

## A TELEPHONE CALL FROM A MAN IN SPACE

When as a youngster I dreamed of what it might be like—500 years hence—to travel in space, I never ever imagined that such a thing would happen in my lifetime.

I was transfixed by our first attempts to put a man in space, usually being tortured by imagining many ways we would do things wrong. It was not that I feared just the possible death of an astronaut. I was also concerned from the very first about how instruments would function in zero pressures and exceedingly variable temperatures—the space environment could be guessed, but was really unknown. What might all the effects be? Further, I was aware that there was a “solar wind”, i.e. particles coming from the sun in various quantities at various times. What might their effect be on men and hardware? Surely there would be more variables than we were prepared to grasp.

A principal shocker was that astronauts might be of my generation, not just from future generations! In graduate school I knew Karl Henize. He was a couple of years younger, but we crossed paths frequently. He had his Ph. D. in astronomy from the University of Michigan while I was at Indiana University. He was launched into space in 1985 and made 126 orbits around the earth. I recall that he was the first scientist to be selected as an astronaut, but perhaps that relies on my definition of a scientist. Because he was about my age, I was not just envious—I was incredulous. For sure enough, going into space in my lifetime was really happening! And at least one of those who did so was my age. Where had I been? Why was I not more alert?

I probably talked at home about knowing an astronaut, but that had little impact on Wayne. On day Wayne and I were in the airport in New York City on our way to London, and Karl came along, recognized me, and we had a short but interesting conversation. I introduced him to Wayne, but only after Karl had gone on his way did I tell Wayne he had just met an astronaut. He was amazed that I knew such a guy. Even then I had no real appreciation for all of the wonders there were to be derived from men in space, and space travel.

On one occasion a couple of us from Los Alamos made a trip to NASA headquarters to talk with the director about one of our space experiments, and I also had the occasion to meet several astronauts as time passed. For example, one from New Mexico, Harrison Schmitt became a U.S. Senator, and I had a number of interactions with him during his tenure as senator. Also, while serving as a member of a group working for the National Commission on Space, I met Neil Armstrong, among others.

In my last years at Los Alamos I was in charge of some rocket launches, and one of the guys who helped with those experiments was Don Pettit. He was always hoping to become an astronaut, and I generally pooh-poohed him saying he needed to go somewhere to become a Nobel Prize winner. We spent time together in the Pacific for several lab-type activities, and he sometimes asked to go along with us when we had a good trip in mind. So we were together at Chuuk Atoll in the Eastern Caroline Islands in the Pacific, and once he and his future wife spent a week with us floating down the Nile on a felucca. Don bordered on being family.

I was surprised when Don was finally selected as an astronaut, and thrilled to be invited to see him launched for a mission at the International Space Station (ISS).

On that occasion we were invited as family, so I got to meet the family of Kenneth Bowersox and other NASA notables. Don was supposed to return by shuttle after a relatively short stay at the space station, but when the Columbia shredded he was forced to remain at the station for almost 6 months. He had made me eligible to communicate with him while he was in space, and in order to do so I had to agree to some interesting rules from NASA. First they informed me that Don's and my conversations would be private, and that we need not worry about being monitored. I was amused to notice that in the fine print, NASA took it all back, making clear that NASA could terminate our conversations at any time for any reason. I was not to tell their astronauts anything that would be worrisome, or troubling, or personal-type news that NASA did not already know about and in truth I thought all of that was quite reasonable. But I enjoyed the double talk.

I had an e-mail from Don about once or twice a week. I responded to each one, but don't remember initiating any. I always had one of my computers on the NASA web site showing the location of the ISS, a position that was updated every 10 seconds or so. All that I had to do was hit the space bar whenever I went past that computer, and then I knew exactly where he was. This was great fun, for the velocity in going around the earth every 90 minutes is immediately apparent.

One morning I was aware he would pass just to the north of Loveland, but was just finishing breakfast when the telephone rang. "Hello! This is Don" was what I heard. It was immediately apparent that it was a satellite call, but I have to admit that I had been retired for such a long time that my first thought was that of a taxpayer. "Who is paying for this call?" I thought, but I already knew the answer. We had a great conversation, terminated when he said "I have to go now". He was already half way across the Atlantic!

Some weeks after he returned to earth, I told Don how much I appreciated his call to me, and what a special moment that was. He then told me that he knew exactly how I felt, for only a couple weeks before our conversation he had had a telephone call from the ISS asking how he had handled a particular problem when he was there. He then told me with considerable animation how excited and pleased he was to have a telephone call from a man in space!

People in space have trouble with the laws they live by. I have been aware of this difficulty for some time, for several astronauts have shared this problem. For example, the "laws" or rules that cosmonauts live by are not the same as those for astronauts. Cosmonauts are rewarded after a flight in a variety of ways, but if they did anything on their own in space without permission, their future is truly jeopardized. For astronauts, I believe it is fair to say that NASA also has many rules, but they are used only when necessary, and astronauts are not in fear of them. It is certainly understandable what rules might be made, but if your rules do not mesh with another person in the same space capsule as you, entirely new difficulties are bound to arise. To my knowledge there have

been a number of troubling incidents, and the problems have not yet been resolved.

When Don and I were in the Marshall Islands on one occasion, I shared my theory for atolls always having certain similar shapes and why I thought that was. One day in the ISS Don looked out the window (without permission) and saw a perfectly rectangular atoll. He grabbed a camera and took its picture (without permission). He then e-mailed the picture to me (without permission). I immediately shared that picture with others here in Loveland (without permission.)

According to the rules, NASA should have known and approved of the picture, and how it was handled after it was taken. None of these things happened, but then, what difference did it make? For space travelers in capsules owned by countries other than ours, there might have been consequences to this behavior that would contrast markedly from ours.

There are examples of such behavior in the book about Don in the ISS,

### **Too Far From Home: A Story of Life and Death in Space**

Author: **Chris Jones**

On November 14, 2008, Don was again launched into space in STS-126. Once again we were there to see him off. Don's use of his time in space is extraordinary as he is constantly inventing new ways to use material available to him. This is documented in many places on the web.

Amazingly enough, I received an invitation from Don to attend his third launch into space—this one from Kazakhstan—and I am delighted to say that I did so, in December, 2011. Son Chip accompanied me, and the trip and launch were a huge success. I'm still in the process of documenting this event, and the story will appear in one of my "trip" books, "Our trip to Kazakhstan".