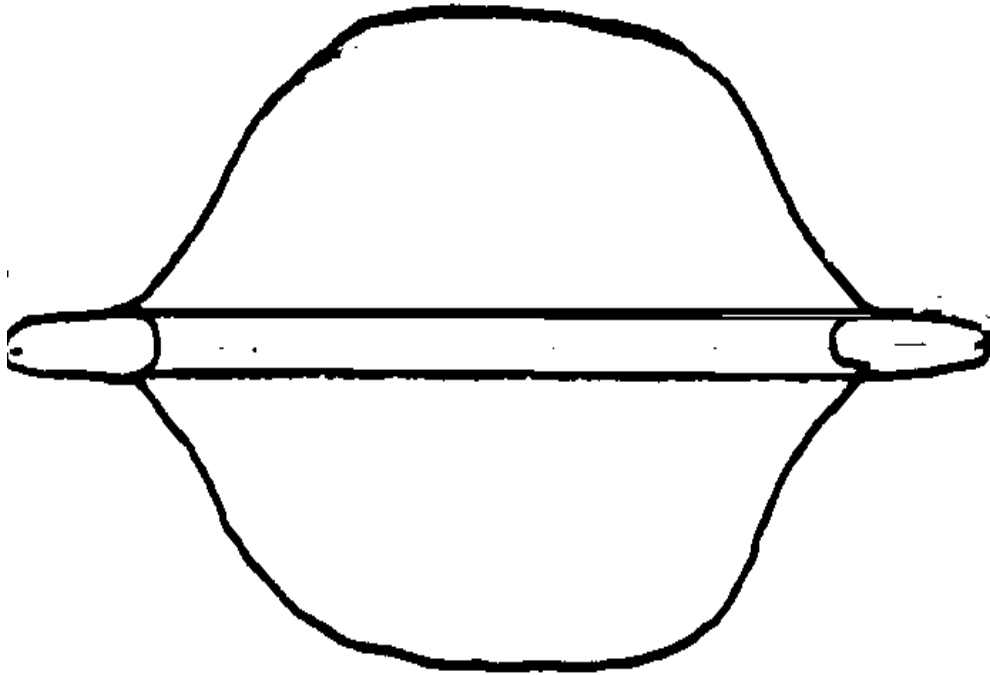


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SILHOUETTE OF A GIGANTIC SPACESHIP

THE SILHOUETTE



OF A GIGANTIC SPACESHIP

INTRODUCTION

This is the complete report on the UFO sighting by the Japanese crew of a jumbo freighter aircraft in November, 1986. This sighting gained international attention when the Federal Aviation Administration (FAA) announced that it was going to officially investigate this sighting because the Air Route Traffic Control Center in Anchorage, Alaska, had reported that the UFO had been detected on radar. More recently (May, 2001) this sighting case has become prominent once again as a result of the CSETI Disclosure Project (see <http://cseti.org>). One of the government witnesses presented by CSETI is John Callahan, former Division Manager for Accidents, Evaluations and Investigations in the Washington, D.C. headquarters of the FAA, has cited this case as evidence that UFOs are real. The official documents cited by Callahan in his Disclosure Project interview was used to create the report presented here. What you will read here is a MORE complete report than the FAA presented to President Reagan's science advisors, the CIA, the FBI and others. (In fact, if the truth be told, the FAA did not do a very thorough investigation, as you will see at the end of this report.)

When the FAA announced that it was going to investigate, the airplane captain, Kenju Terauchi became a media star. He was featured on numerous radio and TV programs and in People Magazine. Unfortunately his career suffered for his indiscretion of reporting a UFO. Within a few months of these events he was grounded, even though he was a senior captain with an excellent flying record. Several years later he was reinstated.

What you are about to read is the most complete and analytical investigation of this sighting ever published. (This was originally published in the International UFO Reporter, March/April, 1987, published by the Center for UFO Studies. This report took up the whole issue of the IUR.)

Numbers in parentheses refer to footnotes at the end of the paper.

THE FANTASTIC FLIGHT OF JAL1628

by Bruce Maccabee

In mid-October, 1986, Capt. Kenju Terauchi was excited to learn of a special Japan Airlines flight from Paris to Anchorage and then to Tokyo. It was to carry a cargo of French wine. There would be an intermediate stop at Reykjavik, Ideland.

The flight began on November 16, 1986, with himself and a crew of two (copilot, flight engineer) in the cockpit. The plane landed in Iceland and waited for good weather. The next day the plane took off heading north northwest. A bright moon helped with the visibility for the night flight over Greenland, but as the plane continued over northern Canada the moon set behind them. When the plane reached an air route reporting point in far northwestern Canada called "Shingle Point" the sky ahead was dark except for an afterglow of sun in the west. The plane reported its position to the flight control center at Edmonton, Alberta, and continued across the Canada-Alaska border, where it made history. UFO history, that is.

Although this wasn't a routine flight, it, nevertheless, was not expected to be a newsworthy event. But something happened over Alaska which caught the attention of the world for several days in late December and early January, 1987. Virtually every newspaper in the world carried a story about what Capt. Terauchi and his crew saw over Alaska. This is the story of that sighting as told to the Federal Aviation Administration (FAA) by the crew members and the flight controllers on the ground.

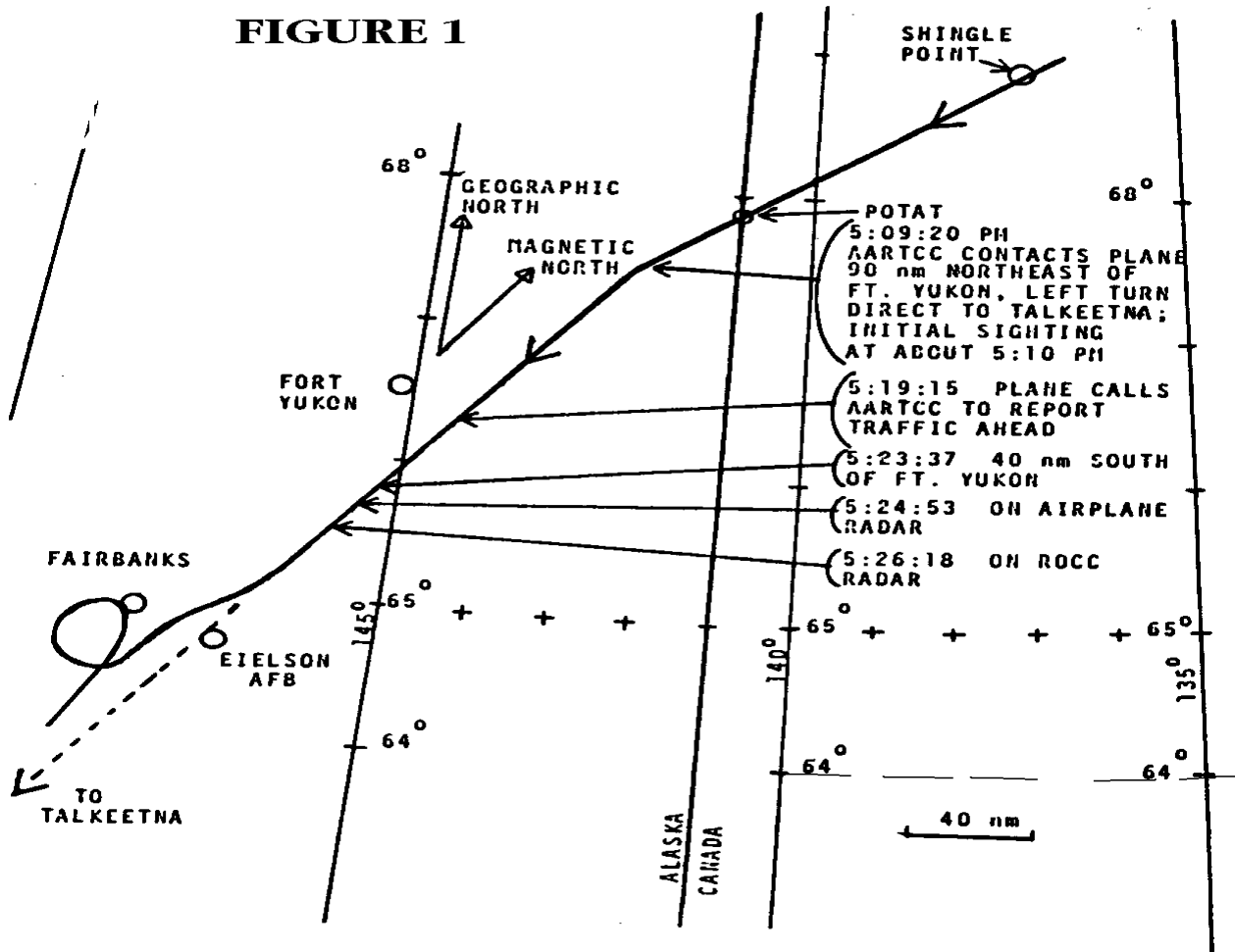
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UNIDENTIFIABLE LIGHTS

IT was about 11 minutes past 5 local time, the late afternoon of November 17, while JAL1628 (the designation for this particular flight) was high over the frozen northeastern part of Alaska that Capt. Terauchi first realized that the lights to the left and below were unusual. He had first noticed them about a minute earlier while his plane was turning to the left. After watching them for a short time he decided that they were lights of "special missioned aircrafts or two fighters" on some mission. (Note: The Air Force maintained continual air surveillance over Alaska because of its proximity to the (former) Soviet Union.) He decided to ignore them. But "the position of the lights had not changed even after a few minutes and that called our attention." In other words, the lights appeared to be traveling along with his plane. (1,2)

AT that time the Boeing 747 freighter was operating on autopilot and heading outwestward (a heading of about 215 degrees) at an altitude of 35,000 ft (3). The sky to the right had an afterglow of sunset, but ahead and to the left it was very dark.

THE Anchorage Air Route Traffic Control Center (AARTCC) had called the plane just about two minutes before this time, i.e., at 5:09:20 (4,5) (or 20 sec. past 5:09 PM; exact times are based on the AARTCC tape recorded record of the events) to report the initial radar contact with the plane, which at that time was about 90 nautical miles (nm) notheast of Fort Yukon. (1 nm = 1.15 statute miles = 1.85 km) (Referring to a map, the plane at this time was at the "upper right hand corner" of Alaska.) The flight controller had asked the plane to head directly toward an air route reporting point called Talkeetna, named after the small Alaska town nearby (north of Anchorage and not far from Mt. McKinley). (4) In doing so the plane would pass south of Fort Yukon and Fairbanks. The copilot, who handled the aircraft communications, acknowledged the AARTCC request and then turned the plane to the left ("left rotation") about 15 degrees to a heading of 215 degrees. It was during this turn that Capt. Terauchi, sitting on the left side of the cockpit, first saw the unidentifiable lights out his side window (2). (See Figure 1)

FIGURE 1

AFTER the plane levelled out he observed "lights that looked like aircraft lights, 30 degrees left front, 2,000 feet below us, moving exactly in the same direction and with the same speed we were." At that time the airplane was flying at about 525 kts (nautical miles per hour) ground speed (972 km/hr or 605 mph) according to the tracking data (3). Subsequently the speed decreased to about 500 kts.

IT is important to note the pilot's statement of his belief that the lights were 2,000 feet below him. He could not know how far below the lights were just from his visual sighting. (To determine the distance below he would have to know the exact depression angle and the distance to the lights.) Nevertheless, his statement indicates that his sighting line to the lights had a noticeable depression angle (the angle below horizontal). At 35,000 ft the horizon distance is about 214 nm so the depression angle of the horizon is about 1.5 degrees which is hardly noticeable. The pilot's statement therefore implies that the lights were below, probably considerably below, his horizon, i.e., between himself and the ground, thus ruling out any astronomical source for the lights. (Note: CSICOP published its initial "solution" of the sighting as Jupiter and Mars. This will be described later.)

THE captain's initial reaction to the lights was to ignore them as US air fighters, probably military aircraft from one of the nearby Air Force Bases (Eielson or Elmendorf). But the position of the lights "had not changed even after a few minutes and that called our attention." (2) The lights of these two "aircraft" stayed at the left for a while and then the unbelievable happened. (6)

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THE UNBELIEVABLE

"TRAFFIC IN FRONT OF US"

"IT was about seven or so minutes since we began paying attention to the lights (when), most unexpectedly, two spaceships stopped in front of our face, shooting off lights. The inside

cockpit shined brightly and I felt warm in the face." (Note particularly these reported physical effects.)

WHAT the captain saw suddenly appear ahead of him and to the left at about the 11:00 o'clock position is illustrated in Figure 2, which was drawn by the Captain only a few hours after the event (7). The vertical lines represent boundaries enclosing a dark center of each object. The horizontal lines represent flame colored or yellowish "exhausts" flaring outward, left and right, from the dark center. There were two totally separate sets of the "exhaust" flame groups, i.e., two totally separate "crafts." It was the captain's impression that the two "aircrafts" he had seen for the first time to the left only minutes before had suddenly jumped in front of his plane.

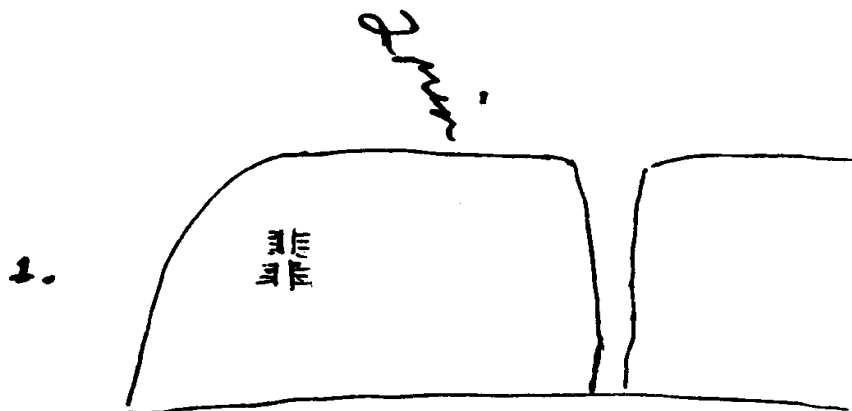


Figure 2: Original drawing by Capt. Terauchi of the "two spaceships" in front of JAL1628. Objects were situated one above the other for two minutes.

In his written testimony Terauchi speculated that the "spaceships" fired jets to "kill the inertia (actually momentum!) of their high speed maneuver." After this maneuver from the left of the plane to the front, "the ships appeared as if they were stopped in one place in front of us." At this time one "ship" was above the other. "Then three to seven seconds later a fire like from jet engines stopped and became a small circle of lights as they began to fly level flight at the same speed as we were, showing numerous numbers of exhaust pipes. However the center area of the ship(s) where below an engine might be was invisible. (From) the middle of the body of a ship sparked an occasionally (sic) stream of lights, like a charcoal fire, from right to left and from left to right. Its shape was square, flying 500 feet to 1,000 feet in front of us, very slightly higher in altitude than us. Its size was about the same size as the body of a DC-8 jet, and with numerous exhaust pipes."

THE pilot speculated that the "firing of the exhaust jets varied, perhaps to maintain balance. Some became stronger than others and some became weaker than others, but (they) seemed (to be) controlled automatically." (2) At the time of this startling appearance the pilot "did not feel threatened or in danger because the spaceship moved so suddenly. We probably would have felt more in danger and would have been prepared to escape if the spaceships were shaking or unable to stop themselves." (Note that the plane was traveling nearly 10 miles every minute so there wouldn't be much time to react if he felt he were going to run into something a short distance in front of his plane.) It was at this time that the pilot concluded that he was looking at something REALLY unusual because, in his words, "it is impossible for any man made machine to make a sudden appearance in front of a jumbo jet that is flying 910 km/hr and to move along in a formation paralleling our aircraft." (2)

AFTER this sudden appearance in front of the jet the lights moved in formation with the jet for three to five minutes. As they moved they rocked or swayed back and forth. Then they abruptly rearranged their orientation from one above the other to side-by-side. They were still both at about the 11 o'clock position (7) (See Figure 3, drawn several hours after the event.).

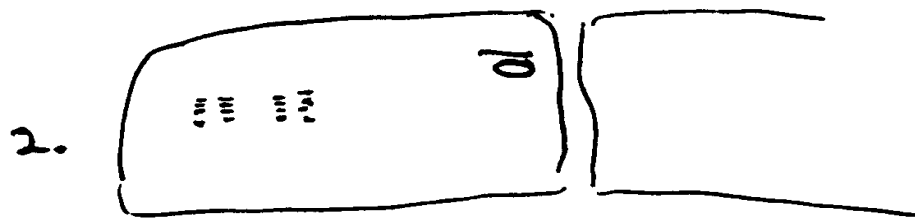


Figure 3: Second relative orientation of "spaceships." Objects were side by side for 10 minutes.

CONTINUING the description, the lights were like flames coming out of multiple rocket exhaust ports arranged in two rectangular arrays, according to the captain's drawings made shortly after the event and again two months later (Figures 2 and 3). He compared them to "output exhaust" like the "Challenger (as it took off)." (1) He described the colors as "amber and whitish." He stated that the "numerous lights" were "exhausts on the engines" which were "lined up all the way." (See Figures 2,3 and Figure 4 which was drawn in January, 1987.) When they were "blasting recoil (the) jets (were) so strong that I could not see (the individual lights and their arrangement) because it was so bright." However, "once the recoil blasts stopped the speed was absolutely steady, not faster, not slower, and I could see them (the individual lights or exhaust ports) very clearly." (1) Besides the lights of the "exhaust ports" the captain also reported seeing "sparks like a fire when using gasoline or carbon fuel." By this he may have meant brief bursts of yellowish color.

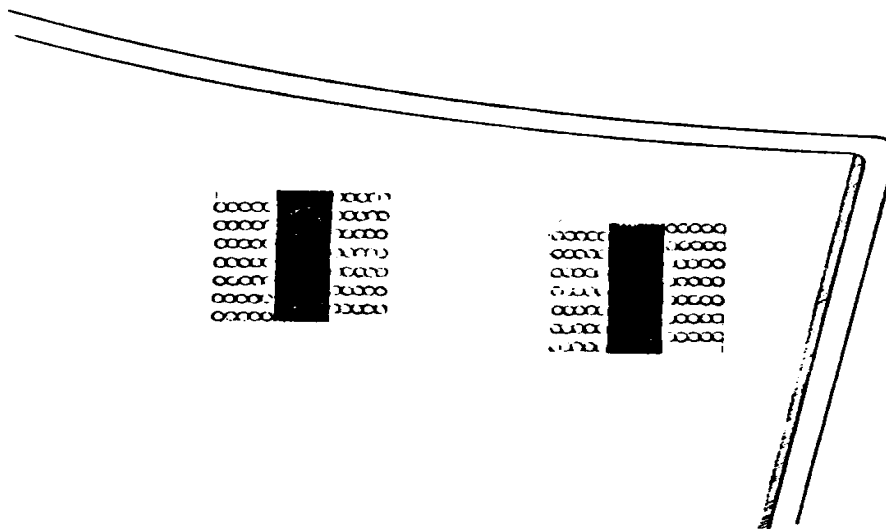


Figure 4: The "spaceships" as seen through cockpit window

THE copilot, Takanori Tamefuji, compared the numerous lights or flames to "Christmas assorted" lights with a "salmon" color. (9) He said, "I remember red or orange, and white landing light, just like a landing light. And weak green, ah, blinking. " The intensity wasn't constant but rather it pulsated: "became stronger, became weaker., became stronger, became weaker, different from strobe lights" (which have very quick flashes). The lights were "swinging" in unison as if there were "very good formation flight...close (formation)" of two aircraft side by side. He had no doubt that he was seeing some sort of aerial object or objects just ahead and to the left of the airplane. He compared the clarity of the lights to seeing

"night flight head-on traffic" at which time it is only possible to see the lights on the approaching aircraft and "we can not see the total shape."

UPON seeing the lights he first thought he was seeing "two small aircraft. " But they were "very strange" because there were "too many lights" and "it was so luminous." Subsequently he had the feeling that "it was larger than normal aircraft." He thought that lights were "a little bit lower" than the altitude of the plane, while Capt. Terauchi recalled that the lights might have been a bit higher. Tamefuji pointed out that "it is very difficult" to judge the altitude of "head - on traffic." He summarized his impressions by saying, "I'm sure I saw something. It was clear enough to make me believe that there was an oncoming aircraft. " (9) Of course, these "aircraft" were not oncoming. Instead, they were matching exactly the speed of the 747 jet.

ACCORDING to the captain's drawing each of the two "aircrafts" had two rectangular arrays of lights or horizontal flame "exhausts" and these were separated by a narrow rectangular dark area (Figures 2, 3, 4). The copilot's drawing was similar.(9) The two arrays associated with a single craft were "swinging" or rocking to the left and right as if they were rigidly bound together and rotating back and forth about a central pivot point within the dark region (8).

THE flight engineer who sat behind the copilot, Yoshio Tsukuba, had a poorer view of the lights. He recalled that when he first saw them he was looking "through the L1 window at the 11 o'clock position" (about 30 degrees to the left of straight ahead) and he saw "clusters of lights undulating." (10) The clusters were "made of two parts...shaped like windows of an airplane" (i.e., arranged in square or rectangular clusters). He emphasized that "the lights in front of us were different from town lights." He described the colors as white or amber.

(Note: keep in mind the descriptions of these lights and the flight dynamics for comparison with explanations which were put forth months later that these were misidentified astronomical phenomena and reflections on clouds.)

APPARENTLY having clusters of blinking, undulating and rotating ("swinging") lights nearly in front of their plane and apparently only a few thousand or so feet away was too much for the crew. After discussing the situation over the next 60 seconds or so they decided to try to find out what was going on. Mr. Tamefuji, who was the "voice" of the aircraft, called the AARTCC. It was now about nine minutes since Capt. Terauchi had first noticed lights on "two aircrafts" at the left of his plane and it was probably only about a minute or two after the "spaceships" had abruptly appeared nearly in front of the jet where they could be seen by the whole crew. At the time of the call the two "ships" were still traveling one above the other.

(NOTE: Here follow statements transcribed from the AARTCC audio tape that recorded the whole sighting. The times listed below are minutes and seconds of Alaska Standard Time.)(11)

5:19:15 JAL1628 Anchorage Center, Japan Air 1628, ah, do you have any traffic, ah, seven (eleven?) o'clock above?
5:19:24 AARTCC JAL1628 heavy, say again...
5:19:28 JAL1628 Do you have any traffic in front of us?

(IT appears that Tamefuji's reference to "seven" o'clock in the tape transcription is an error either by Mr. Tamefuji (who had to speak English to communicate with the AARTCC) or by the transcriber. The seven o'clock position is far to the left and nearly behind the airplane where Tamefuji couldn't have seen the lights. I assume that the correct direction was eleven o'clock.) It is interesting to note that Tamefuji asked for "traffic ...above " indicating that at that time he placed the lights at an altitude above the 747 jet, even though when he was interviewed a month and a half later he recalled the lights being below the jet. The suggestion that the lights were a bit above agrees with the captain's recollection.

5:19:32 AARTCC JAL1628 heavy, roger.
5:19:36 JAL1628 Ah, roger and , ah, we (have) in sight, ah, two traffic (sic), ah, in front of us one mile about.

AT the time of the event Tamefuji estimated the distance to the lights as being "one mile, about" which is quite a bit greater than the "500 to 1000 feet" that Capt. Terauchi recalled in his testimony written about a month and a half later.

5:19:49 AARTCC JAL1628, roger, do you have.., ah, can you identify the aircraft?
5:19:58 JAL1628 Ah, we are not sure, but we have traffic in sight now.
5:20:04 AARTCC JAL1628 heavy, Roger. Maintain visual contact with your traffic and, ah, can you say the altitude of the traffic?
5:20:14 JAL1628 Uh, almost (at) the same altitude.
5:20:21 AARTCC JAL 1628 Roger. Would you like a higher or lower altitude?
5:20:27 JAL1628 Ah, no, negative. JAL1628.

About a minute elapsed and then the AARTCC tried again to learn the identity of the "traffic."

5:21:19 AARTCC JAL1628 heavy, see if you are able to identify the type of aircraft, ah, and see if you can tell whether it's military or civilian.
5:21:35 JAL1628 We cannot identify the type, ah, but we can see, ah, navigation lights and ah, strobe lights.

5:21:48 AARTCC Roger, sir. Say the color of the strobe and beacon lights.
5:21:56 JAL1628 The color is, ah, white and yellow, I think.
5:22:03 AARTCC White and yellow. Thank you.

THE reference to navigation and strobe lights conflicts somewhat with the description given subsequently of multiple pulsating lights. It is unfortunate that the crew was not fluent in English (many of the words on the AARTCC tape are barely distinguishable) because, no doubt, the crew could have provided much more accurate descriptions during the sighting. I suspect that the poor description of the colors (white and yellow) was a result of the copilot not knowing the English words for the actual colors he was seeing and thereby being forced to use the closest word he knew. In the subsequent interviews with a translator the colors mentioned were yellow, amber and green. The colors yellow and amber are not conventional colors for aircraft (red, white, green are conventional) but they might be consistent with "rocket exhaust" which is what the captain compared them to in his interview and written testimony. (1,2)

BY this time the personnel of the AARTCC were aware of the JAL report of traffic and the watch supervisor entered the following into the Daily Record of Facility Operation:

"5:21 PM. JL1628, HB747, BIKF-ANC reported traffic at his altitude (FL350) one mile with a white and yellow strobe. AAL ROC and EDF ROCC notified. No known traffic identified."

IT should be noted that in the above statement the reference to Alaskan Airlines Regional Operation Center should probably have been Japan Air Lines ROC. Also, the Elmendorf (EDF) Regional Operational Control Center (ROCC) was not actually contacted until 5:23 PM. Note also that "back in those days" the radar operators were alert to any intrusions by Russian aircraft which might be testing our defenses. Hence the contact with the Air Force at Elmendorf.

AFTER flying in a one-above the other orientation for several minutes the "two ships" changed their relative positions. The captain recalls "the ships moved in formation for about three to five minutes (and) then the ships moved forward in a line, again slightly higher in altitude as (sic) we were, 40 degrees to our left. We did not report this action to the Anchorage Center. Honestly, we were simply breathtaken." (Here the captain refers to the "ships" arranging themselves side by side in a horizontal "line," as is clearly indicated by Figure 3.)

AT some time while the arrays of lights were ahead and to the left, Capt. Terauchi decided to take a picture of them. He asked Tsukuba to get the camera. This incident helped Tsukuba later to remember how long the lights had been in front of the plane. He recalled during the interview (10), "I think I saw it for about 10 minutes after I sighted it the first time. The reason is because the captain wanted to take pictures. His camera bag was placed behind his seat, beside mine, and I handed it to him. But he could not take pictures, so I placed his camera bag beside my seat again. So I think about 10 minutes."

WHEN asked why the captain couldn't take pictures Tsukuba responded, "Well, his camera is Alpha 7,000 with film ASA 100. He could not operate it well. I mean the operating procedure of the camera was not well understood."

THE captain recalled the attempt at photographing the lights as follows:(2) "I thought perhaps it is one of those things called UFO and taking a photo might help to identify the object later. I asked to bring forward my camera bag that was placed in the rear of the cockpit and began to take a picture. The area in which the plane was flying was unchanged but the lights were still moving strangely. I had ASA 100 film in my camera but the lens kept adjusting and never could set a focus. I changed auto-focus to manual focus and pressed the shutter but this time the shutter would not close. Then our aircraft began to vibrate and I gave up taking the photo. I placed my camera back in the camera bag and concentrated on observing the lights." (Note: probably he had his camera operating with automatic exposure. If so, then since he was photographing into the dark the camera was compensating for the low light level by keeping the shutter open. Had he changed to manual exposure he might have gotten a useable picture.)

AFTER learning the color of the strobe lights the AARTCC began to ask about flying conditions ("normal") and clouds ("below us"). It took from 5:22:11 to 5:23:05, or about a minute, for the AARTCC to get an answer about the clouds because of interference with the radio transmissions. At 5:22:41 the AARTCC told the plane the transmissions were "garbled" and asked it to change transmitting frequencies. In his testimony the pilot recalled the several requests for cloud altitude: "They asked us several times if there were clouds near our altitude. We saw thin and spotty clouds near the mountain below us, no clouds in mid-to-upper air, and the air current was steady."(2) The repeated questions about the clouds caused Terauchi to wonder why the controller was so interested in clouds. He speculated, "Perhaps the controllers were concerned that an increased use of improved lazer (sic) beams using (sic) clouds was creating moving images." (Here Terauchi refers to laser beams illuminating the clouds. Of course, there were no sufficiently powerful visible laser beams in the "wilds" of Alaska at that time.... nor are there now.)

THE pilot also remembered the communication problem: "The VHF communications, both in transmitting and receiving, were extremely difficult for 10 to 15 minutes while the little ships came close to us and often interefered with communication and Anchorage Center. However, communication conditions became good as soon as the ships left us. There were no abnormalities in the equipment of the aircraft."(2) When he was interviewed the captain was asked to describe the type of interference he heard. He described the interference as "some kind of, like, ah, jamming... it was just a noise, sounded like zaa, zaa."(1) The communications capability was, he said, two out of five possible levels (5,4,3,2,1) with five being perfectly clear.(1) Normally communications with a plane in that area would be good.

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RADAR CONTACT

SHORTLY after the copilot told the AARTCC, at 5:23:05, that the clouds were "below us", he reported a new and sudden event:

5:23:13 JAL16298 And now the target, ah, traffic is extinguished. We cannot see it now.
5:23:19 AARTCC JAL1628 Roger. And I'm not receiving any radar replies.

IT was probably at this time that the "two ships" which had been quite close to the plane since 5:18 or 5:19 PM suddenly moved farther away and to the left. Looking to the left the captain could now see that "there was a pale white flat light in the direction where the ships flew away, moving in a line along with us, in the same direction and same speed and at the same altitude as we were." (2)

ABOUT this time the AARTCC controller decided to find out if the Air Force at Elmendorf Regional Operational Control Center had anything on its radar.

5:23:35 AARTCC (to the ROCC) Could you look approximately forty miles south of Fort Yukon? There should be (JAL1628) up there. Can you tell me (if) you see (a) primary target and its position?

IT took the ROCC operator about two minutes to answer the question. In the meantime significant events occurred aboard the plane and at the AARTCC.

IT was now about 14 1/2 minutes since Capt. Terauchi had first seen the lights traveling along with his plane, about 6 to 7 minutes since the lights had appeared abruptly in front of the plane, and only a minute or so since the "ships" quickly moved away from the jet, apparently in the direction of the "flat pale white light" (2) which the captain later described as like "two white fluorescent-like lights". (12) The captain's drawing indicates that the lights were horizontally oriented and spaced apart, like two long fluorescent tubes end-to-end but with a large dark gap in between them. (See Figure 5a. Figure 5b is the captain's map to illustrate the location of the airplane along its flight track in Alaska when the "traffic" first appeared at the left - 1, when the traffic appeared in front of the airplane - 2 and when the traffic departed and the two white lights appeared at the left - 3. The illustrations in Figure 5 were drawn several hours after the sighting.)

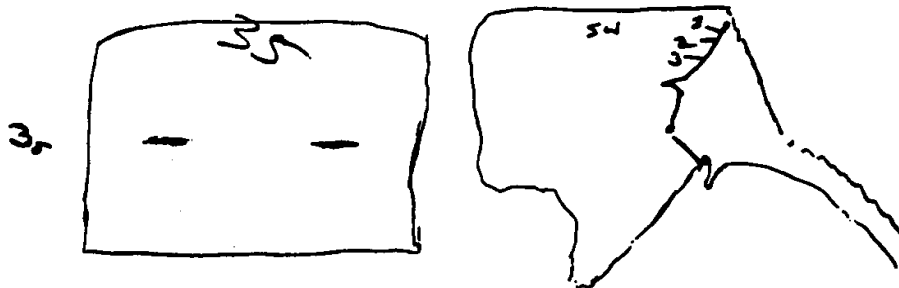


Figure 5A: Capt. Terauchi's November 17 drawing of two flat pale lights and the "silhouette of a gigantic spaceship"

Figure 5B: Capt. Terauchi's map of the track of the aircraft with numbers indicating locations of the plane when the "traffic" appeared as illustrated in Figures 2 (#1), 3 (#2) and 5A (#3)

At this time in the flight he could only see the two white lights. He was not sure whether the two "ships" had become pale white lights after they moved away from the jet or if the white lights were something entirely different. (He reported that later in the flight that he could see the outline of a large shape connecting the lights. After seeing the outline the captain had the impression that the distant lights were on a very large "mothership" and that the two small "ships" had traveled to the "mothership." (1)) It was difficult for the other crew members to see the pale lights through the left window and they didn't try to describe any particular orientation or shape to the lights. They did, however, agree that there were some lights at the left where the pilot indicated.

UP to this time the AARTCC had not acknowledged the detection of any anomalous target on

the ground radar. Terauchi recalled his feelings at the time: "We had (earlier) said we could see lights in the 10 o'clock position (i.e., about 60 degrees to the left) at the same altitude and wondered if they could see anything on their radar. The Anchorage Center replied that they could see nothing on their radar." (See the response from the AARTCC at 5:23:19.) Copilot Tamefuji recalled that, even though the lights were now farther away, the captain decided to "search the object by the (airplane's) radar." (9)

TERAUCHI wrote (2), " I thought it would be impossible to find anything on an aircraft radar if a large ground radar did not show anything, but I judged the distance of the object visually and it was not very far. I set the digital weather radar distance to 20 (nautical) miles, radar angle to horizon (i.e., no depression angle). There it was on the screen. A large green and round object (here he refers to the image or "blip" on the radar screen) had appeared at 7 or 8 miles (13 km to 15 km) away, where the direction of the object was. We reported to Anchorage center that our radar caught the object within 7 or 8 miles in the 10 o'clock position. We asked them if they could catch it on ground radar but it did not seem they could catch it at all." (21) During the January interview Terauchi recalled that the radar detection occurred about 15 minutes after he first saw the lights, i.e., at about 5:25 PM. He was only slightly in error.

5:24:50 AARTCC JAL1628, do you still have, uh, visual contact with the, ah, traffic?

5:24:53 JAL1628 Affirmative. Also, (4) we (have) radar contact, ah...(unintelligible; broken transmission).

5:25:02 AARTCC JAL1628 heavy, roger, sir. I'm picking up a hit on the radar approximately five miles in trail of your six o'clock position (i.e., behind the plane). Do you concur? (Note: this was probably a silly question to ask since the crew could not see behind the plane. However, it is the first indication that the Elmendorf radar may have detected something other than the plane.)

5:25:12 JAL1628 Ah, negative, ah, 11 o'clock, ah, eight miles, ah, same level. Over.

A month and a half later the captain did not remember the direction exactly (see above; he recalled the 10 o'clock position) but he had recalled the distance correctly (this is an important check on the accuracy of his recall).

FLIGHT engineer Tsukuba recalled seeing on the radar screen at "about 10 miles" a "green dot like, not exactly a dot. It was not a dot but stream like", i.e., elongated. He did "not think it (the radar target) was the same lights as the one (sic) I saw in front of us." Here the flight engineer is referring to the visual difference between the two bright "ships" which had been nearly in front of the jet and the pale whitish light of the "mothership." Tsukuba described this "second" light as "very difficult to see" and "vague," although he did indicate that he saw it for "a total of 30 minutes." (10)

ACCORDING to Tsukuba (and also the pilot and copilot) there was no problem with internal cockpit lights reflecting off the windows since the internal lights had all been turned off (except the dim instrument lights). Tsukuba was sure that the "mothership" light was indeed outside the aircraft, but it was sufficiently indistinct and "hard to see" from his seat on the right side of the jet that he was "not certain whether it was lights of a distant town or a strange object." (10) He reported that the weather was clear and that none of his instruments showed any disturbances.

COPILLOT Tamefuji recalled that the radar echo was "just like other traffic, but, ah, I thought a little bit large." He said the radar target image was green and at a distance of 7 to 8 miles (nautical). He said he had "many experiences before in checking oncoming aircrafts on a radar" and in his opinion the radar echo was similar to a conventional aircraft echo.

SEVERAL hours after the sighting the captain, who had the best view of the radar screen, drew a picture of the radar image. (7) His illustration, Figure 6, shows a filled circle or

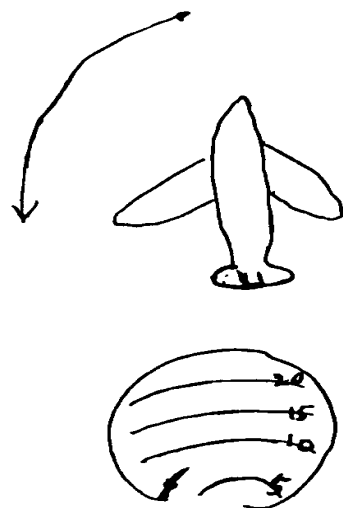


Figure 6: Captain's sketch of how objects moved with respect to the plane and how the radar echo appeared on the weather record display. Radar target is in the lower left of the round display screen at about 7 nm range.

"dot" at the center of a thick arc that covered ten or so degrees of arc. The image was roughly the 60 degree to the left of straight ahead. (The radar screen was marked with circles at varying distance, 5 mi., 10 mi, 15 mi., etc., and the image of the unknown was an arc lying between the 5 and 10 mile circles.) In commenting on the radar image the captain pointed out that "normally it appears in red when an aircraft radar catches another aircraft" whereas green is usually the color of a weak weather target such as a cloud. The fact that the echo was green on the screen led him to ask whether or not the "metal used in the spaceship is different from ours." (2) One might also speculate on the use of radar signature reduction techniques generally classified as "stealth." At any rate, the shape, size and color of the radar target indicated that the object was quite large and yet quite a weak reflector.

THE radar target remained on the screen for an undetermined length of time, but probably for no more than several minutes. "While we were communicating with Anchorage Center," the captain said, "the two pale white lights gradually moved to the left side and to the left diagonally back 30 degrees as if they understood our conversation and then when they were beside our aircraft (i.e., at about the 9 o'clock position or 90 degrees to the left) they totally disappeared from our radar." This is not surprising since the weather radar as it scans back and forth does not cover an arc greater than 90 degrees to the left or right.

WHILE the "mother ship" lights were dropping back to the left and the radar echo was going off the screen of the airplane radar, the Air Force and the AARTCC were having their own radar detections. At 5:25:45, after spending two minutes looking, the ROCC radar controller reported back to the AARTCC that he was getting some "surge primary return." By this he meant an occasional radar echo unaccompanied by a transponder signal. (It is important to understand the difference between "primary return" and a transponder return. On the radar screen each appears as a small dot or "blip" and if a plane with a transponder is present the two blips appear together (if one is not masked out). Primary radar, which is the standard echo-based radar, is the only way of detecting a distant aircraft that has no transponder. It is what one would expect to use to detect "non-cooperative" objects which don't have transponder, such as UFOs!. A transponder is a transmitter on an airplane which sends out a coded signal in response to a radar pulse from the ground station. All commercial planes carry transponders as the main means of detection by the ground controllers. The transponder can carry more information than just the echo, such as the plane designation and its altitude. In this case the JAL1628 carried a transponder. Therefore the radar operator would expect to see two adjacent blips each time the radar beam, in its continuous rotatory sweep mode, would sweep past the airplane. Any primary return without a transponder return would be evidence of a radar reflective object without a transponder. The difference between primary radar and transponder signals played a roll in the FAA "explanation" of the radar detections described below.)

THE ROCC controller added, "I don't know if it's erroneous or whatever, but..." The AARTCC responded:

5:25:50 AARTCC Negative, its not erroneous. I want you to keep a good track on there and if you pick up a (transponder signal), verify that you do not have any (military) aircraft operating in that area.

5:25:57 ROCC That is affirm(ative). We do not have anybody up there right now. Can you give me the position of the primary you're receiving?

5:26:03 AARTCC I'm picking up a primary approximately 50 miles southeast. But it's right in front of the (JAL1628). (4)

Unfortunately the AARTCC controller did not say what the primary return was southeast of (I know; don't end a sentence with a preposition!). He may have meant something southeast of Ft.

Yukon, since it was displayed as a location on his radar screen. At this time the plane was roughly 60 nm south southwest, relative to geographic north, of Ft. Yukon. But with respect to magnetic north (which is used on air route maps), the plane was southeast of Ft. Yukon. (The reason for this difference in direction is that in that area of Alaska magnetic north has a deviation of about 30 degrees clockwise from true geographic north.)

THE conversation continued as follows:

5:26:13 ROCC OK. I've got him about....

5:26:15 AARTCC Eight miles in front of the (JAL1628) he's got traffic at the same altitude (35,000 fty).

5:26:18 ROCC OK. I've got him about his, ah, oh, it looks like about, ah, 10 o'clock at about that range, yes.

THE clear implication of the last ROCC comment is that the Elmendorf radar showed a primary return - an object without a transponder - in about the same location as the captain reported! (Keep this in mind as you read the FAA "explanation" presented farther on in this paper.) The AARTCC then asked the ROCC to check on any military flights in the area around the plane and ended the conversation at 5:26:35.

ABOUT a minute later AARTCC called ROCC to report that the "target in front of the (JAL1628) is unknown to us." (4) ROCC responded (5:27:53), "OK. We've lost contact with it now. The AARTCC controller then went on to say, "OK. We're not working that aircraft (meaning the unknown target) in the...(unintelligible)..well, the aircraft (JAL1628) still has a visual contact, only he can't identify the (unknown) aircraft. He believes it has white and yellow strobes." To this the ROCC controller responded (5:28:04), "OK. I'm still not, I, we lost contact on him. I don't see him at all." In other words, there was no longer an unknown primary return on the ROCC radar display.

DURING this conversation the flight was continuing along a straight line heading of 215 degrees (southwestward) toward Talkeetna. The unusual lights were at the left side. The captain recalled, "When they were in front of us they were positioned slightly higher in altitude than we were, but now they placed themselves slightly below the horizon where it was difficult to see. The distance between us was still about seven to eight miles visually." The airplane radar no longer showed a radar echo since the lights were too far to the left. (7)

MANY minutes earlier, when the sighting began (about 5:10 PM), Ft. Yukon was at the right of the plane. The captain recalled the lighting conditions of the sky at the time: "When we started to see Ft. Yukon diagonally below us at the right the sun was setting down in the Southwest, painting the sky in a slightly red stripe, approximately two to three millimeters (at arms length?) and gave a bit of light but the east was still pitch dark."

A calculation of the angular elevation and azimuth of the sun shows that at the time of the initial sighting the sun was about 15 degrees below the horizon, from ground level, and was at an azimuth of about 270 degrees, or due west. This would place it below the horizon and 55 degrees to the right of straight ahead of the plane. Thus the astronomical calculation shows that the captain was incorrect in referring to the sunset direction as "southwest" although he wasn't far off. The calculation is consistent with the claim of the captain and crew that the sun had set and that there was a thin reddish stripe of sky just at the horizon to the right of straight ahead.

UNDER these conditions the sky to the left of the plane would have been very dark and stars would have been visible. The nearly full moon which had lighted the sky while the plane was over Greenland was now behind the plane at an azimuth of about 50 degrees and an elevation of about 10 degrees. Two planets were visible above the horizon in the southeast: Jupiter at an azimuth of about 140 degrees and an elevation of somewhat more than 11 degrees and Mars at about the same azimuth but only several degrees above the horizon. Jupiter was quite bright and Mars was much dimmer. Jupiter and Mars were 70 degrees to the left of straight ahead as the plane flew southwestward.

BY the time the "small ships" had moved away from the aircraft and the ROCC had detected some "surge primary return" near the jet, the sun was several more degrees below the horizon, the sky in the southeast was darker and the plane was well south of Ft. Yukon. The captain picks up the narrative: "Far in front of us there were lights increasing from the U.S. Military Eielson AFB and Fairbanks." Each was about 40 miles away at this time. "The lights were still following us at exactly the same distance. However, it was too dark to identify by only the lights whether or not they were the same spaceships that were flying in front of us a few minutes ago. It seemed that we were flying on the lighter side and gave them the advantage of being on the dark side."

THAT is, from the viewpoint of the supposed "mothership" the airplane was silhouetted against the light western sky, but the crew of the jet could not see the outline of the "mothership" because it was silhouetted against the dark sky in the east. The captain was able to see only the faint lights from the "mothership."

AS the plane approached Eielson Air Force Base and Fairbanks the captain saw "two very bright lights" appear "suddenly from the north...perhaps four or five mountains away." He speculated at the time what these might be. He couldn't identify all the normal ground lights because the "flight above Alaska territory is generally in daytime and it is confusing to identify the kind of lights" on the ground. He finally decided that the lights were along the Alaska pipe line.

CONTINUING his narrative, Capt. Terauchi recalled, "We arrived at the sky above Eielson

AFB and Fairbanks." (Actually, at this time, about 5:30 PM, the plane was about 20 miles northeast of Eielson and about 30 miles east-northeast of Fairbanks.) "The lights (of the city) were extremely bright to eyes that were used to the dark." (The cockpit lights had been turned off to eliminate window reflections of internal lights.) "We were just above the bright city lights and we checked the pale white light behind us. Alas! There was a silhouette of a gigantic spaceship. We must run away quickly! 'Anchorage Center. The is JAL1628 requesting a change of course to right 45 degrees.'" It felt like a long time before we received permission."(2)

Actually it took only 15 seconds to get permission, as the transcript of the AARTCC tape recording shows. But it did take longer to actually begin the turn (see Figure 7 which illustrates the flight track and the locations of the airplane at specific times).

5:30:16 JAL1628 (very broken communication; unintelligible)
 5:30:20 AARTCC JAL1628 heavy, you're coming in broken. Say again.
 5:30:23 JAL1628 Request, ah, deviate, ah, ah, from, ah, object, ah, request heading two four zero.
 5:30:52 AARTCC JAL1628 Roger. Fly heading two four zero. JAL1628 heavy, deviations approved as necessary for traffic.
 (Note: since the controller knew that there were no other known aircraft in the sky it was OK for JAL1628 to go anywhere it wanted to avoid "traffic")
 5:30:49 JAL1628 It's, ah, quite big...
 5:30:52 AARTCC JAL1628 heavy, you're still broken. Say again.
 5:30:56 JAL1628 It's, ah, very quite big, ah, plane.

THE radar tracking data show that by asking for a magnetic heading of 240 degrees Tamefuji was requesting a 60 degree turn to the right. At 5:31:08, about 50 seconds after Tamefuji called for permission to turn, the plane began to turn from its magnetic heading of 182 (+/-1) degrees (about 215 degrees with respect to geographic north). By 5:32:08 the plane had settled on its new heading of 222 degrees magnetic (255 true), a turn of 40 degrees, which is close to the 45 degrees which the captain recalled, but less than the 60 degrees requested by Tamefuji.

THE captain's narrative continues after the right turn: "We checked our rear (and) there was still the ship following us. 'This JAL1628. Again requesting for change course 45 degrees to the right.' We had to get away from that object. 'JAL1628. This is Anchorage Center. We advise you, continue and take 360 degree turn.' 'Jal1628, thank you. we will continue 360 degree turn.'"(2)

UNFORTUNATELY the captain was not totally accurate in his recall of these apparently frightening events. The AARTCC transcript shows that there was no request for a second right turn. There was, however, a request for a descent in altitude from 35,000 to 31,000 ft at 5:32:07 followed by a request to turn to a heading of "two one zero," i.e. about a 12 degree turn to the left, at 5:34:56. Later on, at 5:36:37 the AARTCC controller asked the plane to make a 360 degree right turn. But all of this is getting ahead of the story.

SO, what was it that the captain saw that caused this "flight response?" What did he mean by the "silhouette of a gigantic spaceship?" The term silhouette is applied to a situation in which the observer sees the outline of a relatively dark object against a brighter background, or vice versa. The location of the plane just before the turn was northeast of Eielson AFB and roughly east of Fairbanks. East of Eielson there are no cities, just mountains. Looking behind and to the left, then, the pilot was looking away from city lights. This would mean that anything in the sky at an altitude somewhat below that of the plane would not be silhouetted against a bright background. Something above the horizon, however, might have been silhouetted against a slightly bright sky since the moon (on the horizon behind the plane) brightened the sky. Perhaps what happened is that before this time the "spaceship" was below the altitude of the airplane and thus silhouetted against the dark earth (and so the captain could only see the pale white lights) but at this time the "spaceship" moved upward and was above the horizon and the captain could now see its silhouette against the slightly glowing sky. Alternatively., perhaps what the captain saw was a reflection of ground lights off the object and thus was able to see its outline silouetted against a dark background. At any rate, he got the impression that the object was bigger than his airplane, so big, in fact, that in public statements he compared it to the size of an aircraft carrier! He could still see the horizontal pale white lights, as illustrated in Figure 5a, but he could now also see other structure as illustrated in Figure 8, which was drawn about a month and a half after the event.

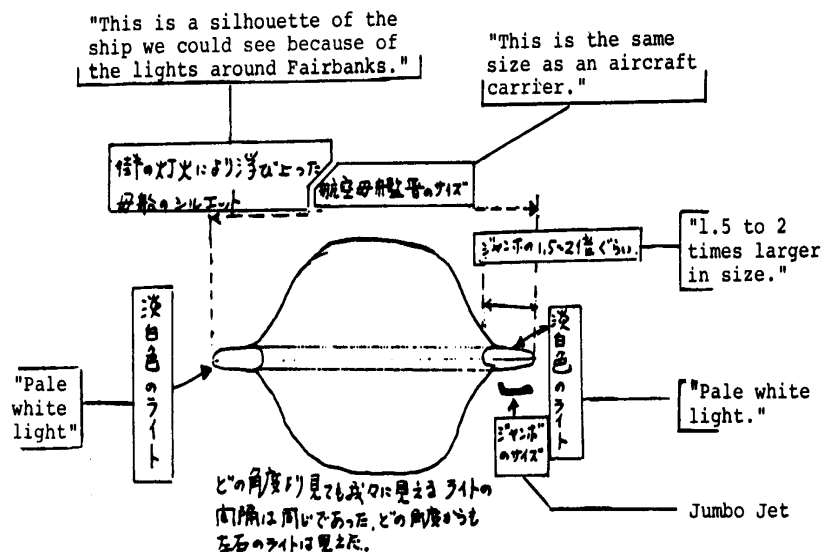


Figure 8: Capt. Terauchi's drawing, a month and a half after sighting of "gigantic spaceship"

SHORTLY after the plane turned to the right the AARTCC controller called the Fairbanks Approach Radar controller to find out whether or not the short range radar had a target near the JAL. The approach radar reported no target other than JAL1628.

AFTER the right turn the plane was flying on a heading of about 255 degrees (true) and was about 20 miles north of Eielson AFB and 30 miles east of Fairbanks (see Figures 1 and 7). At 5:32 PM the conversation between the controller and JAL1628 continued:

5:32:07 JAL1628 JAL1628, ah, request descent.
 5:32:20 JAL1628 JAL1628 Request three one zero. (i.e., 31,000 ft)
 5:32:25 AARTCC JAL1628 heavy, understand. Requesting flight level three one zero.
 5:32:34 AARTCC JAL1628 heavy, your transmissions are broken. Say again.
 5:32:39 JAL1628 Flgith level three one zero.
 5:32:41 AARTCC JAL1628 heavy, descend at pilot discretion. Maintain flight level three one zero.
 5:32:45 JAL1628 Leaving three five zero to three one zero. (The descent begins)

THE tracking data show that the plane descended from 35,000 ft to 31,000 ft over the next four minutes, reaching the lower altitude when the plane was almost due south of Fairbanks and just before it entered the 360 degree turn.

5:32:58 AARTCC JAL1628 heavy, do you still have your traffic?
 5:33:00 JAL1628 Still, ah, coming, ah, ah, right in formation, in ah, formation.
 5:33:07 AARTCC JAL1628, understand.

A minute and a half went by, during which time the plane flew on a straight heading while decreasing in altitude. Then the AARTCC decided to find out what had happened to the traffic.

5:34:38 AARTCC Jal1628 heavy, say position of your traffic.
 5:34:42 JAL 1628 Affirmative. Just over Fairbanks .
 5:34:52 AARTCC JAL1628 heavy, understood. Your traffic is over Fairbanks at this time.
 5:34:56 JAL1628 Affirmative, ah, requesting heading two one zero.
 5:35:02 AARTCC JAL1628 heavy, roger. Deviations approved as necessary for traffic.

THIS portion of the audio tape transcript shows that the captain was incorrect in recalling a second right turn. Instead, the plane turned left about 12 degrees beginning at 5:35:09 and it continued to turn as if it were heading back in the direction of Talkeetna. By the time of the left turn the altitude had decreased to about 33,000 ft.

THE statement at 5:34:42 that the object was "over Fairbanks" could not be correct if the object were at the left side of the plane because at that time Fairbanks was still ahead and somewhat to the right.

5:35:15 AARTCC JAL1628, say altitude of your traffic.
 5:35:20 JAL1628 Ah, oh, ah, ah, same level.

ANOTHER minute passed by during which time the AARTCC called the Fairbanks approach radar again and once again the approach radar reported no target other than the JAL1628 itself. The copilot indicated that he wanted to resume his flight straight directly to Talkeetna:

5:36:12 JAL1628 Ah, Anchorage Center, JAL1628. Request direct to Talkeetna.

5:36:18 AARTCC JAL1628 heavy, cleared direct to Talkeetna and in, ah, advise me of your (sic) position of your traffic.

5:36:24 JAL1628 Ah, same po... same position.

IN other words it appeared that the "traffic" had stayed in the same position relative to the aircraft and had descended with the aircraft to an altitude which was about 31,200 ft. (3) The AARTCC decided it was time to "test" this unusual "traffic."

5:36:37 AARTCC JAL1628 heavy, sir. I'm gonna request you to make a right turn three six zero degrees, 360 degree turn and advise me what your traffic does then.

5:36:47 JAL1628 Right turn 360.

THE plane commenced the turn at about 5:37:15. The pilot, in his testimony written a month and a half later, recalled this event: " We had to get away from that object. 'JAL1628. This is Anchorage Center. We advise you, continue and take a 360 degree turn.' 'JAL1628, thank you. We will continue 360 degree turn.' It was too slow to circle in the automatic pilot mode; therefore we switched to the manual mode and set to turn right on a 30 degree bank. We looked to our right forward but did not see any light." (Note: if an object initially behind the plane remained stationary as the plane turned to the right it would first be seen by the copilot on the right side.) "We were relieved, thinking the object may have left us and (we) returned to level flight, but when we checked to our rear the object was still there in exactly the same place" (i.e., after the turn was complete it was seen again, by the captain, far to the left rear of the plane).

WHEN the plane began the turn the AARTCC communicated with the ROCC. At 5:37:23 the ROCC confirmed that no military aircraft were "working up there" and at 5:37:30 that there was no "traffic" on the radar screen. AARTCC then called the plane again. By this time the plane had been turning for about a minute and a half. It would take several more minutes to complete the turn.

5:38:55 AARTCC JAL1628 heavy, sir. Does your traffic appear to be staying with you?

5:38:57 JAL1628 Ah, (unintelligible) distinguished. (He meant extinguished.)

5:39:01 AARTCC JAL1628 say again?

5:39:04 JAL1628 It, ah, disappeared.

5:39:10 AARTCC JAL1628 heavy, roger. At your discretion proceed directly to Talkeetna, J125 (to) Anchorage.

THE "mothership" was behind and to the left before the right turn. Therefore there were three possible outcomes of the turn assuming that the object didn't just "disappear": (a) if the object remained stationary while the plane turned it would initially "disappear" from the left side and then reappear nearly behind the plane but on the right hand side after 30 seconds to minute of turning; (b) if the object also made a right hand turn but did so on the "outside" of the airplane's turn (i.e., at a much larger turning radius) then it would stay to the left and behind and be continually visible at the left; (c) if the object also made a right turn but trailed behind the airplane it would remain invisible during the turn.

THE fact that it "disappeared" very soon after the plane started the turn indicates that the "mothership" did not make a turn on the outside of the turn of the plane. On the other hand, the captain and copilot recall that they looked out the right hand side to see if it would reappear during the turn, but they did not see it. Therefore it may have trailed the aircraft during the turn. But it did not stay directly behind the aircraft after the turn because the captain recalled that after the turn had been completed and they were again heading southward "we" (the captain, since he was the only one who could see to the left and behind) "checked to our rear and the object was still there in exactly the same place."

THE conclusion that the object may have trailed behind during the turn is consistent with a radar report made at the time. While the plane was turning the ROCC confirmed an anomalous radar target in the vicinity of the plane. (Note: some of the times given below do not agree with the times in the FAA transcript. This is because some of the transcript times are in error. The times given below agree with the FAA-supplied tape recording of the conversations between the FAA controllers, ROCC and the aircraft.)

5:38:57 AARTCC Anchorage Center.

5:38:58 ROCC Ya, this is one dash two again. On some other equipment here we have confirmed there is a flight size of two around. One primary return only.

5:39:05 AARTCC OK. Where is, is he following him?

5:39:07 ROCC It looks like he is, yes.

5:39:10 AARTCC OK. Standby.

THE use of the phrase "flight of two" indicated that, on the radar screen, the JAL 1628 had a companion. That companion appeared as a primary return only (no transponder). Moreover, it appeared to the ROCC that the companion was "following" that is, it was behind the plane.

SOON after the ROCC confirmed a "flight of two," the AARTCC resumed communication with the plane:

5:39:10 AARTCC JAL1628 heavy, roger, at your discretion proceed direct to Talkeetna J125, Anchorage. (Note: J125 is a flight route.)

5:39:15 JAL1628 (unintelligible)

5:39:35 AARTCC JAL1628 heavy, roger sir. The military radar advises they do have a primary target in trail of you at this time.

5:39:32 JAL1628 Ah, say again?

5:39:35 AARTCC JAL1628 heavy. Military radar advises they are picking up intermittent primary

target behind you in trail, in trail I say again.
5:39:47 JAL1628 I think so.

WHILE one of the AARTCC air traffic controllers was conversing with the plane another one was continuing to converse with the ROCC:

5:39:24 AARTCC OK. Do you want to, do you have anybody you can scramble up there or do you want to do that?
5:39:30 ROCC I'll tell you what. We're going to talk to the liaison officer about that.
5:39:33 AARTCC OK. Uh, it's starting to concern Japan Airline 1628, a 747. He's making a 360 now and it's still following....
5:39:46 ROCC Where is this search (radar) return at, right behind him or where?
5:39:50 AARTCC Say again?
5:38:51 ROCC Ah, I'm gonna talk to my other radar man here has gotta, he's got some other equipment watching this aircraft.
5:39:54 AARTCC OK.
5:39:55 ROCC OK. We're going to call the military desk on this.

AT this point the conversation with the ROCC ended and the plane was contacted again.

5:40:10 AARTCC JAL1628, Anchorage Center.
5:40:12 JAL1628 Go ahead.
5:40:13 AARTCC Roger Sir. Would you like our military to scramble on the traffic?
5:40:17 JAL1628 Negative. Negative.

CAPTAIN Terauchi's immediate reaction to the offer of military assistance was to decline it. In his testimony he recalled the event and explained his reaction: " 'JAL1628, This is Anchorage center. Would you like to request scramble for confirmation?' 'The Anchorage Center, this is JAL1628. We would not request scramble.' We turned down the offer quickly. I knew that in the past there was a U.S. military fighter called the Mustang that had flown up high for a confirmation and a tragedy had happened to it. Even the F-15 with the newest technology had no guarantee of safety against the creature with an unknown degree of scientific technology." (Note: his reference to a Mustang flying high and a "tragedy" may be a reference to the Mantell case of January, 1948 when Mantell flew his F-51 to such a high altitude that he, apparently, blacked out while chasing some huge shiny object that was very high in the sky. This was subsequently explained, with a high degree of probability of being correct, as a high altitude balloon.)

DESPITE the immediate negative reply the AARTCC was persistent:

5:40:26 AARTCC JAL1628 heavy, sir, we do have military ah, at Eielson, 40 miles away. I can put them up and let them check the traffic for you.
5:40:34 JAL1628 Roger.
5:40:35 AARTCC JAL1628, roger. Would you like us to do that?

AT this time a military aircraft referred to as TOTEM, which was not a fighter aircraft but was already in the air, offered to check out the traffic. The transmission was somewhat garbled, however, and the AARTCC controller thought he was hearing JAL1628. JAL1628 was also confused momentarily:

5:40:44 TOTEM Anchorage Center, you have TOTEM 71 up here. We might be able to get close to him.
5:40:48 AARTCC JAL1628, you were broken. Say again.
5:40:55 JAL1628 Ah, say again?
5:40:59 AARTCC JAL1628 Your transmission was broken, sir. We do have military aircraft in your vicinity that we can, ah, check on the , ah, traffic with you.
5:41:07 JAL1628 Ah, JAL1628. No radar traffic above.

(This last statement seems to make no sense in the context of the conversation. Perhaps Mr. Tamefuji did not correctly understand what the AARTCC had said.) It was now one minute since the AARTCC had been directed the plane to fly directly to Talkeetna. At that time, 5:39:10, the plane was about 1/3 of the way around the circle (see Figure 7). Finally at 5:42:04 the plane responded. By this time it was 3/4 of the way around the circle.

5:42:04 JAL1628 Anchorage Center, JAL1628. Confirm direct to Talkeetna three one zero.
5:42:09 AARTCC JAL1628 heavy. Affirmative. Direct to Talkeetna and descend at pilot's discretion. Maintain flight level two five zero.
5:42:16 JAL1628 Ah, pilot's discretion. Two five zero.

WHILE the plane was being directed to Talkeetna the AARTCC and the ROCC continued discussing the radar targets.

5:41:51 AARTCC Where's that, ah, are you still painting a primary, ah, by that JAL flight?
5:41:56 ROCC OK. Let me look at my other....
5:41:59 AARTCC If so, where's the position of it?
5:42:00 ROCC OK. Standby.
5:42:24 ROCC It looks like, ah, offset left and then possibility fell back in trail. However, I can't see him now. I can't pick him out.

WHILE this conversation was going on Capt. Terauchi was looking to his left and backwards. It was there again!

5:42:35 JAL1628 Ah, we have...Anchorage Center, JAL1628. We have in sight same position,

over.

5:42:42 AARTCC JAL1628, understand. In sight, same position.

THIS statement, made as the plane was just coming out of the turn to head southward from near Fairbanks toward Anchorage (see Figure 7), indicates, as described previously that the "mothership" may have followed behind the plane. The captain remembered the events this way: "The consumption of fuel during this flight was almost as expected but there was only 3,800 pounds left and as such was not enough for extra flying for running around. We have got to arrive at Anchorage." At this point from in his testimony the captain recalled the direction from the AARTCC to proceed directly to Talkeetna. But he thought that the plane had initiated the request. He continued, "We checked behind us again. The ship was in formation and ascending with us. We wondered and feared as to their purpose." The word ascending should have been descending (the plane never ascended during the sighting according to the tracking data) and furthermore, it is in the wrong temporal location in the testimony because the descent occurred before, not after the turn. (The captain incorrectly recalled the descent as occurring after the turn.)

HIS testimony continues at this point with his recollection of the query about a scramble of a military jet. But according to the transcript, the discussion of a scramble came before the plane completed the turn rather than after, as the captain recalled.

ABOUT a minute and a half later the AARTCC decided to find out whether or not the traffic was still with the plane.

5:44:07 AARTCC JAL1628, sir, do you still have the traffic?

5:44:12 JAL1628 Ah, say again please.

5:44:13 AARTCC JAL1628 heavy.. Do you still have the traffic?

5:44:17 JAL1628 Ah, affirmative, ah, nine o'clock.

CAPTAIN Terauchi recalled the reappearance of the "mothership." "We flew toward Talkeetna at an altitude of 31,000 ft. The spaceship was still following us, not leaving us at all."

BY this time the plane was completely out of the turn and headed southward toward Talkeetna. At about 5:40 a United Airlines passenger jet took off from Anchorage and headed north to Fairbanks. Several minutes later it reported being at 29,000 feet and on a 350 degree (magnetic) heading. The AARTCC controller decided to ask the UA pilot if he could see anything behind the JAL flight. At 5:44:43 he called the UA pilot to say that the JAL flight was in his 11 o'clock position and 110 nm north "and he has traffic following him, sir. It's unknown traffic... I want you to see if you see anything with him." The UA pilot said he would look when he got closer. The controller asked the JAL flight to stay at 31,000 ft and the UA flight to stay at 29,000 ft. He then directed the UA flight to turn some more so that the planes would pass within five miles of one another.

5:46:48 AARTCC JAL1628 heavy. Maintain flight level three one zero.

5:46:54 JAL1628 maintain three one zero.

5:46:59 AARTCC JAL1628, roger. I'm gonna have a United aircraft get close to you and take a look, ah, to see if he can identify your traffic.

5:47:06 JAL1628 Thank you.

SEVERAL minutes later the planes were much closer together and closing on one another rapidly (the separation was decreasing at rate between 15 and 20 nm per minute).

5:48:16 UNITED 69. Can you please point the traffic out again please?

5:48:19 AARTCC United 69 heavy, affirmative. The, ah, Japan Air is in your eleven o'clock position and five zero (50) miles (away), southbound.

5:48:28 UNITED 69 Ah, roger. Thank you.

5:48:31 AARTCC JAL1628 heavy, sir, Say the position of your traffic.

5:48:34 JAL1628 Ah, now, ah, ah, moving to, ah, around 10 miles now, ah, ah, position, ah seven, ah, eight o'clock, 10 miles.

5:48:36 AARTCC JAL1628 heavy, roger.

AS the planes approached each other in the dark sky the "mothership" apparently dropped back, allowing the JAL plane to get far ahead. Of course the 10 miles distance was only the pilot's guess. The object was too far back to be detected on the airplane radar, which would give an accurate distance. The United pilot asked the AARTCC to have the JAL pilot flash the headlights on the JAL aircraft so he could locate the plane. At 5:49:45 the JAL pilot did that. At this time the planes were about 25 miles apart.

TERAUCHI says that at about the time that his plane headed toward Talkeetna after the 360 turn, "a United Airline passenger jet which left Anchorage to Fairbanks flew into the same air zone and began communicating with Anchorage center. We heard them transmitting that there was an object near JAL1628 and requesting for confirmation. We heard the Anchorage Center was saying to the United Airline aircraft that JAL1628 was at an altitude of 31,000 ft and therefore the United aircraft should maintain 33,000 ft." (Actually the transcript shows that the UA altitude was 29,000 ft.) "It sounded as if Anchorage Center had the United Airline aircraft fly above the spaceship. We were flying the east side of Mt. McKinley. The United Airline aircraft came close to us. The United Airline aircraft requested us to flash our landing lights for visual confirmation and we both confirmed our positions visually. The United Airlines aircraft was coming close to us. We knew that they were watching us. When the United plane came by our side the spaceship disappeared suddenly and there was nothing left but the light of the moon."

WHEN the planes were about 12 miles apart and still approaching one another, the UA plane

reported seeing the JAL plane and nothing else. By this time the "mothership" had apparently disappeared:

5:50:35 UA69 UA69 heavy. We've got the Japan Airliner in sight. I don't see anybody around him. He's (referring to the "spaceship") at his seven o'clock position, huh?
 5:50:46 AARTCC UA69, that's what he says. JAL1628 heavy, say the position of your traffic now.
 5:50:52 JAL1628 Ah, now, distinguishing (he meant to say "extinguishing"), but, ah, ah, your, I guess, ah, 12 o'clock below you.
 5:51:02 AARTCC JAL1628 heavy, say again. You're broken.
 5:51:06 JAL1628 Just ahead of United, ah..(unintelligible)

THE above conversation appears to confirm Terauchi's later recollection that the object disappeared when the two planes got close to one another. The copilot used the word "distinguishing" and followed this with "I guess 12 o'clock below you." Previously he had used the word "distinguished" when he meant "extinguished," or no longer visible, because the object had disappeared shortly after the 360 turn began (see 5:38:57 and 5:39:04 above). Apparently he meant "extinguishing" or "extinguished" at this time as well. Furthermore, if the object had been still visible he would not have said "I guess 12 o'clock below you." because the captain would have been able to see where the object was relative to the UA jet. Thus it appears that the object/light had disappeared by 5:51 when the planes were still about 12 miles apart.

IT is also interesting to note that the copilot used the words "below" you which suggests that at that time the JAL flight crew thought that the UA plane was above their altitude. This is as the captain remembered it. Perhaps they did not hear the controller tell the UA plane to maintain 29,000 ft.

AT 5:51:32, after the planes had passed one another, the UA plane reported being able to see the JAL plane silhouetted against the sky. The UA captain could see the contrail as well as the jet but nothing else. The controller responded, "We got just a few primary hits on the target and then, ah, we really haven't got a good track on him, ever, " meaning that the radar never showed a continuous track (a continuous series of "blips") of primary-only radar targets associated with the unusual "traffic."

AFTER the UA plane had passed the JAL flight at a point about 60 nm south of Fairbanks at about 5:51, the AARTCC requested that TOTEM also fly toward the JAL plane for a look. AARTCC then directed the JAL plane to descend. The plane made its final report on the "traffic", which was "long gone" by this time.

5:53:10 AARTCC JAL1628 heavy, descend at pilot discretion. Maintain flight level two five zero (25,000 ft).
 5:53:13 JAL1628 JAL1628, ah, pilot's discretion maintain, ah, two five zero, so , ah, ah, I cannot, I couldn't see, ah, UFO, over.
 5:53:27 AARTCC JAL1628 heavy, understand. You do not see the traffic any longer.
 5:53:31 JAL1628 Affirmative.

DURING the next several minutes TOTEM viewed the JAL plane but couldn't see any other traffic. JAL1628 proceeded to Anchorage and landed at 6:20 PM. The FANTASTIC FLIGHT was over, but the seeds of controversy had been sown. They would bear sometimes bitter fruit about a month and a half later.

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THE FANTASTIC FLIGHT ENDS ... AND THE CONTROVERSY BEGINS:

THE FIRST INTERVIEW

Because of the report of unusual traffic the crew was interviewed immediately by FAA official Jack Wright and by agents James Derry and Ronald Mickle. Wright recorded the following information: (14)

----- I received a call from Dick Powers concerning a JAL flight which the Captain had stated he was being followed or shadowed. I observed the aircraft land at 1820 hours (6:20 PM). No other aircraft was noted. The B747 taxied into the international ramp area. I interviewed Capt. Terauchi and the crew of two. The captain stated that this was the first time that anything like this had happened to him. He stated that approximately five nm after passing the Canadian/Alaskan border at 35,000 ft something appeared five to seven nm in front of the aircraft. It had lights, four to five in a line (refer to captain's drawing) and said it was bigger than they were (B-747). At times the object would be to the captain's side of the aircraft (left). Never the other side (right). He referred to the dark side. After passing Fairbanks area he requested to fly parallel to course and this was granted. When he turned to the right and flew parallel, the object was gone. (In all cases weather radar was also used to identify the object and the five-to-seven nm distance was taken from the radar display - 20 nm range.) They returned to course and the captain said "There it was, as if it was waiting for me." At approximately the Talkeetna area the object took off to the east and was gone. A United flight departed from Anchorage and was requested to check if they could see anything but

it was gone before United got there. Nothing different with the cargo except some expensive wine. The captain and crew were shook-up but professional. James Derry interviewed the crew at JAL operations. Capt. Terauchi had asked AARTCC if they were picking up two targets and was told "just one." The total time was approximately 55 minutes. A new crew took the flight on to Tokyo. Capt. Terauchi and the crew were to be in Anchorage a few days before any additional flights. James Derry requested that the tapes and any other information be saved. (10)-----

THE sparse amount of information contained in this initial report indicates that Wright did not carry out an extensive interview of the pilot and crew. It also indicates that he did not learn exactly what happened, probably because of one or more of the following reasons: (a) he may have failed to ask for a minute-by-minute history of the flight; (b) Terauchi may not have been able to recall the events accurately and in the correct order, and (c) it may have been difficult to communicate (Japanese-English translation).

Special Agents James Derry and Ronald Mickle also participated in the interview.. However, as will be seen, they did obtain more information. Both Derry and Mickle made notes. Agent Derry recorded the second interview as follows: (14)

SPECIAL Agent Ronald Mickle recorded the interview as follows (14):

----- As per telephonic request from (Wright), the following are the events which took place on November 17, 1986 and were taken from my personal notes during the interview. I went to the Japan Airlines station office as instructed by the Manager (Derry). Myself (sic) and Jim Derry interviewed the crew of JAL Flight 1628, which reported the sighting of unidentified air traffic. The flight crew consisted of (Terauchi, Tamefuji and Tsukuba). Captain Terauchi stated he first sighted (visually) the unidentified air traffic (UAT) in the vicinity of POTAT intersection and the ADIZ. The aircraft he was piloting (B747) was at flight level 390, airspeed 0.84 Mach. Captain Terauchi indicated that the UAT was in front of his aircraft at a distance of approximately seven to eight nautical miles for approximately 12 minutes. Captain Terauchi stated that while he had a visual on the UAT he spotted yellow, amber and green lights and a rotating beacon but no red lights. The captain said there were two distinct sets of lights, but appeared to be joined together (as fixed to one object). Captain Terauchi ascertained through visual sighting and radar that the UAT was equal in size to a B747, possibly larger.

CAPTAIN Terauchi stated that during the visual sighting the lights of the UAT changed from a horizontal position to a vertical position and had positioned itself in front of the B747 to the port side. The UAT stayed on the port side for approximately 35 minutes. Captain Terauchi said he was communicating with the AARTCC personnel during the sighting. The captain stated he requested and received permission to perform a 360 degree turn while in the vicinity of Fairbanks which he had a visual on. Captain Terauchi stated the UAT maintained its position on the port side during the turn. Captain Terauchi stated that visual sight of the UAT was completely lost approximately 40 nm north of Talkeetna, while continuing to Anchorage. The captain stated that there was static during VHF communications with the AARTCC, that there was erratic movement with lights of the UAT during the visual contact, that navigation was being performed by coupling of the onboard INS's, and that the AARTCC had indicated to him the presence of a primary target in addition to his aircraft. Through a confidential source at JAL it was stated to me that this is not the first sighting of an unidentified aircraft by Captain Terauchi. (10)-----

.....
A comparison of the above versions of the second interview shows that the full and accurate story that I have previously presented, as based on the transcripts of the AARTCC audio tape and the detailed testimony of the crew, did not come through in the initial interviews. Furthermore, the interviewers had somewhat divergent opinions on what the captain told them. Part of this problem may have been, literally, in the translation (Japanese to English), but part of the problem also is that different people react to and remember different elements of any story. It is interesting to note Derry's reference to NORAD being contacted and NORAD reporting that "they also had two targets on radar." Derry also indicated that Air Force Intelligence would get a report on the sighting.

IT is unfortunate that the interviewers did not think to tape-record the conversations for later analysis but instead simply relied upon their recollections and brief notes. Nevertheless, the basic core of the story is clearly expressed in these early interviews and thus they support the captain's subsequent more detailed testimony, written about a month and a half later. Particularly supportive of the captain's later testimony were the drawings made during the interview with Derry and Mickle (Figures 2, 3, 5, 6). They show how the lights appeared in front of the aircraft and beside the aircraft and how the radar target appeared. These sketches, made only hours after the events, are consistent with the more elaborate drawings that the captain made a month and a half later to illustrate his testimonial report (Figures 4, 8 - 11). These latter drawings were publicized widely in the news media. The captain also made a map of his recollection of the flight (Figure 12).

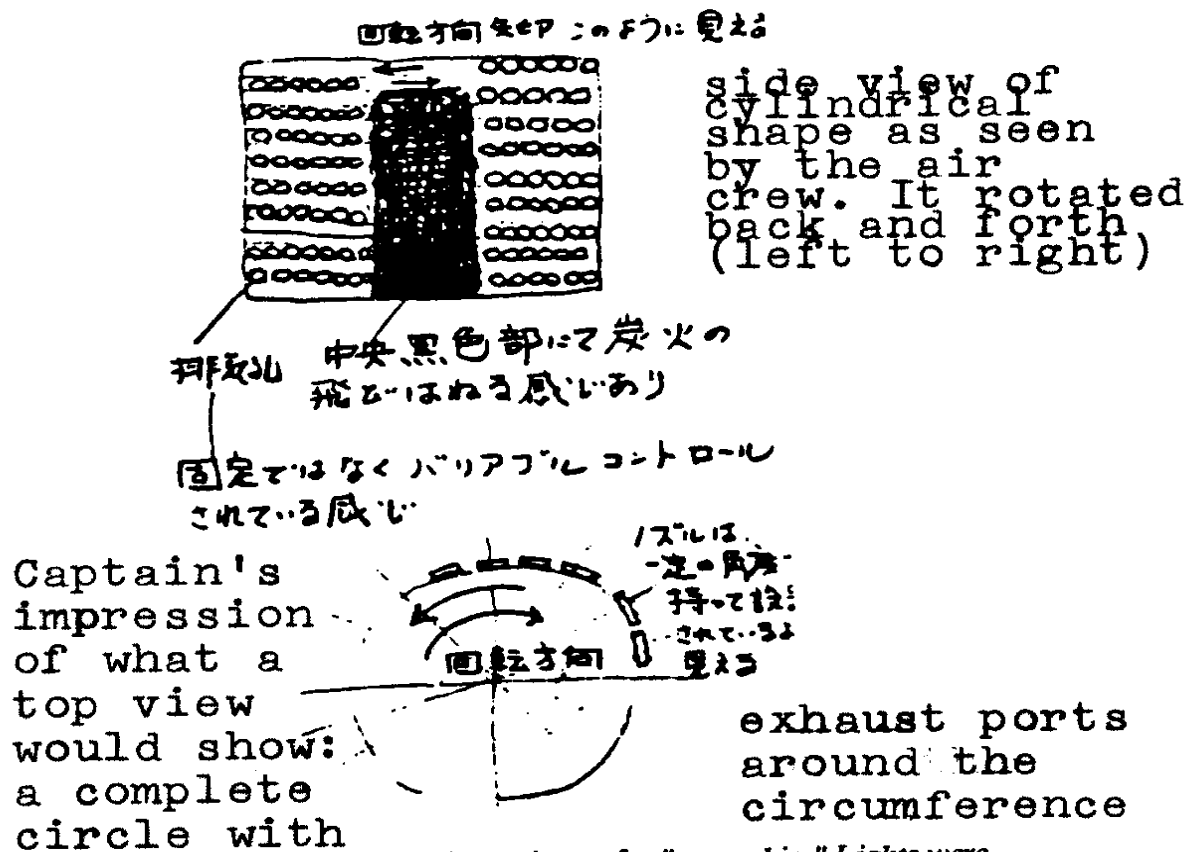


Figure 9: Pilot's sketch of side and top views of a "spaceship." Lights were moving to left and right as indicated by arrows.

最初に灯火も見

ヘアクリップのような
長方形のスタイルをしている

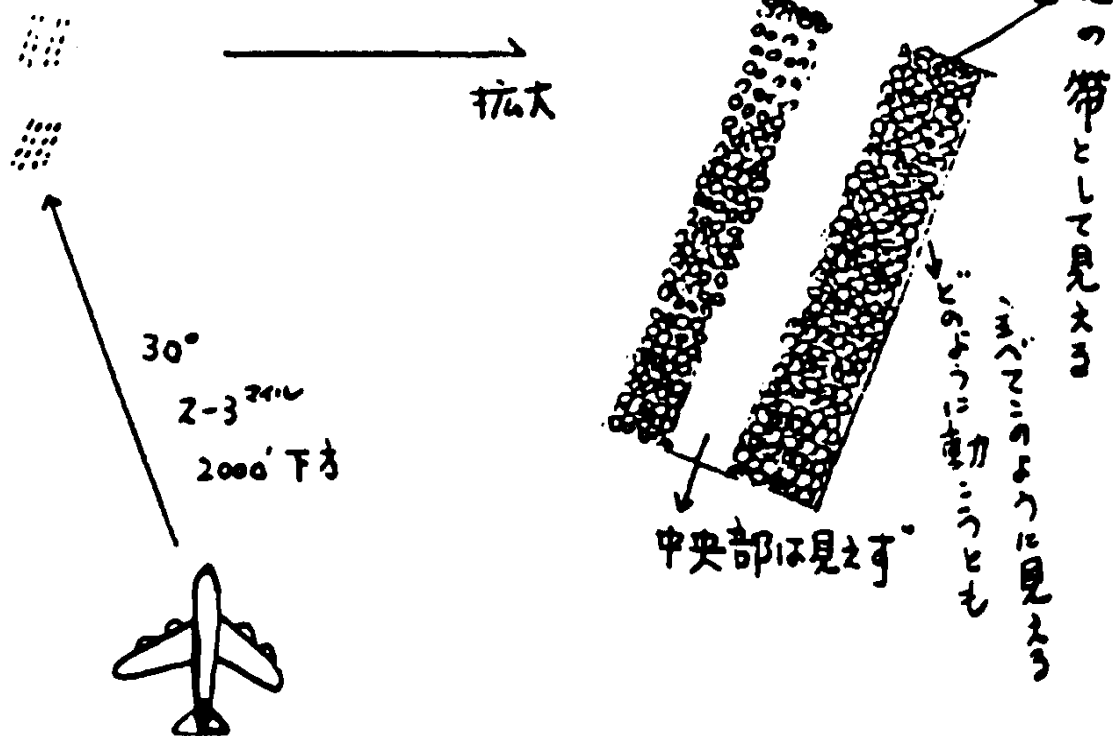


Figure 10: Initial view of "two spaceships" to the left front of airliner

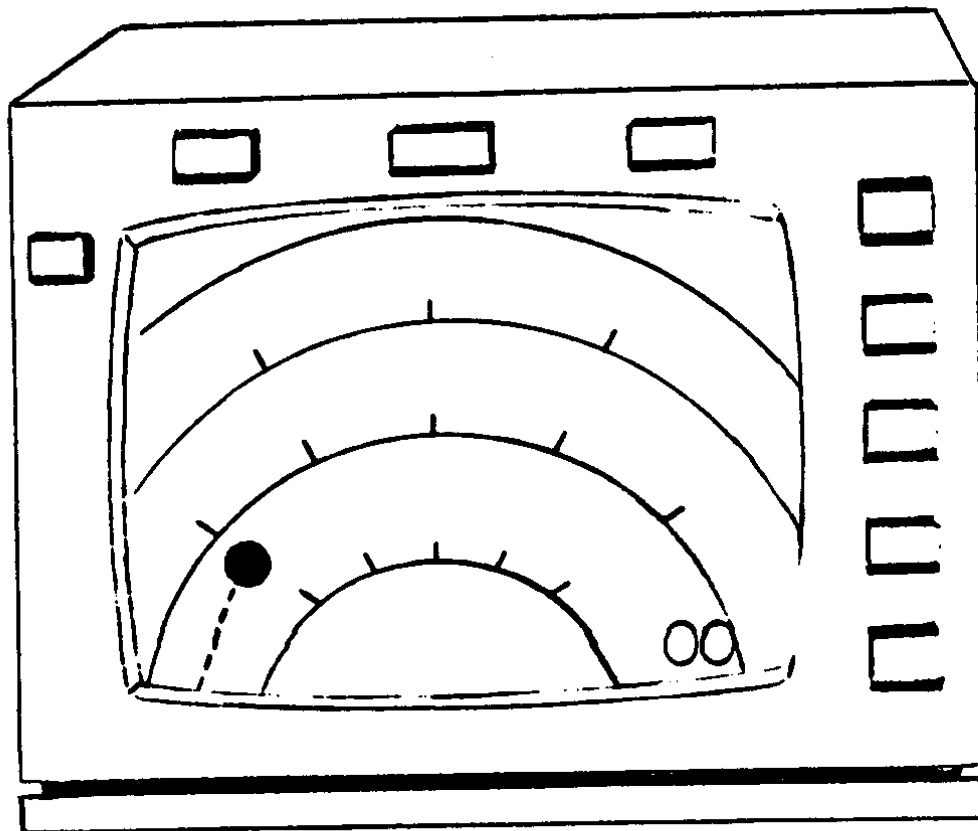


Figure 11: *Artists' reconstruction of captain's sketch of how object appeared on aircraft radar*

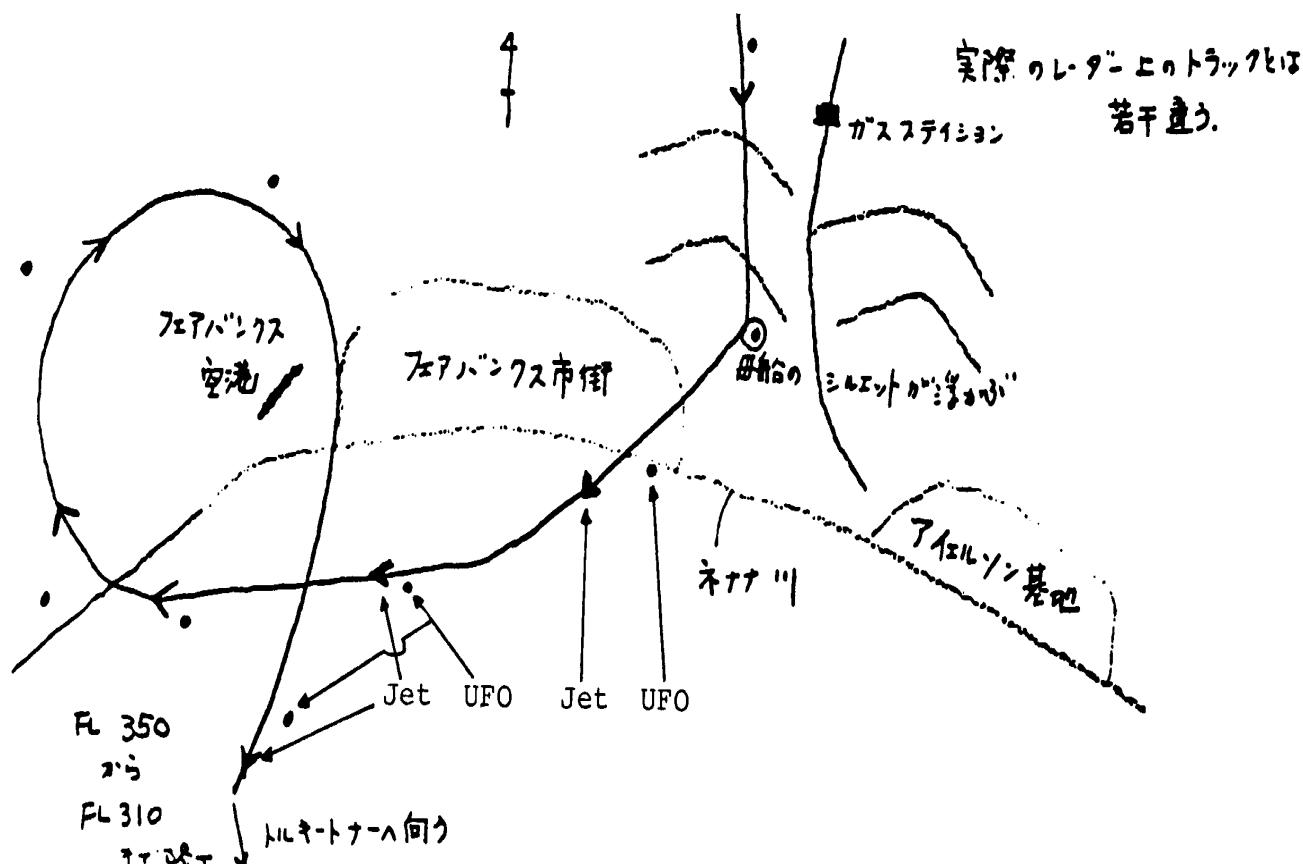


FIGURE 12 Captain Terauchi's Event Map

THE air traffic controller who was responsible for guiding the JAL flight recorded his recollections the next day, evidently without first listening to the AARTCC tape recording of the conversations with the plane. He wrote as follows (13):

----- During the period of 2030 UTC (universal time coordinated), November 17, 1986, to 0430 UTC, November 18, 1986 I was on duty in the Anchorage ARTCC. I was working the D15 position from 0156 UTC to 0230 UTC, November 18, 1986. (This corresponds to 4:56 to 5:30 PM Alaska Standard Time, November 17, 1986.) At approximately 0225Z (5:25 PM) while monitoring JL1628 on Sector 15 radar the aircraft requested traffic information. I advised no traffic in his vicinity. The aircraft advised he had traffic 12 o'clock, same altitude. I asked JL1628 if he would like high/lower altitude and the pilot replied negative. I checked with ROCC to see if they had military traffic in the area and to see if they had primary targets in the area. ROCC did have a primary target in the same position JL1628 reported. Several times I had primary returns where JL1628 reported the traffic. JL later requested a turn to heading 210. I approved JL1628 to make deviations as necessary for traffic. The traffic stayed with JL1628 through turns and descent.

IN the vicinity of Fairbanks I requested JL1628 to make a right 360 turn to see if he could identify the aircraft. He lost contact momentarily at which I time observed a primary target in the six o'clock position, five miles. I then vectored UA69 northbound to Fairbanks from Anchorage with his approval to see if he could identify the aircraft. He had contact with the JL1628 flight but reported no other traffic. By this time JL1628 had lost contact with the traffic. Also a military C-130 southbound to Elmendorf AFB from Eielson AFB advised he had plenty of fuel and would take a look. I vectored him toward the flight and climbed him to Flight Level 240 (24,000 ft). He also had no contact.

I requested JL1628 to identify the type or markings of the aircraft. He could not identify but reported white and yellow strobes. I requested the JL1628 to say flight conditions. He reported clear and no clouds. The phrase "single primary returns" (used above) is in reference to a target other than JAL and "the traffic" is in reference to the unidentified object. (10)-----

ALTHOUGH the Anchorage FAA alerted the FAA Security Office in Washington, D.C., no further action regarding the reported traffic was taken. This is unfortunate since careful debriefing at the time of the event possibly could have uncovered details which had been

forgotten by the time the crew was interviewed again in January 1987.

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THE FAA "SLEEPS" WHILE THE PRESSES ROLL

IT is quite likely that the JAL sighting would never have been known to the general public, nor would it have been investigated, if it hadn't been for the interest by the American newsmedia in an odd story out of Japan. On December 29, 1986, the Kyoda Press in Japan published a news story about a Japan Airlines crew that had seen a UFO while flying over Alaska and that the UFO had been picked up by military radar. The Kyoda press got the story as a result of the air crew talking to their friends, etc., and someone alerted the press. On December 24 the Kyoda Press contacted the Public Information Officer at Anchorage, Paul Steucke. According to Steucke, as told to Walter Andrus of MUFON, "The first thing I got was a phone call from Kyoda News Service out of Japan. That was the day before Christmas, December 24. They sent a correspondent over and the correspondent said to me - you know that we've got some information on 'such and such'. Is it true? I said, well, yeah, and here's what we've got. On the 29th after the Christmas holidays that story must have been printed somewhere in Japan because United Press International picked it up. Then the United press reporter over here asked me the same question and I told him the same thing."

UPI reporter Jeff Berliner broke the story in the United States on December 29. Numerous newspapers reprinted the story and the FAA headquarters in Washington, D.C. learned about it from Alaska press office. (According to John Callahan, he received a call from Alaska asking what to do about the press interest in the UFO sighting. Although he didn't know anything about the sighting he told them to say "We're investigating.") When the FAA headquarters called Anchorage for the full story, it learned that the radar data tape had been saved (which was unusual since the tapes were generally reused after 30 days). The FAA then announced that it would investigate the sighting according to a story in the Washington Post, January 1, 1987.

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THE FAA WAKES UP AND INVESTIGATES

THE information about the sighting must have come as a complete surprise to the FAA headquarters. On January 1 the FAA reopened its inquiry into the sighting. Capt. Terauchi was interviewed on January 2 (1), at which time he supplied his written testimony (2). On January 4 the national press reported that the FAA had reopened the inquiry and numerous news stories followed.

THE FAA released portions of the information through Mr. Steucke as the information became available. Unfortunately the FAA did not have a complete and accurate story to report and consequently the early news stories contained errors. The most amusing of these was in the reported time of the sightings. For some reason someone had handwritten a note on the master copy of the first FAA release, which was a summary of the AARTCC tape recording. The note indicated that the events had begun at 6:19 PM, even though the summary itself clearly said 0219 UTC which translated to 5:19 PM Alaska Standard Time. This time error was perpetuated in news reports even though the captain recalled the correct time and stated it during an interview with Larry King on January 2.

WHILE the press was having fun with the story the FAA continued its inquiry. The copilot was interviewed on January 5 (9) and the flight engineer on January 15 (10). A complete transcript of the AARTCC tape recording, although with some errors, was completed on January 9 and the radar data tape recording was sent to a special FAA facility for analysis. The FAA announced that it would release the material it had collected after it complete the inquiry.

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CSICOP LEAPS INTO THE BREACH

The initial press stories in January treated this sighting as real news. No one contradicted the captain when he made his "outlandish" claims, the most outlandish being that he was followed by a UFO larger than his 747 jumbo jet. The press was yearning for an explanation, but there was none to be had as long as the FAA was still investigating. Enter the Committee for Scientific Investigation of Claims of the Paranormal (CSICOP), ever ready to leap into the breach and provide an explanation. On the 22nd of January CSICOP published a press release entitled "UFO Mystery Solved." (14) The cover letter of the press release announced the "findings of the (CSICOP) investigation into the Japan Air Lines Flight 1628 UFO incident of November 18, 1986." The release itself stated that "according to a leading UFO investigator" (Philip J. Klass) "at least one extraterrestrial object was involved - the planet Jupiter, and possibly another - Mars." The press release asserted that at the time of the sighting (incorrectly given as one hour earlier than it actually occurred) Jupiter was "extremely bright" at a -2.6 magnitude and would have been about 10 degrees above the horizon on the left side of the aircraft where the pilot first reported seeing the UFO. Mars would have been slightly lower and about 20 degrees to the right of Jupiter. The press release stated that "Although the very bright Jupiter and less bright Mars had to be visible to JAL Capt. Kenjyu Terauchi, the pilot

never once reported seeing either - only a UFO that he described as being a 'white and yellow' light in his initial radio report to the Federal Aviation Administration controllers at Anchorage." (14)

THE press release could have mentioned, but did not, that Terauchi did report seeing numerous stars in the sky, city lights and a glow of sunset in the west.

THE CSICOP explanation was based mostly on Phil Klass' analysis of an early version of the transcript of the audio tape. The radar tracking data were not made available at that time and so he could not have known the precise locations and flight directions of the plane at the times of the various sightings. Apparently he completely ignored the pictorial information (drawings by the captain) which had been widely publicized. Mr. Klass made a major error in not waiting for the release of the complete information package by the FAA because, if he had waited, he would have found that the publicized versions of the sighting were actually quite accurate in their descriptions of the lights. These descriptions, of course, rule out Jupiter and Mars as possible causes of the sighting. Without the FAA data package he did not know that initial drawings were made only about 2 hours after the event. Nor did he know that the other crew members, in separate interviews, supported the captain's report of the groups of lights that appeared in front of the plane. Nor did he know about the sudden rearrangement of the relative positions of the groups of lights from one above the other to one beside the other, a maneuver that Jupiter and Mars would have difficulty carrying out during the time of the sighting. Nor did he know that at the end of the sighting, while the plane was flying southward, ROUGHLY TOWARD Jupiter and Mars, the pilot reported the "gigantic spacecraft" was behind and to the left, in a direction nearly opposite to the planets.

THE CSICOP press release discussed and rejected the FAA and Air Force radar detections. Curiously, however, it completely ignored the claim by the pilot that the airplane radar did detect a radar-reflective object at 7 to 8 miles in the direction of the UFO. Perhaps Mr. Klass rejected this claim, but if he had waited for the data package from the FAA he would have learned that the other two members of the crew confirmed the pilot's statement about the radar detection.

IN summary, the Jupiter-Mars explanation is contradicted by the sighting directions to the UFO at various times, by the descriptions of the crew members and by the airplane radar detection. However, the "gullible" press did not know that at the time. The explanation was widely publicized. The explanation made the captain look like an idiot, but as far as the press was concerned, that's OK. Only idiots report UFOs. Having done their duty the newsmedia promptly forget about the sighting.

IN retrospect it appears that the CSICOP press release which was marked "FOR IMMEDIATE RELEASE" should have been marked "FOR PREMATURE RELEASE."

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THE PRESS SLEEPS WHILE THE FAA ANALYZES

JANUARY went by and then February with still no word from the FAA. But then, on March 5, the FAA announced the results of the inquiry. According to the FAA press release the FAA "was unable to confirm the event." (15) The event was unconfirmed because "a second radar target near the JAL flight at the time of the reported sighting was not another aircraft but rather a split radar return from the JAL Boeing 747." In other words, the FAA couldn't confirm the sighting ON RADAR because the "traffic" or "primary return" reported by the AARTCC controller at the time of the sighting was merely an artifact of the radar set. Or so said the FAA! (Recall that the transponder return or "blip" is separate from the primary return blip. These two should be immediately adjacent or one-on-top of the other under ordinary conditions. What the FAA was saying was that because of a minor and temporary malfunction of the radar the primary return was separated in position on the radar screen from the transponder return, thus making look as if there were two separate radar-reflective objects in the sky.) The press release did not mention that the "split return effect" was contradicted by the fact that the extra echo did not come back with every sweep of the radar and by a statement by an airtraffic controller who said that they rarely, if ever, get a split image in the area where the JAL jet was flying. The press release did NOT offer an explanation for the visual sighting, nor did it dispute the crew's claim that something unusual was seen. The press release ignored the visual sighting.

THE FAA press release made a smaller splash in the newsmedia than had the original January stories about the FAA involvement. This may have been because (a) the press misinterpreted the FAA statement, thinking that the FAA was saying it had explained everything and (b) that the sighting had already been "explained" by CSICOP. The general newsmedia concentrated on the FAA statement that it could not confirm the radar sighting and ignored the failure of the FAA to even mention the visual sighting. NBC News incorrectly reported that "Terauchi's crewmates were not sure that they had seen a UFO" and that the FAA "concluded a three-month investigation saying there is nothing to substantiate the pilot's story." From this sort of press reporting one would get the impression that the whole sighting revolved around the Captain's story and did not involve the other crew members. The NBC story failed to mention, probably because the NBC reporter didn't know, what you, dear reader, know: that the copilot and flight engineer had independently confirmed the pilot's report of seeing numerous lights appear in front and to the left of the aircraft and that the airplane radar had picked up a large target in the same direction as the UFO.

AFTER March 5 the press interest in this story essentially died, leaving the general

public with the impression that once again an experienced air crew had failed to identify normal phenomena and that there was no evidence that UFOs are real objects.

(Note: Capt. Kenjyu Terauchi was subsequently "grounded" for a couple of years, evidently for his boldness in reporting what he and the others had seen.)

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POSTSCRIPTS

THERE are two postscripts to this story. One is that the Philadelphia Inquirer evidently took this sighting seriously because several months later in the Sunday Magazine they published a very detailed report on the sighting. The author did not support the conclusion that the lights could be explained.

THE second postscript is that CSICOP was not finished with the case. Evidently even Phil Klass could see that his Jupiter-Mars explanation had failed. In the Summer, 1987 issue of the Skeptical Inquirer he published a new analysis. (16) This time the lights were explained as reflections of moonlight from the clouds and "turbulent ice crystals." (Recall that the air crew reported thin clouds below them.) According to Klass the turbulent ice crystals "could have generated flame-colored lights" and "this would also explain why the undulating lights would periodically and suddenly disappear and then reappear as cloud conditions ahead changed. When the aircraft finally outflowed the ice clouds and the initial 'UFO' disappeared for good (the Captain) would search the sky for it, spot Jupiter further to the left and conclude it was the initial UFO." Klass attributed the airplane radar sighting to "an echo from thin clouds of ice crystals."

KLASS's explanation verges on scientific garbage. There is no reason to suppose that moonlight reflected off ice crystals in the clouds would generate "flame colored lights." Klass' explanation certainly could not account for the heat which Terauchi felt on his face. Nor would it explain the distinct arrays of flames or lights associated with two independently flying objects that appeared ahead of the plane and ABOVE for many minutes (the clouds were reported to be below the plane). Nor would it explain the sudden rearranging of these arrays of lights. He says this reflection from crystals could explain the colors of the lights. However, the reflected light would be basically the color of the moonlight. A variation in color would occur only if the moonlight were "broken" into its spectrum by refraction of light in the crystals (similar to what happens with rain and a rainbow). But the spectrum of white light contains more than just the yellow, amber and green which were reported. Blue and red should also have been noted if the air crew was looking at what would essentially be a "rainbow."

THE lights ahead of the aircraft were described as bright. The copilot compared them to headlights of oncoming aircraft. A reflection of the moon from thin clouds would cover large areas of cloud and would be dim, rather than bright and point-like.

KLASS' explanation for the radar target is total conjecture on his part since the clouds were reported by the plane to be thin. Would there be any return at all from such clouds? One might ask, if there were so many clouds, why the radar didn't pick up numerous "blobby" returns on the right side and ahead of the aircraft as well as on the left where the "mothership" appeared to be.

And, of course, Klass' explanation does not account for the "silhouette of a gigantic spaceship."

SIC TRANSIT GLORIA CSICOP.

POST POSTSCRIPT

IN May, 2001, John Callahan, who was at the time the manager of the FAA Division of Accidents, Evaluations and Investigations, for the first time publicized his version of the JAL1628 story. His testimony is presented at the CSETI web site. According to Callahan, when he learned of the sighting he directed that the radar tapes be sent to the FAA analysis center in Atlanta. Then he flew to Atlanta and, using his new home video camera, recorded the radar tape as it was played back through the special equipment at the Atlanta center. The radar tape was synchronized with the audio tape of conversations between the air traffic controller and the airplane. In an interview in 2001 Mr. Callahan told me that the unknown radar target disappeared when the plane was flying south from Fairbanks (after making the complete turn at Fairbanks) while the United airplane was flying northward toward JAL1628. The United plane did not see anything. But after the United airplane passed the JAL and continued north.... the unknown radar target appeared again, this time BEHIND THE UNITED AIRPLANE.

FOOTNOTES/REFERENCES

- 1) Interview of Capt. Kenjyu Terauchi, January 2, 1987. During the interview Capt. Terauchi reported two previous UFO sightings. About five years before the present sighting he saw a "mothership" shortly after taking off from Taipai, south of Formosa, but it was "so weird I ignored it." Then he saw, from his home during the daytime, bright lights that continued for about ten minutes. Although this was not Terauchi's first UFO, it was the first sighting of unidentified phenomena by the other two crew members. In January 1987 Capt. Terauchi had another sighting of a strange phenomenon which he reported. He subsequently offered a satisfactory explanation for it. (From the FAA file on the JAL sighting)
- 2) Written (in Japanese, with translation) testimony of Capt. Kenjyu Terauchi as received by the FAA on January 2, 1987. A comparison of the transcript of the conversation with the air traffic controller (ref. 4 below) with Terauchi's testimony shows that, a month and a half after the sighting, he recalled the individual events quite but not perfectly accurately and that he confused the order of some of the events. The order of events in Terauchi's testimony has been modified somewhat in this presentation to place them in the order that is found on the AARTCC audio tape.
- 3) Flight path as constructed from the radar data package supplied by the FAA.
- 4) Information obtained from the tape recording and transcript of the tape recording of conversations between the plane and the AARTCC.
- 5) Writing somewhat more than a month after the event the pilot recalled (2) that the plane first communicated with Anchorage at 5:05 PM. He correctly recalled that the plane was asked to fly directly to Talkeetna and then take air route J-125 to Anchorage.
- 6) The order of events as presented here follows the order in the AARTCC tape (ref. 11). The order of events in the captain's testimony is somewhat different. It appears that he accurately recalled most of the events which make up the total sighting, but he did not always present them in the proper order. His presentation seems to jump forward and back in time occasionally. The order of events as presented here seems, to this author, to be the most consistent with the testimony of the copilot and the flight engineer and the ARTCC tape. It should be noted that the lights were first seen by the captain in a location to the left and below the plane where neither the copilot nor the flight engineer would be likely to look. Whether or not the captain mentioned them at that time is not known. But all three witnesses recalled seeing the lights remaining in front and somewhat to the left of the aircraft for a number of minutes and then seeing the light return to the left side as far back as the 9 o'clock position. After the lights dropped back farther than that, only the pilot was easily able to see them because of his position on the left side of the cockpit. Thus the total event consisted of a single witness sighting at the beginning, a multiple witness sighting in the middle and a single witness sighting at the end.
- 7) Notes made by Special Agents Jack Wright, James Derry and Ronald Mickle after the crew was interviewed just after the plane landed at Anchorage on November 17.
- 8) Interview of Captain Kenjyu Terauchi by Dr. Richard Haines (private communication)
- 9) Information found in the January 5, 1987 interview of Copilot Takanori Tamefuji. The difficulty in communicating through an interpreter is evident in the transcript of this interview. At one point the interviewer asked Tamefuji, referring to the arrays of lights ahead and to the left, "And you could distinguish these lights as being different from the star...?" Tamefuji's response is transcribed as "NNNooo...", which some might interpret as meaning that Tamefuji couldn't distinguish the lights from stars. But the interviewer immediately continued "...from the stars?" to which Tamefuji replied, "Different is fine." Subsequently Tamefuji made it quite clear that the lights were very different from stars.
- 10) Information found in the January 15, 1987 interview of the flight engineer, Yoshio Tsukuba.
- 11) Transcript of the conversations between the airplane and the AARTCC and between the AARTCC and the Air Force Regional Operations Command Center (ROCC)
- 12) Interview with Capt. Terauchi published in PEOPLE magazine, January 12, 1987
- 13) Personal statement by Carl Henley of the AARTCC, released by the FAA office on December 29, 1986
- 14) "UFO Mystery Solved," press release by the Committee for Scientific Investigation of Claims of the Paranormal (CSICOP), January 22, 1987 (Buffalo, NY)
- 15) "FAA Releases Documents on Reported UFO Sighting Last November," by Paul Steucke, Office of Public Affairs, Alaskan Region, Federal Aviation Administration (FAA), U.S. Department of Transport, March 5, 1987 (Anchorage, AK)
- 16) Klass, P.J., "FAA Data Sheds New Light on JAL Pilot's UFO Report," The Skeptical Inquirer, Summer, 1987 (Buffalo, NY)

