

AirSpace Season 4, Episode 6: Homesick at Space Camp

**Nick:**

So Emily, did you know that there's an adult Space Camp?

**Emily:**

Umm, no, but I'm going to suggest for season five of AirSpace podcast, that we do an audio journal of the three of us attending space camp for grownups.

*Intro Music up and under*

**Matt:**

Welcome to AirSpace from the Smithsonian's National Air and Space Museum. I'm Matt.

**Emily:**

And I'm Emily.

**Nick:**

And I'm Nick. So it's the shuttle era and your one of those kids that's absolutely glued to the TV anytime there's a launch. Maybe you've clipped out an ad for Space Camp from the local paper and you're starting to save your allowance so maybe you can go one day.

**Emily:**

Like the Apollo era before it, the shuttle era enthralled a generation. And Space Camp came on the scene just in time to give those kids a taste of what it might be like to have a career in space.

**Matt:**

It's been 40 years since the space shuttle first launched. So we're looking back at something else the shuttle era brought us.

**Emily:**

Space Camp.

**Matt:**

Space Camp.

**Nick:**

It's Space Camp you guys.

**Matt:**

Today on AirSpace.

*Intro music up and out*

**Nick:**

The space shuttle launched in 1981. That was 40 years ago this year. And growing up in the 1980s, like, I was aware of the shuttle, but the space program was bigger than that for me. And I think part of the reason is that I was always kind of peripherally aware of Space Camp. This program that middle school, high school students could attend and kind of see what the space program was all about. Apollo walking on the moon, that felt like a million years before my time, but this was jazzy, contemporary.

**Emily:**

Space Camp felt like this new age tech thing that was so, to me, fictional growing up. That it was never a thing I thought about doing as a real person. But I also didn't have a picture in my mind of the kind of people who went to Space Camp. In my mind camp is like the thing where you go and make smores, and swim in a Lake, maybe make some bracelets, meet some other kids, get a lot of mosquito bites. So the notion of Space Camp is still kind of foreign to me because I don't actually know anybody who went to Space Camp. So I don't know what happens at the Space Camp.

**Matt:**

You know, I never got to go to Space Camp because my family didn't have a ton of money and I had three younger brothers. So we had to make the money go as far as possible. And the closest I ever came was going to like a voluntary summer school program that was dedicated to the idea of space flight and space science fiction. And so I spent four weeks, one summer in a classroom talking about space. So that's as close as I ever got to Space Camp.

**Nick:**

So we talked about the space shuttle program launching in 1981. Space Camp started in 1982, but the roots go back to a seemingly casual conversation in 1977. The conversation was between Edward Buckbee, who was previously a NASA public affairs officer who was by that time, the director of the U.S. Space and Rocket Center Museum. And Wernher von Braun, who was a German rocket scientist who built weapons for the Nazis during World War II. And eventually made his way to the United States with some of his colleagues where he was very instrumental in the creation of the rockets that took Americans to the moon. And was still a important figure within NASA by 1977. So von Braun and Buckbee were at the U.S. Space and Rocket Center in Huntsville, Alabama and von Braun noticed a bunch of schoolchildren touring the facility. And he noted that in the United States, there were options for kids to go to camps for band, or football, any kind of sports you could think of, but not necessarily any science camps, no space camps. And he was saying this to a guy who had a space museum on the grounds of a space center, and well, maybe they could do something about that.

**Matt:**

Yeah. And one of the things that Buckbee had become really aware of in running that museum and part of the reason why that museum was founded in the first place was because American families were incredibly interested in NASA and in human space flight. And actually would make trips from around the

country just to visit places where space flight was taking place. And I think they saw an opportunity there both to serve NASA in terms of getting more people in the pipeline for the types of jobs that NASA had to offer, but also the financial incentive of, hey, we know that NASA is really popular with kids. So let's see what we can do with that.

**Emily:**

So Edward Buckbee is kind of the one who got Space Camp started. And he ran the first test camp in 1981 with his daughter and her friends, which is probably my favorite part of the story in that you don't have a lot of dads out there, at least in the 80s, at least sort of openly and loudly being like, sure, my daughter and her friends want to talk more about space stuff when they're not in school. And it turned out it was successful enough that he went and actually opened Space Camp for the first time, kind of officially in 1982.

**Nick:**

So we have all acknowledged and we will restate now the very shameful fact that none of us, your intrepid hosts, got it together to go to Space Camp when we were kids, tweens, or teens. So we felt it was important to speak to someone who had been to Space Camp. Dr. Danielle Nuding.

**Dr. Danielle Nuding:**

Yeah. So my name is Dr. Danielle Nuding and I am a instrument system engineer.

**Emily:**

Dr. Nuding works at the Applied Physics Laboratory at Johns Hopkins and she builds and programs scientific instruments that go into space on awesome space robots. And that includes a lot of instrumentation that landed on Mars with the Perseverance Rover, which we all know and love. And she's currently working on instruments for missions to go to the asteroid Psyche, see previous episode on the Psyche mission, and the Europa Clipper spacecraft.

**Dr. Danielle Nuding:**

I went to Space Camp in high school. I was actually 16 years old and went to the Advanced Academy at Space Camp. What year was that? I would have to do the math. It was probably like 2003, 2004 time period.

**Matt:**

But once you get there, you get to do all the things that I would've wanted to do for a week, building and launching model rockets. And you get to interview and train for roles in simulated space mission, really get to know what astronauts do and how space exploration works.

**Dr. Danielle Nuding:**

When you're at Space Camp, they introduce you to all of the different roles you can have. You can be commander, you can be pilot, you can be payload specialists and they train you and interview you for those roles on your internal teams. My mission was to fix the Hubble. And the moment that I was able

to step into and apply for and get the commander role of our team; the person leading the entire mission and my team putting their full trust in me was really where I realized that I can do this. It builds this confidence in you that makes you believe that you can actually have a career in space science, or become a pilot, or become an astronaut. I mean, they really just seed that in. And I remember the moment that I got selected, and that was just, I mean, it was mind blowing. I'm getting goosebumps just thinking about it. And that was however many years ago. *laughs*

**Emily:**

What I like about these missions is that the kids get broken up into teams. But I also really like it because it's a combination of robotics and human exploration, which I think does a really good job of trying to touch upon all the different interests that individual kids may have when they come in. Right? Some kids may be much more interested in rovers and robots than they are about being astronauts themselves. So hearing Danielle's description is really interesting to me because I can see why they would pick something like a Hubble repair because you need both astronauts and robots in order to make it happen. So Danielle said that she was always really interested in space and was really thinking that she wanted to be an astronaut when she grew up, but it was Space Camp that really showed her that there was so many other ways to be involved and engaged in space sciences then just becoming an astronaut.

**Dr. Danielle Nuding:**

It was my first leave the state, go by myself, do something that I was interested in, had been interested in since first grade. I was the first grader that said, I want to be an astronaut when I grow up. I've actually learned that the astronaut track is not necessarily for me. I like to write the instructions more than follow them sometimes. So that path is not for me. And I actually enjoy working with robotics a lot. But it did really open up the path of space exploration and what that looks like.

**Emily:**

Right. So one of the other things that's really special about Space Camp harkens back to our fandom episode of season three. Something really special that Danielle brought up about Space Camp is that it's really a fun opportunity for kids to kind of get together and hang out with a bunch of other kids like themselves who are really excited about space stuff. And just want to hang out with a bunch of kids who also are really excited to talk about space stuff. It's no longer trying to get your parents excited about all the stuff you know about space. It's your opportunity to really hang out and learn from kids who are really passionate about the same kind of stuff that you are. Even if you don't know a ton about it. If you're pumped about it, you get to hang out with a bunch of other kids who are pumped about space stuff.

**Dr. Danielle Nuding:**

I always had supportive family, and friends, and community, but at some point, they don't care on the same deep level. And finding those people that you can just talk. We're all in the same bunk beds together and you share rooms. I mean, you can ask the Space Camp counselors, they have a difficult time getting everybody to go to sleep because there's just this buzz of excitement of being around your people.

## *Musical transition*

### **Matt:**

So again, I'm older than both of you. And one thing that I remember about the late 80s and early 90s was that there was this anxiety in the media and in Congress that the US was falling behind other countries in science and engineering education. And the big question was, how do we get more kids involved? And this was part of the answer that the Reagan administration came up with, was let's sell space to the kids and see if it can get them into learning math and learning science. And thinking about space as a type of career option. Even though most of those kids will end up going to work for other science and engineering fields. This will be our way, our hook of getting them in.

### **Nick:**

When Space Camp was conceived in 1977, a couple of years before it actually took off, that was when NASA was making its first big push to diversify the astronaut Corps. The class that was selected in 1978 was the first to have women in the astronaut Corp, had the first African-Americans that flew in space. So this was where NASA was at. And by the time Space Camp was fully developed and operational in the early 1980s, NASA was making even more efforts to reach out to children in particular.

### **Emily:**

Yeah. When we look at the very first Space Shuttle astronaut class through 2021 glasses, we wouldn't necessarily look at that class and say, gosh, what a diverse group of folks. But in the time, those first classes of Shuttle astronauts were really so much more diverse. And I think that really helps a whole new generation of kids really see themselves in the astronaut program that maybe hadn't seen themselves in the program before. And Space Camp was that one sort of step up to kids seeing a path forward into kind of exploring space as a place where they belonged and existed, where in previous exploration programs, a lot of kids couldn't have seen themselves in the test pilot astronauts of the earlier eras.

### **Nick:**

Yeah, that was the real prize. And the genius of Space Camp is before I knew whether or not I wanted to be an astronaut or could be an astronaut, I knew I could do Space Camp and it was there. And even though I didn't go, I always knew it was available. And I think that was an important part of getting kids to start thinking that they too could be astronauts. They could see real astronauts who looked like them, but there was also something real and tangible that they could do now.

### **Emily:**

Well, and that's not all totally by accident though, right? Like yes, Space Camp is exciting. Yes, Space Camp is interesting and it's also totally linked to the space shuttle program that's launching at that time. But there was a marketing campaign that was attached to Space Camp, right? Like, Director Buckbee was going on talk shows and he was doing late night TV. And he was really trying to get folks to understand what Space Camp was for and what it was doing. And it was being marketed to the kids too, right? It wasn't just the late night TV shows that were trying to get adults excited about sending their

kids to Space Camp. They were kind of doing that same marketing and branding to the kids channels. It wasn't all on accident, right? We were sort of indoctrinated with the initial push out of getting everybody excited about what Space Camp was.

*Musical transition*

**Matt:**

One of the remarkable things about Space Camp is that from the start, it was pretty much always 50, 50 when it came to boys and girls. There was pretty good gender parity from the early days on with Space Camp. And over time Space Camp has just been committed to becoming more accessible, and more diverse, and having more offerings for all kinds of kids with different needs.

**Emily:**

There's been a lot of effort into opening Space Camp up for students who wouldn't necessarily be able to afford it otherwise through a lot of scholarship programs to help make sure that Space Camp is for everybody. And back to Matt's point, it sounds like this is an effort that has existed from day one. But I think as space has grown, not just in terms of human exploration and robotic exploration, but also international cooperation. There's so much other stuff that's been going on at Space Camp, including kind of expanding their camp curriculum to not just be focused on kids that are trying to be drawn in as astronauts, but also kids who want to be focused more on aviation, or more on robotics, or even cybersecurity. And I think what's even more exciting about it is that for some campers they can even receive college credits for certain parts of Space Camp.

*Music slowly fades in*

**Nick:**

900,000 campers have been to Space Camp since 1982 from all 50 States and 160 countries worldwide.

**Emily:**

Wow.

**Nick:**

And none of them, us.

**Matt:**

You're making us feel small and inconsequential.

**Nick:**

The under view effect.

**Matt:**

AirSpace is from the Smithsonian's National Air and Space Museum. You can follow us on Twitter or Instagram @airspacepod. AirSpace is produced by Katie Moyer and Jennifer Weingart. Mix by Tarek Fouda, distributed by PRX.

*Music up and out*