



## THE LATEST BUZZ FROM SPACE

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There's a new Buzz on the big screen: No, it's not Buzz Lightyear in a "Toy Story" sequel. Instead, you'll see an animated version of Apollo 11 astronaut Buzz Aldrin in the new 3-D children's movie, "**Fly Me to the Moon.**"

If anything, Aldrin gets even more animated in real life, particularly when he's talking about what he'd do to fix America's space program.

Aldrin has to rank among the most visible and most traveled astronauts from the Apollo era: Just in the past week, he popped up at the Virgin Galactic rollout of SpaceShipTwo's mothership and on NBC's TODAY show as well as the New York and Los Angeles premieres of "Fly Me to the Moon."

He's currently in talks for a movie based on his life story - and Aldrin's wife, Lois, thinks Reese Witherspoon would be the perfect actress to take on her role in the film. "Lois likes Reese Witherspoon because she played a similar part in [the Johnny Cash biopic] 'Walk the Line,'" Buzz Aldrin told reporters.

Like Cash, Aldrin has faced his own demons, including bouts of depression and alcohol abuse in the wake of his flight to the moon in 1969. Aldrin and Neil Armstrong came under extra pressure because of their status as the first humans on the moon - and while Armstrong is dealing with the burden of fame by carefully guarding his privacy, Aldrin is dealing with it by immersing himself in public life.

Nowadays his greatest passion is getting space exploration back on track, and he's come around to a view that's different from NASA's. When I called up Aldrin today to talk about the movie, which premieres Aug. 15, his perspective on exploration was the first thing we talked about.

Here's an edited transcript of the Q&A:

**Cosmic Log: You have so many opportunities to meet with people and get**

**your message out about space exploration - how do you choose what you're going to do, and what you just let pass?**

**Aldrin:** Well, I move with the flow. ... Since our focus in exploration is on returning to the moon in preparation for further exploration to near-Earth objects, asteroids, moons of Mars and the surface of Mars, that'll keep us busy through a good bit of the first half of this century.

The American people need to realize that exploration of space – particularly in things that the U.S. can do well, which is human exploration of space – is a worldwide indication of leadership that for historians stems way back to World War I, the intervening times, World War II, the Cold War, the “space race,” the end of the Cold War and the era of permanence in space in low Earth orbit, exhibited by the international space station.

Now there is a resurgence of exploration, hopefully leading toward a permanent growing colony on Mars – not necessarily the moon. That's dependent upon robotic advances and commercial activities on the moon. If commercial activities can pay for the habitation of humans on the moon, and pay for the necessity of having humans augmenting robots, then it'll lead to human occupancy of some number on the moon.

Just as an aside, the moon is not a good place to set up housekeeping. Having been there for a brief stay, I can attest to the hazards of doing that, and the hazards of bureaucracies consuming U.S. taxpayer funds for something that may not be all that fruitful or rewarding to the United States.

I have chosen to focus on specific 40th anniversaries of space activities, catching up with the beginnings of space exploration from Sputnik through Mercury and Gemini. There's the 50th anniversary of NASA and the 40th anniversary of the first manned Apollo flight in October. Then there is Apollo 8, 9 and then 10 in April, coinciding with Yuri's Night. I hope to rename that “Yuri, Al and John's Night,” to commemorate Yuri Gagarin [the first human in space], Alan Shepard [the first American in space] and John Glenn [the first American in orbit].

Then there's Apollo 11 and 12 to commemorate in Washington. And you have the individual missions on up through 2015, the 40th anniversary of the Apollo-Soyuz mission. That hopefully fills the gap between retiring the space shuttle orbiter [in 2010] and the time when NASA will fly people in its next spacecraft, the Orion [in 2015].

**Q: That's a clever way to address NASA's spaceflight gap.**

**A:** Hopefully we will come up with some other ways to help fill the gap, so we won't have to be beholden to the Russians. In reviewing the Apollo flights, I find that there's a very interesting thread: From Mercury to Apollo we needed to have something in between to bridge the gap. The Gemini program was a very natural filler of the gap. ... We filled the gap, and we had flexibility.

Now, after Apollo, we didn't have a whole lot of flexibility when we were underfunded. It resulted in a big gap, even though we flew Skylab and we had Apollo-Soyuz. We were not as flexible as we should have been.

Today, we are looking at another gap, and we need to fill the gap. We certainly need to be flexible, because we have two candidates for president, perhaps with somewhat differing objectives. ... I'm trying to be a catalyst for a space transition advisory team.

**Q: With one campaign or the other?**

**A:** With both. I hope to be visiting both conventions along with a number of advocacy people, and I'm forming this team, hopefully around an organization that feels it doesn't have to wait until January to deal with everybody else who wants to bombard the new administration with their pet plans.

**Q: Are you working with an existing organization?**

**A:** Some of the think tanks are reluctant to take a position that runs counter to the "stay the course" option that exists now at NASA with regard to the Commercial Orbital Transportation Services program, called COTS – which involves private-sector stimulation - and the Defense Department's EELV program. The Defense Department and NASA have had an atrocious record of trying to come together for unified efforts to support space activities.

Maybe there are commercial interests who could stimulate the Commerce Department to step in and indicate a preference, in a way that the Defense Department or NASA might find inappropriate because of their previous commitments and programs.

I'm quite sensitive to the fact that the Europeans have a ministerial meeting in November to decide the future of the European space program. They could decide whether they should support Russian programs to low Earth orbit or American programs. The Japanese have indicated the same preference as the Europeans, for a lifting body and a runway lander. I'm sure the Indians would like to not just duplicate the Chinese with a capsule lander, but would like something more advanced. Again, that would be a lifting body and a runway lander.

That's what I feel we should have as a redundant spacecraft capability in the American space program – to be redundant to the Orion spacecraft and the launch vehicle to put it into orbit and carry it beyond.

**Q: That would be an area where you'd like to depart from the current course – because in the COTS program, both of the companies receiving NASA money are developing space capsules as well.**

**A:** You're very observant, following my well-chosen words. I'm quite aware that a number of years ago, the Russians had a design that they tested with scale

models. We re-engineered and studied it and renamed it the **HL-20**. ... My group of engineers thought it was very, very attractive, and together with Raytheon we were working on a proposal... It really surprised us when the upper management said they'd make no bid for COTS. ...

So I and my engineers searched around and looked for ways of teaming with different people. Initially it was not too satisfying to work with SpaceDev, but after a change of management, it became very appropriate. I've been pursuing that personally and somewhat organizationally ever since. I think that would be a very good alliance to work with, including foreign partners like ESA, JAXA and ISRO [the European, Japanese and Indian space agencies].

I haven't taken steps yet, but hopefully the Commerce Department may choose to provide a preferential announcement. That would be kind of gutsy for somebody to do. ... I think we need to fill the gap, and I'd sure like to see the gap filled early by a lifting body and a runway lander.

**Q: You've just laid out something that could be a life's work.**

**A:** Well, I'm 78. Lois keeps telling me that we're both going to make 100-plus somehow.



nWave Pictures

Apollo 11's crew members voyage through space in a scene from the animated 3-D movie "Fly Me to the Moon." Put on your red-blue glasses and click on the image for the 3-D effect.

**Q: Keeping your mind busy, which obviously you're doing, is a great way to do that. I'm keeping my mind busy thinking about how we can get into "Fly Me to the Moon."**

**A:** That's really easy, because the second part of the **ShareSpace Foundation** is to implement a "Buzz Prizes" opportunity for space exploration through a lottery. And the third part is education. ...

"Fly Me to the Moon" is like all these 40th anniversaries of Apollo, and the 50th anniversary of NASA, and the 60th anniversary of the Air Force. They are all public events stimulating interest. ... I wrote a children's book called "Reaching for the Moon" three years ago, and it's doing very well. We are awaiting final production of "Look to the Stars," another children's book coming out in April. So I am quite involved in things that stimulate young people to look at the reality of history, and how well it was carried out in the past.

Now we have a family-values, animated, exciting film coming out that portrays youthlike tendencies among fictitious insect characters ... heh, heh. You can see that three flies stowing away on a spacecraft is the kind of adventurous spirit that young people have, which sometimes runs counter to what parents think they ought to be doing.

I put my emphasis on renditions of the planets, narrated in an educational way with the latest that we know about planets and the solar system - for example, presenting what's being uncovered on Mars in a realistic way.

I've taken it upon myself to convince people that after the first couple of preliminary missions to the moons of Mars, and maybe once to the surface of Mars, we should accumulate a population on Mars from each and every human mission that goes there. This is a kind of one-way trip, counting on future breakthroughs to bring people back in their retirement days for a reunion with their families and friends. I really think that that's the economic way to establish a colony living off the land on Mars.

**Q: That parallels the way the New World was settled by the Europeans.**

**A:** The Mayflower Pilgrims were not sitting around waiting for the return ships.