Apollo Launch - an Analogy for Life

Broadly speaking, three things happened during an Apollo mission: 1) Launch—lots of energy and noise required to build momentum very slowly; 2) Staging—ejecting the expendable to focus valuable resources on what was important; and 3) Command Module—precisely navigating to the destination. This seems like a reasonable analogy for life.

I wrote the paragraph above many years ago after taking inspiration from the photograph above of the Apollo 16 launch. In this case, a picture is worth a thousand words, and my mind launches into a flurry of thoughts about analogy and parable, beauty and paradox, composition and combustion and poetry and prose. I hope that the opening words capture your imagination and attention as they have mine.

Launching into a New Year

The launch of a Saturn V rocket was disruptive. Many things happened in the lead up to the moment of ignition—involving literal years of preparation—but the mission timer created a demarcation, an unequivocal before and after, and the calendar and holidays do the same for us. We have arrived at the beginning of another year, a point from which to launch new resolutions, a new calendar, new memories, and the beginnings of so many other things, especially for those new test professionals joining us from test pilot schools and universities all over the world. What will happen in the year ahead? What kinds of things will go just like we expect? What things will surprise us?

The history of Apollo provides us with countless examples from which to draw lessons we can apply to these questions, to the year ahead, and to flight test safety. Some of us know these stories, and some don't. Still more of us have forgotten, so let's examine two of these missions: Apollo 12 and Apollo 13. Almost everyone knows of the latter and can accept the obvious moral of its story, that we will face extremely disruptive and potentially destructive uncertainty. Safety demands peak performance. It will take everything within us to solve problems, the character of which we cannot even imagine. In the weeks ahead, these pages will offer up words that help us navigate the big problems, the ones that require equally large solutions, but sometimes small things make a big difference, and that is the lesson of the lesser known story of Apollo 12, one that begins with an unfamiliar character and three small but almost unintelligible words.

In 1969, an engineer by the name of John Aaron observed something odd during a test at Kennedy Space Center. It was a strange telemetry reading that caught his attention, but something else, inside of him, motivated him to dig a little bit deeper and figure out why. Eventually, he traced the phenomenon to the Signal Conditioning Electronics (SCE) system. This information was a small seed planted in the soil of his mind, and a year later it would bear fruit.

On November 14, 1969, just moments after liftoff, lightning struck the Apollo 12 rocket. No one knew this, but pandemonium ensued.

T+01:02: "Okay, we just lost the platform, gang. I don't know what happened here; we had everything in the world drop out" (Pete Conrad, Apollo 12 Commander). He continued, "I got three fuel cell lights, an ac bus light; a fuel cell disconnect; ac bus overload 1 and 2; Main bus A and B out."

Thirty-four seconds later, after an expletive filled conversation in the mission control center, CapCom passed this short message: "Apollo 12, Houston. Try SCE to auxiliary. Over."

The small suggestion, "SCE to AUX" came from John Aaron. At a critical moment during the launch sequence, switching the SCE to AUX restored telemetry between the spacecraft and mission control. Houston did not order an abort, and the mission continued.

APOLLO 12 AIR-TO-GROUND VOICE TRANSCRIPTION

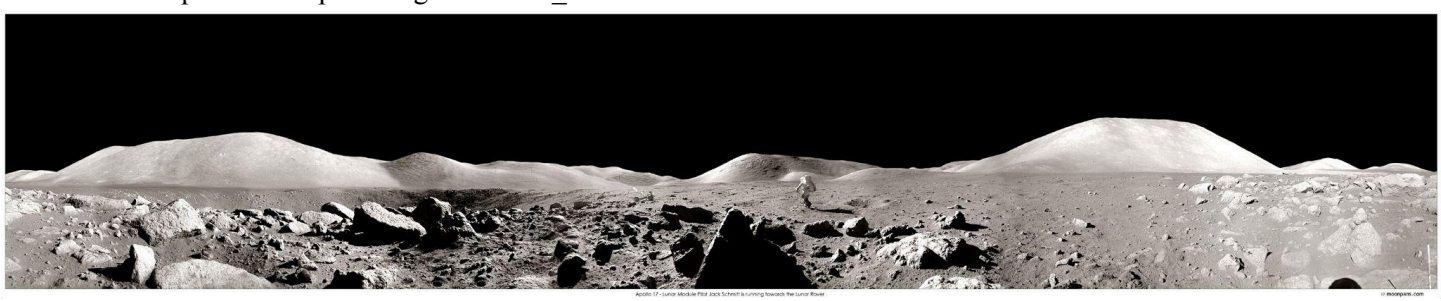
Tape 1/1
Page 1

MILA (REV 1)

Day Hour Min Sec		
00 00 00 00	CDR	Lift-off. The clock's running.
00 00 00 05	CDR	I got a yaw program.
00 00 00 14	CDR	Roger. Clear the tower. I got a pitch and a roll program, and this baby's really going.
00 00 00 20	CC	Roger, Pete.
00 00 00 22	CDR	It's a lovely lift-off. It's not bad at all.
00 00 00 33	CDR	Roll's complete.
00 00 00 34	CC	Roger, Pete.
00 00 00 42	CC	MARK.
00 00 00 43	CC	One Bravo.
00 00 00 44	CDR	Roger. We ... on that.
00 00 01 00	LMP	... Got your GDC.
00 00 01 02	CDR	Okay, we just lost the platform, gang. I don't know what happened here; we had everything in the world drop out.
00 00 01 08	CC	Roger.
00 00 01 12	CDR	I got three fuel cell lights, an ac bus light; a fuel cell disconnect, ac bus overload 1 and 2, main bus A and B out.
00 00 01 36	CC	Apollo 12, Houston. Try SCE to auxiliary. Over.
00 00 01 41	CDR	NCE to auxiliary - -
00 00 01 43	CC	SCE, SCE to auxiliary.

So what should we take away from this story?
I think the story is inspiration and information. Perhaps it will serve as a small spark, the kind of thing that makes you think, "That's strange," like a telemetry reading that doesn't make sense. If it does inspire, maybe another small step will take you to a video that provides a more comprehensive story, an online encyclopedia article about an individual we ought to remember, or a historical transcript that captures the conversation. On the other hand, maybe its lessons will strike like lightning. I want the story to make you think, and I want the rich stories of our past to serve as rocket fuel, not only in the disruptive way it launches our imagination into the year ahead but also in the measured way it spurts small changes in the trajectory of our thoughts, helping us arrive precisely at our intended destination, no matter what stage of life we are in.

Notes and References
Apollo 12: https://youtu.be/IQJqAYTwx5g?si=mX_OMlazWSriaUJJ&t=4518
John Aaron: https://en.wikipedia.org/wiki/John_Aaron



Call for Abstracts - 2026 Flight Test Safety Workshop

5-6 May 2026	2026 Flight Test Safety Workshop	Fort Worth, TX

The Flight Test Safety Committee, a joint committee of SFTE, AIAA, and SETP, is pleased to announce that the North American Flight Test Safety Workshop will be held 5-6 May 2026 in Fort Worth, Texas. This year's Workshop Chair is Tom Currie, Bell.

A Tutorial will be held on Tuesday, 5 May followed by a Technical Tour. Technical presentations will be held on Wednesday, 6 May followed by an Award Dinner where the Dave Houle Best Paper Award, Tony LeVier Flight Test Safety Award and the Hugh Dryden Flight Test Safety Lifetime Achievement Award will be presented.

This is an official call for abstracts.

For the technical presentation portion of the Workshop, we want to hear from testers on all subject matters. Each technical presentation selected is given a 30-minute slot (25 minutes for the technical presentation and 5 minutes for questions from the audience). No proceedings are published for this Workshop, therefore formal written papers are not required.

Please send abstracts to the 2026 Flight Test Safety Workshop Chair via Susan@setp.org.

The deadline for abstracts is 4 February 2026 to allow time for appropriate consideration and inclusion in the program.

REMINDER: You do not have to be an SETP , SFTE, or AIAA Member to submit an abstract, so please share with your flight test colleagues.

2026 Flight Test Safety Workshop Hotel Reservation Information

DoubleTree by Hilton Fort Worth South Hotel & Conference Center

100 Altamesa Blvd E, Fort Worth, Texas, 76134, USA

A limited block of rooms is reserved at the group rate of $119.00 per night. Please click HERE to book your room. Please reserve your room by Friday, 10 April 2026 in order to guarantee these rates

New Podcast Episode EP 72

Batten Down the Hatches...and Boot up the AI
In this episode we will hear about a harrowing adventure on the high seas and get a sneak peak at a new research tool coming soon from the Flight Test Safety Committee.

Listen Now

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If you are interested in watching the video of this episode you can find "On Condition" on YouTube HERE

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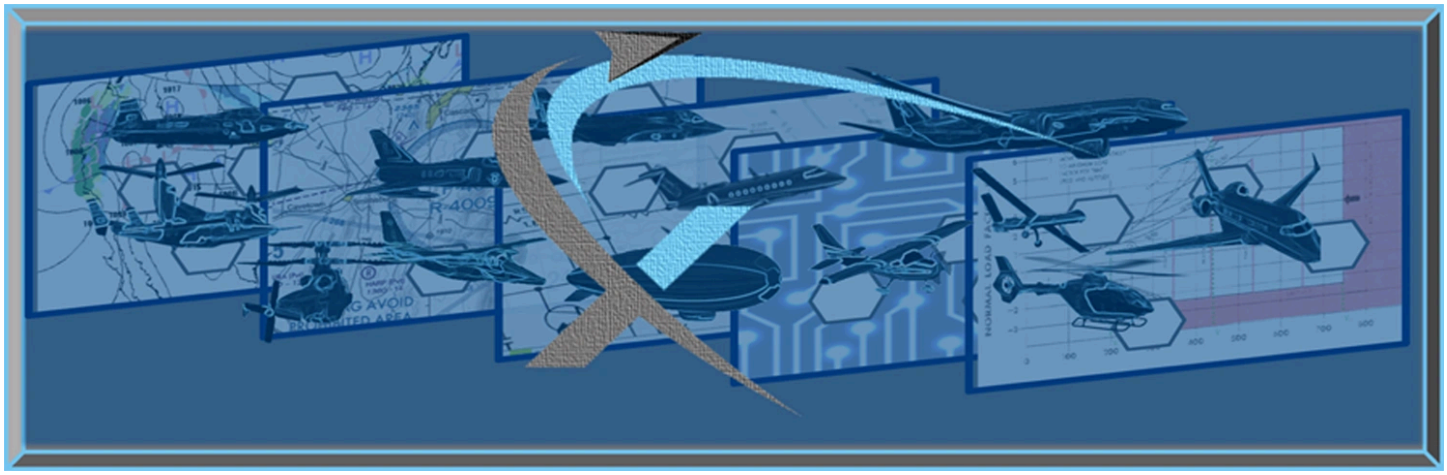

In the next edition

- The Little Prince, a story about Flight Test Safety from Rafa Sánchez, Former SAF Fighter Pilot (on behalf of Aviation Safety Airbus DS) — shared by Josef Gietl. Send your letters to the editor to **mark@flighttestfact.org**.
- Scaffolding, Apollo 13 and how "You won't be prepared, but you can prepare."
- Call for Nominations - the annual Levier Award
- Chia Chat - more ponderings from the president