

Descartes High School

interviews

Astronaut Daniel Burbank aboard the ISS

11:14 am — January 9, 2012

Frank: Oscar Radio 4 India Sierra copy Foxtrot 6 Kilo Romeo Kilo portable station. Over.

...

Frank: Oscar Radio 4 India Sierra copy Foxtrot 6 Kilo Romeo Kilo portable station for ARISS contact with Montigny-le-Bretonneux City. Over.

...

Frank: Oscar Radio 4 India Sierra copy Foxtrot 6 Kilo Romeo Kilo portable station for ARISS contact with Descartes School. Over.

...

Frank: Oscar Radio 4 India Sierra copy Foxtrot 6 Kilo Romeo Kilo portable station for ARISS contact. Over.

Dan Burbank: ...KRK, this is OR4ISS. I copy. Over.

Frank: Hi Daniel, hello to everybody and happy new year for 2012 aboard the space station. My name is Frank. How do you copy? Over.

Dan: I copy you loud and clear. This is Dan, Dan Burbank and the signal here is strong.

Frank: Roger, Daniel. Many thanks for this special event. We have a crowd of about 300 people listening to you, students, of course, but also teachers and VIPs. We have TV and radio reporting the event and for the first time in France, we have an astronaut with us, Léopold Eyhardt, from STS122 mission, is behind me. How do you copy? Over.

Dan Burbank: I copy you loud and clear and I'm glad that we've got so much interest in so many kids and the VIPs to support today's event. I'm ready to answer the questions.

Frank: Roger, Roger. Our guest operator is Jeoffray, a student from Descartes High School who just got his radio license before this contact. He's going to speak on behalf of all students. Are you ready for the first question, Dan? Over.

Dan Burbank: Absolutely, I am ready.

Jeoffray : Hello, Jeoffray speaking. **Question 1 by Valentin:** How did you feel during your first day in Space?

Dan: My first day in space was in September of 2000 aboard a space shuttle mission and it was absolutely wonderful. My second day in space and my second trip to space was equally so, when I launched about a month and a half ago to return to space station exactly the same. This is from a physical standpoint, I love flying in space, I love flying in space from the minute the rocket engines start. This is really one of my lifelong dreams. Over.

Jeoffray : Question 2 by Mathilde: Was becoming an astronaut a child's dream? Did someone inspire you, like a role model? Over.

Dan: I have to say as a child when I watched the Apollo Vision shortly before my 8th birthday, that is what got me interested in space and got me interested in astronomy, but I did not at that age and not until I was already an adult actually think about becoming an astronaut. To me it didn't seem like something possible and I think that it's an important lesson for kids today, it is to dream big and to see those dreams to fruition, if at all possible, and for me it was not until I was already a pilot in the coastguard and a colleague of mine became, you know, was selected for the national program that I thought about doing this. Over.

Jeffray : Question 3 by Marc-Aurel: How do you cope with cultural differences between Astronauts? Over.

Dan: I have never seen it being an issue with cultural differences between astronauts aboard space stations, nor during our training. Everybody that does this does it because of a real love for space flight, a love for exploration and the cultural differences in our opinion I think are such a minor part, we are all humans, we are all human space explorers and we love doing this. Over.

Jeffray : Thanks. **Question 4 by Lucas:** Have you ever done funny experiments in space? Could you give us some examples? Over.

Dan: One of the experiments that we did just yesterday you know, not official by any means but you can, through conservation of angular momentum, you can change the attitude of the orientation that you are in relative to an earthal space, relative to the surrounding structure in the space station. For example, if I should stand,... if I just float in the volume... open volume of the space station, and if I pedal my legs like I would if I were on a bicycle, and if I pedal those legs forward, my body will go backwards, if I pedal my legs backwards, my body will go forward. I can do the same thing with my legs rotating counter clockwise beneath me and my upper body will turn clockwise. You can do it with your arms or your legs, it looks very funny but it is and has perhaps interesting implications for how we might control attitude in the open volume of space. Over.

Jeffray : Question 5 by Jeffray: We have taken pictures of the ISS with a telescope. Have you also got this kind of equipment and do you have time to observe the stars? Over.

Dan: In my opinion, we don't have enough time to observe the stars aboard space stations. Our days are very busy and the end of the day is when we have a chance to do that. We have wonderful cameras with wonderful long lenses on the order of 1,600 millimeters and we can also ... our cameras allow us to take relatively fast exposures, even in deep space, so we're taking pictures of comets, of stars and all kinds of other things. Myself, I am an amateur astronomer. I have telescopes on that I use a lot on planet earth. I've never actually imaged the space station and have not tried to do that, but I've done, ... I've imaged stars, galaxies and nebula before. Over.

Jeffray : Thanks. **Question 6 by Camille:** Have you already experienced extravehicular activity? Over.

Dan: Yes, I have, and this was a couple of years ago on SPS 115. We did one... I did one of the space walks to help build the International Space Station electrical power system, to put some of the large solar rays that we have on the US segment of space station and as much fun as space flight is relative to life on earth, a spacewalk is that much more fun than even working aboard space station. To see the earth independent of anything around you, to see the earth through your very thin polycarbonate lens of the spacesuit visors is just breathtaking, spectacular. Over.

Jeffray : Question 7 by Ines: Does your water recovery system filter all the waste water and is it really efficient? Over.

Dan: Our water recovery system filters probably on the order of about 70% of the waste water and it greatly reduces our need to re-supply water from the ground. That is important if we want to go to Mars, if we want to go to the Moon and stay there, we have to be able to use almost everything that we have.

Jeoffray : Question 8 by Valentin: Have you already got the first results of the alpha magnetic spectrometer experiment? Over.

Dan: We have not yet got, that I know of, preliminary results from the alpha magnetic spectrometer. It has already discovered and captured millions, I believe at this point, of both matter and (?) magnetic particles, so that data is still being analyzed in the ground and it will be. This is a long term experiment to actually find the things of the information now that we want about dark matter and dark energy...It is gonna take a lot of time and a lot of computational work.

Jeoffray : Thanks. **Question 9 by Marie:** What has been the most exciting experiment for you so far? Over.

Dan: I think one of the most exciting experiment that has a tremendous amount of potential for life on earth is the experiment that we are doing is a combustion integrative rack. This rack allows us to suspend small droplets of very different fuels in all different kinds of environments in very precisely study, in a controlled fashion, absent gravity, absent the gravity induce convection. Exactly how the fuel is combusted and through doing that, we can improve the fuel efficiency of cars on earth and electrical power generation plants, and we can also improve flight safety for a space environment, design better fuel systems, and better fire suppression systems for spacecrafts and future spacecrafts.

Frank: Roger. Many thanks Dan. This Frank back. Only 1 minute left. This is a great day for all of us. It concludes more than a year of close collaboration between school and our radio club. We're quite happy to have made it. Before ending and for some seconds, I give the microphone to Léopold Eyhardt. Over.

Dan: We have just about a minute left. Go ahead. Over.

Léopold Eyhardt: Hello Dan, this is Léopold Eyhardt. How are you doing?

Dan: I'm doing just great. Absolutely having a wonderful time up here. Very busy but very much enjoying it. Over.

Léopold Eyhardt: I see that we have only a few seconds left here. I just wanted to tell you that everybody is really excited to talk to you, so I wanted to wish you first a happy new year ...

Dan: Okay, well, fantastic. It was great answering the questions and spending a little time with you and I think all the work that folks do on ground to help make this possible is very important, and I think it's very important to get the message out that international space exploration important program like this is critical for the future of the humanity.

Frank: Okay, thanks Dan. Thanks a lot for your work in space and all the dreams induced. Now good luck in space Daniel. All the best to the crew. Oscar Radio 4 India Sierra Sierra. That was Florida 6 Kilo Romeo Kilo portable station together with the Descartes High School of Montigny-le-Bretonneux. Merci, à bientôt Dan. Over.

Dan: F6KRR, this is OR4ISS. Thank you very much for the QSO. Very much enjoyed spending time with you. 73, this is OR4ISS clear.

Frank: Okay 73, bye bye.

Clap, clap...