

Re: Moon Landing a Hoax??!! Real Evidence here>>>

Source: <http://sci.tech-archive.net/Archive/sci.astro/2005-02/0921.html>

From: Warhol (molarh_at_hotmail.com)

Date: 02/09/05

Date: Wed, 9 Feb 2005 02:26:23 +0100

"Jay Windley" <webmaster@clavius.org> a écrit dans le message de news: cub7q6\$bmp\$1@news.xmission.com...

>

> "Warhol" <molarh@hotmail.com> wrote in message

> news:36r4ucF54sgdfU4@individual.net...

> /

> / America's Moon Expedition a Fake?

> / 05/15/2003 18:05

>

> Cribbed from this forum

>

>

> <http://engforum.pravda.ru/showthread.php3?threadid=35635&perpage=40&pagenumber=1>

>

> The subsequent discussion is enlightening -- it shows the original author to

> be simply steeped in the standard (and long debunked) conspiracy theorist

> literature written by construction workers.

>

> Put on some coffee; I will treat your arguments thoroughly.

>

> / Even people ignorant of space technologies understand that

> / then-level of technological and electronic development wouldn't

> / allow to perform complicated space maneuvers

>

> Non-sequitur. By definition people ignorant of space technologies are not

> good sources on what that technology can and cannot do.

>

> / Forty years ago, American President John Kennedy urged the people

> / to get united about the Moon landing idea

>

> No. NASA approached the Kennedy administration about funding a moon

> mission. At first the Kennedys passed; they had to be coaxed to support

> the

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- > *idea of sending a man to the moon. On at least one occasion Kennedy called*
- > *NASA administrator Jim Webb into the Oval Office and reminded him to keep*
- > *the focus on what he had agreed to, and not get bogged down in the science*
- > *and engineering candy.*
- >
- > */ ...asked for \$40 billion for realization of a Moon shuttle program.*
- > */ The sum was incredible for that time.*
- >
- > *No. The generally accepted cost of Apollo was just over \$20 billion in*
- 1970*
- > *money, about a third of which went to develop the Saturn V. That launch*
- > *vehicle was supposed to serve other projects. The disbursement was over*
- ten*
- > *years, providing about \$2 billion per year for the project. It is not the*
- > *only project for which NASA was funded. Compare this to entitlement*
- > *programs which, at the time, were spending in the neighborhood of \$70*
- > *billion *per year*.*
- >
- > *Although critics of Apollo like to paint it as a very expensive*
- boondoggle,*
- > *it was actually not a very large project in the government's budget.*
- >
- > */ Some of the pictures revealed unnatural shades and*
- > */ sometimes even disagreed with the fundamental physics laws.*
- >
- > *I have seen many claims of "unnatural shades" and supposed disagreement*
- with*
- > *"fundamental physics laws". In each case I have so far examined, the*
- > *problem lies with the claimants, who prove they are largely ignorant of*
- > *physical law and are instead substituting uneducated intuition for it.*
- > *Consequently it is fairly easy for even amateur photographers to produce,*
- in*
- > *sunlight, these photos that these "researchers" say are impossible except*
- in*
- > *a studio.*
- >
- > *In fact, I have challenged these "researchers" to substantiate their*
- claims*
- > *that only studio lighting can produce the photographs. So far no takers.*
- > *Since some of them, such as Bart Sibrel and David Percy, claim to be*
- > *photographers and filmmakers, I presume they have access to such equipment.*
- >
- > */ American engineer Ralph Rene was the first who notices these faults...*
- >
- > *Ralph Rene is not an engineer or a physicist, although he has claimed to*
- be*
- > *both in order to support his speaking and writing endeavors. Ralph Rene*
- is*
- > *a retired construction worker with no college-level education in either*
- > *physics or engineering.*

- >
- > / *He said that photos of that kind could be made in special pavilions*
- > / *on the Earth.*
- >
- > *Except that when pressed, he could not describe how these "special*
- > *pavilions" (apparently soundstages) were made, where they are, or why no*
- > *one*
- > *can be produced who has any actual knowledge of them.*
- >
- > / *British researchers even said that such films could be fabricated*
- > / *in Hollywood.*
- >
- > *By "British researchers" I assume you mean Mary Bennett (self-proclaimed*
- > *psychic) and David Percy (claiming to be an "award-winning filmmaker", but*
- > *has yet to say which award he actually won).*
- >
- > *Neither Bennett nor Percy has ever been to Hollywood, whereas I have. And*
- I**
- > *have surveyed the largest soundstages available in the 1960s and I have*
- > *interviewed people working in Hollywood such as Charles Ziarko, who were*
- > *actively working there at the time. Further, I have discussed the*
- > *limitations of creating believable moon sets with the grips who worked on*
- > *"From the Earth to the Moon". No one I have met in Hollywood believes the*
- > *moon mission photography and film/video was produced there.*
- >
- > *I have tested Percy's specific claims of how it was done. Whereas he*
- > *provides only diagrams to demonstrate what he says happens, I have done*
- > *practical experiments with actual studio lights to show that what Percy*
- > *says*
- > *will happen, does not in fact happen. And many times the opposite thing*
- > *happens. Clearly Percy has not done his research; he apparently hopes his*
- > *drawings will fool readers.*
- >
- > *Bennett and Percy have now withdrawn from public comment. They still*
- > *continue to sell their books and videos at a premium price, but they no*
- > *longer respond to questions from readers. This is ironic, since the*
- > *majority of their claims rest on the supposed unwillingness of NASA and*
- > *its*
- > *supporters to address *their* arguments.*
- >
- > / *What is interesting, only several tens of pictures about the Moon*
- > / *flight out of the total number of 13,000 pics held by the NASA*
- > / *were published in fact.*
- >
- > *Hogwash. Apollo photography comprises more than 20,000 70-millimeter*
- > *photographs, all of which have been available from NASA since the*
- > *mid-1970s.*
- > *The claim that only a few pictures have been published is true only if*
- > *you,*
- > *as these "researchers" have done, limit your study to secondary materials*
- > *published by third parties for lay audiences. Those "several tens" of*

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- > *pictures are the best of the bunch, chosen by those unrelated editors for*
- > *their visual appeal.*
- >
- > *| Scientists and engineers studied all information concerning*
- > *| America's Moon flight...*
- >
- > *Which scientists? Which engineers? Name them.*
- >
- > *| Even people ignorant of space technologies understand that*
- > *| then—level of technological and electronic development wouldn't*
- > *| allow to perform complicated space maneuvers...*
- >
- > *Again, a non—sequitur. The definition of "ignorant of space technologies"*
- > *is precisely that they don't know about it, how it works, or what it can*
- > *do.*
- >
- > *Further, Americans in the 1960s witnessed a steady progression of*
- > *proficiency in space and so were not surprised by the moon landings.*
- Those
- > *who argue that the technology wasn't capable are chiefly youngsters who*
- > *don't have any first—hand knowledge of 1960s technology, or layman who*
- > *aren't expert in technology of any era.*
- >
- > *| What is more, return back of the carrier rocket was also quite a*
- > *| problem.*
- >
- > *In what way?*
- >
- > *| The Apollo onboard computers performed even poorer than present—day*
- > *| calculators.*
- >
- > *True, but irrelevant. The question is not how well some computer performs*
- > *compared to some other computer, but rather how well the computer performs*
- > *compared to the tasks it's being asked to do. If you have a weak*
- > *computer,*
- > *you don't give it much to do. If you have a powerful computer, you give*
- > *it*
- > *more to do. There's nothing about spaceflight that inherently requires an*
- > *onboard programmable digital computer. There are different options for*
- > *control than a computer.*
- >
- > *The widespread use of embedded computers today has created the false*
- > *impression that without computers these problems can't be solved at all.*
- My
- > *new oven has a computer in it. My old oven just had physical knobs that*
- > *were directly connected to the burners. My new washing machine has a*
- > *computer, whereas the old one had an electromechanical sequencer. The*
- > *latter did the job just fine, but it's more difficult and expensive to*
- > *produce. Putting in a microcontroller lets them sell it to me for \$20*
- > *cheaper.*
- >

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- > *That's the thing: we use computers because computers are available to us*
- to
- > *use, not because they are sorely needed and we can't do without them.*
- > *They're more convenient than required. The Apollo computer was given just*
- > *as much work as it could do. The rest of the mission tasks were given to*
- > *other equipment and to the human pilots.*
- >
- > *| Did a space suit made of rubber and cloth in the 1960s protect*
- > *| people on the Moon*
- >
- > *How much rubber? How much cloth? Any other materials such as Chromel–R*
- or
- > *aluminum or other polycarbonates?*
- >
- > *| Could it protect from high radiation?*
- >
- > *What radiation? From what sources? How much of it was there?*
- >
- > *| The temperature of 250 Fahrenheit degrees below zero would*
- > *| immediately kill humans in such suits.*
- >
- > *What exactly was it that supposedly got that cold? How would heat*
- transfer
- > *occur on the moon? If –250 F is the coldest temperature reached by the*
- > *lunar surface during lunar night, what's the warmest? What was the*
- > *temperature of the lunar surface when the astronauts were walking on it?*
- >
- > *| But it was reported that none of the astronauts was even affected with*
- > *| radiation sickness.*
- >
- > *Correct. Here the conspiracy theorists try to manufacture a discrepancy.*
- > *The radiation was supposedly deadly (although they provide no quantitative*
- > *evidence to support that position), yet they correctly note that none of*
- the
- > *astronauts got sick. According to their preconceptions, this is evidence*
- > *that none of the astronauts was actually in space. But a better*
- > *interpretation of this is that the dire estimates of radiation exposure*
- are
- > *incorrect. And since the conspiracy theorists are not themselves experts,*
- > *and do not cite any other experts that confirm their expectations, it is*
- > *clear how this "dilemma" is resolved:*
- >
- > *The astronauts did not become sick due to radiation because the radiation*
- > *environment was not as deadly as the uneducated conspiracy theorists have*
- > *suggested.*
- >
- > *| Former NASA staffer Bill Kaysing...*
- >
- > *Bill Kaysing never worked for NASA. He worked briefly for Rocketdyne as a*
- > *technical writer and a librarian. His degree is in English literature.*
- He

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- > *is neither a scientist nor an engineer. He quite Rocketdyne for personal*
- > *reasons and then went on to become disillusioned with the U.S. government*
- > *because of its treatment of Vietnam veterans. In the press release he*
sends
- > *out to those who want to interview him or have him speak, he states quite*
- > *clearly that his book was written as a sort of revenge against the U.S.*
- > *government. What kind of "researcher" is that?*
- >
- > *| ...confessed that even the Agency itself considered the possibility*
- > *| of man's landing on the Moon was 0.0017% at that period (which*
- > *| was practically nothing!).*
- >
- > *But of course this figure comes from a "top secret" study done by*
Rocketdyne
- > *(not by NASA) that only Kaysing had access to. He says it was done in*
1959,
- > *and I would expect a great degree of skepticism from people writing at*
that
- > *time. Man had not yet flown in orbit, and no one had any idea that a*
- > *little-known bunch of scientists would soon be given full funding for*
lunar
- > *mission research.*
- >
- > *In any case, Kaysing will not produce the actual document so that we can*
see
- > *what assumptions its findings are based on, or in fact even if such a*
> *document actually exists.*
- >
- > *| It is not ruled out that Americans did fly to the Moon, but didn't*
advance
- > *| further than its orbit.*
- >
- > *Wait. Are you saying American *astronauts* flew into lunar orbit? How*
does
- > *that get around all your radiation arguments? How does that get around*
all
- > *your claims of supposed problems with the rockets? If navigation to the*
- > *moon was so impossible, how did they make it that far? Your claims are*
> *becoming inconsistent.*
- >
- > *| Robots did the rest of the work.*
- >
- > *LOL! So now you've gone from claiming that the U.S. didn't have*
appropriate
- > *technology to put a man on the moon, to a position where it was designing*
> *clever robots doing all the things that we claim Apollo astronauts did.*
- > *Driving core samples? Preparing documented and differentiated samples?*
- > *Doing adaptive exploration?*
- >
- > *You're trying to argue both sides of the fence.*
- >

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- > / *However, it is also unlikely that 382 kilograms of Moon soil could*
- > / *be delivered to the Earth after three expeditions (Soviet Moon*
- > / *research vehicles brought just 0.3 kg)*
- >
- > *I agree. It's highly unlikely that nearly 400 kg of lunar samples -- many*
- > *of them prepared or acquired by special means on site -- could have been*
- > *collected and returned to Earth by unmanned probes during the period, say,*
- > *1968 to 1972.*
- >
- > *Let's say that those poor bumbling Americans are just as savvy as the*
- > *Soviets when it comes to building sample-return robots, and that the*
- > *capacity of any one probe is 0.1 kg. That would require 3,820 successful*
- > *sample-return missions. At a 95% success rate, that would be 4,021*
- > *attempts. There are roughly 1,800 days in the Apollo operational period,*
- > *meaning that a sample return mission would have to be launched and/or*
- > *recovered about every 50 hours round the clock. Don't you think so many*
- > *launches would be suspicious? Don't you think someone would be alive*
- > *today*
- > *who worked on such a massive space endeavor?*
- >
- > *So yes, it's quite absurd to propose that 1960s unmanned technology was*
- > *used*
- > *to obtain the lunar samples. So if they weren't retrieved by robots, how*
- > *were they retrieved?*
- >
- > / *...at the same time allowed the USA to spare billions of dollars.*
- >
- > *Where did that money go? Who got it and spent it?*
- >
- > / *This version resembles the movie Capricorn-1.*
- >
- > *Yes, as in pure fiction.*
- >
- > / *Probably, the movie [Capricorn One] was made with a view to*
- > / *rehabilitate America for its big lies.*
- >
- > *Yes, but not that big lie. Writer/director Peter Hyams says he tried to*
- > *pitch his story to Hollywood shortly after the Apollo missions, but no one*
- > *there thought anyone would believe the story of a massive government*
- > *cover-up. But after Watergate, the American public was more ready to*
- > *accept*
- > *the movie's premise.*
- >
- > *Nevertheless, if you want to compare Watergate to Apollo, the differences*
- > *are clear. As knowledgeable people studied more about the Nixon*
- > *administration's activities, the picture became clearer and more pieces*
- > *fell*
- > *into place. As knowledgeable people study the Apollo conspiracy theory,*
- > *it*
- > *almost immediately falls apart.*
- >

- > / *When the Apollo–Moon module system was studied more carefully, it*
- > / *became clear that two astronauts in space suits couldn't find room*
- > / *in the module...*
- >
- > *This is the conclusion of journalist James Collier -- again a*
- non–scientist*
- > *who demonstrates in his articles and films how *not* to do research. For*
- ex*
- > *ample, under the pretense of studying the "original film footage" from*
- > *Apollo 16, he really studied a half–hour PR film that was sent out to*
- > *elementary school students. Much of his information about the LM hatch*
- > *design comes from Jeffrey Kluger's book written for teenagers, not from*
- any*
- > *actual NASA documents.*
- >
- > *Not once in Collier's articles or videos does he actually measure a space*
- > *suit, or do any experiments to test his theory. He looks at cutaway*
- > *drawings of the lunar module and simply declares that the astronauts won't*
- > *fit. Consummate begging of the question.*
- >
- > / *...not to mention the Moon robot that couldn't be placed there even*
- > / *non–assembled.*
- >
- > *I assume you mean the LRV, or lunar rover. Collier was a consummate idiot*
- > *in this part of his video. Even though he had seen dozens of drawings and*
- > *photographs of how the LRV folded up and was stowed on the side of the LM,*
- > *he concocted his own version of how he thought it was supposed to fold up.*
- > *This was based on a verbal description given to him by a former NASA*
- > *employee. Collier talked over the interviewee's description, so it's no*
- > *wonder he got it wrong. Then he went off by himself and drew what he*
- > *thought the guy had intended, but never went back to him and said, "Is*
- this*
- > *what you were describing?" Then Collier pointed out what he had drawn*
- > *wasn't feasible. Too bad it bore no resemblance whatsoever to what NASA*
- > *actually did.*
- >
- > *It's easy to see why Collier was unsuccessful as a journalist too.*
- >
- > / *What is more, astronauts couldn't squeeze through a narrow*
- > / *tunnel between the space ship and the module.*
- >
- > *Collier wrongly presumes the astronauts were supposed to do that while*
- > *wearing pressurized space suits. That was never part of the flight plan.*
- > *Further, Collier measured the overhead hatch of LM–2 in the Smithsonian.*
- > *LM–2 was an unmanned early test article that was never intended to carry a*
- > *human crew.*
- >
- > / *In fact, an exit hatch opens inward, not outside as the*
- > / *legendary documentary demonstrates.*
- >
- > *Not sure what you mean by the "legendary documentary". It's much safer to*

- > *have the hatch open inward, because then air pressure holds it against the*
- > *seal. Pressure vessels have been designed that way for many decades.*
- >
- > *Collier tried to make a big mountain out of that molehill. First he pulls*
- > *up his children's book and points to where it says the inward-opening*
- hatch*
- > *was a "little known fact". He spins this to make it sound like it was a*
- big*
- > *blunder on NASA's part, and if they'd been thinking they'd have made the*
- > *hatch open outward. But what Kluger means by "little known fact" is that*
- > *the *public* isn't generally aware of it. Engineers specifically designed*
- > *the LM hatch (and all spacecraft and airplane hatches) to open inward.*
- >
- > *He says it would have been impossible for two astronauts to effect an*
- egress*
- > *with the hatch opening inward, but again this is just based on his*
- informal*
- > *observations of some drawings of the LM. He didn't measure anything, and*
- he*
- > *certainly didn't do any experiments. He's just guessing that he's right.*
- >
- > *But the biggest reason he says they didn't actually use that hatch for*
- > *egress is that there was no written procedure in the flight plan for doing*
- > *it. That's a red herring, of course. There was a procedure, but each*
- crew*
- > *worked it out on their own. Collier presumed that astronauts were just*
- dumb*
- > *monkeys who just followed step-by-step instructions written for every*
- > *activity from lunar orbit rendezvous to taking a crap.*
- >
- > *The biggest nail in Collier's coffin (and since Collier is now deceased I*
- > *should hasten to mention I don't mean that disrespectfully) is that*
- LTA-8A,*
- > *the lunar module whose forward hatch he measured, was *exactly* the test*
- > *article that was used on Earth in vacuum chambers to train the astronauts*
- on*
- > *ingress and egress. There are dozens of eyewitnesses and even film*
- footage*
- > *of astronauts in training getting through that exact hatch in pressurized*
- > *space suits.*
- >
- > *The documentary was probably shot in a cargo bay of a swooping*
- > *supersonic airplane to create an effect of weightlessness.*
- >
- > *Except that only gives you 30 seconds of weightlessness at a time, and we*
- > *have continuous 10-minute film reels of people weightless on Apollo*
- > *spacecraft.*
- >
- > *Besides, you just claimed above that we might have gone all the way to*
- lunar*
- > *orbit with manned spacecraft. Why can't they simply have filmed it in*

- > space?
- >
- > / *It is strange but not a single star could be seen on the pictures*
- > / *of the Moon flight.*
- >
- > *It is not strange at all to anyone who understands photography.*
- >
- > / *Stars are even brighter in space than as seen from the Earth.*
- >
- > *Not by much, maybe 5–10%. Air attenuates very little light in the visible*
- > *spectrum.*
- >
- > / *Instead, there was blue light streaming into the illuminators of*
- > / *the space ship, at the time when it is known that open space is*
- > / *absolutely black.*
- >
- > *Space is absolutely black, but every photographer knows you can't*
- photograph
- > *through a window without getting some scatter or reflection from the*
- window.
- > *Try it yourself. I have. I can easily make windows "glow" in my*
- > *photographs, even though behind them is pitch black.*
- >
- > / *Apollo landing was also strange: running of the engine didn't move a*
- > *single*
- > / *stone or a speck of dust on the Moon surface.*
- >
- > *That's funny; millions of people have seen the 16mm film of the landing,*
- > *which quite clearly shows blowing dust.*
- >
- > / *Pressure of a jet engine would inevitably make a crater*
- > / *on the place of landing while braking.*
- >
- > *This is something engineers know how to compute or test. I'll represent*
- to
- > *you that the total force of the exhaust plume on the surface was 2,500*
- lbf.
- > *Can you work out what the unit area loading was on the lunar surface?*
- >
- > *Here's a more intuitive example. The Harrier jump jet generates about ten*
- > *times more thrust than a hovering lunar module. Why doesn't it dig*
- craters?
- >
- > *You're trying to tell me it's "inevitable" that a crater would form. But*
- > *that's just begging the question. How do you know you'd get a crater?*
- >
- > *To be sure, there is quite a lot of photographic evidence of fluid erosion*
- > *and probably some heat-related discoloration of the lunar surface under*
- > *Apollo 11's engine. It was clearly swept by a high-velocity fluid. But*
- if
- > *you want me to accept that there should have been a crater, then you'll*

have

> *to do more than simply declare it's "inevitable".*

>

> *| A cloud of dust thrown from under the Apollo wheels should have been*

> *| six times higher than depicted on the photos.*

>

> *I assume you're talking now about the LRV wheels. This argument makes no*

> *sense. You're telling me that whatever the film shows, it should really*

be

> *six times higher? That's wearing your preconceptions on your sleeve.*

>

> *The LRV dust plumes during the Apollo 16 "Grand Prix" tests are quite*

> *conclusive. You can't stir up dry particles like that without raising an*

> *aerosol cloud. I live in a desert; I know. The degree to which ejected*

> *dust rises is a function of gravity, but also a function of how strongly*

> *they were ejected. That in turn is a function of how much the wheels slip*

> *against the regolith, and of how strongly the clumped regolith might*

adhere

> *to the mesh.*

>

> *Most people base their analysis on small, low-quality digital movies*

> *downloaded from web sites. If you look at high-quality reproductions, the*

> *detail in the dust is unmistakable -- they are on purely ballistic*

> *trajectories unaffected by any fluid medium. If you accelerate a handful*

of

> *particulates into a fluid medium like air or water, you find that the*

initial

> *trajectories give way very rapidly to turbulence and other artifacts of*

> *fluid dynamics. Not so with the LRV dust plumes. They retain fully*

> *ballistic behavior during their entire lifetime.*

>

> *| As for the shadows that astronauts and their apparatuses cast on the*

Moon,

> *| they were of different length and direction, at the time when it is*

known

> *| that the Sun is the only source of light on the Moon.*

>

> *Unfortunately the singular nature of the sun does not mean that shadows*

> *should behave as the conspiracy theorists say they should. The*

> *conspiracists ignore entirely the effects of perspective and terrain, all*

of

> *which can be shown both theoretically and empirically to affect shadows in*

> *exactly the way we see depicted in the Apollo photographs -- and,*

> *incidentally, in Earth photographs as well.*

>

> *The conspiracists propose to use shadow geometry as a way of telling real*

> *photos from fake. Unfortunately, because we can easily produce real*

photos

> *that "break" their rules, we know their rules don't really do any such*

> *thing.*

>

- > *Further, their methods of describing shadow geometry have no basis in*
- > *geometry. In fact, we know from geometry that their methods *cannot**
- > *derive*
- > *usable shadow information. If we employ mathematically rigorous methods*
- > *known to photogrammetry, such as shadow vanishing–point analysis, we*
- > *discover to our satisfaction that photos claimed to be possible only with*
- > *multiple light sources are, in fact, lit with single sources.*
- >
- > *| It may also seem strange that not a single picture of the Earth*
- > *| as seen from the Moon was made during the expedition.*
- >
- > *Hogwash. Several were taken.*
- >
- > *| Movements of the astronauts looked as if the film was slowly played.*
- >
- > *No. I tested this with a film crew in the desert with an actor wearing a*
- > *space suit. We filmed him walking and running at normal speed, then*
- > *slowed*
- > *the film down. What we got out of that bore no resemblance to the Apollo*
- > *films.*
- >
- > *The conspiracist show you three or four seconds of Apollo film, which*
- > *they've sped up. Superficially the motion there resembles a normal human*
- > *gait in Earth gravity. But in order for this explanation to hold, it must*
- > *hold for more than just those two or three carefully–chosen seconds. If*
- > *you*
- > *speed up the film where the astronauts are working with their hands -- or*
- > *better, flailing as they lose their balance and are about to fall -- you*
- > *see*
- > *that, sped up, the motion is comical and absurd. That is obviously not*
- > *how*
- > *the films were made.*
- >
- > *| It was obvious that jumping and moving was very difficult for*
- > *| the astronauts...*
- >
- > *Some of that was intentional. Apollo 11 astronauts were not permitted*
- > *even*
- > *to kneel down. The durability of the space suits was still not well*
- > *known.*
- > *Later missions were free to cavort in the dust to a greater extent.*
- >
- > *However, the space suits were fitted with mobility aids. As you can*
- > *suspect, the pressure of the suit would, in some cases, make bending*
- > *difficult. Some of this was alleviated by accordion joints at knees and*
- > *elbows. But there was also a system of cords threaded through resistance*
- > *grommets that made it easier for the astronaut to retain his limbs in a*
- > *flexed position. That was accomplished by arranging for flexion to pull a*
- > *cord through a resistance grommet in such a way that tension in an*
- > *opposing*
- > *cord would help retain the limb flexed. But this had the disadvantage of*

- > *making the flexion itself more difficult.*
- >
- > *| ...but the jumping amplitude was very small.*
- >
- > *In most cases, yes.*
- >
- > *| Even school children know that a man weighing 160 kilograms on the*
- > *| Earth would weight only 27 kg on the Moon, which would made him jump*
- > *| like a grasshopper.*
- >
- > *Only if he chose to do so. The space suits also put each astronaut off*
- > *balance. And in the lesser gravity, balance was itself a problem; it was*
- > *not easy for an astronaut to tell he was leaning dangerously out of*
- > *equilibrium. Since the center of gravity for each astronaut was shifted*
- > *very far back, the common problem was the tendency to tip over backwards,*
- > *leading each astronaut to be very careful in how he moved.*
- >
- > *Neil Armstrong reported that he had tried several high leaps, but after*
- > *almost falling over backward he decided he'd better keep his feet on the*
- > *ground for safety. But in front of a television audience of some 800*
- > *million people, he lept from the ground to the third run of the LM ladder,*
- > *some five feet off the ground. It was difficult for him to do with the*
- > *mobility problems of his suit, but you can see him do it in black and*
- > *white.*
- >
- > *Now when I point this out to people, they automatically shift into the*
- > *argument that he must be on a wire or something. But that's not the*
- > *point.*
- > *The point is that high leaps -- however they were accomplished -- *are* in*
- > *the Apollo record. The conspiracy theorists just haven't been doing their*
- > *homework. They claim they aren't there, when they clearly are.*
- >
- > *| It looked rather strange that a corner of the flag fluttered and one*
- > *| of the astronauts even had to pull it down.*
- >
- > *You're confusing one instance with several others. The flag should indeed*
- > *respond inertially to movement of the flagpole. The free end of the flag*
- > *is*
- > *quite susceptible to inertia, as any flexible mass would be. In fact,*
- > *with*
- > *a nylon flag you *can't do* in air what you see the people on the moon do.*
- > *That's because the air damps out any of those motions. You never see the*
- > *free end of the flag flop back and forth on Earth. Try it. Nylon flags*
- > *are*
- > *easy to get.*
- >
- > *The astronaut pulls down one corner of the flag in order to stretch out*
- > *the*
- > *fabric so it's visible for what it is. Nylon has pretty good fabric*
- > *memory.*
- > *When you go buy your 3x5 nylon flag, take it out of its package (where*

it's

> *been tightly folded for months) and see if it hangs so that the wrinkles
> aren't visible. It won't -- not even Earth gravity can instantly "hang
out"*

> *the wrinkles in a nylon flag. The Apollo flags were packed very tightly,
> much more so than commercial packaging. So when they were finally
unfurled*

> *in the weak gravity, they really wanted to stay furled.*

>

> *| Probably, some stupid worker in a film pavilion, where the documentary
> | was shot, opened the door and let the wind inside.*

>

> *Ludicrous. You're telling me that experienced filmmakers in Hollywood
> wouldn't know to keep people from going in and out of a closed set?
> Hollywood soundstages have "red eye" lights on the outside that signal any
> who might wish to enter that shooting is underway. Many sensitive sets
have*

> *armed guards to enforce this.*

>

> *But let's suppose the worst happened and someone opened the door. Things
go*

> *wrong on film sets all the time. (In fact, the wrongs typically outweigh
> the rights.) What's wrong with the director yelling, "Cut! Who opened
the*

> *door?" and doing another take?*

>

> *| In a word, there were lots of strange things connected with the*

> *| Mood landing expedition...*

>

> *Not "strange" to the people who understand what's going on.*

>

> *When we look at these alleged inconsistencies and anomalies, we find the
> argument that something must be wrong because some individual author
doesn't*

> *understand what's going on. So there "must" be something fishy. But that*

> *presumes the author intuitively understands everything. If there is an*

> *inconsistency, there must either be something wrong with the observation
or*

> *else something wrong with the author's expectation against which the*

> *observation is being measured. But conspiracy authors never consider the
> latter possibility. They simply declare that they cannot be wrong, and*

> *stubbornly maintain that position even when it is shown that they are
wrong.*

>

> *Most insidiously, many of these people grossly inflate or fabricate their*

> *credentials to make it sound like they really should know about all the*

> *details. But when you dig past the bluster, you find nothing but*

third-rate

> *filmmakers, librarians, and construction workers who collectively believe*

> *they have the expertise to challenge the opinions of world-renowned*

> *scientific and engineering experts. Doesn't that seem just a bit stupid?*

- >
- > / *Within a year since the sensational expedition, 11 people connected*
- > / *with the Apollo program died.*
- >
- > *No. Many of the deaths you speak about happened *before* the missions.*
- >
- > / *7 people died in car accidents and 3 burnt down in test capsules*
- > / *although they were high-class pilots.*
- >
- > *Since you didn't name the casualties, it's difficult to know which*
specific
- > *people you're talking about. It's also questionable whether *you**
actually
- > *know what people you're talking about. Let's see what I can do.*
- >
- > *1. Theodore C. "Ted" Freeman (astronaut). Killed Oct. 31, 1964; ejected*
from T-38 at insufficient altitude. The cause of the T-38 crash was a
bird
- > *strike at low altitude -- clearly an accident and, I would argue,*
impossible
- > *to stage intentionally. Did the CIA train a bird to fly into Freeman's*
jet?
- >
- > *2,3. Elliott M. See, Jr. and Charles A. Bassett (astronauts). Killed*
Feb.
- > *28, 1966; T-38 crash. The T-38 grazed a building at the McDonnell plant*
while attempting to land. Pilot error compounded by poor weather and
visibility. The pilot misjudged his altitude in the poor weather and was
unable to gain altitude in time to avoid the building. Did NASA control
the
- > *weather and make them crash?*
- >
- > *(This counts for two casualties. Conspiracists always cite numbers of*
deaths in order to amplify the suspicion. But a better measure of whether
these were intentional or accidental is the number of incidents. If one
pilot makes a mistake and takes ten other pilot-passengers to their
deaths,
> *that's still just one incident. It's not a "suspicious" number of deaths*
if
> *that's simply how many people were in the plane.)*
- >
- > *4. Edward G. Givens. Killed June 6, 1967; car accident (astronaut). The*
notion that test pilots make better drivers is counterindicated by data.
- In
- > *fact, test pilots have a higher rate of automotive accidents. Passenger*
Bill Hall survived the crash and described what happened. Givens was
driving on an unfamiliar road (he had missed his turn) in torrential rain,
skidded on an unmarked curve, and slid into a 16-foot ditch. The curve
had
> *an extensive history of prior accidents. How could this have been*
arranged

> intentionally?

>

> 5,6,7. Virgil I. "Gus" Grissom, Edward White, and Roger B. Chaffee.

Killed

> Jan. 27, 1967; fire in AS-204 capsule. After extensive investigation by

> several groups, cause of fire determined to be accidental with some

> contributory negligence on the part of engineers. This accident counts

for

> three victims.

>

> The Apollo 1 fire has been discussed extensively. If you assume the fire

> was caused intentionally in order to silence these astronauts, you have to

> question why it was done in such a way that would certainly bring loads of

> intense scrutiny on NASA. If NASA had something to hide, why would they

> kill astronauts on their property in their spacecraft? That's just

inviting

> people to come discover your secret.

>

> 8. Thomas R. Baron (former quality control inspector for Apollo contractor).

> Killed April 1967; familial suicide. It has been argued that Baron was

> killed for his criticism into alleged shoddy practices at KSC. His death

> was ruled a suicide -- he drove his car into a train with his family in

it.

> At the behest of anti-NASA senator Walter Mondale, Baron testified at the

> Apollo 1 hearings. However, under examination he was shown not to be a

> credible witness. Baron had two risk factors for suicide: an unspecified

> mental condition that required hospitalization, and a chronic illness

> (diabetes). Until his embarrassment before Congress, Baron had enjoyed a

> brief stint as a whistle-blower, feeding local Florida newspaper lurid

> hearsay tales of supposed shoddy work practices at his former employer,

> North American Aviation. Baron had been fired for leaking such hearsay to

> the press earlier. His own description of his employment suggests he was

> not a very good worker, and probably had a bone to pick.

>

> If Baron had been killed to silence him, why not do so *before* he

testified

> for Congress and delivered a length report to them of his findings? Why

> would any subsequent "silencing" be necessary once his testimony was out

of

> the bag and had been quite soundly discredited by the normal means? No,

it

> makes much more sense for Baron to have committed suicide as the

> investigation concluded than for him to have been silenced.

>

> 9. Clifton C. Williams (astronaut). Killed Oct. 5, 1967; ejected from

T-38

> at insufficient altitude. The T-38 suffered a mechanical failure at high

> altitude. Williams could have ejected safely at that altitude, but

instead

> chose to remain with his aircraft as long as necessary to keep it from

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- > *harming innocent people on the ground. Inasmuch as it was his choice to*
- > *continue to fly the aircraft down to an unsafe altitude for ejection, it*
- is
- > *difficult to argue this was an intentional murder.*
- >
- > *That covers all the casualties I know of that occurred before the first*
- > *Apollo mission. Subsequently you had:*
- >
- > *10. James B. Irwin (astronaut). Died Aug. 8, 1991; heart attack.*
- > *Conspiracy theorists have claimed that Irwin was about to reveal the hoax*
- to
- > *them. Unfortunately they can present no evidence that he was going to do*
- > *any such thing, and the claims were made after Irwin's death. It's a*
- clear
- > *case of dead men telling no tales, but in this case the likely tale is*
- that
- > *Irwin had no such plans. It is not surprise Irwin died of a heart attack.*
- > *He had a history of heart problems.*
- >
- > *11. Alan B. Shepard, Jr. (astronaut). Died July 21, 1998; leukemia.*
- > *Nothing remarkable associated with his death.*
- >
- > *12. Charles "Pete" Conrad, Jr. (astronaut). Killed July 8, 1999;*
- motorcycle
- > *accident. Although there is much innuendo that he was "about to reveal*
- the
- > *hoax," no evidence of this is given.*
- >
- > *I know I'm forgetting some such as Swigert and Roosa who have died*
- > *subsequent to the missions. But that's not as interesting to me. They*
- died
- > *of natural causes with no suspicious circumstances or anything. Several*
- > *more Apollo astronauts are likely to die shortly; they're all reaching the*
- > *end of their natural lives and passing on from understandable accident or*
- > *natural causes. The stories that each person who dies was "just about to*
- > *reveal the hoax" and thus killed to prevent that from happening, simply*
- > *don't have any evidence to support them. All the claims are made just*
- after
- > *the death in question, with no evidence to suggest that they were about to*
- > *reveal anything.*
- >
- > *It's clearly a case of people pasting on an interpretation.*
- >
- > *| Is it possible that the people were liquidated because they wouldn't*
- > *| keep the secret about the fake Moon expedition?*
- >
- > *I don't know; is it? Is intentional murder in these cases more probable*
- > *than accident? You ask the question, but you don't answer it.*
- >
- > *| As the Northrop Grumman corporation, the one that developed and*
- > *constructed*

> / *the Moon robot*
>
> *It wasn't Northrup–Grumman at the time, it was just Grumman. They built the*
> *lunar module. You've used "lunar robot" in two different contexts and so*
> *it's not clear what you're referring to.*
>
> / *...told an American magazine that all negatives and records*
> / *concerning the event were liquidated.*
>
> *Not entirely correct. One person told one other person that some records*
> *were destroyed. And we have eyewitness testimony of the destruction of*
> *some*
> *ephemeral material. But the existence of copious original material is*
> *ample*
> *evidence that this charge is false. The authors simply didn't do much*
> *searching. They concluded that the documents were destroyed after asking*
> *only one person.*
>
> *I have been able to get documents from Grumman, although when they became*
> *Northrup–Grumman my relationship with them has become less convenient. I*
> *suspect it's a matter of Northrup not caring too much what Grumman did 30*
> *years ago.*
>
> *In any case, Apollo is one of the most extensively documented activities in*
> *history. I can obtain a very large number of original documents*
> *describing*
> *nearly every portion of the enterprise in great detail. Further many of*
> *these are now provided electronically and/or free of charge. I can*
> *literally find more information about the Apollo lunar module than about*
> *the*
> *Boeing 727.*
>
> *Most people are unaware just what volume of paperwork attends any serious*
> *engineering program. We're talking literally about millions of sheets of*
> *paper, requiring an inconveniently large building to keep it in. Not*
> *everything that's drawn or written down is of lasting importance. Some*
> *paperwork is useless once the craft has been built. Other paperwork*
> *becomes*
> *useless once the craft has flown and is no longer in active service. The*
> *historical significance of this ephemeral material is dubious.*
>
> / *It is rather strange, because we know that America treats its*
> / *achievements and the history with trepidation.*
>
> *This does not translate to private engineering corporations keeping*
> *(literally) millions of sheets of paper, at their expense, for a project*
> *that was canceled and has no chance of being resurrected in that form.*
They
> *kept some important things, destroyed the ephemeral stuff, and made the*
rest

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- > *available to the U.S. National Archives, which picked and chose what it felt*
- > *had historical significance. The Apollo detailed records are on microfilm*
- > *under the auspices of the National Archives, which is responsible for*