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Interview with Kent Miller

Kent Miller
Utah State University

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Interview with Kent Miller  
April 9, 2011  
Riverwoods Conference Center, Logan, UT.  
Interviewer: Ryan Martineau  

Name: Kent Miller  
Date of Birth: 1946  
Place of Birth: Richfield, Utah  

**Question:** When did you get involved with the GAS team? When did you start with the GAS team?  
I came to Utah State in 1984, I had been working at Lockheed and knew Rex McGill. In 1985 he had been running the GAS program and he asked me if I wanted to run it. He was a good salesman, I guess, I agreed to do it. This is fall of 1985 and in January of 1986 was the Challenger accident.  

**Question:** What was that like, the event around the time?  
Well it shook everybody up, of course. The main thing is the GAS was all of a sudden the students in the program realized they would never fly their GAS cans while they were students and anyway I ran the program from then until just after the Discovery launch when they started launching the shuttles again. So I had it during this time when we really had no chance of flying. We were looking for other things to do and ways to keep kids interested and involved and be ready when we did get the chance to fly.  

**Question:** So you were a mentor for the students?  
Yes. I did what Jan Sojka is doing now.  

**Question:** So what were the projects they were working on during that time? The ones that were suppose to fly, what did you do in the meantime?  
I can’t remember all of the projects. It was different then, they didn’t work together. When the students came they would each propose their own experiment and they would build themselves a spacepack, they called it a little fiberglass shelf that would go in the GAS can and that was their space to make their experiment. Scott Thomas was just finishing there was still people working on the fluid flow experiments that he was doing. There was a group of Navaho Indians who were trying to build the first Navaho payload which didn’t happen until several years later. The guys that were there when I was weren’t able to do it. I don’t remember all of the experiments, there were a couple of biology experiments, chemistry, things like that. I don’t remember the details.  

**Question:** When, with the Challenger accident did the students fill their time just with expanding on their experiments or what was the time filled with? Just the same experiments or were there new programs that you were trying to introduce to the GAS program?  
Initially we didn’t know how long it would last, so we worked on the same experiments. We still met every month, we had a GAS coordinator and she worked with them and we expected they would start flying again sooner than they did. So we kept working there, but as time went on we started looking at other places. Gil Moore, that when he approached his friends
at Hollowman Air Force Base in Texas about balloon flights and we started work on being able to fly them on balloons. They didn’t ever fly them while I was there. They did after Jan Sojka took over. But we did the ground work, tried to decide what you could do on a balloon flight. The similarities of space, the hard vacuum, cold temperatures but still have gravity and so that’s different. So what could you do and what made sense. We talked about having the students build new experiments with cameras on them so you could look out over the curvature of the land, things like that. Just tried to keep involved, keep things going. We had seminars and things where the student could meet and talk about just to keep them excited even though they couldn’t fly.

**Question:** For you, when you were growing up, was there anything that particularly sparked an interest in space or a career in space?

I don’t know, I’ve always been interested in it. I grew up on a farm and my father had a master’s degree, not quite a master’s, he had some post graduate work. He had a degree in plant pathology and a minor in chemistry, so he had an education from here at Utah State. He liked scientific things and helped me like them. So I came, I was here as an undergraduate at Utah State.

**What was your degree in?**

Physics. When I was a junior looking for a summer job and a part time job during the school year it was right when Kay Baker was moving his laboratory up here from University of Utah and I got a job with him. Initially doing dry wall and moving equipment, things like that, but then when the school year started he let me work on data analysis and data presentation things like that. So in essence, I had sort of my own GAS program in that way, it wasn’t anything official. Kay was a good mentor to me and let me work with him on his research. So that got me interested in space and then when I went to the University of Illinois for graduate work, after the first year then you start looking around at the different laboratories to try and interviewing the different professors to try to get a match on where you are going to do your research. There was an aeronomy laboratory at the University of Illinois and I ended up doing my graduate work with them. I stayed in doing space research. After that I went to Lockheed in California with pioneer Venus. We were the first, and so far the only, satellite to orbit Venus. I did the programming for the potential analyzer. We were there when it went into orbit so that kept me excited about space. When I came back here it was kind of a natural thing to stay working with space. Working with students was something I always wanted to do.

**Question:** What’s your most cherished memory about that? What would you say you like to remember most?

I don’t know. The whole experience I don’t know if I can come up with any one memory. In fact even after I gave up the GAS program, after Jan took over, I had a grant from the National Science Foundation on what they called research experience for undergraduates. We had a program here where the students would come in from all over the country during the summer. All different areas of space science. So the experience kind of continued in that way. A lot of GAS students got involved in that. It has just always been fun for me to work with the students. It’s something that is really rewarding to me. I still do it.

**Question:** Did you ever go on any of the GAS road trips? Were you ever involved in any of those trips?

There wasn’t any road trip to go on. There wasn’t anything to do. Until right at the end, I think it was 1988, when they launched the first shuttle after the Challenger accident. The
Discovery launch and they had a GAS conference at Coco Beach that week. I had just gotten my NSF grant so we took the GAS students and we went to Cock Beach for the conference and then to the Cape to watch the launch of the shuttle. That was a neat experience. We had, I guess, six or eight students, I don’t remember. I left some picture here of that experience with the students.

Question: Do you remember who went there and anything about what they presented at the conference?

I was looking at the pictures and I couldn’t remember them all. Oscar Monje was there and he is here at this gathering. There was I think there was six students from here and then we took one student from BYU and a professor from Southern Utah University. I don’t remember what they presented. I assume it was something about their research. I didn’t make a presentation there the student’s did. We got a good tour of the Cape and they took us back to where they were restoring all the GAS cans from us and other experiments. They were all there waiting to go back up on the shuttle. We got a good location to watch it go up. One of the TV stations from Salt Lake sent someone down and interviewed us. It was a big deal. It was fun. Something the students would remember.

Question: Across the time you were with the team what personal growth did you see? Personal growth and growth in your skills that are pertinent to the team?

Well skills related to the GAS program I guess were more interpersonal skills. How to relate to students. How to motivate students. There was a time when I, it was my first job where I was really in charge of my own research, so most of the growth I guess was in the things that made me stretch in my own personal research. Developing the program, writing proposals and getting them funded, things like that. As far as the GAS program goes I know it helped me in working with people, but for me it was just a enjoyable thing to do.

Question: Do you remember any of the other students you worked with, or any of the specific projects?

I’ve been trying to remember since I got here. It’s been a long time. I really don’t remember specific projects all that well. I don’t think I can come up names of students.

Question: Is there anything else you would like to add about the GAS team or your experience with it?

Well one thing if this is still people reading it in 2088 when they open the time capsule in Old Main that’s my GAS paraphernalia there. The newsletters that we had, I can’t remember what else is there. We had some GAS stuff there in the time capsule.

Thank you for your time.