

A Possible Cause of Disappearance of the Malaysian Airline Flight 370

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Abstract – A new version of disappearance of Malaysian Airlines Flight 370 is proposed. It is based on a pure accidental meeting of the aeroplane with a large cloud of hydrogen, mostly ionized, released from the ocean. The ionized hydrogen likely damaged all navigation electronic equipment. In consequence the aeroplane became "blind" and not visible.

Keywords: Malaysian Boeing 777-200, Flight 370, disappearance, ionized cloud of hydrogen.

1. Introduction

The giant jet aircraft Boeing -200 of Malaysian airlines disappeared without any traces from the radar screens during the night of March 8, 2014 [1]. The Boeing 777-200 en-route to Beijing was expected to make a contact with the Ho Chi Minh air traffic control at the time of its disappearance. In a case of the missing Malaysia Airlines Flight 370 headed from Kuala Lumpur to Beijing, locally at 12:41 am Saturday (Friday afternoon ET), March 8, 2014, the air traffic controllers in Subang, outside of Kuala Lumpur, lost a contact with the Boeing 777 plane over the Gulf of Thailand between Malaysia and Vietnam, 90 nautical miles northeast of Kota Bharu, Malaysia. The aircraft had 227 passengers and 12 crew members. The last time the air traffic controllers managed to have a contact with the airplane was about 2 hours after its departure from Kuala Lumpur (at 1:22, local time). After that, the contact was lost. All passengers are considered deceased although nobody knows their whereabouts. The search party didn't yield any results in locating them. The weather conditions during this flight were considered suitable for flying, and therefore, were eliminated as a possible cause of this tragedy. Also any potential inexperience of the pilots was eliminated as a possible cause as the pilots had more than 18,000 hours of flying experience.

The search rescue parties and airline industry experts are convinced that this giant airplane cannot disappear without a trace. However, there is not a single clue about that. Neither there is no airplane wreckage in the ocean, nor the jet fuel spots in the water. The black boxes can transmit the radio signal for a month even from the bottom of the ocean. The engines by Rolls Royce also have emergency beacons. However, there were no signals heard from MH370 in the whole large area of the Indian Ocean. 43 ships and 58 planes were searching traces of this

flight for months. The possible place of fall into the Indian Ocean was suggested by the Chinese satellites. It wasn't. After the first week of the search operation, there were hypothesis of a possible hijack of the airplane together with all passengers. The theory of hijacking was pronounced more often than terrorism as the prime minister of Malaysia, Najib Razak, said that the data received from the radars point out to the fact that someone purposely disconnected all communication equipment and sharply changed the plane course.

II. Fantasy versions of aeroplane and ship catastrophes

First of all, one should consider the "fantasy" versions of the possible catastrophe because these have filled the mass media space and prevented real specialist from assessing the situation very carefully. It is worth recalling that all this noise about paranormal activities in certain areas started with the Bermuda triangular after five bombardiers Grumman TBM-1 avengers with the patrol mission were lost in the Atlantic Ocean along with another airplane called for a rescue operation on December 5, 1945 [2,3]. On that day five avenger planes took off from the airport Fort Lauderdale of the Naval forces USA to perform a training mission. The flight was supposed to last three hours. Charles Taylor was a commanding officer. The training mission was going in a normal regime. Something out of the ordinary started on their return. The air traffic control in Key West received a radio call from the mission captain about the "unexpected" situation. The airplanes lost their course, and the commanding Officer Taylor decided to flight towards the coast line until they have fuel. After some time the radio contacts with avenger airplanes were lost forever. After the contact was lost, three patrol bombardiers Martin were dispatched. These were state of the art airplanes equipped with modern radars that were very well fit to search for missing airplanes and ships. These rescue bombardiers could land and take off from sea with wave activity less than 3 - 4.5. In a summary, the search party was not successful and even one of the rescue airplanes was lost with 13 crew members. All 27 people were missing. During all radio contacts with the air traffic controller Taylor constantly stated that they didn't know where they were. The panic of the missing party was understandable as from the recordings of the radio contacts it as clear that they were dealing with something very strange in the air. The airplane

equipment stopped working that it was impossible to determine the correct course and even figure out the location. The pilots were looking for land during several hours but could never find it. This event landed first in the local press and after that all USA learned about it. The publisher was in shock. Several hundreds of airplanes and ships made very large scale rescue efforts over the area of 250,000 square miles, however they were not able to find any traces of this catastrophe. It is not surprising that after this tragedy many people started recalling old tales about missing ships and that there were strange things in that area.

However, more recent independent investigation showed more real reasons for the tragedy with the "Avengers". The crew was almost entirely made of cadets making their training mission. The only experienced pilot was their instructor, Lieutenant Taylor, who himself was just transferred to Fort Lauderdale, and he was not very familiar with the flight region. There was no mention of any strange phenomena in their recorded radio transmissions. Lieutenant Taylor mentioned that he lost his orientation and both compasses were not working. Trying to figure out their position, he mistakenly thought they were over Florida Keys, south of Florida peninsula, therefore, he was suggested to use solar orientation and go north. However, a subsequent analysis suggested that the airplanes were in fact much further to the East and were moving northwards parallel to the Florida shoreline. Bad radio signals (severe interference with other signals) prevented them from determining the exact position of this group of aircrafts. After some time, Taylor decided to fly westwards, however there were not able to reach shoreline as they ran out of fuel. The Avengers had to try to land in water. At that time it was getting dark and according to the ship reports from that regions the sea conditions were quite rough. After it was known of the lost Avengers, two PMB Mariners seaplanes were dispatched for search and rescue operation. One of them didn't come back. One can explain this catastrophe that those planes had some specific defects that allowed fuel vapor penetrate the main cabin and it was sufficient for a small spark to cause an explosion. The captain of "Gaines Mills" tanker informed of explosion and falling debris, later he noticed fuel spots on the sea surface.

Afterwards until certain time, these mysterious stories about missing people and planes were forgotten. However, the book "The Bermuda Triangle" by Charles Berlitz [4] dedicated to the mysteries of the Bermuda Triangle was published in 1974. This book instantly became a bestseller, and it was reprinted by dozens of publishers. This book was requested for additional prints several times. In total, some 20 million copies were printed. However, the meteorological analysis shows that this area of the Bermuda Triangle is subject to frequent tropical cyclones and storms. Even for large tonnage ships this could be a very serious problem, and for smaller

yachts and fishing boats that are abundant in that area it is much worse. The frequency of the ship wrecks in the area of the Bermuda Triangle is not higher than in different areas (considering traffic intensity). When the large commercial jet aircrafts started flying over the area of the Bermuda Triangle, there were no any airplane crashes. The mystery of the missing dozens of planes and ships doesn't give any peace to the researches of paranormal activity. That's why the disappearance of the Malaysian airlines airplane Boeing 777-200 is being tried to relate to paranormal activities, even a kidnapping by the aliens.

III. Possible realistic causes of disappearance of ships and aeroplanes

Therefore, one should try to consider possible realistic potential causes of such abrupt disappearance of ships and airplanes. There could be several reasons. These are:

A. Migrating waves

This hypothesis assumes an existence of so-called migrating waves that could reach 30 m and can appear very suddenly in the ocean. Until 1995 it was considered not real until the wave of 25.6 m was recorded at the petroleum production platform in the North Sea off the coast of Norway [5]. This wave was named "Draupner wave". Later, the research project MAXWAVE of the ocean surface using radar satellites ERC-1 and ERS-2 of the European Space Agency (ESA) confirmed the existence of so-called "Draupner" waves. During three weeks, it was recorded more than ten giant solitary waves with the wave height of over 25 meters. If such a wave descends on a ship, then a relatively small ship (although this would be also extremely dangerous even for large container ships and supertankers) can sink in a matter of minutes.

B. Infrasound effect

Certain natural conditions could generate infrasound in oceans which could cause depression effects in humans that could lead to panic, hallucinations and temporary insanity as a result of which the crew could abandon the ship and parish. Perhaps, this could explain in some extent legends about small flying frigates ghosts, flying Dutch, very widespread in medieval times. However, this hypothesis is not fit to explain catastrophes with modern ships and specially airplanes.

C. Gas plumes from the ocean floor

Let's stop here and discuss this in details. The thing is that in some places with large deposits of methane hydrates, a sudden release of methane could happen. This will lead to a formation of large bubbles coming to the sea surface with a very low density that any ship will plunge instantaneously to the seas abyss. Some experiments conducted confirmed such a possibility of sinking a ship within a few seconds if this ship is in the area of gas discharge and

the bubble size is of the order magnitude or larger than the ship [6]. When rising in the atmosphere methane can cause engine failures, malfunctions of altimeters and a severe reduction in aerodynamic lifting force which all can lead to crashes. The most dangerous is that the methane-air mixture can cause a strong explosion.

In modern history there were catastrophes that could explain this. Such catastrophe happened near a small town of Asha in Chelyabinsk area of Russia along the main railroad on July 4, 1989 [7,8]. The gas pipeline "Siberia – Ural - Volga area" had a leak which formed a cloud of methane-air mixture on the ground near the leak location. Under very unfortunate circumstances, two trains entered this gas cloud from opposite directions. As a result of a massive explosion both trains were destroyed. According to some non-official sources, this explosion was approximately the same as in Hiroshima - 12 kt. Some 575 were parishes (780 - according to a different source), and several hundreds were wounded.

Let's try to think about a similar catastrophe but in the ocean. In this case as a result of the gas expulsion (e.g. methane release from gas hydrates) a gas "bubble" forms on the sea surface. Then this methane bubble rises in the air (as methane is lighter than air), mixes with air and expands creating a methane mixture cloud. In this process, the methane concentration drops as this bubble rises. At the large altitude (higher than of 5-6 km), the methane concentration is lower than 4.4% which is low enough to prevent any risk of explosion of the methane-air mixture. Therefore, for any commercial jet aircrafts normally flying at the altitude of 10 km the methane-air mixture would not represent any risk of explosion. However, if for some reasons (e.g. during a take-off) the jet airplane has not reached its cruising altitude, the risk of explosion if this jet passes directly through this methane mixture cloud is quite high. Probably, this was what happened to the Boeing 747 performing TWA 800 flight from New York to Paris on July 17, 1996 [9]. The jet blew at the altitude of 4 km 46 minutes after a takeoff from the New York airport. As a result, all 230 passengers and crew perished. The real cause of this catastrophe is still unknown even some of the best civil and military experts were involved in the investigation.

There is another possible reason of airline catastrophes. The author of this paper recently offered a theory that the Earth's core consists of metallic hydrides rather than of metals (mostly iron) as previously thought [10]. This theory has been recently confirmed by several experimental data. According to

this theory in several places of the Earth's core thermonuclear reactions sporadically take place. The temperature in these places increases, and metallic hydrides break and release a large amount of hydrogen which is then expelled by drastically increased pressure from the Earth's core to the outer Earth's core and mantle. The chain reaction doesn't happen here as hydrogen being a very good heat exchanger moves out all excess heat energy, and the temperature drops again. But the expelled from the inner Earth's core hydrogen forms hydrogen gas plumes rising to the Earth's surface. The properties of these plumes have been studied by geophysicists for a while now. The expelled plumes directly from the Earth's surface are essentially volcanoes. The Earth's surface is protected from the expelled hot magma by the Earth's crust consisting of hard rocks. However, these hard rocks in the Earth's core have various fractures and faults (so called anomalous zones) which are subject to volcanic activity. The most important are zones with fractures and faults in the ocean as the earth's crust thickness is 4-5 km which is an order of magnitude thinner than on the continents (with 40-50 km crust thickness). Thus, the danger of expelled hydrogen exists mostly only in the ocean.

IV. A possible cause of disappearance of airline flight 370

Now let us consider the following situation. A large cloud of hydrogen, mostly ionized, released from the ocean flow is rising in the air, mixing with the air and expanding. What will happen to the airplane if for some reason it enters this cloud? The explosion is likely not possible as the hydrogen concentration at the altitude of 10 km would be quite low. However, because of the very low density of hydrogen, the airplane would suddenly drop. Besides, the ionized hydrogen will most likely damage all navigation electronic equipment including special transponders transmitting aircraft identification data and information about aircraft position, and also system ACARS performing constant monitoring of flight data and transmitting them to ground control services. Very experienced pilots can exit from this sudden drop but they would be "blind" without any working navigation equipment. If this happens during day, then pilots and even some passengers can determine a route to the nearest shoreline by the solar position. However, the Malaysia flight that likely got in this situation at night time around 1:37 am local time. Finding airplane orientation based on stars in tropics is very difficult, thus, obviously, the pilots were not able to do so. One can assume here that in this force majeure situation, the pilots tried to return back to the Kuala Lumpur airport (see Fig. 1).



Fig. 1 – The route of Boeing 777-200 of Malaysia Airlines Flight 370. 1-4 are coordinates of the aircraft determined by ground radars, and 5 is the assumed flight direction [1].

However, the pilots were not able to take the correct route, and with the cloud coverage, the aircraft passed north of airport missing George Town and a large well lit freeway crossing Malaysia north to south. Thus, the airplane gradually lowered its altitude (barometric altimeters must have been working fine) to exit the cloud coverage and to obtain ground visual. However, when the aircraft gained ground visual, it was over the ocean, and that is where it was seen by two Chinese fishermen. The pilots decided that they took a wrong direction and instead of east, they are flying westwards. That's why around the point 4 they changed their direction by 90 degrees and assumed to go north. Here the aircraft ascended again to the normal safe cruising altitude of around 10 km. At this moment at 2:22 am, the Boeing was last seen by the military radars (point 4 in Fig. 1). Then the airplane followed its flight south or south-west towards the Indian Ocean at the cruising speed of 870 km/hr until sunrise time of approximately 6 am local time. During this time, the airplane flew approximately 3000 km to reach 19° - 22° S latitude. At this point, the pilots most likely realized that they flew south instead of north. Then, the only survival scenario would have been to turn east and to fly towards Australia. After that, the Boeing jet flew approximately 2 hours until it ran out of fuel. According to the signals from Rolls-Royce jet engines transmitted once an hour by satellite Inmarsat, the last signal was received at 8:15

am local time. The aviation experts could determine approximate zone where the jet fell into the ocean which could simplify the search efforts. Most likely, it is near the Western Coast of Australia.

V. Conclusions

How real is the proposed cause of the Malaysia Airline jet catastrophe? In principle, the likelihood of jet aircraft passing through the hydrogen cloud expelled from the sea bottom and rising in the air is very low as hydrogen quickly escapes to the outer of the atmosphere and then to space. However, this likelihood is not zero and must be taken into a serious consideration by the investigating parties. The final answer of what really happened we can have only after the Boeing jet wreckage is found and information from "black boxes" is retrieved.

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