Outbound to the Moon – with a UFO?

The story of a UFO following Apollo-11 to the moon is a widespread cultural meme, but is actually representative of a bigger type of lunar spaceflight event that seems to have also occurred during the outbound legs of other Apollo missions.

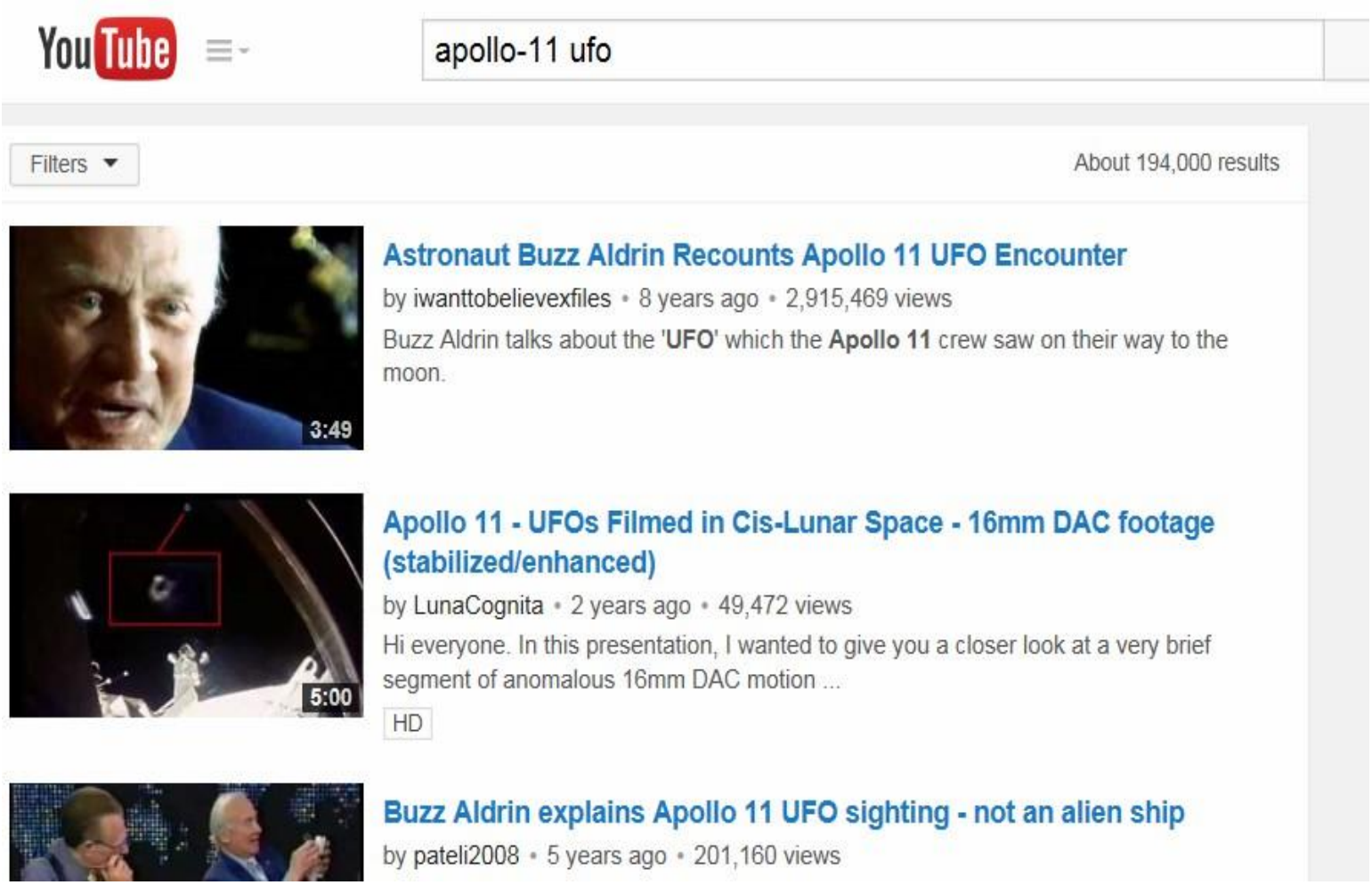
The myth provides an opening to digging into a fascinating but little-known aspect of real space flight.

Here's how widespread the story has become on the Internet

- Neil Armstrong moon ufo -- "About **20,500** results"
- Aldrin moon UFO – "About **15,400** results"
- Apollo-11 UFO – "About **190,000** results"
- Google "Apollo-11 UFO " = "796,000 results"

James Oberg
July 16, 2015
ROUGH DRAFT 3

Endemic on YOUTUBE



Link TBS

Only a ‘click’ away….

Evidence from Apollo 11 about UFOs found on the Moon

ElPeruanoUFO

Subscribe 813

6,877,171

Add to Share ••• More 3,177 1,995

Uploaded on Aug 12, 2007

Soon after the astronauts from the Apollo XI landed they notice an alien precense located behind a nearby Hill, According to this pseudo documentary, when they were getting ready to record it on film the sighted beings and objects immediately disappeared.

Juan Jose Benitez use to work in the 70s as a reuters reporter from Spain, during those years he heard about a fascinating news of a contacted from Peru called Sixto Paz Wells, he was sent to Peru to investigate and interview him which resulted in a catapult of fame for him, mainly due to the writting of his first book on this story "SOS to humanity" which narrates the close encounter with the ETs beings which Sixto Paz had access to, includding traveling to outer space.

Link TBS

Dramatized in several documentaries

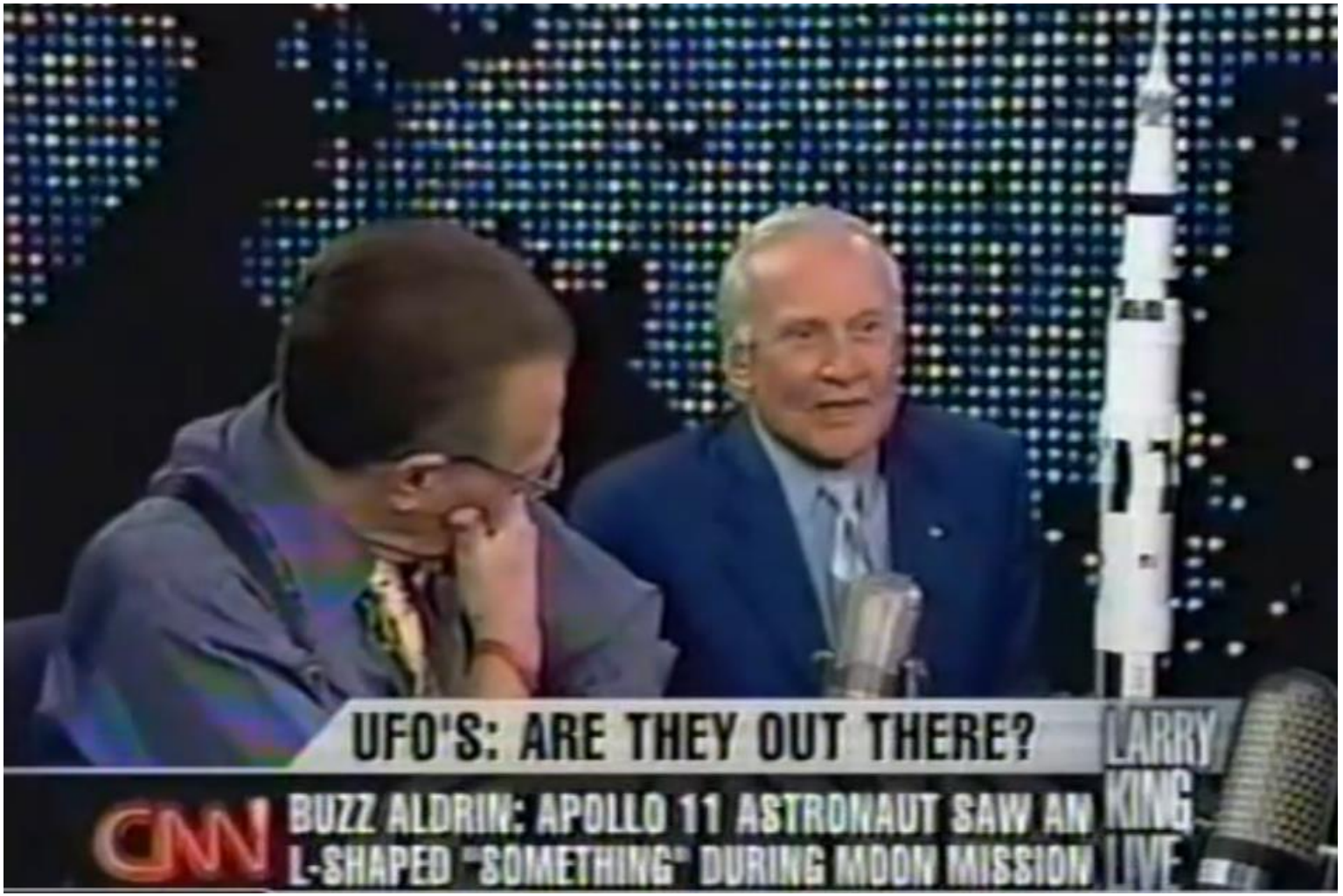
Link TBS

How it became a media sensation

- http://www.openminds.tv/did-buzz-aldrin-see-a-ufo-on-his-way-to-the-moon/3875

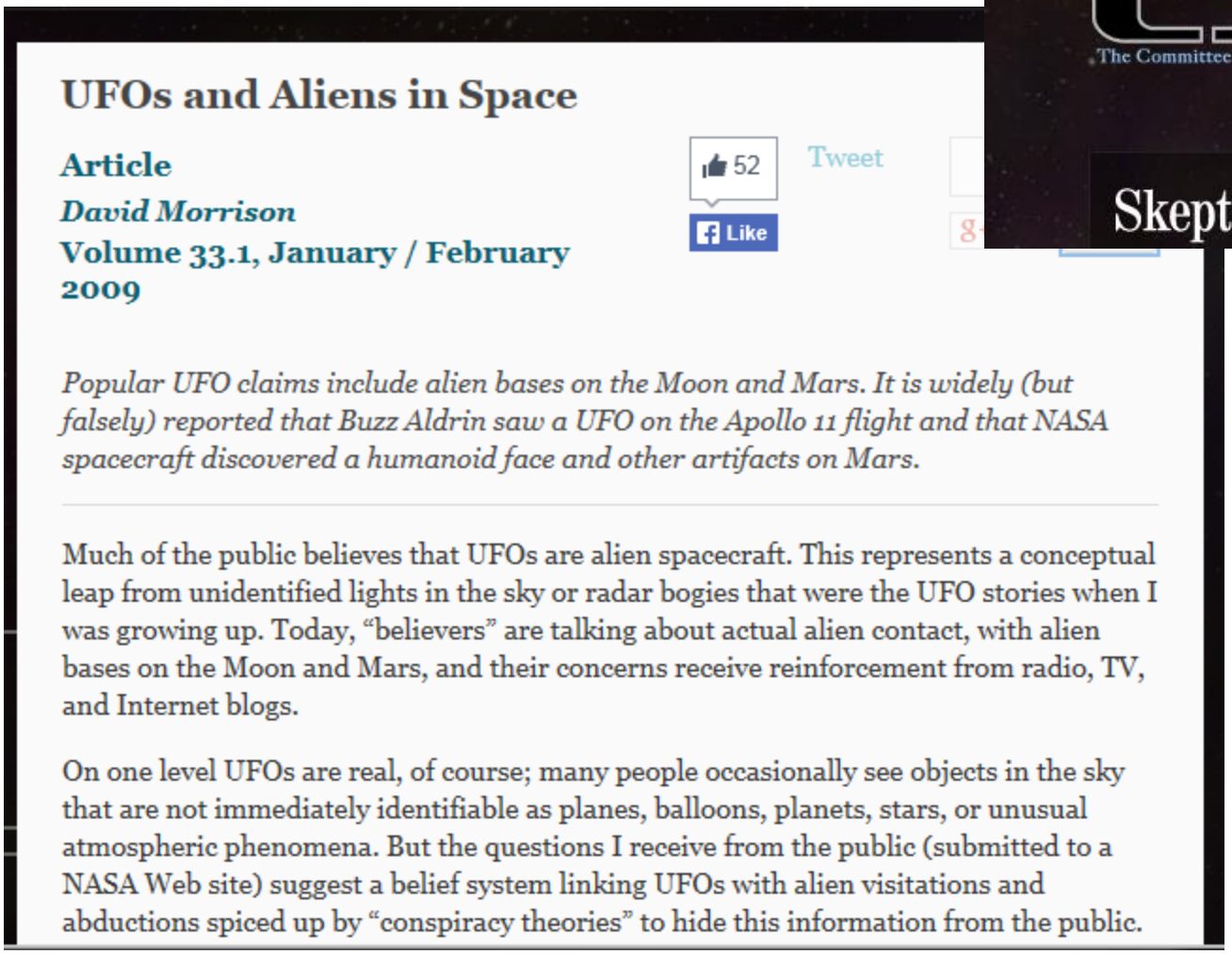
From there, only a hop, skip, and jump to becoming ‘common knowledge’ that the crew described a UFO out their window but NASA covered it up and later made the astronauts lie about it. “Knowing” such stories gives believers the impression [false, but seductive] that their insights are superior to those of other people and of ‘rocket scientists’.

Aldrin’s narrative – distorted



Link TBS

Aldrin clarifies – to little effect



A PROGRAM OF THE CENTER FOR INQUIRY

CSI

The Committee for Skeptical Inquiry

Skeptical Inquirer

UFOs and Aliens in Space

52 Like Tweet

Article

David Morrison

Volume 33.1, January / February 2009

Popular UFO claims include alien bases on the Moon and Mars. It is widely (but falsely) reported that Buzz Aldrin saw a UFO on the Apollo 11 flight and that NASA spacecraft discovered a humanoid face and other artifacts on Mars.

Much of the public believes that UFOs are alien spacecraft. This represents a conceptual leap from unidentified lights in the sky or radar bogies that were the UFO stories when I was growing up. Today, "believers" are talking about actual alien contact, with alien bases on the Moon and Mars, and their concerns receive reinforcement from radio, TV, and Internet blogs.

On one level UFOs are real, of course; many people occasionally see objects in the sky that are not immediately identifiable as planes, balloons, planets, stars, or unusual atmospheric phenomena. But the questions I receive from the public (submitted to a NASA Web site) suggest a belief system linking UFOs with alien visitations and abductions spiced up by "conspiracy theories" to hide this information from the public.

http://www.csicop.org/si/show/ufos_and_aliens_in_space

Basic features

- July 18, 1969 CDT 21:09 [5 hrs later in GMT]
- GET [Ground Elapsed Time] 60:47 [hh:mm]
- 212,000 miles from Earth
- Neil Armstrong, Michael Collins, Edwin [‘Buzz’] Aldrin preparing to get some sleep
- Spacecraft in long-axis slow roll [“BBQ mode”]
- Slowly fluctuating starlike object hardly [if at all] moving against star background
- Using optics, ambiguous shape barely seen

Moon secrets ‘crockumentary’, SyFy channel, July 2014

- Features denials from Aldrin opposite sneering narration
- Highlights 30 seconds of Aldrin fidgeting in silence with narrator claiming he has ‘clammed up’ and refused to respond to ‘leaked’ photos of the UFO he spotted
- Scene more consistent with normal interview sequence of request for guest silence while recording ‘room tone’ for use with inserted graphics
- Deceptive portrayal of Aldrin silence quite consistent with editorial practices of falsification aimed at audience

Part of a wider multi-element myth

link

Multi-part myth

- Sighting on way out to the moon [THIS report]
- “Snowman” photos at the moon
- Post-landing ‘secret transmissions’
- Mysterious messages
- “Moon Pigeons“

Alternative explanations

- The Saturn third stage booster
- One of the “LM garage” walls called ‘Spacecraft LM Adaptor’ [SLA] panels
- Small shed fragment of mylar insulation
- “all sorts of little objects going by at the various dumps”
- Soviet Luna-15 probe
- Malfunctioning secret Pentagon spysat
- Other

Unearthly features of spaceflight makes stuff ‘look weird’ in space

- Objects drift along together from own momentum, not powered flight
- Tumbling objects maintain rate
- Nearby small objects can be disturbed by thruster plumes [fan out very widely]
- Sunlit windows tended to ‘glare out’, best star views were on ‘down sun’ face of vehicle
- Earthside range/scale cues are totally garbled

Sources of information

- NASA air-to-ground recordings/transcripts
- NASA interviews and news media interviews
- Crew debriefings
- Basic principles of space flight
- Observation by ground telescopes
- Eavesdropping by radio amateurs
- Analogous observations on other missions
- Years later, “insider” stories

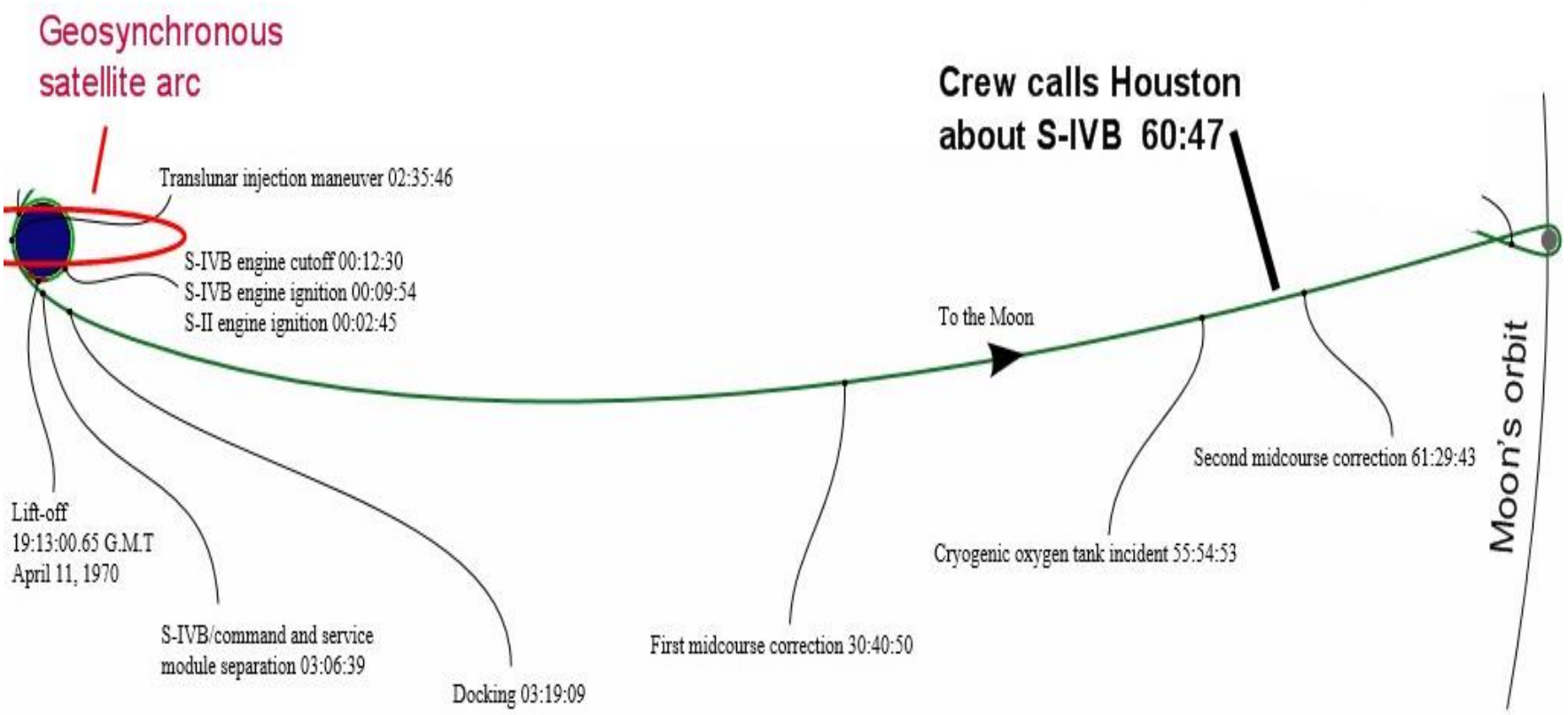
Sources of misinformation

- Misunderstanding of crew jargon
- Misunderstanding of spaceflight principles
- Unjustified application of earthside analogies
- Subconscious transfer of Hollywood SFX
- Subconscious transfer of video game modeling
- Memory drift and/or enhancement
- Memory cross-fertilization and contamination
- Other

Apollo-11 ‘companion’ – WHEN & WHERE??

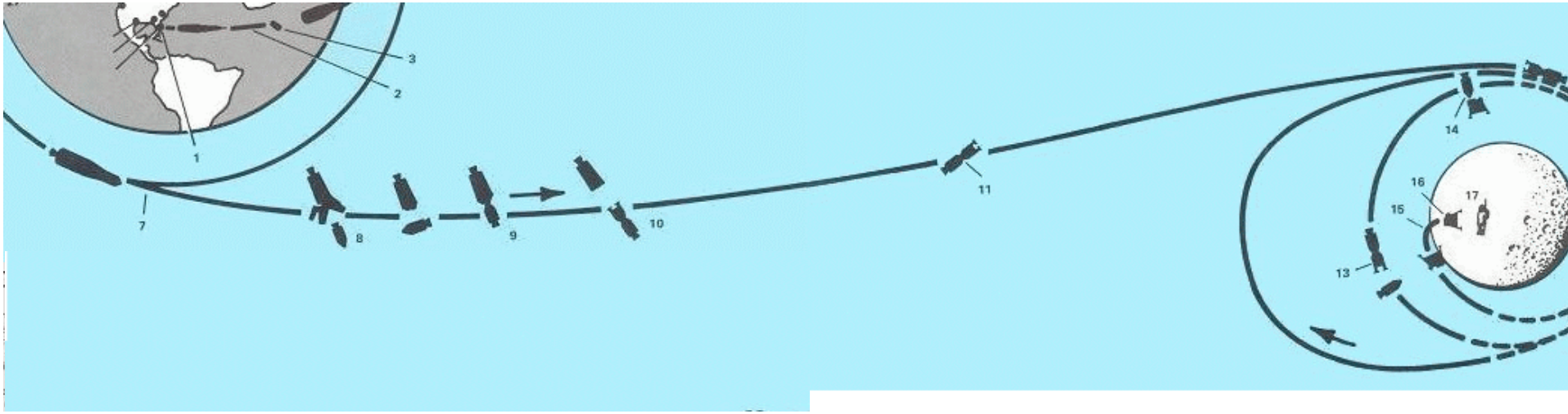
- The exact distance from Earth is on page 200 of
- http://www.jsc.nasa.gov/history/mission_trans/AS11_PAO.PDF
- where the request "Do you have any idea where the S-IVB is with respect to us?" occurs shortly after 7/18/69, GET 60:47, CDT 21:09, and the mission commentary had just given the range as "184,600 nautical miles from earth," about 212,000 statute miles, speed 2061 mph. The crew was preparing for sleep after putting the CSM into a passive thermal roll ["barbecue mode"] of 3 revs per hour, or about 18 deg/minute.

The place in space…

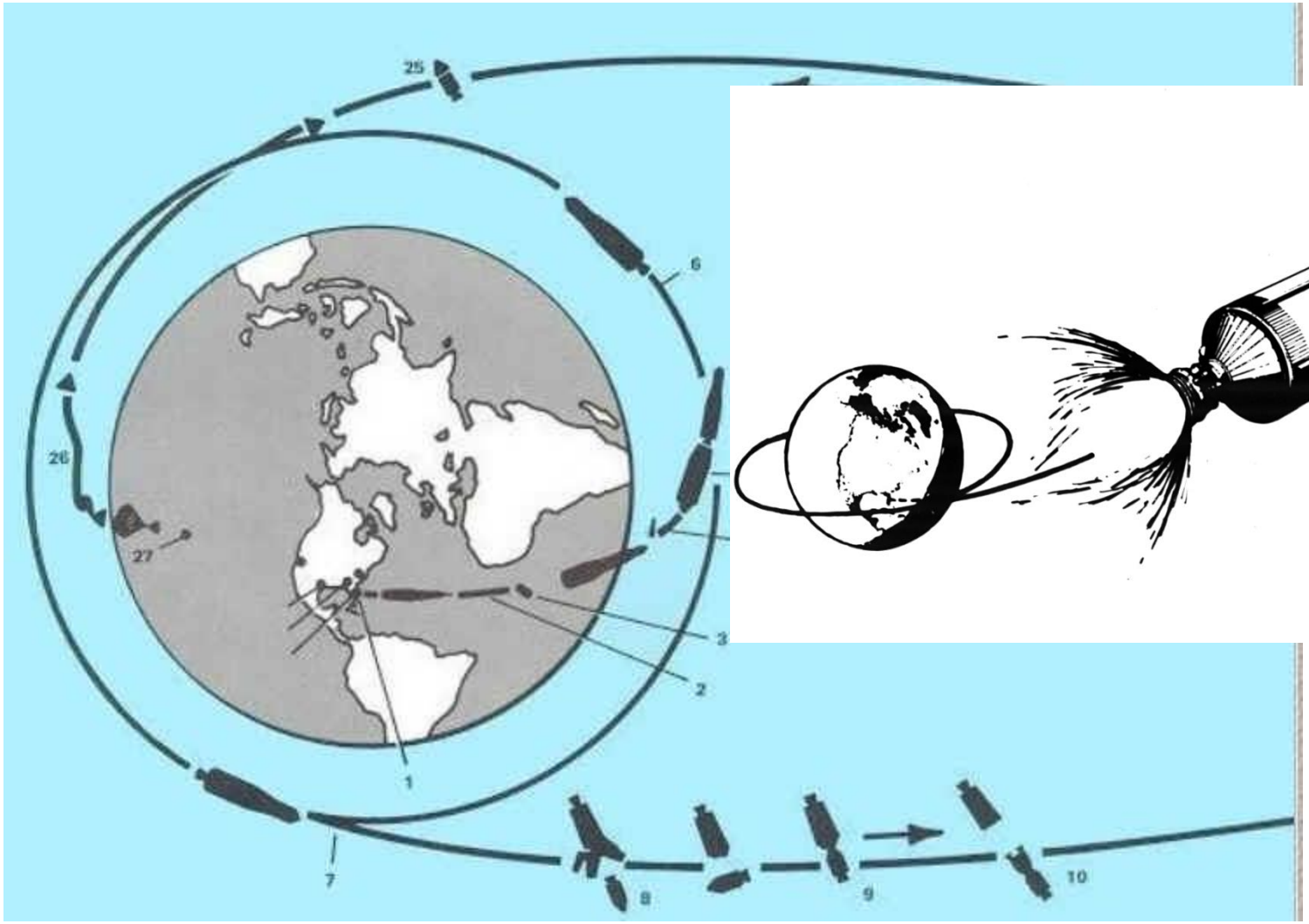


[explanation TBS]

What had already happened…



Events not to scale – the early maneuvers were actually grouped sequentially very soon after leaving the ‘parking orbit’



Detail – S4B thrusting, then separation, ‘transposition’, docking to LM, extraction from launch shroud

PAO at GMT 1969/7/19:04:00

APOLLO 11 MISSION COMMENTARY, 7-18-69, CDT 23:00 GET 62:29:00

PAO This is Apollo Control at 62 hours 29 minutes. The flight surgeon reports that the crew appears to have been asleep now for about the past 30 minutes. The spacecraft appears to be holding its passive thermal control attitude very well and at this time Apollo 11 is about 32,000 miles from the Moon traveling at a speed of 3,782 feet per second. In the past 50 minutes or so, we have seen that velocity increase about 10 feet per second going from 3772 feet per second to the present 3782 as the spacecraft continues to accelerate toward the Moon. The Change of Shift Briefing following this shift will occur at about 11:15 PM Central Daylight Time. Flight Director Glynn Lunney and his team of flight controllers are coming on now being debriefed by the Eugene Kranz team and that shift change will be occuring shortly here. The new capsule communicator will be astronaut Ron Evans. At 62 hours 30 minutes, this is Apollo Control.

http://www.jsc.nasa.gov/history/mission_trans/AS11_PAO.PDF

Air-to-Ground transcript

02 12 25 07	CC	Apollo 11, Houston. Looks like we've got a good PTC going. It's good night from the White Team. Over.
02 12 25 17	CMP	Okay. See you tomorrow. Thank you for everything.
02 12 45 38	CDR	Houston, Apollo 11.
02 12 45 41	CC	Go ahead, 11. Over.
02 12 45 46	CDR	Do you have any idea where the S-IVB is with respect to us?
02 12 45 50	CC	Stand by.
02 12 49 02	CC	Apollo 11, Houston. The S-IVB is about 6000 nautical miles from you now. Over.
02 12 49 14	CDR	Okay. Thank you.

http://www.jsc.nasa.gov/history/mission_trans/AS11_TEC.PDF

When first noticed in media

- TBS

Postflight crew debriefing

http://history.nasa.gov/alsj/a11/A11TechCrewDebrfV1_2.pdf

Aldrin: The first unusual thing that we saw I guess was 1 day out, or something, pretty close to the moon. It had a sizeable dimension to it, so we put the monocular on it.

Collins: How'd we see this thing? Did we just look out the window and there it was?

Aldrin: Yes, and we weren't sure but that it might be the S-IVB [Saturn Rocket Third Stage]. We called the ground and were told the S-IVB was 6000 miles away. We had a problem with the High Gain about this time, didn't we?

Collins: There was something. We felt a bump or maybe I just imagined it.

Armstrong: He was wondering whether the MESA [Modular Equipment Stowage Assembly] had come off.

Collins: I don't guess we felt anything.

Aldrin: Of course, we were seeing all sorts of little objects going by at the various dumps and then we happened to see this one brighter object going by. We couldn't think of anything else it could be other than the S-IVB. We looked at it through the monocular and it seemed to have a bit of an L-shape to it.

Armstrong: Like an open suitcase.

[more]

Postflight crew debriefing [2 of 3]

Aldrin: We were in PTC [Passive Thermal Control] at the time so each one of us had a chance to take a look at this and it certainly seemed to be within our vicinity and of a very sizeable dimension.

Armstrong: We should say that it was right at the limit of the resolution of the eye. It was very difficult to tell just what shape it was. And there was no way to tell the size without knowing the range or the range without knowing the size.

Aldrin: So then I got down in the LEB [Lower Equipment Bay] and started looking for it in the optics. We were grossly misled because with the sextant off-focus what we saw appeared to be cylinder.

Armstrong: Or really two rings.

Aldrin: Yes.

Armstrong: Two rings. Two connected rings.

Collins: No, it looked like a hollow cylinder to me. It didn't look like two connected rings. You could see this thing tumbling and, when it came around end-on, you could look right down in its guts. It was a hollow cylinder. But then you could change the focus on the sextant and it would be replaced by this open-book shape. It was really weird.

[more]

Postflight crew debriefing [3 of 3]

Aldrin: I guess there's not too much more to say about it other than it wasn't a cylinder.

Collins: It was during the period when we thought it was a cylinder that we inquired about the S-IVB and we'd almost convinced ourselves that's what it had to be. But we don't have any more conclusions than that really.

The fact that we didn't see it much past this one time period - we really don't have a conclusion as to what it might have been, how big it was, or how far away it was. It was something that wasn't part of the urine dump, we're pretty sure of that.

Skipping ahead a bit, when we jettisoned the LM, you know we fired an explosive charge and got rid of the docking rings and the LM went boom. Pieces came off the LM. It could have been some Mylar or something that had somehow come loose from the LM.

Aldrin: We thought it could have been a panel, but it didn't appear to have that shape at all.

Collins: That's right, and for some reason, we thought it might have been a part of the High Gain Antenna. It might have been about the time we had high gain antenna problems. In the back of my mind, I have some reason to suspect that its origin was from the spacecraft.

In "RETURN TO EARTH" pages 223-224 Colonel Edwin E. Aldrin Jr. writes:

In the middle of one evening, Houston time, I found myself idly staring out the window of the Columbia and saw something that looked a bit unusual.

It appeared brighter than any star and not quite the pinpoints of light that stars are. I pointed this out to Mike and Neil, and the three of us were beset with curiosity.

With the help of the monocular we guessed that whatever it was, it was only a hundred or so miles away.

Looking at it through our sextant we found it occasionally formed a cylinder, but when the sextant's focus was adjusted it had a sort of illuminated "L" look to it. It had a shape of some sort -- we all agreed on that -- but exactly what it was we couldn’t pin down.

We asked Houston some casual questions: "How far away is the Saturn third stage?" The response was in the vicinity of six thousand miles. That wasn't it.

“Return to Earth” [continued]

It could possibly have been one of the panels of the Saturn third stage which fly off to expose the LM and cannot be traced from earth.

We could see it for about forty-five seconds at a time as the ship rotated, and we watched it on and off for about an hour.

We debated whether or not to tell the ground we had spotted something, and decided against it. Our reason was simple: The UFO people would descend on the message in hordes, setting off another rash of UFO spottings back on earth.

We concluded it was most likely on of the panels. Its course appeared in no way to conflict with ours, and it presented no danger. We dropped the matter there.

Aldrin interview much later

- Elsewhere, Aldrin has discussed his role:
- http://mysteriousuniverse.org/2014/07/its-all-the-buzz-the-real-story-behind-buzz-aldrins-ufo/
-

On Apollo 11 in route to the Moon, I observed a light out the window that appeared to be moving alongside us.

There were many explanations of what that could be, other than another spacecraft from another country or another world – it was either the rocket we had separated from, or the four panels that moved away when we extracted the lander from the rocket and we were nose to nose with the two spacecraft.

So in the close vicinity, moving away, were four panels. And i feel absolutely convinced that we were looking at the sun reflected off of one of these panels.

Which one? I don't know. So technically, the definition could be "unidentified."

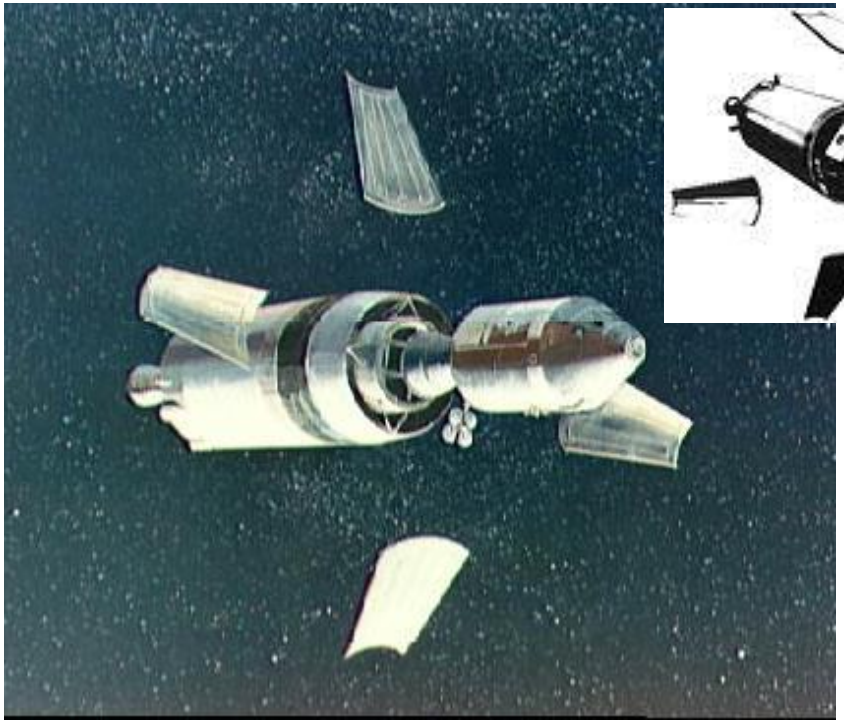
Observing through the sextant

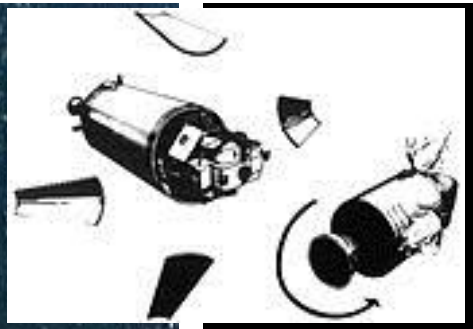
- Mike Collins made the observation that he could just barely make out a shape] through the CM sextant's small telescope whose technical specs are here:
- http://www.ion.org/museum/item_view.cfm?cid=6&scid=5&iid=293 and here
- http://fer3.com/arc/m2.aspx/Apollo-spacecraft-sextant-FrankReed-may-2004-w15576
- The instrument consisted of two telescopes. The first was a one-power, wide-field scanning telescope, which was used to locate a star or constellation in space. The second was a 28-power sextant, which took the actual reading.

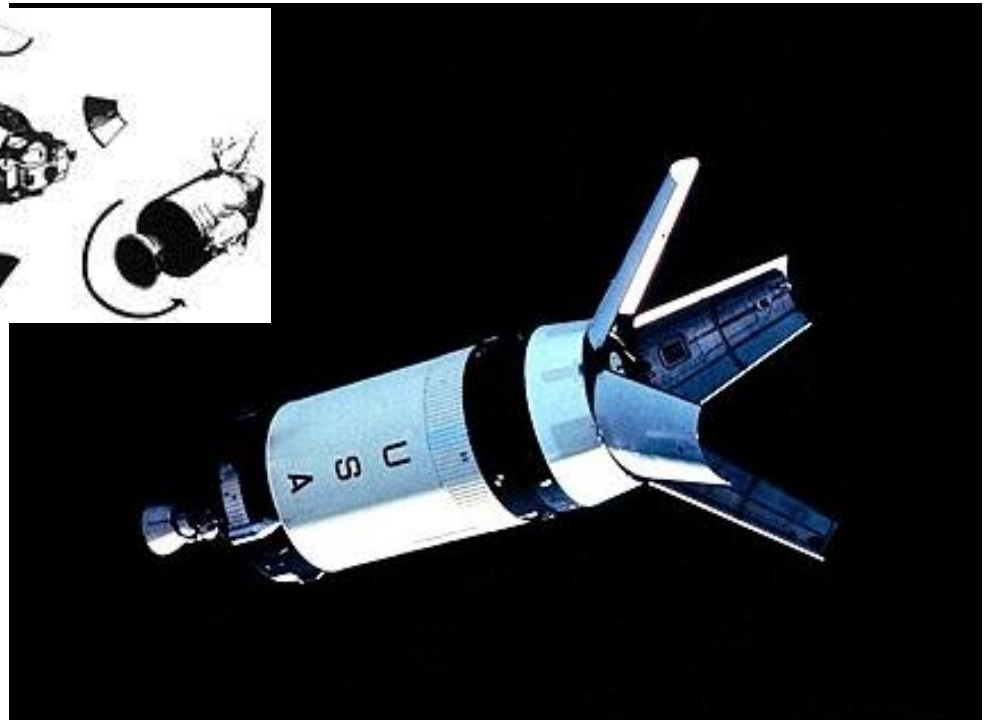
Consensus on SLA panel ID

- “Probably” a SLA panel but NOT ‘certain’
- May have been too far away [e.g., Sparks]
- Wealth of small spacecraft-generated stuff
- Telescopic observations show them ‘close’
- Observed ONLY on outbound leg, when SLA panels were not far away; never on return
- tbs

“Spacecraft Lunar Adaptor” panels enclosing LM during launch





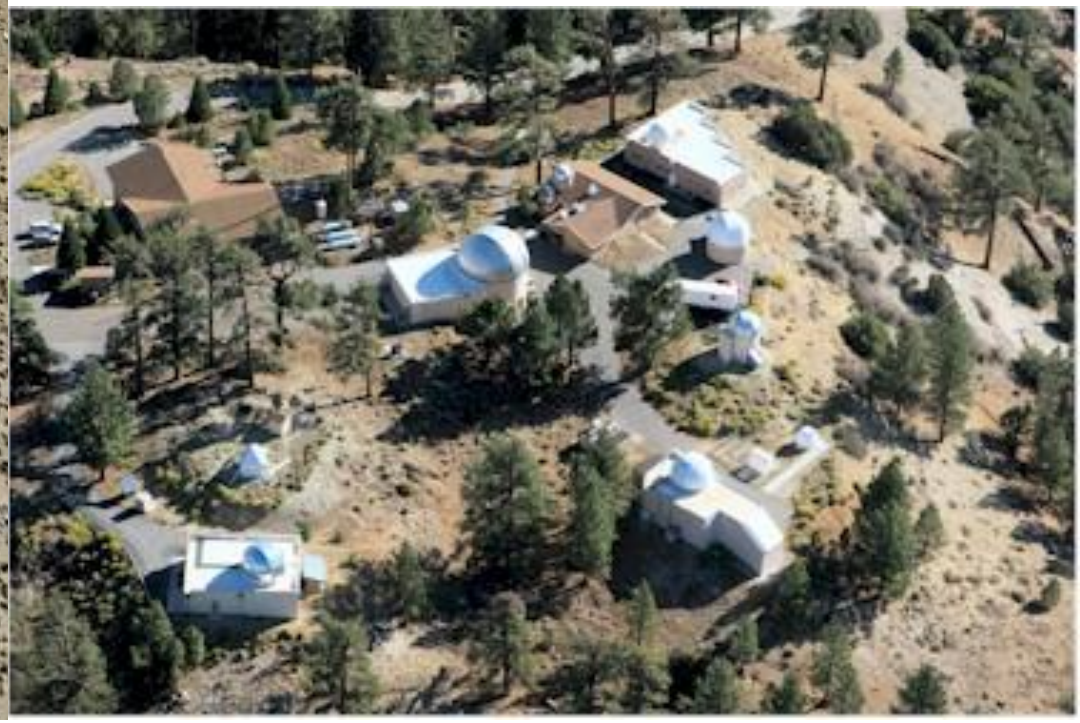


Details TBS

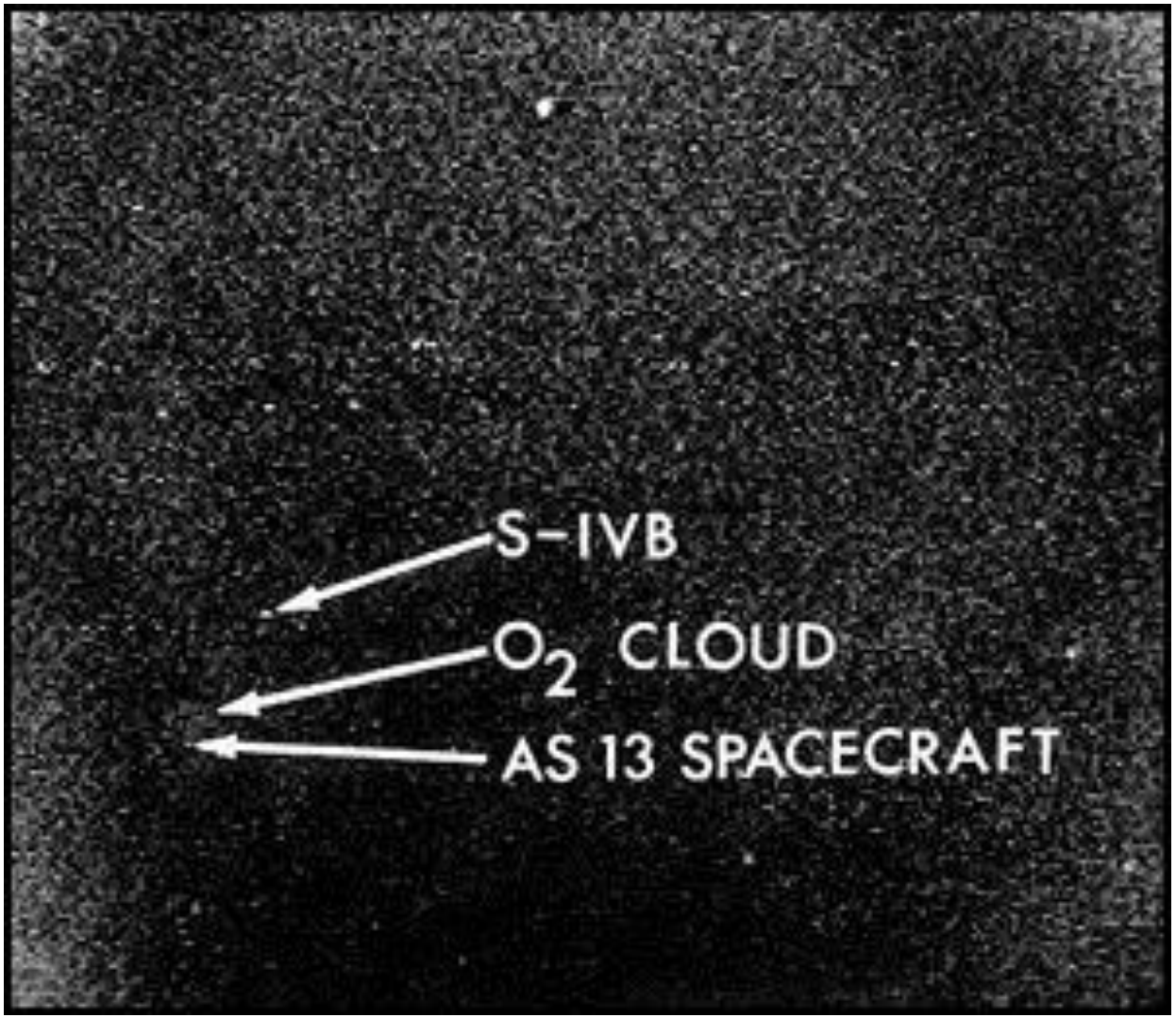
SLA panels near the Apollo were regularly observed from Earth

- Apollo-8
- [no reports from Apollo-10]
- Apollo-11
- Apollo-12
- Apollo-13
- Apollo-14

Back on Earth, eyes were watching



- Corralitos Observatory [Las Cruces, New Mexico.]
- Table Mountain Observatory [JPL], California

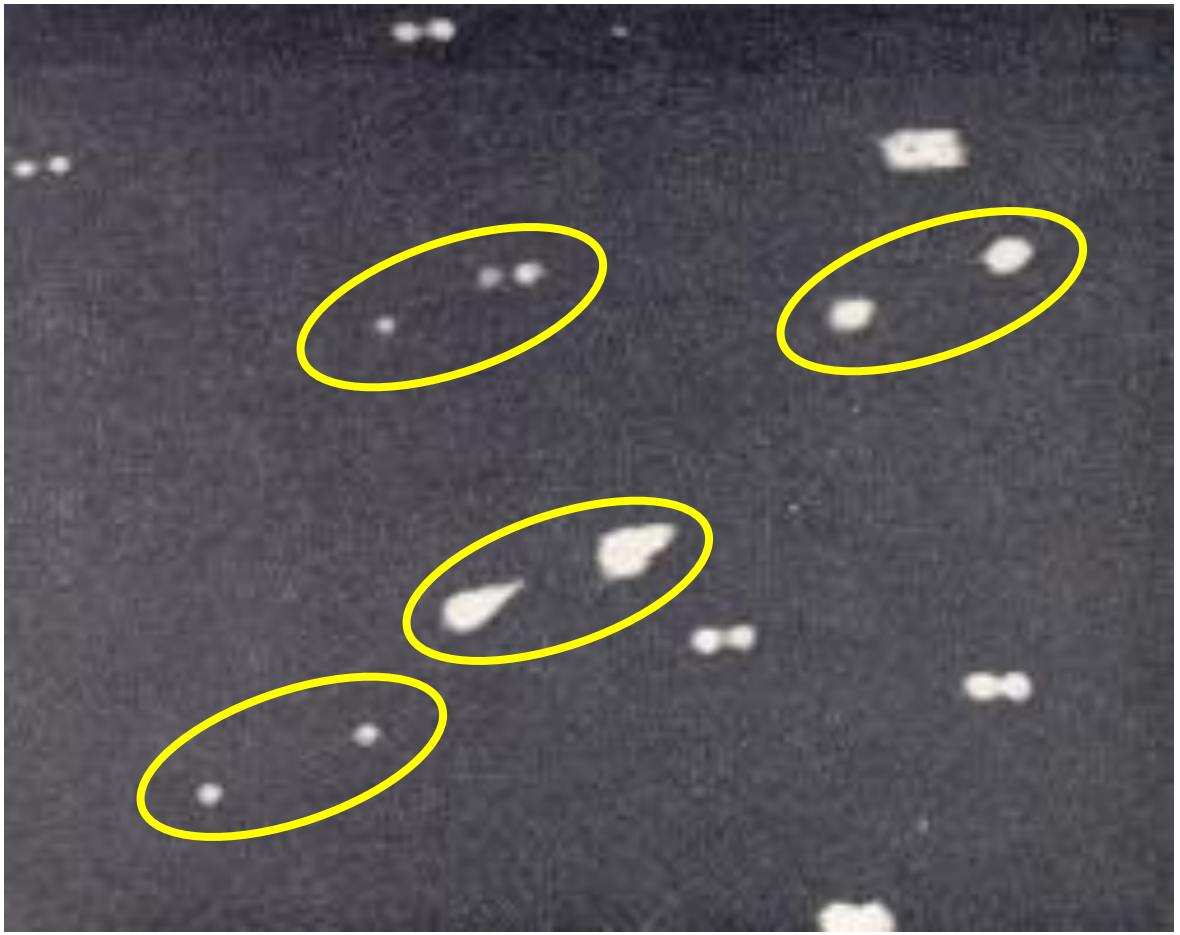


Apollo-13

Depending on local weather and darkness, observatories around the world observed many phases of the outbound flights

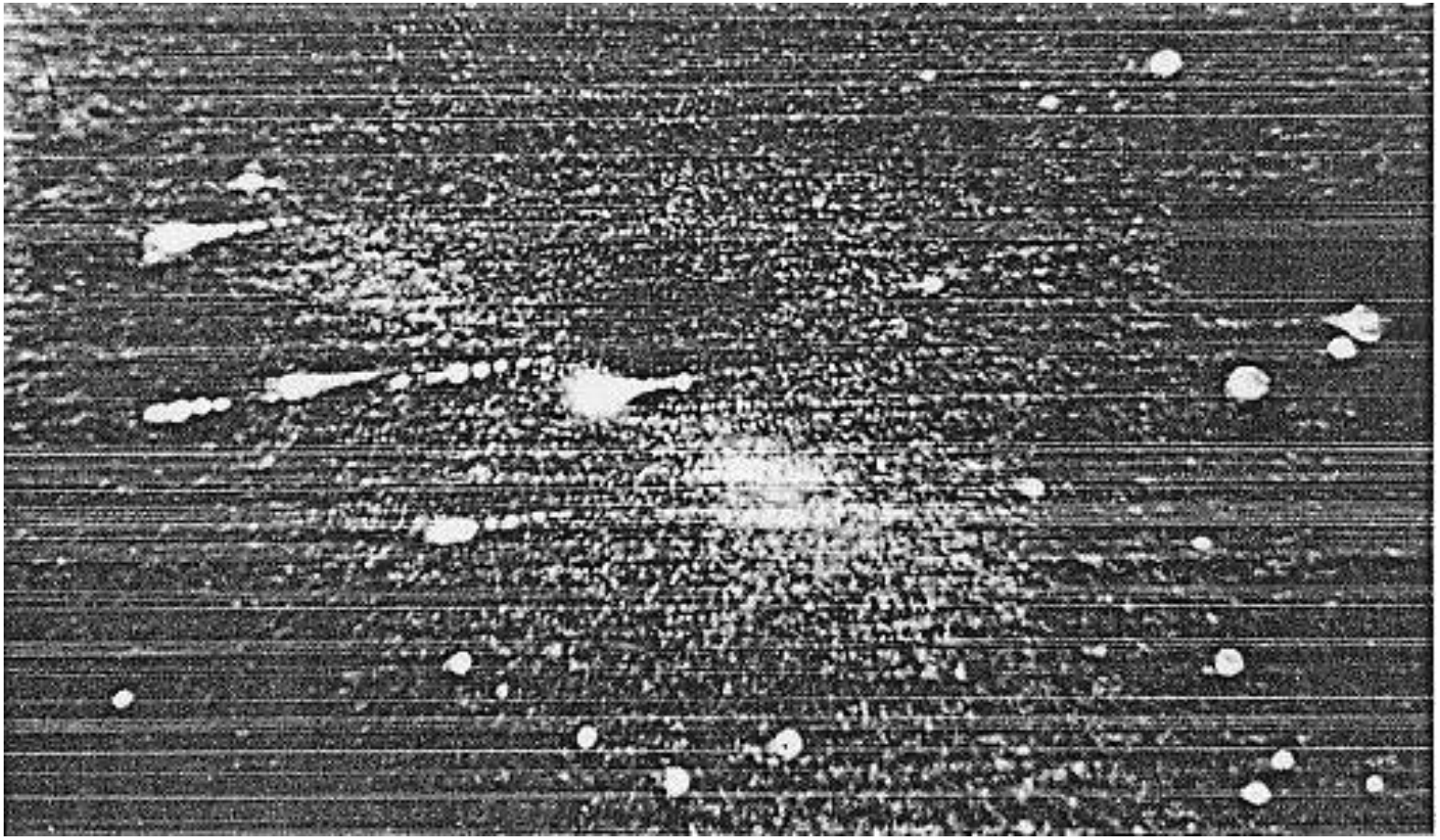
Apollo-8 and SLA panels [Dec 1968]

Corralitos Observatory



Several Apollo objects are revealed by their motion in this composite photograph with the Corralitos 24-inch reflector. Taken December 22nd at 3:01:50 UT and 2.5 minutes later, the two negatives were superimposed and displaced horizontally. **Stars appear as horizontal pairs, but spacecraft components are shifted diagonally**. The brightest images (integration time one second) are of two objects that were not quite resolved."[1] (Images used by permission of Elaine Halbedel, current director of Corralitos Observatory)

Apollo-14 and SLA panels observed [Jan 1971]



This image of Apollo 14 during a water dump (including SLA panels) is provided in an archival image courtesy of current director Elaine Halbedel, from the Corralitos Observatory files. This was done with a TV system on the 24-inch reflector. The motion of the objects brings out not only the spacecraft and S-IVB booster stage, but the four flashing SLA panels.

Apollo-13
-
Table Mountain Observatory

Jim Young also presents this photograph of Apollo 13 from Table Mountain, from 0523-0528 UT on April 12, 1970 (two days before the explosion). The spacecraft itself shone steadily at magnitude 13, while the SLA panels occasionally flashed as bright as magnitude 9 (too seldom to show up very brightly in this long-exposure image). http://www.w7ftt.net/apollo13.html

Actual separation distance

- Bill Keel: “The best image I have for that was from Jim Young at Table Mountain. I just heard from him (on the 45th anniversary of exposing the picture) with an estimate of the field size (432x540 arcseconds) . This is for the April 12, 1970 image 0523-0528 UT.” [email April 2015]
- Launch was April 11, 1970, 19:13:00 UTC, so this is MET 0d 10h 10m
- Distance from Earth was 50,000 nm [92 000 km] , so if 200 arcsec apart, trigonometry gives about 90 km [55 miles] at perpendicular aspect angle

Other crew sightings

- Apollo-12 -- led to even MORE famous ‘UFO story’ due to major misinterpretation of crew jargon during reporting
- Apollo-14 -- CMP Roosa aggressive visual tracking of S4B
- Apollo-16 -- Crew detailed reportage of frequent local blizzards of ice and insulation fragments
- Other

Apollo-12 “UFO” -- Myth

- About 7,410,000 results on Internet search
- The way it is usually reported:
- “One day out on the earth moon leg of the trip the astronauts radioed Mission Control that two flashing lights had appeared off the bow of their capsule. After rejecting the possibility that the objects could be spinning pieces of the Apollo booster rocket the capcom suggested that they could be the jettisoned protective panels. One of the astronauts replied ‘Gee that could be, but one of those lights just shot out of here at tremendous speed’ ".
- http://www.tarrdaniel.com/documents/Ufology/astronaut_ufo_sighting.html

What they actually saw and said

- GET 36h 40 m

- http://www.popscreen.com/v/38m6/UFO-Apollo-12--Pete-Conrad--SLA-panel-Leaving-Area-at-a-High-Rate-of-Speed

- **034:50:43 Conrad:** Houston, 12.
- **034:50:46 Carr:** 12, Houston. Go.
- **034:50:49 Conrad:** We think we have the S-IVB in sight. We've - had a - an object which is in the same place all the time and appears to be tumbling. We've had it ever since yesterday, and it just seems to be tagging along with us, so I guess that's the S-IVB. It's usually out our center hatch window when our roll angle is about 35 degrees right now. Maybe that'll give you a clue, and somebody can figure out if that's what we've really looking at.
- **034:51:24 Carr:** Roger, Pete.

[no mention in the post-flight crew technical debriefing]

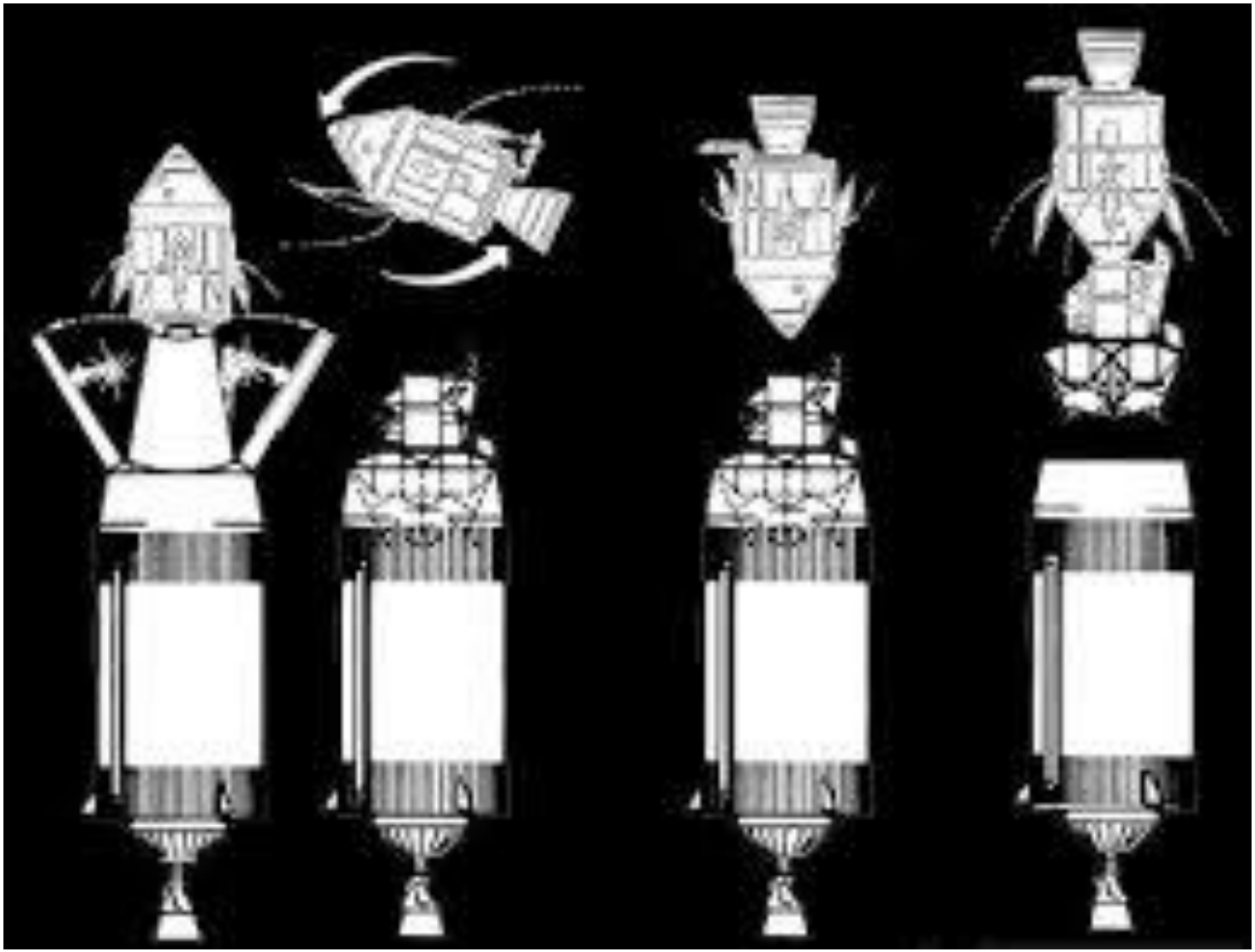
http://history.nasa.gov/ap12fj/07day2_qettd.htm

- **036:12:07 Carr:** Roger, Pete. That thing you saw off the hatch, at a roll of 35 degrees, we figured there's probably three possible answers. Number 1: it could be the S-IVB, or possibly a SLA panel, or it could be the backup crew flying trail on you.
- **036:12:24 Conrad:** Roger. Actually we have two objects out there. One's not anywhere near as bright as the other, so I think the real bright one's the S-IVB and the other one's probably a SLA panel. They're about 20 degrees apart. And as far as the backup crew goes, tell them we'll meet them on the back side of the moon.
- **036:12:48 Carr:** Roger, Pete. Best as we can tell down here now - best as we can tell down here now, the S-IVB should be near Denebola, and if it's SLA panels - correction, what you are saying now ought to be near Enif; is that correct?
- **036:13:06 Conrad:** Yes, it's near Enif.
- **036:13:13 Carr:** Roger, Pete. And the words here are that the S-IVB is about 180 degrees away, near Denebola.
- **036:13:23 Conrad:** Okay. I wonder what that could be.
- **036:13:28 Carr:** Okay. We'll go back to our drawing board.
- **036:13:29 Conrad:** The object's very bright - The object's very bright, and it's obviously something that's tumbling. It's tumbling about 1½ rev's per second, or at least it's flashing at us about that. And Dick - Dick is going to tell you what star it's near. He's messing with his chart right now.
- **036:13:55 Carr:** Roger. We're standing by.

Conrad's reference to 'turning around' dealt with the Command Module turning around to dock to the LM

- **036:26:25 Carr:** 12, Houston.**036:26:29 Conrad:** Go ahead.
- **036:26:30 Carr:** Pete, as best as we can tell, looking at things down here, on those SLA panels, we assume that they weren't imparted any great amount of Delta-V, like anything more than 1 or so feet per second when they separated. Your SLA panels would probably only be about 300 miles away from you right now.
- **036:26:51 Conrad:** That could be true but, gee whiz, when we turned around, I saw one of those SLA panels leaving the area at a high rate of speed; it looked to me like it was leaving us pretty - pretty rapid clip, like it got a lot more than a foot per second or so.
- **036:27:21 Carr:** Well, since we don't really have any idea how they left or what their trajectory could be, it's kind of tough really to say just what the heck that could be.
- **036:27:33 Gordon:** Okay. We'll assume it's friendly anyway, okay?
- **036:27:37 Carr:** Roger. If it makes any noises, it's probably just wind in the rigging.
- **036:27:41 Conrad:** Okay. Understand.

Apollo CSM “Turnaround”



Separation of the CSM from the SLA (Spacecraft (or Service Module)/Lunar Module Adapter) is a fast but complex event. A guillotine severs the electrical connections between the Service Module and the S-IVB; a train of explosive cords cut the metal structure joining the SM to the SLA to allow the spacecraft to come free; they cut the upper 75% of the conical SLA into four long sections which are now only joined to the S-IVB by spring loaded partial hinges at the centre of their lower edge; they set off pyrotechnic thrusters, mounted within the intact portion of the SLA, which force pistons to push on the outside edge of each SLA panel, causing them to begin rotating away from the vehicle's centreline. Once the panels have rotated about 45°, the hinges disengage, allowing the springs within the hinge assembly to push the panels away at about 2.5 m/s. Sitting on top of the S-IVB, and revealed for the first time is LTA (Lunar Test Article)-B, a nine-tonne instrumented cylinder installed to provide the Saturn V with a more representative load.

Apollo-8 was the first flight to use the partial hinges to jettison the SLA panels. During *Apollo 7,* the panels stayed attached but the commander, Wally Schirra, reported that one of them had not fully deployed. He pointed out that maneuvering near that wayward panel was worrisome and suggested dropping a planned docking test for fear of a panel hitting the spacecraft. NASA subsequently arranged for SLA panels to be jettisoned completely away from the vicinity.

http://history.nasa.gov/ap08fj/03day1_green_sep.htm

Astronaut Conrad direct quotation on Apollo-12 UFO story

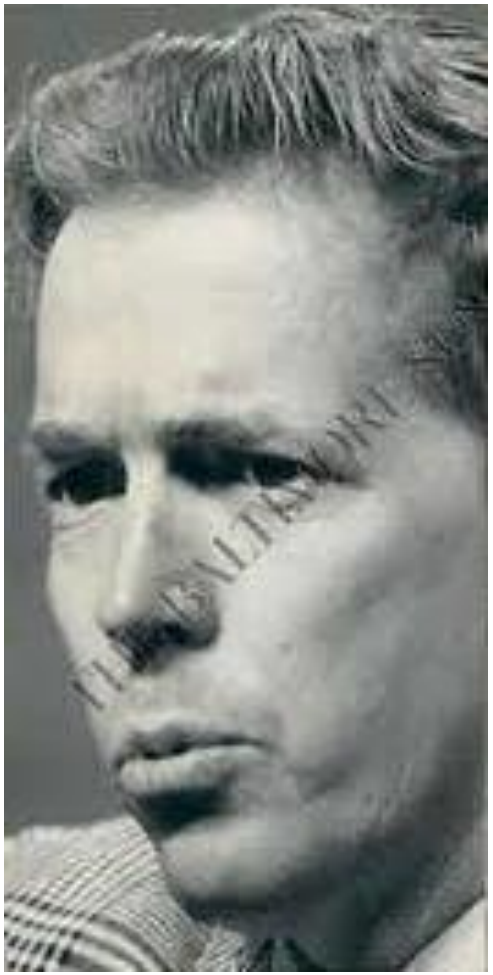
- *They've been after me for years because we were followed by a UFO on the way to the moon. That, of course, was untrue.*
- *The guy who came up with it was going by our transcript where we saw debris from our own rocket and we were joking with the ground crew about it. He took this out of context...*
- *I called the ground and said, 'Hey, gang, we're being followed, there's some flashing object out there.' Some scandal sheet took that and made a helluva story out of it.*
- *But it was nothing like anything I was connected with.*

Charles ‘Pete’ Conrad, letter quoted in
‘Space World’ magazine, Feb 1977, p. 14.

Other sources of nearby objects

- **041:20:14 Conrad:** Okay, Houston. Apollo 12 is dumping waste water and purging fuel cells.
- **041:20:21 Gibson:** Roger, 12.
- **041:20:35 Gibson:** Pete, can you see any ice crystals from that?
- **041:20:42 Conrad:** You can see the water dumps; there's no doubt about that. There's all kinds of it. In fact, they look like a regular snowstorm.
- **041:20:54 Gibson:** Does the snowstorm tend to hang around or does it move off pretty quickly?
- **041:20:59 Conrad:** It moves out pretty fast.

Apollo-14 February 1971



Command Module Pilot Stu Roosa visually tracked the S4B most of the way to the moon and made accurate eyeball estimates of range, to assist in predicting its impact point on the lunar surface.

MISSION COMMENTARY
1/2/71 22:54 CST

- CAPCOM Apollo 14, this is Houston.
- SC Go ahead, Houston.
- CAPCOM If the work load isn't too heavy up there for you, we have another set of noun 88 values for sighting on the S4B, if you're interested.
- --
- CAPCOM Roger, read back correct. These are CAPCOM calculated for a GET of 32 hours 45 minutes. That should be valid from the present up to about 33 45. You will be able to see the S4B when your spacecraft roll angle is between 85 degrees, that's 085 degrees and 020 degrees. If you do see it through the sextant, we'd like you to take some pictures using the same technique as on the dim light photography per camera advance, same film magazine same exposure time, if you concur, over.
- SC Okay, sounds great. I understand this is setup for time of 32 plus 4500, however it ought to be good now and we ought to be able to hack it when our roll is between 085 to 020. And if we lamp the big moose, we'll take some pictures of it using the same magazine and the same procedures as the first dim light that we just finished.

MISSION COMMENTARY 2/1/71 23:38P CST

- CC Hello, 14, this is Houston. We advise that the S-IVB is tumbling at a rate of 1 tumble, that is one 360 degree tumble about every 4-1/2 minutes so that the intensity of the object may very if you see it out there. And even if you don't, we've been considering the speed of the film. We'd like to take some pictures perhaps that would show up on photography that you can't see with the naked eye.[snip] Over.
- SC Okay, Bruce, copy that. When we get around to the right ROLL angle we'll give a go on the SIVB.
- CC Roger.

[continued]

- CC Do you see anything out there, Stu?
- SC Well, we're just now coming out from behind the LM. Looks like I've got something here in the sextant. Let me pull it out to the center and see what it looks like.
- Well, Bruce, we've got two things in the sextant and - you know, it could either be a faint star - I don't see any - any tumbling on them yet, but four and a half minutes isn't that fast either.
- CC Roger. We copy.
- SC Okay, I've lost one of them due to the light coming into the sextant. And I'm about to lose the other object whatever it was.

MISSION COMMENTARY

2/2/71 00:47 CST

- SC Houston, 14.
- CAPCOM Go ahead, 14.
- sc Hey, Bruce. I'm going to take some pictures of this S4B area this time around. Do you want me to have the 2 stripes at 24 frames per second for 2 seconds and everything Just like on the other sequence?
- CAPCOM That's affirmative, Stu.
- SC Okay.

MISSION COMMENTARY, 2/2/71 2:08 CST 124/2

- CC 14, Houston.
- SC Go ahead.
- CC The photo people would like ...
- SC . . . Fredo.
- CC Yes, the photo people would like to know if you got the S-IVB pictures using the dim light Earth side settings there, and about when you did that.
- CC If you remember.
- SC Stand by.
- We took some pictures. Whether we got them or not leaves to be seen.
- CC Is that a pun.
- SC Roger. (garbled)
- SC Those pictures were completed at 34 03 25 and they were on magazine J for Juliet.
- CC Okay. You got them at 34 03 25 on mag Juliet.

2/2/71 57:03 GET

- PAO This is Apollo Control 57 hours 3 minutes
- ground elapsed time. …Apollo 14 is now 170 374
- nautical miles out from Earth, velocity continuing
- to decrease 2802 feet per second. …
- SC Houston, 14.
- CAPCOM Go ahead 14.
- SC Hey, Fred, just for curiosity sake
- …just how far away is the S-IVB?
- CAPCOM Stand by.
- CAPCOM 14, Houston
- SC Go ahead.
- SC Do you have any estimate as to how the S-IVB is away, Stu.
- CAPCOM Stand by one.
- SC Hey, Fred, Apollo 14.
- CAP COM Go ahead.
- **SC Okay, after looking through the optic and judging the size and its relative motion through the celestial sphere, I estimated at 2178 miles from us.**
- CAPCOM Stu, you might replace the rendezvous radar yet. The number they gave me was 2400 nautical miles. (garbled) going away at about 1 nautical mile a minute.

2/2/71 57:27 G.E.T.

- CAPCOM Okay, FAO would like to know about when Stu took the S-IVB pictures and how much you got remaining on that sequence camera mag.
- SC Okay, Houston, stand by one.
- SC Okay, Fred, I took them -- sort of reverse order but in using pretty much the same procedures (garble) however, I think I'm going to end up with streaks on the film because you know the way the CMC tracks the objects but at 57 hours even I took, I ran 2 seconds at 24 frames per second five hundredth and then I took 1 frame at 1/60 for 20 seconds, 1 frame at 1/60 for 5 and then at 57:20, I took one frame at 1/60 for 50 seconds and had to cut it off there, couldn't get a full minute and then ran off another strip and I'm calling it 78 percent left on the magazine.
- CAPCOM Okay, Stu. I copied all of that, thank

Apolllo-14 debrief -- roosa

Here also, we used the same dim-light procedures on trying to get some pictures of the S-IVB. I questioned the validity of using those procedures, but that's what MCC wanted, and that's what we did. It seemed like they should have been shot at something like one frame/sec if you really wanted to catch it instead of the one frame at 60 and so forth. But, anyway, it was something to amuse us and the FDOs I guess; so we took several shots of the S-IVB. I have no confidence at all that the film will be any good.

We finally completed this S-IVB photography technique at 34:03.

https://www.hq.nasa.gov/alsj/a14/a14-techdebrief.pdf

Apollo-14 results

- TBS

NASA reply to UFO inquiries

Letter to Donald Ratsch from Dale Myer (Associate Administrator for Manned Space Flight, dated Feb. 5, 1973

"During all of our Apollo lunar missions, objects have been sighted by the various crews. Subsequent to the crew sightings, the flight controllers determined the observations were probably either the SIVB booster, the spacecraft lunar adapter (SLA) panels, or smaller objects such as mylar foil particles. Because of their large size and highly reflective surfaces, the SIVB and SLA panels should be visible at great distances in the space environment."

“Moon Pigeons”

- TBS

“Mythification” process in action

- “Moon pigeon” metaphor discussed by author Bill Birnes on segment of NASA’s Unexplained Files [2015]
- Quote
- Claim is totally fictitious, Birnes dreamed it up for dramatic effect

Trans-lunar coast “Barbecue Mode”

At various times during the trans-lunar coast, when a stable attitude is not necessary for platform realignment or other purposes, the spacecraft is placed into a slow continuous roll - typically 0.35° per second, or approximately 17 minutes to complete a full 360° roll. This is called the Passive Thermal Control maneuver, often referred to as "Barbecue'" mode. The purpose of this maneuver is to maintain an even heating and cooling of the CM heat shield, the SM RCS quads, SPS propellant tanks and structure, and the LM propellant and battery systems.

http://www.ehartwell.com/InfoDabble/Apollo_lunar_mission_tutorial:_Transposition,_Docking_and_Extraction

SLA panel shortly after LM extraction

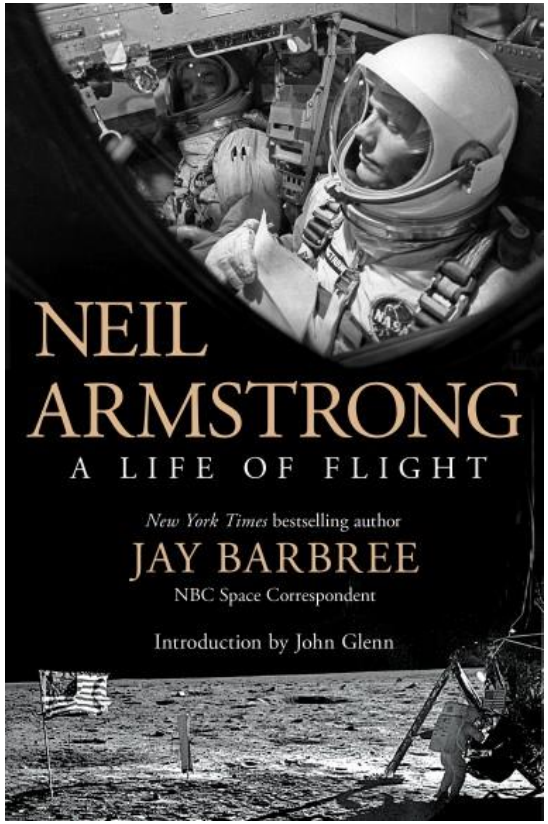
New theory [2014] – broken spysat

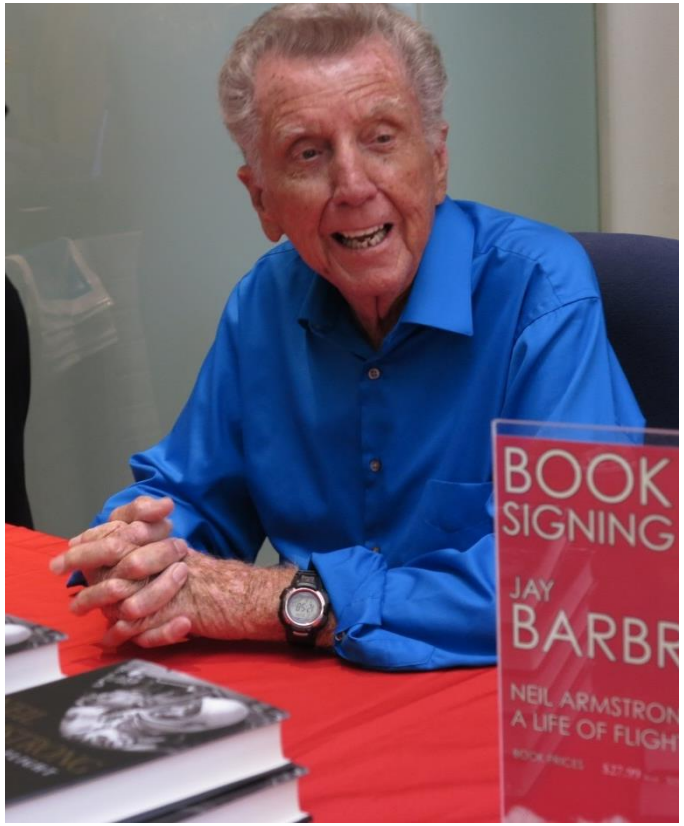
Source Claims Aldrin and Apollo 11 Crew Saw "Spy Satellite"

Posted on July 12, 2014

http://www.gralienreport.com/ufos/source-claims-aldrin-and-apollo-11-crew-saw-spy-satellite/#comment-23115

NBC’s veteran space reporter





New biography of Neil Armstrong, 2014

Jay Barbree's 'scoop'

- Pp 299-300

The only time there was tension among the crew during quarantine was during a debriefing about seeing distant flashing lights in space. All three [300] had seen the lights when they were outbound and their comments had crazed UFO buffs.

Now here in quarantine their conversation reached a fever pitch. You would have thought some were suggesting a UFO was following Apollo-11 to the moon. Neil became annoyed.

"From the beginning I felt there was an explanation," he told me. "We were looking back at lights that steadily flashed – natural lights or human made it seemed to me, and we just didn't have the facts. I thought we had an obligation not to start some Hollywood frenzy about us being watched and followed by aliens."

Neil's analysis of the incident proved to be correct.

I had earlier learned a top-secret and sensitive American photographic reconnaissance satellite had failed and was tumbling out of control. With each tumble it sent out a reflection from sunrays giving the appearance of flashing lights. My source was solid and he only told me with the promise I would not report it. At the time it could have damaged the country's reconnaissance efforts severely.

The only UFO Apollo 11's astronauts were seeing as Neil had suspected had been built here on Earth – one they could not identify, and when I told him, he laughed and said, "Well, what the hell, isn't that what a UFO is – an unidentified flying object?"

As always, Neil was right on target.

Had Barbree asked me to review this section, this is what I would have advised him

- The connection with the failed military spysat was dubious since Apollo-11 was much farther out from Earth than any spysat
- The odds of them crossing paths within visual range were tiny
- If they had passed nearby it would have been at a very high speed instead of floating outside the window for an hour
- "Their comments had crazed UFO buffs" just couldn't be true since the report of them seeing anything unusual came out much later
- Any attempt to make both reports into one story would require force-fitting the facts to the detriment of accuracy
- Since Armstrong had suspected it was an American spacecraft, Barbree perhaps felt obligated to prove that "As always, Neil was right on target. "
- This motive led him to skip the most basic background checks such as reading the crew air-to-ground transcripts

In our email exchanges Barbree remained stubborn

- From: Barbree, Jay (NBCUniversal) Sent: Monday, Aug 18, 2014 4:09 PM
- Subject: RE: Apollo 11 UFO?
-
- Jim I stand fully behind what I wrote based on what Neil told me and the solid source.
-
- 1. The failed recon satellite was in orbit around the Earth.
- **2. Apollo-11 was not, I repeat not 200,000 miles from Earth.**
- 3. Neil became very annoyed with Buzz, and rightly so, trying to make this out as some frigging UFO.
- 4. Buzz always comes back cutting people down. That's why I treated him with due respect in the book and kept him at a comfortable distance for having anything whatsoever to do with the book.
- 5. I will not get in a food fight with Buzz Aldrin or any other Monday Morning Quarterback regarding Neil and my work. It stands by itself having been read by the likes of Jim Lovell, Gene Cernan, and others with level heads – saying before it was published they could not find any mistakes in NEIL ARMSTRONG: A Life of Flight.
- 6. No one, anywhere, found a mistake until after it was in print enjoying some success.

- From: James Oberg Sent: Monday, August 18, 2014 4:39 PM
- When did the sighting occur?
- ==========
- From: Barbree, Jay (NBCUniversal) Sent: Monday, Aug 18, 2014 5:06 PM
- I was never told**. Neil only said it was a few hours after TLI.** [jo: trans-lunar insertion, from parking orbit] He was most aware **what they were seeing was near Earth.** That's why when my source told me in the utmost confidence Neil believed what they were seeing was the tumbling recon satellite.
- ==========
- **From:** James Oberg **Sent:** Monday, August 18, 2014 4:14 PM
- Here's the shot, clearly a lot closer to Earth.[jo: near earth shot w/ debris]
- http://www.mercuryrapids.co.uk/Image11%20-%20apollo11.jpg
- Agreed: Buzz was such a tease with the UFO story, but he got badly burned when the media took him seriously.

3

- From: James Oberg Sent: Monday, August 18, 2014 5:39 PM
- How far away do you think Apollo-11 was at the time of the sighting?

- From: Barbree, Jay (NBCUniversal)
  Sent: Monday, August 18, 2014 6:09 PM
  I wouldn't have any idea, Jim, but I think your picture was taken in Earth orbit. What I was told the flashes of light came from the same spot between Earth and Apollo-11. **I took that to mean 20 to 50 thousand miles out – a few hours after TLI.**
  They left Earth at approximately 25,000 MPH which began degrading at cutoff.
  My source passed away this year in his 90s. He was known by everyone in this business and well respected.
  When I showed him what I had written in the book he confirmed it again. Hugh Harris was present.
  I'm **sure of my information** Jim as was Neil.

Other outbound sightings of objects

- list

Apollo-14 – blizzards of ice crystals

SHEPARD When that waste water comes out of there it's like being in a blinding snowstorm. It really zaps out. It came out with a pretty good velocity. Most of it drifted away fairly rapidly. Some of the stuff that hung with us was the tail end of the dump — just spitting out, freezing, melting, and departing with low velocities. The urine-dump departure velocities were lower.

ROOSA They were always with us. Venting from the urine dump was a real problem if you're going to do a P51. I'm not sure whether our heater was working exactly right or not. Every-time we would dump into the Sun, we'd flake off a few flakes and they'd be out with us. One day during PTC, I became well dark-adapted with the patch, kept my dark adaptation, looked through the telescope, and all I could see was a million stars coming from our vent.

- url tbs

Water dumps interfered with star sightings

So, all the time during our wait periods, we would be kicking off this vent almost continuously when it went into the Sun. One day, I guess it was entry day or the day before, and before we had done any dumping that day, I looked through the telescope and it was great, with the Sun behind me. Of course, the LM was gone. But, with the Sun right behind me and with no vent you could see the constellations. You have to be going down across the south. You could see Acrux and Atria and so forth. If you're ever forced to do a P51, I think you're going to have to stop that urine dump hours before you get ready for it. You're going to have to go to bags 10 hours or 5 hours, or some long period of time before that to get rid of the residual dumping that you are faced with.

- url tbs

Apollo-15

- Irwin photographed sim door separating.
- https://www.hq.nasa.gov/alsj/a15/a15-techdebrief.pdf

Apollo-16

- Young describing blizzard at turnaround. It couldn't have been very far away. He was right there. I was three times that far away on 10. We went on in and docked. All the way in the particles were coming off the S-IVB and the LM. I had never seen anything like it. They were really streaming off. I didn't know whether they were S-IV=B particles, LM particles , or what they were at the time.
- DUKE They were jetting off. They weren't just floating away**.**
- MATTINGLY It sounds as if you saw streams of particles coming out and, I don't think that's what they were. They were just large clouds of material out there and they were coming away from the SLA. I couldn't see a source. I didn't think it was anything that you could pinpoint. It was just a lot of debris.

- https://www.hq.nasa.gov/alsj/a16/a16-techdebrief.pdf

Apollo-17 hatch jettison

Cernan describing watching from hatch window:

“It came off just as clean as a whistle, with almost no tumbling until it got 20 or 30 feet away from the spacecraft. Then you could see that there was just a little roll and a little pitch as it drifted on away, but very very little .

“Not a great deal of debris and garbage as I recall came off with it either .

“You could probably sum up all the pyro operations by saying there are absolutely no questions. They're just good, solid, hard thuds, including SIM door jett ..... It was a very definite jolt to the spacecraft when the door was jettisoned”

- https://www.hq.nasa.gov/alsj/a17/AS17Tech1.pdf

Mattingly recalls hearing plume bounce-back

Mattingly -- Let me say something about the sounds of those engines. I think our impressions were different. I didn't hear any RCS sounds when I got off the S-IVB. I didn't hear any sounds during the turnaround; and, I didn't hear anything on closure until I got in real close.

I would swear - I know it's not possible - but, I'd swear, I could hear the jets impinge on the LM before we docked. And you could certainly see it. Maybe I was visually seeing the skin of the LM kind of flutter and I knew that should make a noise. I heard the same noises every time we fired the engines after that.

I don't know if there could be enough local atmosphere or whether you can get a reflected shock that you could hear. I don't know how it is , but, I know I could hear reflections off the LM before we docked.

Young -- I think that is possible, Ken, with the mass going out and coming back and bouncing off your vehicle. There are a lot of particles in there.

Apollo-16 – surrounded by particle swarm

Mattingly -- I never was able to use the telescope for anything, except to see the LM radar and the quad, from the time we picked the LM up until we got into lunar orbit. It was due to the tremendous number of particles that were floating around that, I guess, came from the LM.

It was just like everyone talked about - if you do a sighting right after a water dump. We were continually populating the environment with these little things popping off.

So the telescope - except for objects like the Earth and the Moon - is essentially useless.

Apollo-16 [Young] – particles shooting out

Let's say something about LM Ingress which sort of got us off the first days timeline. When Ken was down doing the navigation sights , I was looking out his window. I was sitting there watching. All of a sudden the stuff was sorta floating off. I saw it coming out from behind this place that we tried to point out to you on the TV, when we got the TV on it.

I saw this stuff is coming out like something is shooting it out of there. I was as nervous as a cat. Didn't I show it to you guys? …

It was directional. So I figured the only thing it could be was that something was making it squirt out of there.

You've got the best gauge in the world when you can look at something and see it leaking. I wondered if there was some valve we could shut; now was the time.

We went into the LM and powered up the TM, and they didn't see a thing. In fact , we turned on the RCS gages and we didn't see anything.

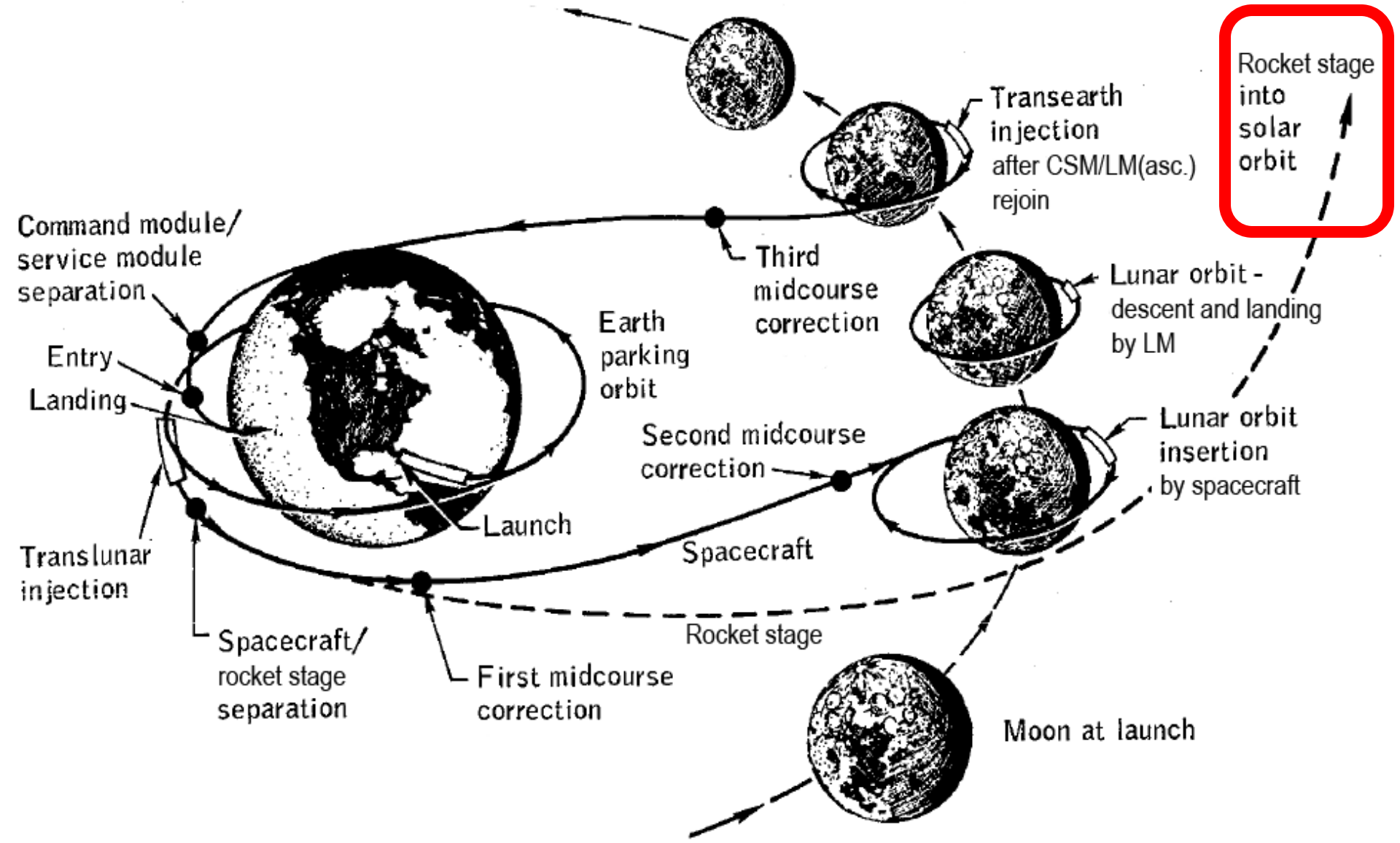
Boy, I don't know what it is . It could have been a thruster down in there , but I don't know why it would come off directional like that.

Apollo-16 – Flakes coming off LM skin

- Duke -- Later on during the flight , another panel started doing the same thing. It was shredding off paint , it was also directional , but it was not as much as that big panel.

- Young -- When we finally got down on the Moon and looked around at the LM, it looked lik e a shaggy dog. We've got the pictures here, hair hanging out all over.

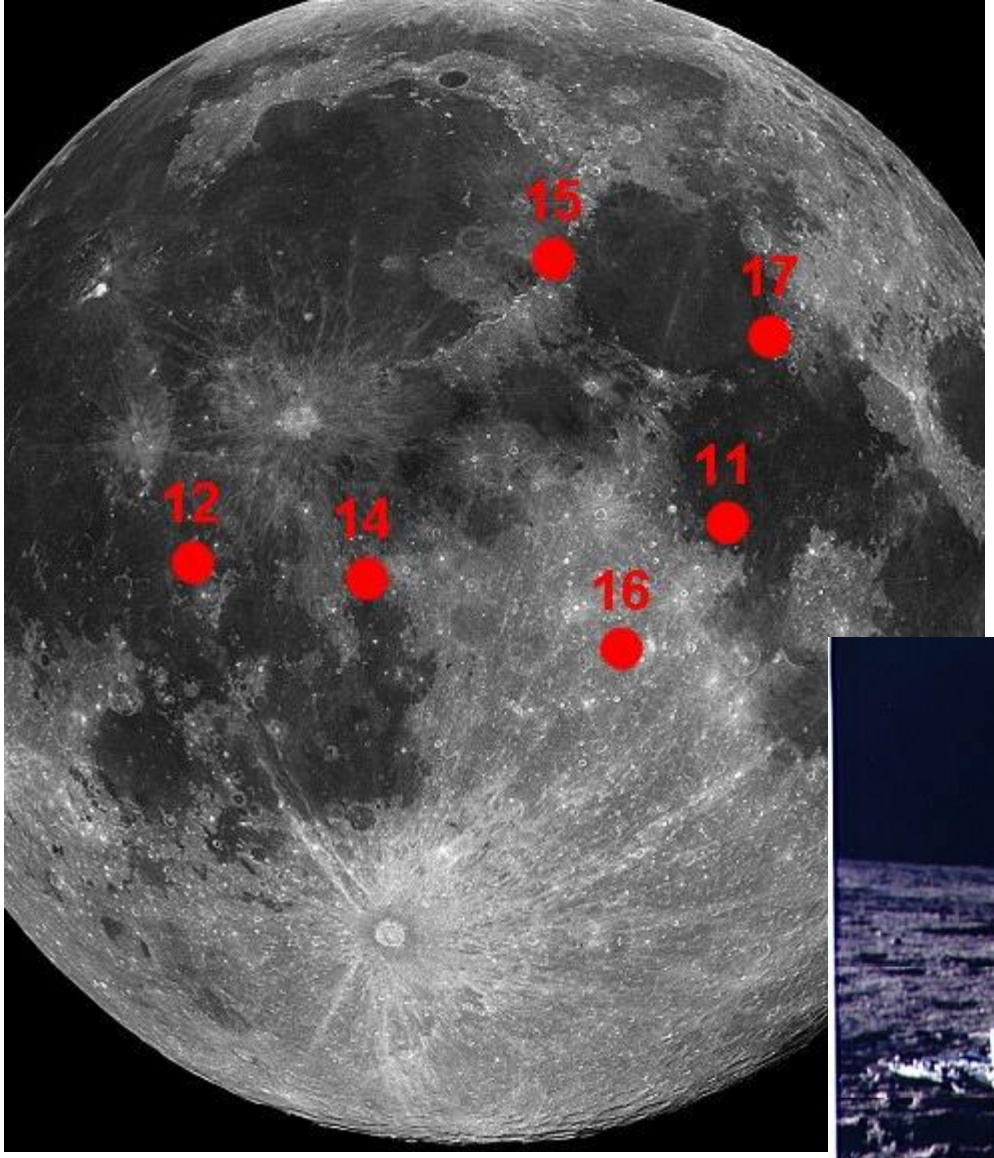
What became of the SLA panels?



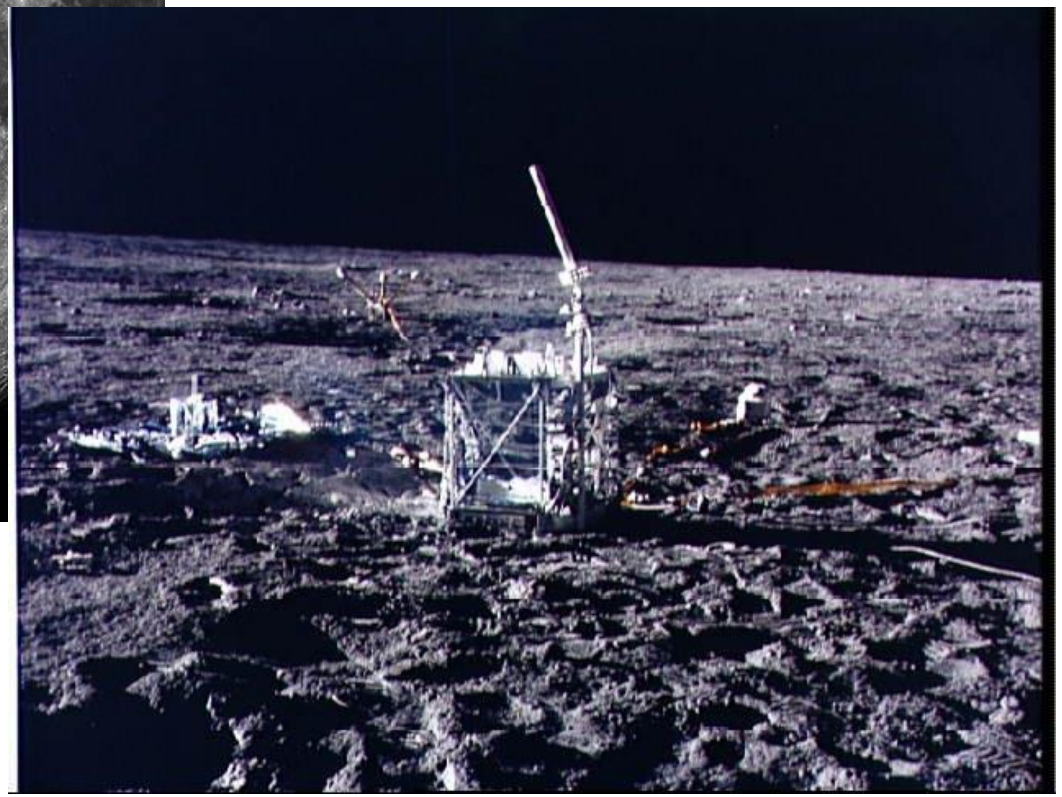
What became of the SLA panels?

- After Apollo-12, S4B stages were directed at lunar impact to trigger seismic signals
- Jettisoned LM Ascent Stages were left in low lunar orbit
- Translunar jettisoned objects such as SLA panels and instrument covers went past the Moon and entered solar orbits
- Twenty years safter the last Apollo mission, some of the pieces started coming back.
- By then, much more powerful telescopes were scanning for dangerous asteroids

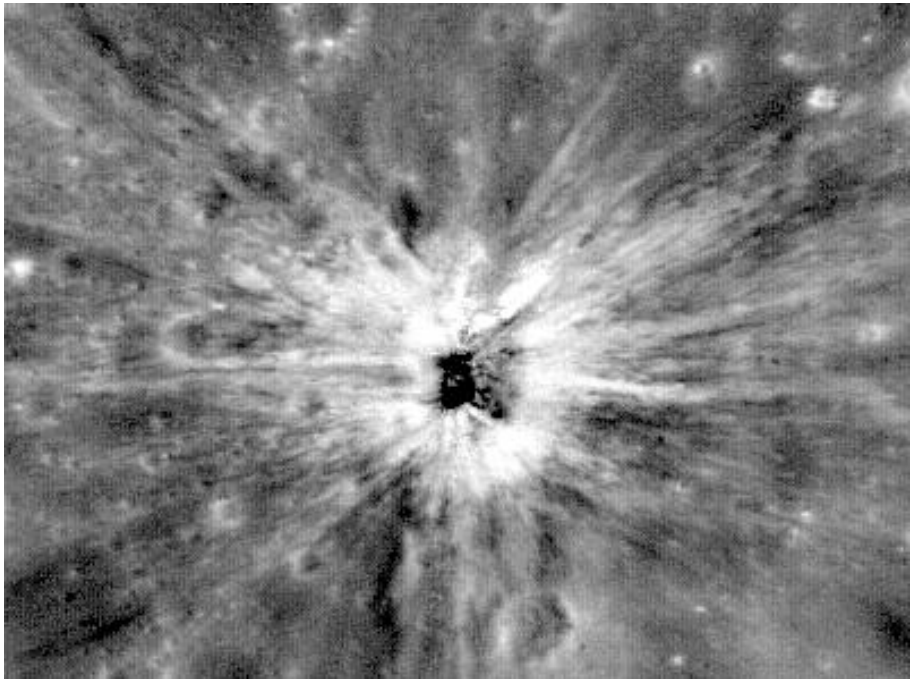
Apollo landing sites



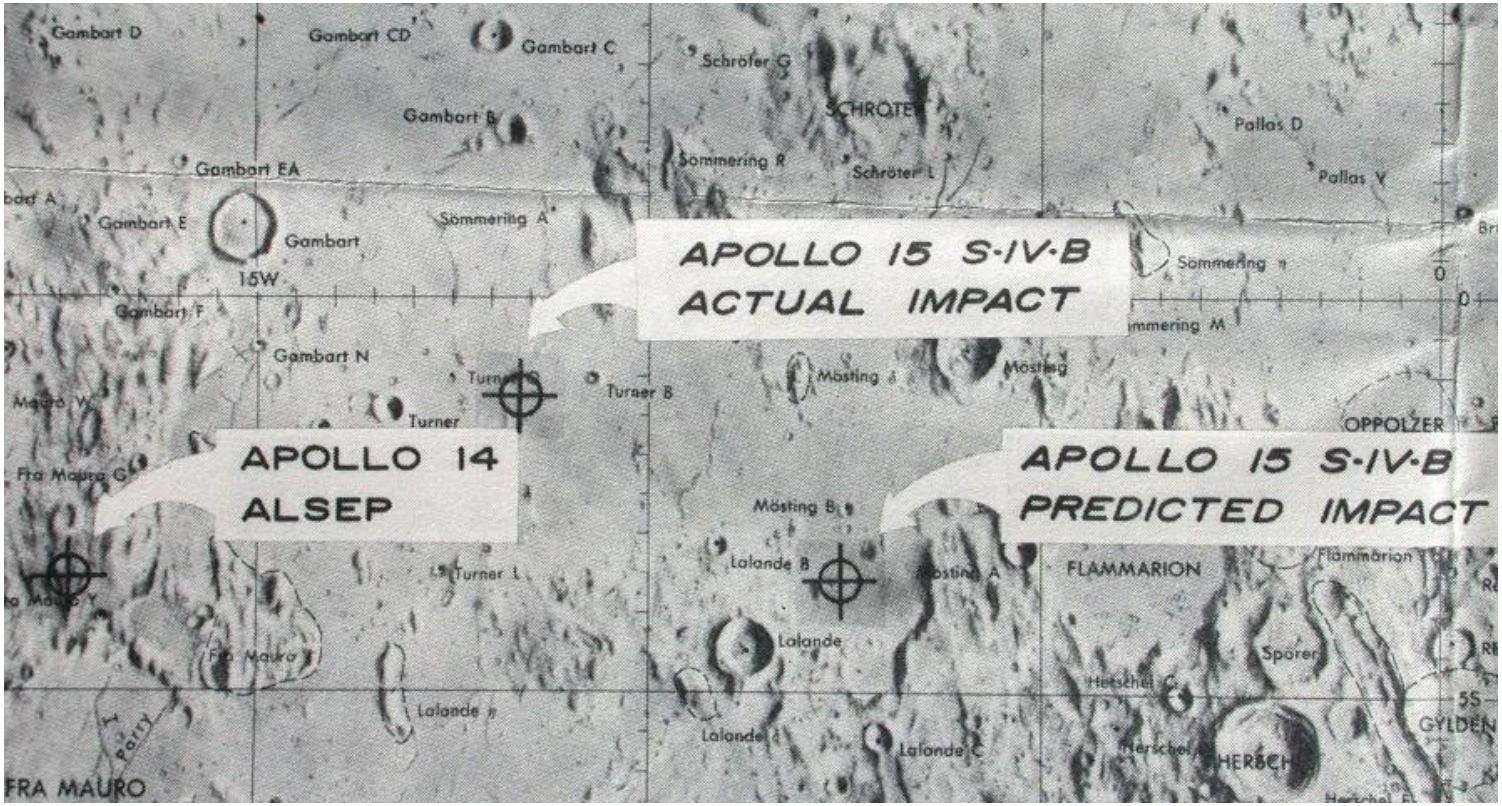
All but first one had nuclear-powered seismometer unit



LUNAR IMPACT



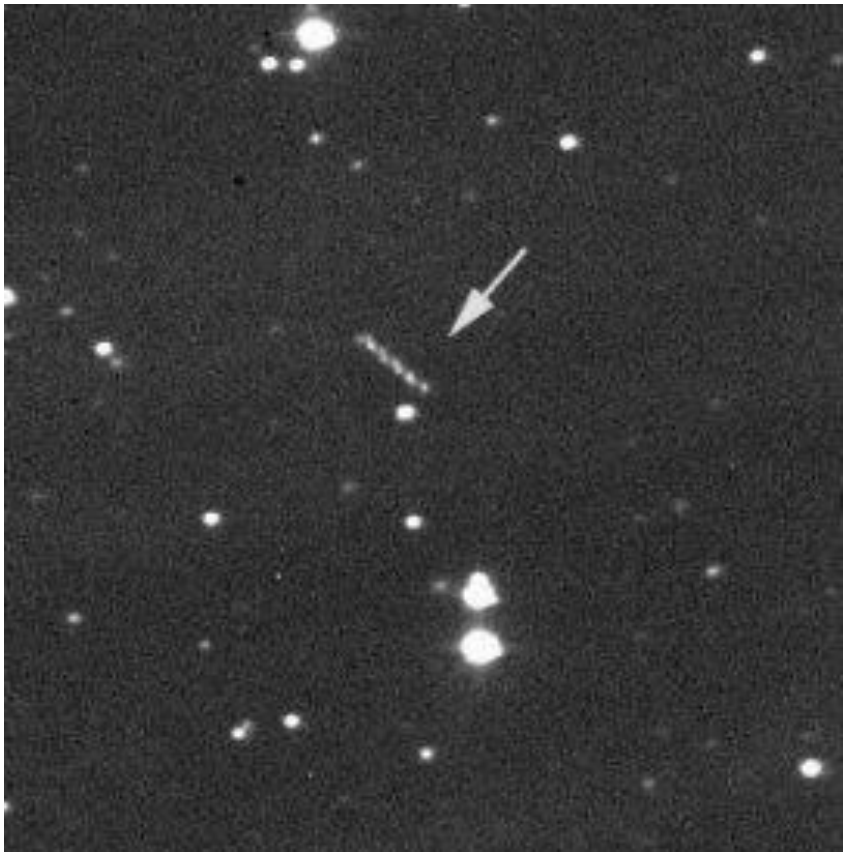
Sample aiming accuracy

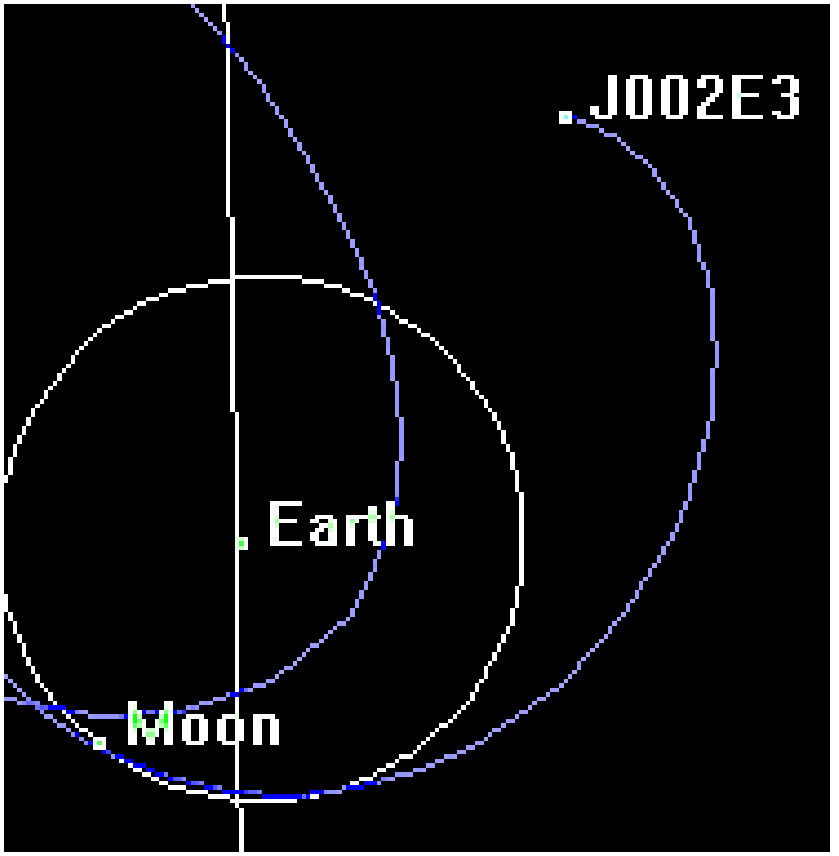


Other objects looped back around the sun decades later

- The small object that is 60-ft long, and rotates once every minute or so was first spotted by amateur astronomer Bill Yeung on Sept. 3rd, 2002 in the constellation Pisces. He named it J002E3.
- http://science.nasa.gov/science-news/science-at-nasa/2002/20sep_mysteryobject/
- http://en.wikipedia.org/wiki/J002E3

Object “J002E3”





Slowly drifted into unstable high orbit, then drifted away

Object “1991-VG”

- http://en.wikipedia.org/wiki/6Q0B44E
- http://en.wikipedia.org/wiki/2006_RH120
- https://independentaustralia.net/environment/environment-display/the-mystery-of-earth-companion-1991-vg,7702

summary

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