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Interview with Bill Decker

Bill Earl Decker
Utah State University

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

Name: William Earl Decker

Date of Birth: 1965

Place of Birth: Rondo Beach, California

Question: When did you get involved with the GAS team?

Right after the, I don't know what you call it, the introductory Physics course that you take. Dr. Sojka taught that year, Introductory Physics for Scientists, science majors, he approached me about joining the team. I was a Physics major and I joined the group that was studying liquid films and bubbles. It was a grant with Thiokol Corporation. It was just after one of the Get Away Special canisters had flown that had made a bubble and we recorded the growth of the bubble and my work was with liquid films and bubbles. While I was there we never designed or made a Get Away Special, but we did some zero gravity on the airplanes.

On the weightlessness on the Vomit Comet?

Yes

Question: What years were you on the team?

I was on the team as an undergraduate physics student from 1988 - 1991, it may have been 1989 when I joined. Our team we had, the bubble team was Dr. Sojka overseeing us, Ned Penley as the graduate student, and Kristen Redd was the other undergraduate student.

Question: Do you remember any of the other's names that you worked on that project with?

That was it. That was the entire group on the bubble side of the project.

Question: Were you involved with any other projects on your time on the team?

No we weren't. We did a few things on the Vomit Comet part we were trying to make a liquid film and then expose it to ultraviolet radiation to polymerize it into a solid during the zero gravity time on the plane. So when we went down, Kristen Redd and I went down to fly the experiment and the apparatus that we made was not approved for flight because the liquid containing chemistry was felt not to be safe. They were afraid that some of the polymer might escape out. So that part wasn't ever tested. What was tested was a small apparatus that we made to make a liquid film, a guillotine that made a liquid film, and we tested pure water without any surfactant agent or soap or anything and discovered that in zero gravity environment you could make a liquid film out of pure water without any surfactant. So the trip although we didn't get to do our primary experiment, the secondary experiment actually was probably better.

Question: Sounds like an interesting road trip was there anything else on that road trip that was interesting? Did you have any other trips like that?

It was an interesting road trip. No, that was the only trip and we were disappointed at the time because the students at that time were not allowed to ride on the airplane. So we had to just turn our experiments over to the Thiokol team who were allowed to ride on it. The only member of that team that I remember was Charlie Izette (?), he was fairly active for a while there from Thiokol in the liquid program.

Question: When you were growing up or as a child what sparked an interest in you in space or microgravity? What led to microgravity research with the GAS team?

Mainly just physics. As a high school student I loved my physics class. Really it was coming to Utah State University and studying physics and meeting Dr. Sojka that led to all the microgravity space research stuff. It was great fun. The other contribution I guess to be made in the years that I was a student. The other question that we answered there was a question whether or not once we produced a film or a bubble whether or not we could add additional fluid to it. As we know in a regular gravity alignment the liquid films will drain the fluid out between the two layers of the film. There was a question as to whether or not we could add fluid back into it. The whole purpose of the liquid films and bubbles was to try to make a structure and then polymerize it into a solid. The ability to add fluid back into a film, I guess would have been an important one and we did prove conclusively that we could do that in gravity. In microgravity the films appeared to not drain of course and so there wasn't, it wasn't necessary to add fluids back between them. We didn't pursue that any further. We did learn that we could add liquid back in between the two layers of the film.

Question: With your skills, pertaining to the GAS team, could you compare before to after joining the GAS team.

Sure. The ? of physics of course understanding increased definitely. Practically my abilities in wood shop and in the metal shop, we actually made all the metal components and all that I had no experience in the metal shop and limited experience in the wood shop so that was very useful and I enjoyed that actually building the apparatus that we later used to do our studies.

Question: So could you tell us a little bit about what you do now? About your career?

Sure. It's a little bit of a different career. After graduating in physics I went to medical school and in medical school sought out a field that would utilize physics because I enjoyed that so much and also would utilize general compassion for patients, people. I fell into a specialty called radiation oncology which is the use of radiation to treat cancer and that's what I do.

That was your interest in physics?

My interest in physics led to that.

Question: Is there anything else you would like to say about the GAS team or how it influenced you?

I have been following along at a distance for quite a few years and always taken great pleasure in the accomplishments of the GAS team and my small part in their history, 20 years ago.

Thank you very much.