hero-Loganair-pilot-pulls-plane-North-Sea-nosedive-just-SEVEN-SECONDS-spares.html?ITO=1490&ns\\_mchannel=rss&ns\\_campaign=1490](http://www.dailymail.co.uk/news/article-3034472/Hero-Loganair-pilot-pulls-plane-North-Sea-nosedive-just-SEVEN-SECONDS-spares.html?ITO=1490&ns_mchannel=rss&ns_campaign=1490); <http://avherald.com/h?article=4813ed2d>.

5, 2014 in Spain Lufthansa Flight LH1829<sup>15</sup>, while on autopilot, went into a dive reaching 4000 feet/minute speed before the crew was able to regain the control of the plane. Autopilot failure, although not that common, is not rare either, e.g. on July 22, 2011 Air France Flight 471 almost crashed in turbulent weather due to autopilot failure (it will be discussed further down in the article); on July 3, 2001 at 18:08, Vladivostok Air Flight 352 crashed  $\approx 52.31^\circ N, 104.3^\circ E$ <sup>16</sup>, flight recordings indicated autopilot's emergency shutdown<sup>17</sup>. What is unusual is that within merely five months three aircraft (Lufthansa Flight LH1829, Loganair Flight BE6780, Germanwings 9525) suddenly went down in a rather small geographical region encompassing UK, Spain and the Alps. In the wake of the Germanwings crash "a number of crew members refused to fly, though safety concerns were not cited as a factor."<sup>18</sup> What were the crews afraid of? Might the six airplanes have been brought down by ball lightning just like Loganair Flight BE6780? Remarkably, a rather large number of airplane crashes have been associated with fireballs similar to ball lightning.

All six passenger airplane crashes occurred in the Alps, where at the end of WWII Allied aircraft pilots observed strange fireballs nicknamed 'foo fighters'<sup>19</sup> similar to the ball lightning that brought down Loganair Flight BE6780. The first 'foo fighters' were observed in November 1944 by a military crew flying from Dijon, France to patrol the area around the Rhine River north of Strasbourg, Germany at  $53.5^\circ N, 13.75^\circ E$ , while the last ones were seen by pilots in February, 1945 near La Spezia, Italy at  $44.1^\circ N, 9.82^\circ E$ <sup>20</sup>, the sites of the six crashes are between the two locations. The number of such sightings in late 1940s - early 1950s, not just in Europe but all over the world, was so drastic that the CIA created an evaluation committee known as the Robertson Panel<sup>21</sup>, while the Air Force studied the sightings in Projects Sign, Grudge and Blue Book<sup>22</sup>; one of the leading scientists of the latter, Dr J. Allen Hynek, did consider the possibility that the fireballs seen in the sky might be a natural phenomenon we have yet to understand<sup>23</sup>. Sightings of fireballs

<sup>15</sup><http://avherald.com/h?article=47d74074>

<sup>16</sup><http://www.irkutsk.org/fed/aircrash2001.html>

<sup>17</sup><http://www.tailstrike.com/040701.htm>; [http://aviation-safety.net/investigation/cvr/transcripts/cvr\\_vlk352.php](http://aviation-safety.net/investigation/cvr/transcripts/cvr_vlk352.php)

<sup>18</sup>[http://www.huffingtonpost.co.uk/2015/04/01/andreas-lubitz-supporters-share-conspiracy-theories-germanwings-plane-crash\\_n\\_6983132.html?icid=maing-grid7%7Cuk%7Cd11%7Csec1\\_lnk2%26pLid%3D340809](http://www.huffingtonpost.co.uk/2015/04/01/andreas-lubitz-supporters-share-conspiracy-theories-germanwings-plane-crash_n_6983132.html?icid=maing-grid7%7Cuk%7Cd11%7Csec1_lnk2%26pLid%3D340809)

<sup>19</sup>[http://en.wikipedia.org/wiki/Foo\\_fighter](http://en.wikipedia.org/wiki/Foo_fighter); [http://sped2work.tripod.com/foo\\_fighters.html](http://sped2work.tripod.com/foo_fighters.html); <http://naziufomythos.greyfalcon.us/foofighters.html>; War Department Classified Message Center Outgoing Classified Message, January 2, 1945 may be found at <http://www.project1947.com/fig/1945a.htm>.

<sup>20</sup><http://naziufomythos.greyfalcon.us/foofighters.html>

<sup>21</sup>[http://en.wikipedia.org/wiki/Robertson\\_Panel](http://en.wikipedia.org/wiki/Robertson_Panel)

<sup>22</sup>[https://en.wikipedia.org/wiki/Project\\_Sign](https://en.wikipedia.org/wiki/Project_Sign); [https://en.wikipedia.org/wiki/Project\\_Grudge](https://en.wikipedia.org/wiki/Project_Grudge); [https://en.wikipedia.org/wiki/Project\\_Blue\\_Book](https://en.wikipedia.org/wiki/Project_Blue_Book)

<sup>23</sup><http://www.artgomperz.com/a1998/dec/hynek.htm>, part 21d.

or similar objects were reported 1) in 2015 a few months prior to the crash of Germanwings Flight 9525 in Switzerland and on February 18, 2016 near the crash site of Germanwing Flight 9625<sup>24</sup>; 2) in 2000 a few months after the crash of Crossair Flight; 3) on April 30, 2015 at 9:17 am ; 4) at 9:17 am in Lachen, Switzerland at  $\approx 47.18^\circ N, 8.85^\circ E$ , very close to the crash sites of Crossair Flight 498 and Swissair Flight 330 and just five weeks after the crash of Germanwings Flight 9525<sup>25</sup>. Fireballs have been also reported to appear and disappear near and even inside aircraft<sup>26</sup>; since a rock-like fireball can not get inside a solid airplane, at least some fireballs must be moving electric charges creating plasma-like environment around themselves.

Figure 1 shows periodicity of  $\approx 95$  days in the maxima of the cosmic ray intensity at the time of the Germanwings Flight 9525 crash. The data on cosmic ray intensity do not go back beyond 1953, but the data on sunspot numbers, correlated to cosmic ray intensity, are available all the way to 1900; the maxima of sunspot numbers show similar periodicity of  $\approx 93 - 94$  days in 1943-1946, when 'foo fighters' were observed in Europe. Could the periodicity somehow have resonated with one of the Earth's internal frequencies to produce fireballs<sup>27</sup>? Could the oscillations in the cosmic ray intensity be related to the giant microwave pulse of energy on March 23-24, 2015 described by so many web sites<sup>28</sup>? Usually such large microwave distortions are observed after either an upper M-class to X-class solar flare, or a very large CME from the Sun; but there was only a C-class flare from the Sun, and no significant CME. The giant microwave pulse was preceded on March 21 by an unexplained "magnetic short circuit" announced by CERN<sup>29</sup>, could it also have been related to the oscillations in the cosmic ray intensity? Cosmic rays are, in fact, not rays by

<sup>24</sup><https://www.rt.com/news/332871-meteor-fireball-france-mystery/>

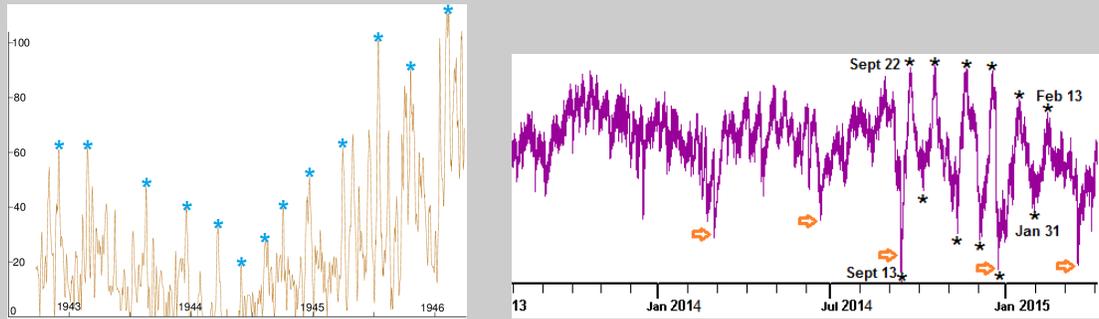
<sup>25</sup><https://www.youtube.com/watch?v=tG5fD4ws05w;> [http://www.ufosightingsdaily.com/2015/03/diamond-ufo-over-paris-france-caught-on.html;](http://www.ufosightingsdaily.com/2015/03/diamond-ufo-over-paris-france-caught-on.html) <http://www.ufostalker.com/ufostalker/UFO+Sighting+in+Strasbourg+Alsace+France+on+March+13th+2015/63937;> <https://www.youtube.com/watch?v=oqB9JepjWmA;> [http://beforeitsnews.com/strange/2015/03/mass-ufo-sighting-at-cannock-chase-24032015-2460230.html;](http://beforeitsnews.com/strange/2015/03/mass-ufo-sighting-at-cannock-chase-24032015-2460230.html) [http://www.disclose.tv/action/viewvideo/163258/FOOTAGE\\_OF\\_A\\_UFO\\_HOVERING\\_OVER\\_THE\\_ITALIAN\\_ALPS/;](http://www.disclose.tv/action/viewvideo/163258/FOOTAGE_OF_A_UFO_HOVERING_OVER_THE_ITALIAN_ALPS/) <http://www.ufostalker.com/ufostalker/UFO+Sighting+in+Lachen+Schwyz+Switzerland+on+April+30th+2015/65093>

<sup>26</sup>[http://www.nature.com/nature/journal/v224/n5222/abs/224895a0.html;](http://www.nature.com/nature/journal/v224/n5222/abs/224895a0.html) [http://www.daviddarling.info/encyclopedia/B/ball\\_lightning.html](http://www.daviddarling.info/encyclopedia/B/ball_lightning.html). Numerous accounts of such reports may be found in Paul Sagan's book "Ball lightning: paradox of Physics" [https://books.google.com.ph/books?id=0LbvX5UnxXoC&pg=PA70&lpg=PA70&dq=fireball+inside++plane&source=bl&ots=e0A50K1x0C&sig=m6eLuY\\_VntccRNn8cDIdu5jV020&hl=en&sa=X&ved=0CD8Q6AEwCGoVChMI\\_Y\\_iwvHcxwIVx6GUCh03Ggt9#v=onepage&q=fireball%20inside%20%20plane&f=false](https://books.google.com.ph/books?id=0LbvX5UnxXoC&pg=PA70&lpg=PA70&dq=fireball+inside++plane&source=bl&ots=e0A50K1x0C&sig=m6eLuY_VntccRNn8cDIdu5jV020&hl=en&sa=X&ved=0CD8Q6AEwCGoVChMI_Y_iwvHcxwIVx6GUCh03Ggt9#v=onepage&q=fireball%20inside%20%20plane&f=false) although the author assumes that all fireball are ball lightning.

<sup>27</sup><https://en.wikipedia.org/wiki/Resonance>

<sup>28</sup>[http://dutchsinse.com/3272015-giant-microwave-pulses-seen-across-europe-africa-and-atlantic-on-march-23-into-24th/;](http://dutchsinse.com/3272015-giant-microwave-pulses-seen-across-europe-africa-and-atlantic-on-march-23-into-24th/) [http://tropic.ssec.wisc.edu/real-time/mimic-tpw/global/anim/20150322T000000anim72.gif;](http://tropic.ssec.wisc.edu/real-time/mimic-tpw/global/anim/20150322T000000anim72.gif) <http://cultureofawareness.com/2015/03/28/dutchsinse-giant-microwave-pulse-seen-across-europe-africa-and-atlantic-on-march-23-into-24th/>

<sup>29</sup>[http://dutchsinse.com/3242015-cern-magnet-short-circuits-today-operations-now-postponed/;](http://dutchsinse.com/3242015-cern-magnet-short-circuits-today-operations-now-postponed/) [http://press.web.cern.ch/;](http://press.web.cern.ch/) [http://www.bbc.com/news/science-environment-32038186.](http://www.bbc.com/news/science-environment-32038186)



**Figure 1:** The left frame shows the daily average of sunspot numbers from late 1943 to early 1946; its maxima, marked with blue asterisks, appear almost periodically every 93-94 days. The right frame shows hourly average of cosmic ray intensity in September 13, 2014 - February 13, 2015; it exhibits periodicity of  $\approx 28 - 29$  days with the minima and maxima marked by black asterisks; and periodicity of  $\approx 95$  days marked by orange arrows. [http://solarscience.msfc.nasa.gov/greenwch/spot\\_num.txt](http://solarscience.msfc.nasa.gov/greenwch/spot_num.txt).

charged particles and their flow is affected by and affects the Earth's ionosphere and liquid core; thus the correlation between cosmic ray intensity and the Earth's magnetic field is to be expected.

The conclusion that Lubitz deliberately rammed the plane into the Alps was based on two key pieces of "evidence"<sup>30</sup>:

1) The black box recordings indicate that the captain stepped out of the cabin. There was a loud bang between 9:30 am - 9:34 am, interpreted by investigators as the captain trying to enter the cockpit, accompanied by captain's yells "For God's sake, open the door!"; a loud metallic banging against the cockpit door at 9:35 am, interpreted by investigators as the captain's attempts to break in with a crow bar; the captain shouting: "Open the god damn door" at 9:37 am; noises similar to violent blows on the cockpit door were recorded on five occasions at 9:39 over the course of a minute. Eerily there were no sounds of the captain's voice from 9:33 to 9:37 am; why was the captain silent for the full four minutes? According to some sources<sup>31</sup> "A buzzer requesting access to the cockpit is heard at 09:34. Knocking and muffled voices asking for the door to be opened are heard until the end of the recording." While some sources claim the captain's voice was clearly heard, others claim only "muffled voices". Could the bangs heard on the recordings have been fireballs hitting the airplane? The second black box has never been found.

2) The co-pilot disconnected autopilot at about the time when the aircraft went down. Was it the co-pilot or autopilot of Germanwings Flight 9525 that put the plane into a dive? Lubitz was

<sup>30</sup>[http://www.dailymail.co.uk/news/article-3016466/Open-goddamn-door-Desperate-final-pleas-Germanwings-captain-emerge-black-box-transcript-reveals-Lubitz-s-repeated-attempts-coax-pilot-toilet.html?ITO=1490&ns\\_mchannel=rss&ns\\_campaign=1490](http://www.dailymail.co.uk/news/article-3016466/Open-goddamn-door-Desperate-final-pleas-Germanwings-captain-emerge-black-box-transcript-reveals-Lubitz-s-repeated-attempts-coax-pilot-toilet.html?ITO=1490&ns_mchannel=rss&ns_campaign=1490);

<sup>31</sup><http://www.bbc.com/news/world-europe-32072218>

certainly aware of Loganair Flight BE6780, Lufthansa Flight LH1829 and Air France Flight 471, most likely, he was aware of Vladivostok Air Flight 352 as well; if fireballs were indeed hitting his plane, switching autopilot off was the most logical thing for him to do. Might it be that he did not open the cabin door because he fainted, panicked or froze, or simply could not afford to waste time to open it while trying to save the plane?

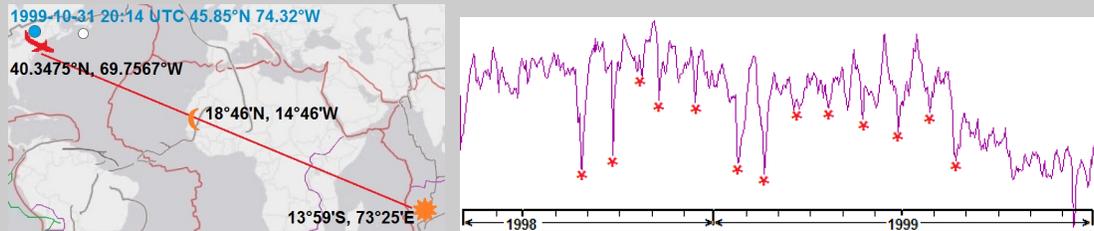
On April 7, 2015, just two weeks after the crash of Germanwings Flight 9525, Icelandair Flight 671<sup>32</sup> was hit by a lightning, leaving a gaping hole in the nose of the aircraft. The crew did not even realize the damage to the plane, as all systems continued to function normally, and proceeded until they safely landed seven hours later. The hit did not show on any instrument panel to alert the crew, nor was it registered by data recorders. Since such hits were not registered by onboard equipment or felt by the crew, the investigators would not be aware of them either.

The crash of Germanwings Flight 9525 is almost a mirror image of the crash of EgyptAir Flight 990 on October 31, 1999 at  $\approx 6:50$  am at  $40.35^\circ N, 69.76^\circ W$ . The cause of the crash was determined to be first officer Al Batouti's suicide. The transcripts from the cockpit voice recorder and the flight data recorder<sup>33</sup> indicate strange sounds, the first 'thunk' sound was at 1:48:22, at 1:48:30 Al Batouti made an unintelligible comment which was followed for the next 48 seconds by the sounds of 'thumps' and 'muffled thumps'<sup>34</sup>. What were the 'thumps'? The captain left the cabin before things went wrong, when he returned, he asked repeatedly: "What's happening, what's happening?" and then said: "What is this? What is this? Did you shut the engines? ... get away in the engines? ... shut the engines". What was the captain referring to by "this"? Al Batouti replied: "It's shut", the final recorded words are the captain's, "Pull with me". There was no indication of a struggle for the control of the aircraft, the recording data show rather cooperation of the two pilots. There was no indication of an explosion on board, the engines operated normally for the entire flight until they were shut down. The NTSB concluded that the left engine and some small pieces of wreckage separated from the aircraft before water impact. The autopilot was also disengaged, but was it because the autopilot tried to crash the plane like that of Loganair Flight BE6780? Why would Al Batouti, who was approaching retirement, which he planned to

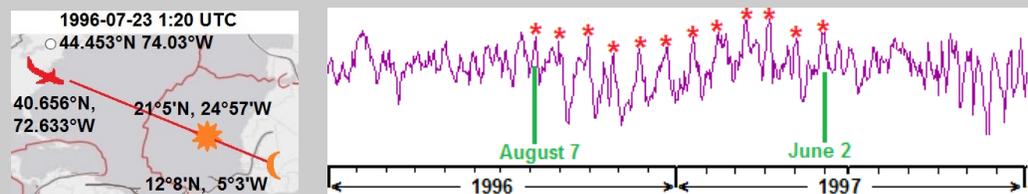
<sup>32</sup><http://www.eturbonews.com/57450/lightning-strikes-icelandair-flight-671>; <http://www.thedenverchannel.com/news/local-news/denver-bound-icelandair-flight-671-struck-by-lightning04082015>; [http://www.denverpost.com/business/ci\\_27872975/denver-bound-icelandair-flight-from-reykjavik-hit-by](http://www.denverpost.com/business/ci_27872975/denver-bound-icelandair-flight-from-reykjavik-hit-by).

<sup>33</sup><http://www.thehullthread.com/egyptair.htm>

<sup>34</sup><http://abcnews.go.com/International/story?id=82910>



**Figure 2:** On October 31, 1999 at 6:50 am, the time of the crash of EgyptAir Flight 990, the subsolar and sublunar points, and the crash site were almost aligned as shown in the left frame. There was also a magnitude earthquakes of magnitude  $\geq 4.0$  in the region on October 31, 1999. The right frame shows the daily average of cosmic ray intensity from May 1, 1998 to December 31, 1999; the minima, marked by red asterisks, show periodicity of  $\approx 14.5$  days.



**Figure 3:** On July 17, 1996 at 1:45 pm, the time of the crash of TWA Flight 800, the subsolar and sublunar points, and the crash site were aligned as shown in the left frame. Also shown is the earthquake of magnitude  $\geq 2.8$  which struck on July 23, 1996 in the vicinity of the crash. The right frame shows daily average of cosmic ray intensity for 1996-1997; the maxima, marked by red asterisks, show periodicity of  $\approx 27 - 28$  days from August 7, 1996 to June 2, 1997.

split between a 10-bedroom villa outside of Cairo and a beach house near El Alamein<sup>35</sup>, commit suicide? If he planned to commit suicide, why did he buy an automobile tire the day before to bring home to Egypt? Al Batouti's words "I rely on Allah", interpreted by some as a proof of suicide, are not typical of something one would say while killing himself, but rather while responding in surprise to something unexpected, as if he saw something in the air.

TWA Flight 800<sup>36</sup> crashed on July 17, 1996 at about 13:45 at  $40.66^{\circ}N, 72.63^{\circ}W$  very close to the crash site of EgyptAir Flight 990. Eyewitnesses on the ground and other pilots in the air reported seeing a bright object "streaking" towards the doomed aircraft the US National Transportation Safety Board ruled out an accidental missile strike. Was it a fast moving fireball?

Figures 2, 3<sup>37</sup> show that 1) each of the two crashes near New York City aligned with the

<sup>35</sup><http://www.theatlantic.com/magazine/archive/2001/11/the-crash-of-egyptair-990/302332/>

<sup>36</sup>[http://en.wikipedia.org/wiki/TWA\\_Flight\\_800](http://en.wikipedia.org/wiki/TWA_Flight_800)

<sup>37</sup>All maps are from <http://earthquake.usgs.gov/earthquakes/search/>, they show major tectonic lines in maroon and their antipodes in gray, major drift lines in purple and their antipodes in green. The positions of the subsolar and sublunar points may be obtained by going to <http://www.timeanddate.com/worldclock/sunearth.html?day=1&month=1&year=2000&hour=12&min=0&sec=0&n=1440&txt=UTC&earth=0> and choosing the appropriate date and time.

subsolar and sublunar points<sup>38</sup>; 2) the cosmic ray intensity for the two crashes exhibited periodicity; 3) both crashes was accompanied by an earthquake very close to Seneca Lake known as 'Seneca Guns'<sup>39</sup>.

Here is another collection of events, this time mostly from Asia, suggesting that the fireballs might be related to earthquake lights:

1) TransAsia Airways Flight 222 crashed on July 23, 2014 at 11:06 am at  $23.585^{\circ}N, 119.64^{\circ}E$ <sup>40</sup> amidst heavy rains. Unusual sounds were recorded by the cockpit voice recorder, interpreted as the sounds of a propeller churning on trees. The crash was accompanied by a magnitude 4.2 earthquake on July 22, 2014 at about 16:47, at  $23.96^{\circ}N, 122.53^{\circ}E$  and a magnitude 6.2 earthquake on August 3, 2014 at 08:30 at  $27.19^{\circ}N, 103.41^{\circ}E$ . Merely 3 hours later, on July 24, 2014 at 01:55 Air Algerie Flight AH5017 crashed at  $14.67^{\circ}N, 1.95^{\circ}W$  amidst stormy weather<sup>41</sup> and on July 23, 2014 a person took photo of an ovoid-shaped object in the skies of Rajajipuram area of Lucknow<sup>42</sup>, the city of Lucknow is at  $26.8^{\circ}N, 80.9^{\circ}E$ .

2) China Airlines Flight 611 crashed on May 25, 2002 at 7:33 am at  $23.99^{\circ}N, 119.68^{\circ}E$  It was accompanied by a magnitude 4.3 earthquake on May 27, 2002 at 08:55, at  $22.9^{\circ}N, 121.1^{\circ}E$  and a magnitude 6.1 earthquake on May 28, 2002 at 16:45 at  $24.07^{\circ}N, 122.26^{\circ}E$ .

3) Exactly 18 years prior to the crash of TransAsia Airways Flight 222 and almost six years prior to the crash of China Airlines Flight 611, in the evening of July 21, 1976, several seismologists observed numerous small 'fireballs' coming from the ground<sup>43</sup>. Sixty one minutes later, a magnitude 6.1 earthquake struck on July 21 at 15:11 at  $24.75^{\circ}N, 98.64^{\circ}E$ . Just a few days later, on the night of July 27-28, 1976 many people reported strange lights, loud sounds and fireballs flying across the sky around Tangshan, China,  $39.6^{\circ}N, 118.18^{\circ}E$ ; on July 27, 1976 at 19:43 am a magnitude 7.6 earthquake struck at  $39.6^{\circ}N, 117.9^{\circ}E$ <sup>44</sup>.

4) On July 7, 2010 at about 20:40 local time in Xiaoshan Airport, Hangzhou, China at  $30.25^{\circ}N$ ,

<sup>38</sup>The alignment is along a straight line on the map, or equivalently, a spherical spiral on the globe

<sup>39</sup><http://earthquake.usgs.gov/learn/topics/booms.php>; <https://en.wikipedia.org/wiki/Skyquake>.

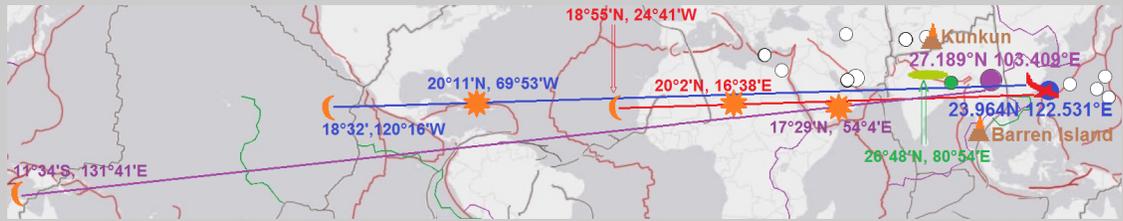
<sup>40</sup>[http://en.wikipedia.org/wiki/TransAsia\\_Airways\\_Flight\\_222](http://en.wikipedia.org/wiki/TransAsia_Airways_Flight_222); [http://en.wikipedia.org/wiki/China\\_Airlines\\_Flight\\_611](http://en.wikipedia.org/wiki/China_Airlines_Flight_611)

<sup>41</sup>[http://en.wikipedia.org/wiki/Air\\_Algerie\\_Flight\\_5017](http://en.wikipedia.org/wiki/Air_Algerie_Flight_5017)

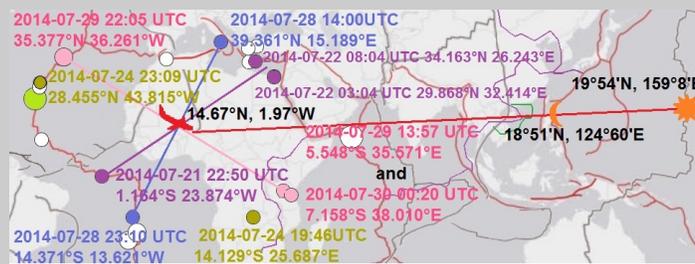
<sup>42</sup>[http://en.wikipedia.org/wiki/UFO\\_sightings\\_in\\_India#2014](http://en.wikipedia.org/wiki/UFO_sightings_in_India#2014); <http://indiatoday.intoday.in/story/ufo-aliens-spotted-flying-over-lucknow/1/373893.html>

<sup>43</sup>Ol'khov, A., On the tectonic interpretation of the 1908 Tunguska event, 2010, may be found at web site <http://olkhov.narod.ru/tunguska.htm>; Wallace, R., Teng, T, Prediction of the Sungpan-Pingwu earthquake, August 1976, Bulletin of the Seismological Society of America, 1980 70/4, p. 1199, in Japanese with English abstract.

<sup>44</sup>Chen, Y., Booth, D., The Great Tangshan Earthquake of 1976: An Anatomy of Disaster, 1988, 53, New York: Pergamon Press.



**Figure 4:** On July 23, 2014 at about 11:06 am, the time of the TransAsia Airways Flight 222 crash, the subsolar and sublunar points, and crash site were aligned along the red line. The green saucer shows the location of Lucknow, India, where a fireball was observed on July 23, 2014, about half way between volcanoes Kunlun and Barren Island; a magnitude 4.3 earthquake, marked green, struck at  $26.0^{\circ}N, 89.7^{\circ}E$  at 22:21, within 74 minutes it was followed by two magnitude 4.0 and 4.2 aftershocks. On July 22, 2014 at about 16:47, a magnitude 4.2 earthquake struck close to the crash site of TransAsia Airways Flight 222 at  $23.96^{\circ}N, 122.53^{\circ}E$ ; the subsolar and sublunar points, and the epicenter of the earthquake were aligned along blue line. On August 3, 2014 at 08:30, the time of the magnitude 6.2 earthquake at  $27.19^{\circ}N, 103.41^{\circ}E$ , the subsolar and sublunar points, and the epicenter of the earthquake were aligned along the purple line. The white circles show earthquakes of magnitude  $\geq 4.0$  in the region in July 22 - 27, 2014.



**Figure 5:** On July 24, 2014 at about 1:55 am, the time of the crash of Air Algérie Flight AH5017, the subsolar and sublunar points, and the crash site were aligned along the red line. Purple/pink/blue/khaki circles indicate earthquakes of magnitude  $\geq 4.0$  in and around Northern Africa from July 17, 2014 to July 31, 2014 which struck within 10.5 hours of each other; for all practical purposes we may assume that the earthquakes of the same color struck simultaneously; the lines connecting one earthquake marked purple with the point between the other two, the line connecting earthquakes marked pink, and the line connecting earthquakes marked blue intersect at almost the same point, which is very close to the crash site of Air Algérie Flight AH5017. It is as if one giant earthquake wanted to strike at the point of intersection but could not make through the thick continental crust and broke up into smaller 'branches' which struck at the colored locations. White circles indicate other earthquakes of magnitude  $\geq 4.0$  in the region from July 17, 2014 to July 31, 2014; the green circle indicates a magnitude 6.0 earthquake on July 7, 2014 at 1:29 am at  $23.72^{\circ}N, 45.58^{\circ}W$ .

$120.17^{\circ}E$  a fireball was reported by a flight crew<sup>45</sup>; followed by a magnitude 5.0 on July 8 at 19:44 at  $24.42^{\circ}N, 122.11^{\circ}E$  and a magnitude 5.2 on July 9 at 0:41 am at  $24.75^{\circ}N, 122.6^{\circ}E$ .

Figures 4 - 8 show that the described crashes in Asia and Africa and some of the earthquakes and fireball sightings that accompanied them were aligned or almost aligned with the subsolar and sublunar points; the crash of Air Algérie Flight AH5017 was right in the center of seismic activity in the region at the time.

<sup>45</sup><http://abcnews.go.com/International/ufo-china-closes-airport-prompts-investigation/story?id=11159531>



Figure 6: On May 25, 2002 at 7:33 am, the time of the crash of China Airlines Flight 611, the subsolar and sublunar points, and the crash site were aligned along the red

line. The subsolar point was close to the crash site a few hours earlier. Two earthquakes of magnitude  $\geq 6.0$  struck on May 15 and 28, 2002. May 26 was Full Moon so the earthquake on May 28 was almost aligned with the subsolar and sublunar points along a great circle. On May 15, at the time of the earthquake, the subsolar and sublunar points were aligned along the blue line, the subsolar point was very close to the epicenter of the earthquake.



Figure 7: On July 7, 2010 at  $\approx 12 : 40$  pm, the time of the fireball sighting/report in Hangzhou, China, the subsolar and sublunar points, and the site of the fireball sighting were almost aligned along the green line, compare to Figure 5. The subsolar and sublunar points and the magnitude 5.0 earthquake on July 8 at 19:44 at  $24.421^{\circ}N, 122.11^{\circ}E$  at the time of the earthquake were almost aligned along the blue line. The subsolar and sublunar points and magnitude 5.2 earthquake on July 9 at 0:41 am at  $24.753^{\circ}N, 122.596^{\circ}E$  at the time of the earthquake were aligned along the brown line.



Figure 8: On July 21, 1976 at 14:00 the subsolar and sublunar points, and the site of the 'fireball' sighting were almost aligned along the green line. Just 71 minutes later, on July 21, 1976 at

15:11, the time of the magnitude 6.1 earthquake at  $24.75^{\circ}N, 98.64^{\circ}E$ , the subsolar and sublunar points and the epicenter of the earthquake were aligned along the blue line.

Here is one more collection of three crashes and one almost-crash:

1) Air France Flight 447 crashed on June 1, 2009 at about 02:10 am at  $3.07^{\circ}N, 30.56^{\circ}W$ <sup>46</sup>. Right before the crash the flight crew had raised the aircraft's nose, reducing its speed until it entered an aerodynamic stall<sup>47</sup>. But why would the crew do it? Flight 447 crashed not too far from the city of Colares, Brazil at  $\approx 0.94^{\circ}S, 48.28^{\circ}W$ , known for 'Operação Prato'<sup>48</sup>, the sight of numerous fireballs of different shapes and sizes, some luminous and some not; the fireballs were reported to be coming out of the water, some exploded in the air producing streams of particles seen as beams of light; there were reports of bluish lights under water. Some pilots reported seeing an "intense

<sup>46</sup><http://www.nytimes.com/2011/05/25/world/europe/25france.html>; [http://en.wikipedia.org/wiki/Air\\_France\\_Flight\\_447](http://en.wikipedia.org/wiki/Air_France_Flight_447); <http://aviation-safety.net/database/record.php?id=20090601-0>

<sup>47</sup><http://www.bea.aero/fr/enquetes/vol.af.447/point.enquete.af447.27mai2011.en.pdf>

<sup>48</sup>[https://en.wikipedia.org/wiki/Operação\\_C3A7%C3%A3o\\_Prato](https://en.wikipedia.org/wiki/Operação_C3A7%C3%A3o_Prato); <http://ufos.about.com/od/bestufocasefiles/p/colares.htm>; <http://www.ufocasebook.com/brazil1977ufoflap.html>.



Figure 9: On June 1, 2009 at 2:10 am, the time of the crash of

Air France Flight 447, the subsolar and sublunar points and the crash site at  $3.0658^{\circ}N$ ,  $30.5617^{\circ}W$  were almost aligned along the red line. Just 22 hours earlier, on May 31, 2009 at 0:47 am, a magnitude 4.9 earthquake struck at  $4.55^{\circ}N$ ,  $32.57^{\circ}W$ ; the subsolar and sublunar points, and the epicenter of the earthquake were almost aligned along the blue line.

flash" in the area where Air France Flight 447 came down<sup>49</sup>.

2) On July 22, 2011 at about 01:11 close to the crash site of Air France Flight 447, Air France Flight 471 almost crashed in turbulent weather supposedly due to autopilot failure<sup>50</sup>, it went into a steep climb and began losing speed; a magnitude 5.9 earthquake struck on July 27, 2011 at 23:00 nearby at  $10.8^{\circ}N$ ,  $43.39^{\circ}W$ .

3) AirAsia Flight QZ 8501 crashed on December 27, 2014 at 23:17 close to  $3.62^{\circ}S$ ,  $109.71^{\circ}E$  (almost antipodally to the crash site of Air France Flight 447) amidst bad weather<sup>51</sup>. Before the crash, radar data showed an "unbelievably steep climb"<sup>52</sup> as if the pilot was trying to avoid something ahead, the climb mirrored that of Air France Flight 447. The cockpit voice and data recorders indicated that the captain took "the very unusual initiative to pull the circuit breaker for the FAC, cutting power to it a few minutes before the end of the flight".

4) SilkAir Flight 185 crashed on December 19, 1997 at 9:12 am at  $2.46^{\circ}S$ ,  $104.94^{\circ}E$ <sup>53</sup>, exactly 17 years before the crash of AirAsia Flight QZ 8501 and almost at the same place; the crash was ruled to be the captain's suicide. The investigation revealed 'chip-outs' and numerous burrs on the servo valve of the plane's rudder of unknown origin. What could have caused them?

Figures 9, 10 show that the crash of Air France Flight 447, almost-crash of Air France Flight 471 and accompanying them earthquakes were also aligned or almost aligned with the subsolar and sublunar points; there was no similar alignment of crash sites of AirAsia Flight QZ 8501 and

<sup>49</sup><http://edition.cnn.com/2009/WORLD/americas/06/04/plane.crash/>; <http://blog.seattlepi.com/aerospace/2009/06/04/air-france-flight-447-other-pilots-saw-intense-flash-in-sky/>

<sup>50</sup><http://www.dailymail.co.uk/news/article-2034685/Air-France-jet-autopilot-fails-drama-echoing-Brazil-crash.html>; <http://avherald.com/h?article=44280b2a>

<sup>51</sup>[http://en.wikipedia.org/wiki/Indonesia\\_AirAsia\\_Flight\\_8501](http://en.wikipedia.org/wiki/Indonesia_AirAsia_Flight_8501); [http://en.wikipedia.org/wiki/SilkAir\\_Flight\\_185](http://en.wikipedia.org/wiki/SilkAir_Flight_185)

<sup>52</sup><http://www.independent.co.uk/news/world/asia/airasia-flight-qz8501-radar-data-shows-unbelievably-steep-climb-before-crash-9951797.html>

<sup>53</sup>[http://en.wikipedia.org/wiki/Indonesia\\_AirAsia\\_Flight\\_8501](http://en.wikipedia.org/wiki/Indonesia_AirAsia_Flight_8501); [http://en.wikipedia.org/wiki/SilkAir\\_Flight\\_185](http://en.wikipedia.org/wiki/SilkAir_Flight_185)

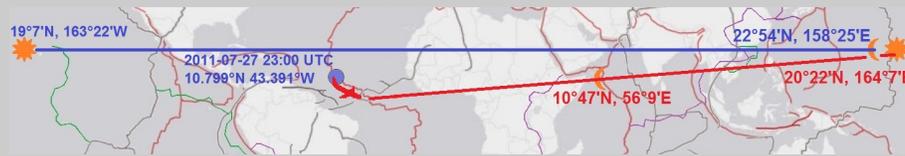


Figure 10: The subsolar and sublunar points and the point where Air France Flight

471 almost crashed on July 22, 2011 at  $\approx 01:11$  am were aligned along the red line. A magnitude 5.9 earthquake struck on July 27, 2011 at 23:00 at almost the same place at  $10.8^{\circ}N, 43.39^{\circ}W$ , its epicenter was aligned with the subsolar and sublunar points along the blue line. Compare to Figure 9.

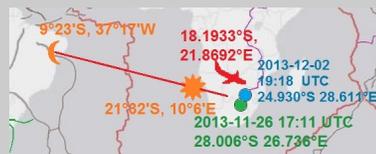


Figure 11: On November 29, 2013 at  $\approx 11:09$  am, the time LAM Mozambique Airlines Flight 470 started rapid decent, the subsolar and sublunar points and the crash site were almost aligned. Two earthquakes of magnitude  $\geq 4.5$  struck near the crash site of LAM Mozambique Airlines Flight 470 on November 26 and December 2, 2013.



On November 18, 1993 at 10:15 pm local time, the time of the fireball sighting, the subsolar and sublunar points, and the site of the fireball sighting in Sasolburg, South Africa were aligned. Volcano Laskar, erupting at the time, is also on the line. There were 22 earthquakes of magnitude 3.0 - 4.8 near the site of the sighting; four of them, shown in blue, were of magnitude  $\geq 3.0$ .



The site of the fireball sighting at the end of July, 1997 at  $26.48^{\circ}S, 29.22^{\circ}E$  and the magnitude 5.0 earthquake on July 21, 1997 at 08:46 at  $26.86^{\circ}S, 26.62^{\circ}E$ . The earthquake was followed by two magnitude 4.8 aftershocks: on July 29, 1997 at 11:25 at  $27.89^{\circ}S, 26.7^{\circ}E$  and on August 1, 1997 at  $27.94^{\circ}S, 26.58^{\circ}E$ .

SilkAir Flight 185.

Another famous crash attributed to pilot's suicide is that of LAM Mozambique Airlines Flight 470<sup>54</sup> on November 29, 2013 at about 11:30 am at  $18.19^{\circ}S, 21.87^{\circ}E$  amidst heavy rain; the black box indicated sounds as if "someone pounded on the cockpit door before the crash". On November 29, 2013 a fireball was reported close to the crash site<sup>55</sup>, exactly 20 years earlier another fireball was sighted at almost the same place<sup>56</sup>. Figure 11 shows the alignment of the crash site with the subsolar and sublunar points, as well as earthquakes and fireball sightings of interest nearby the crash site.

Australian pilot Frederick Valentich and his aircraft vanished on October 21, 1978 at 7:06 pm local time at  $38.85^{\circ}S, 143.52^{\circ}E$ <sup>57</sup>. Before his disappearance he reported seeing something, asked to identify what it was, Valentich radioed, "It isn't an aircraft" then his transmission was

<sup>54</sup>[http://en.wikipedia.org/wiki/LAM\\_Mozambique\\_Airlines\\_Flight\\_470](http://en.wikipedia.org/wiki/LAM_Mozambique_Airlines_Flight_470); <http://aviation-safety.net/database/record.php?id=20131129-0>

<sup>55</sup><http://www.ufoinfo.com/sightings/southafrica/131129.shtml>

<sup>56</sup><http://www.ufoinfo.com/sightings/southafrica/131129.shtml>

<sup>57</sup>[https://en.wikipedia.org/wiki/Disappearance\\_of\\_Frederick\\_Valentich](https://en.wikipedia.org/wiki/Disappearance_of_Frederick_Valentich)

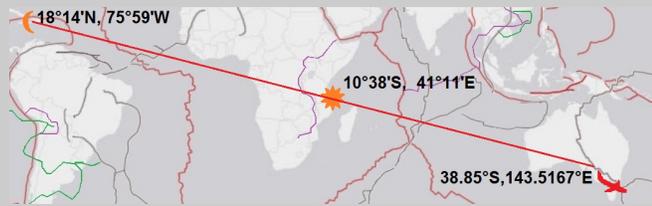


Figure 12: On October 21, 1978 at 7:00 pm Melbourne time, the time of Valentinich disappearance, his last known location and the subsolar and sublunar points were almost aligned.

interrupted by unidentified noise described as "metallic, scraping sounds" . As Figure 12 shows, Valentinich's last known location was also aligned with the subsolar and sublunar points.

**Discussion.** It is hard to tell what exactly caused the airplane crashes described here. The results of the investigations of the crashes seem to be very subjective. Could some of the crashes described here have been misdiagnosed? Very possibly. The crashes of Germanwings Flight 9525, EgyptAir Flight 990, TransAsia Airways Flight 222, LAM Mozambique Airlines Flight, and the Valentinich flight were preceded by strange sounds in the cabin, interpreted by investigators based on very little information available. The remnants of SilkAir Flight 185 revealed the presence of 'chip-outs' and numerous burrs on the servo valve of the plane's rudder, the cause of which has never been determined; the flaperon discovered on Reunion Island in July 2015 and attributed to the lost Malaysia Airline's flight MH370 had unexplained jagged edges<sup>58</sup>. What caused them? Could the crashes have been caused by electromagnetic fields of fireballs, ball lightning, earthquakes lights<sup>59</sup>, volcano lightnings or volcanic bombs<sup>60</sup>, or eddy currents generated by relatively rapidly changing magnetic fields<sup>61</sup> by disrupting the autopilots and onboard computers? The solar activity is known to affect the Earth's magnetic field while the cosmic ray intensity is known to affect and be affected by the Earth's magnetic field; could then the intensity of the solar and cosmic rays activity somehow affect the appearance, frequency and power of the fireballs? Earthquakes are known to be accompanied by changes in ionosphere<sup>62</sup>, could these changes lead to airplane crashes?

Some of the crashes were accompanied by rather unexpected alignments with the subsolar and sublunar points, for a single crash it could be a coincidence but doubtfully for so many.

Although the astrology-like alignments of events with the subsolar and sublunar point are not that

<sup>58</sup><http://www.theweek.co.uk/mh370/57641/mh370-plummeted-out-of-sky-at-up-to-20000ft-a-minute>

<sup>59</sup>For example, Ouellet, M., Earthquake Lights and Seismicity, Nature, 1990, pp. 348-492.

<sup>60</sup>[http://en.wikipedia.org/wiki/Volcanic\\_bomb](http://en.wikipedia.org/wiki/Volcanic_bomb); [http://www.geology.sdsu.edu/how\\_volcanoes\\_work/Thumblinks/Lavaball\\_page.html](http://www.geology.sdsu.edu/how_volcanoes_work/Thumblinks/Lavaball_page.html); Anderson, R., Gathman, S., Hughes, J., Sveinbjörn, S., Bjornsson, S., Jónasson, S., Blanchard, D., Moore, C., Survilas, H., Vonnegut, B., Electricity in Volcanic Clouds: Investigations show that lightning can result from charge-separation processes in a volcanic crater, Science, 1965, 148/3674, pp. 1179-1189, abstract at [http://www.sciencemag.org/content/148/3674/1179.abstract?ijkey=375fba217260b8d42e6453dea57a8c13a4c52918&keytype=tf\\_ipsecsha](http://www.sciencemag.org/content/148/3674/1179.abstract?ijkey=375fba217260b8d42e6453dea57a8c13a4c52918&keytype=tf_ipsecsha)

<sup>61</sup>[https://en.wikipedia.org/wiki/Eddy\\_current](https://en.wikipedia.org/wiki/Eddy_current)

<sup>62</sup><http://www.tau.ac.il/~colin/research/EarthQukes/Workshop/Natan%202010.pdf>

rare, they are not that common either; could they have somehow be related to the crashes?

Did the pilots accused of crashing their planes actually did it? Maybe, or maybe not. The crash of Germanwings Flight 9525 was attributed to suicide within two days of the crash<sup>3,63</sup>, further "investigation" was carried out only to confirm the conclusion; the media frenzy and numerous "experts" wholeheartedly supported the conclusion<sup>64</sup>. Dead pilots cannot argue. Had the pilots of Loganair Flight BE6780 not been able to make it, would their crash have been also labeled a 'suicide'? Are the correlations of air crashes with fireball sightings, earthquakes, cosmic ray intensity and astrology-like alignments, described here merely coincidental or they are somehow related to the crashes? As much as we would like to provide a positive answer, at this point it is hard to say anything for sure.

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<sup>63</sup>For comparison, it took about a year for a Ford dealership to determine why the ABS indicator on the author's Ford Escape was lighting up.

<sup>64</sup><http://www.telegraph.co.uk/news/worldnews/germanwings-plane-crash/11513967/Second-black-box-confirms-French-Alps-crash-co-pilot-Andreas-Lubitz-acted-deliberately.html>