Preflight Interview: Brian Duffy

The STS-97 Crew Interviews with Brian Duffy, Commander:

Q: Talking with Commander Brian Duffy of STS-97. First off, why did you want to be an astronaut? Was there any particular event or person that inspired you?

A. Well, the idea of being an astronaut was something that was planted when I was maybe in 3rd grade or so, about 8 years old. I was one of all those kids that sat in front of the black-and-white televisions and watched the launches of the Mercury and Gemini flights. And about you know... my imagination would run wild, just like any child's imagination does. And I thought how great it would be to be able to do that. And I guess that was the seed that was planted. I had the opportunity to do it. So, I think the seed was planted very young. And I wasn't until actually I had finished Test Pilot School and was flying as a test pilot in the Air Force... the opportunity arose to be able to apply for the program here to fly space shuttles. And it was an opportunity I just couldn't pass up.

Well, tell me a little bit about how that opportunity came to pass. Tell us a little bit about your background in your education and career, and just tell me how you got here.

Getting here to this seat was as you know, of course it's been an interesting road in my career. I grew up in a small town south of Philadelphia, Pennsylvania. Went to school there, graduated from there. I grew up and went to high school there, and not far from there, there was a naval air station. And South Weymouth Naval Air Station. And I used to watch the airplanes fly around there all the time. And I thought it would be an interesting you know, something I would like to do. It would be something that would be neat to go fly fighters and airplanes and that sort of thing. And I went down to the U.S. Air Academy for college and was accepted to go there. And while I was there at the Academy, I majored in mathematics, played baseball, and had a good time. But probably the most important thing I did was I got a chance to fly in a number of different airplanes, one of them being the T-37 and the T-38. And I fell in love with the T-38. It was a hot ship, a hundred feet off the ground, going 600 miles an hour made me realize that was something I really wanted to do. So, graduating from the Air Force Academy, I went to Vance Air Force Base in Enid, OK to fighters out of pilot training and was fortunate to be able to do that. Got a T-38 assignment. I flew a couple of assignments in the F-15, and I had the opportunity to go to Test Pilot School. And I was fortunate to do that, and I was flying F-15 flight tests at Eglin Air Force Base up in the panhandle of Florida when, back in 1985, when a call for applications went out and they were looking for people to apply for the shuttle. And I was surprised to find out, quite frankly, that I had qualified and filled out the forms and sent them in and got an interview and was selected. And I thought, you know, I couldn't let that 8-year-old kid down so many years ago down to find out that I was qualified to apply and not do it. And so I did that, and the rest is history with myself? So, I applied and I very, very fortunate to be here.

All right. This flight begins a series of missions involving the largest and most critical hardware for the International Space Station. Can you give us an overview of the importance of the assembly sequence and why this flight is crucial to enabling the rest of the missions to follow in sequence.

Well, you know, the truth is, every single mission in the sequence of building the space station is equally important. And regardless of what piece of hardware we are bringing up, whether it's a module or whether it's an arm, or if you're bringing up crewmembers or if you're bringing up supplies or you're bringing back stuff—all of those missions are required. We're in a stretch here where we do, in fact, need a series of serial successes, where every mission has to work because the hardware we are bringing up is required for the next one. And if we had fouled been but on my crew nor on all of the other crews that are assigned and training right now, So, we understand the importance of what we're doing. We understand that, you know, we're following on the other flights. We'll be bringing up the Z1 Truss, which is an important piece of the space station structure and also adding Pressurized Mating Adapter-3, or PMA-3 to one of the ports of the Node. And the reason that's important is because on the flight that follows us, the STS-98 crew is going to be flying the U.S. Laboratory and docks to it because he's not going to dock to the port that we dock to. So, that's just an example of how intertwined these flights are and how important one is to the next.

What are and what have been the biggest challenges for you and your crewmates as you trained for this particular flight?

Well, we've had some challenges. We've been training for quite a while now for this. And, one of the challenges you might equate to training for a race or something or running a marathon, for example, you want to, you know, you want to be able to peak for that event and not to peak too soon. We wanted to, but we wanted to make sure that we were adequately prepared and ready to go when the time came. So, we've been training for quite a long time. We've been at it for a long time, however, has been just to good use in that we've not only been involved in getting ready, getting ready and training for the things that we're going to do, but we actually had a chance to get involved in pulling the flight together and planning how things were going to get done and how we're going to do them. So, it's been a very interesting that we've taken advantage of here in the last couple of years while we're getting ready for this mission.

Now after you rendezvous and dock with the ISS, your number one priority is the installation of the Z1 Truss that you mentioned earlier. Can you tell us how the Z1 Truss is some detail. How big is it, and what does it do for the International Space Station now and in the years to come?

Well, let's see, describing the Z1 Truss. It's not a big, sexy piece of hardware. It's, it's, it's approximately 30 feet long, I think, and it's 14,000 pounds or so, it's going to be in the payload bay. It's important because it becomes the base that all the solar platforms are going to be, the four solar arrays that are going to be on the Z1 Truss. Node. And we'll have it there. And then the follow-on flight, uh, with Brent Jett and his crew, they will add the solar array on top of that. So, this is an important base. It also has a lot of other important equipment in it. It has the Control Moment Gyros, for example, that will be used to maneuver the station. It has some of the batteries that are going to be in the attitude that they want and put the solar arrays at the Sun for electrical power generation. It also has the S-band and Ku-band communications equipment that will be used for the Space Station, and on board. It has DC-to-DC converter units on board. It's a very well designed, very compact piece of structure. And what we're going to be doing with it, we'll, we'll, we'll, we'll, we'll be, we'll be, we're going off on vacation is, if you packed your trunk for vacation, you pack it very strategically. You don't waste a cubic inch. Well, that's the way the Z1's put together right now. We're going to carry it to dock with the station. Kotchi Wakata will use the robot arm and place it on the Node. We'll, we'll, we'll, we'll, we'll, we'll use the Robot Mechanism, which will be the first time that's have been done on orbit. That's attach the Z1 Truss on to the Node itself on to the space station. We'll, we'll, we'll, we'll, we'll, we'll, we'll, we'll, we'll, we'll, Chiaki and Bill Mcarthur, Jeff Wisoff and Mike Lopez-Alegria will go out in two teams of two and they will unpack the truck. It's the equivalent of, of, of,