

Not Much Has Changed - Five Years Later

by Dr. Al Koller

In 2010 I wrote a piece for Ad Astra – the journal of the National Space Society – reflecting on our progress in space exploration. Although it is even harder for me to believe it now, we are a decade and a half into the 21st Century and still no closer to colonizing beyond the Earth than we were more than 50 years ago. I know it's still the realm of science fiction for most Americans, and maybe that helps explain why we haven't made the giant leaps some of us working on Apollo expected by 1980. ***But shouldn't we at least try?***

I was a young NASA engineer working for Dr. von Braun and his team for the Apollo 11 lunar landing during those days, and I remember after mission success penning a letter for my boss, Dr. Hans Gruene, Director of Launch Vehicle Operations at Kennedy Space Center, responding to someone who had written him asking about the future. **We said “we have touched the stars and can never look back.” And yet, somehow we have.** How sad. The fateful words from the pop music of those times, “We've come a long way, baby...” don't do much to salve my wounds. I wanted more, and we all expected more from our investments in space. I still want more, and maybe the time has finally come to make that happen.

From my perspective not much has changed over the past fifty years in terms of space exploration and our ultimate goal: colonization. In many areas of aerospace work, there have been enormous achievements worthy of the time, talent, and treasure it took to make them happen. Who would take back the Mars rovers Spirit and Opportunity? What about the Hubble Space Telescope, or the International Space Station, or the Space Shuttle, or even that first commercial sub-orbital flight of SpaceShipOne or the landing of the SpaceX Falcon 9 back at the launch site six minutes after launch? All of them, and many other steps forward, deserved our support, and they have truly changed the world as we know it today. But none of them - not one - has moved us closer as a nation to attempting the goal some thought was the real purpose of our work: **preparing mankind to leave the Earth for a permanent outpost on another world.**

For a long time I thought that NASA had banned the “C” word from its science vocabulary. Woe be it to anyone who might talk about “colonization.” That isn't true, but we've certainly acted as if it were. An entire army of people has grown up with arguments about **whether we should go back to the Moon or go on to Mars, while the fact is that today we have neither the will nor the capability to do either.** In fact, we seem to be farther away from those goals than we were when John F. Kennedy made his announcement that we were going to take men to the Moon and return them safely to Earth before the end of the decade — and that was in 1961.

“We choose to go to the Moon, not because it is easy, but because it is hard.” And we should return there - not because we want to know more about the Moon, but because we left equipment there (including three ground vehicles and six active power generation sites). We did that so that we could return and create long duration colonies in preparation for our eventual travel to Mars and beyond.

Someday we will exhaust our natural resources, and we want to learn how to colonize our Solar System for the future of mankind. Yes, we are explorers by nature and we seek to know all there is to know. But we are also survivors. **Let's go back to the Moon and fulfill our destiny.**

Al Koller, January 2016