

NASA JOHNSON SPACE CENTER ORAL HISTORY PROJECT

EDITED ORAL HISTORY TRANSCRIPT 10

SHANNON W. LUCID
INTERVIEWED BY JENNIFER ROSS-NAZZAL
HOUSTON, TEXAS – AUGUST 26, 2021

ROSS-NAZZAL: Today is August 26th, 2021. This interview with Shannon Lucid is being conducted in Houston, Texas, for the JSC Oral History Project. The interviewer is Jennifer Ross-Nazzal. Thank you again for inviting me over during these interesting times. I've read that that you thought flying on Mir would be a real adventure, and I wonder if you would explain why you thought that at the time.

LUCID: Because it was, and one reason I really wanted to fly on Mir was because I had flown on the Shuttle up to two weeks, and I'd always really really enjoyed it. Then I wondered, "What would it be like for a longer time?" It just had the feel of an expedition; it had the feel of exploration. I was very, very curious as to what it would be like to be in space for a long period of time. Would I enjoy it over the whole time, or what would happen?

ROSS-NAZZAL: Having been in the Astronaut Office, were you getting regular feedback from Norm [Norman E. Thagard] and Bonnie [J. Dunbar] about conditions?

LUCID: You heard bits and pieces, but it wasn't much. Then John [E. Blaha] and I were in Star City and Norm was on Mir, so we just heard a little bit of what was going on through the flight docs because they were the ones that were communicating with Norm. We asked questions of our instructors in Star City, because here at JSC, the instructors always are involved in any

malfunctions, or anything that's going on, and they're involved in the flight, but there they had nothing to do with the flight.

John and I were looking forward to Norm coming home. We obviously wanted to talk to him before we flew because you have crew handovers and interchanges after a Shuttle flight. John and I were at JSC when Norm came back to JSC because we were doing that week or so of science training with the Russians here, which is a whole other story. We asked the person in charge of our schedule, "Hey, can you schedule some time for us to talk to Norm?"

"Oh, no, no, no, no, he's so busy; you're so busy." There was no time for any interchange. John and I thought that was absolutely unbelievable because Norm was just back. But not to worry! Now Norm has a wonderful, wonderful wife. Norm's wife Kirby, it was so wonderful that she was there in Star City because she could cook like you wouldn't believe. She could make the most fantastic meals, and it was the highlight of being in Star City when she would invite us over for supper; it was awesome.

Norm and his wife invited Mike and me and Brenda and John over to their house for supper, so we went. That's why we were able to talk to him, why we were able to find out what had really happened with Norm on Mir. It was a wonderful, wonderful debrief. But it was done on our own and because Kirby was willing to cook us such a wonderful supper. That's how things were.

Then John and I went back to Russia. I heard from a very reliable source that after Norm was here in Houston and after his debriefs, no one particularly talked to him. Norm was just sitting in the office wanting to tell people what was going on. He was just isolated. This person I know would stop by and talk to him. He really wasn't given a job. Soon after that he left.

ROSS-NAZZAL: Did you participate in any sort of cultural training before you went over to Star City?

LUCID: I need to think about that. I don't think so. We had a little bit of cultural training before we flew with Sultan [bin Salman Al Saud]. They had an oil company come in for a day and talk to us. But I don't really remember. But I'd read *Crime and Punishment* [by Fyodor Mikhailovich Dostoyevsky], so I figured I knew about Russian culture. I wasn't concerned.

ROSS-NAZZAL: I was curious about that.

LUCID: If there was any, it didn't make a big impression on me. They might have in later times with later increments. There might have been. But then who knew about the culture anyway? It was just after the end of the Cold War.

ROSS-NAZZAL: You mentioned you had bought a warm coat. Besides clothing and a warm coat, and personal items that you might use, what else did you bring with you to Russia when you went to train?

LUCID: You asked the last time—you'd have to check this—maybe we were sent over as permanent change of station. There's some kind of a term. I'm not sure. However we were sent over, we were allowed to have X amount of stuff shipped over to Russia. A week or so before I left, Mike and I went to Sam's Club. We just loaded up one of their big carts with anything that

looked like it might be good to eat because we didn't really have a handle on where we were going to get food or what we could have.

So I shipped over food, in cans. I shipped over some shampoo, but it took a long time before it showed up. But eventually it showed up. It was a good thing that we'd shipped it because food was hard to come by. I know it sounds funny, but there wasn't a whole lot of variety that you could get. Now they had a general store there in Star City that sometimes had things and sometimes didn't. It improved a lot over the years, but when we were there, there wasn't much for sale. The one thing you could get was bread, but the problem that we had was that John and I started our training at 8:00 in the morning and that's when the store opened. We were over on the working side of Star City until lunch, which I think was at 1:00, then we went back to our apartments for an hour. We couldn't go to the general store and pick up bread because it was closed. By the time we finished our training at the end of the day it was also closed. So you see, it was a little difficult.

Now I went into Moscow every weekend, and it was a real adventure because you'd walk around and you'd see people selling things on the street. I remember one time in February I saw somebody selling some strawberries because they were smuggling them in from other countries. I bought them. Oh, it was such a treat. It broke the routine of having my creamed corn and lima beans. But the flight docs advised us not to buy meat at any of the markets that we saw.

When Michael, my son, came over for Christmas, he came over a couple days before the rest of the family. I said, "What would you like for supper?"

He said, "Hmm. I think maybe I'd like some stew."

I said, "Maybe we can do that." So, we spent an hour running around. I found some cabbage, potatoes, and carrots, and it was in the cold and the snow. By the time we got back I

said, “Okay, now we can cook our cabbage,” because cabbage and carrots and potatoes you could get.

He said, “Wow, that was a lot of work just for this measly supper.”

I said, “Welcome to Russia.”

But you could stop by the embassy there in Moscow, they had a little store there, so you could buy some things there because they shipped directly from the States.

ROSS-NAZZAL: How did you get into Moscow from Star City?

LUCID: Oh, it was easy, I just walked out the gate at Star City. You just walked down the path to the train track that ran through there, and the train came. You didn’t even have to know the times, because every so often there’d be a train coming in, and I’d just get on the train, and I’d go into Moscow. Right at the Moscow train station there was the metro, and you just hopped on the metro, and the world was yours. It was just amazing.

The one thing that I’ll have to say is I was super super impressed with the metros in Russia. Not only did they run on time. Of course they were super crowded. But the stations, I loved the stations because they all had their own personality and their own decorations. Oh, my goodness, they had one station dedicated to [Dmitri Ivanovich] Mendeleev, with all the chemical elements, the models there, and they had another station that was dedicated to [Anton P.] Chekhov I think; I forget which one, anyway some author. The other thing that really impressed me about Russia when I was going around exploring is when you’re on the metro every single person, it seemed like—of course that’s an exaggeration—but they all had books and they were sitting there reading. I thought, “Wow, any country that reads this much has a lot to say for it.”

Because how many times do you ever get on public transportation here and see somebody sit there for a long period of time reading? Everybody was reading. It was amazing.

I had a map of the metro, I had a map of Moscow, and I would just plan where I would go. I always went someplace different. I had a great time.

ROSS-NAZZAL: Was safety ever a concern for you?

LUCID: I wasn't concerned. Now I did hear that the flight docs wondered if I should be walking around. They thought it might not be the best thing to be doing, but they never told me that. You never asked. Back in those days I think I was the only one that explored Moscow on foot every weekend. I just loved it. NASA had a couple of vans there, and they had drivers. The people that worked in the NASA office at the Prophy went into Moscow, and you could ride the van. I know when John's wife Brenda went into Moscow, then of course she was there during the week, so she would ride into the embassy, and that's how she got money for me. If I had something picked up to eat, she would get stuff for me; she was extremely extremely helpful. We couldn't really do that because we were working.

Any mail that came came into the embassy, it had to be picked up there and then brought out. One time Kawai came to see me, so we were walking around Star City because I wanted to make sure that she stayed awake till dark because of the time change. We walked over to the Prophy because it was a Friday afternoon and I had asked to make sure that the DOR [Director of Operations-Russia] who went into Moscow picked up the mail, because they weren't very good about remembering that sometimes. We went in. It turned out the NASA van had gone into the embassy at least two or three times that day. Not once had they picked up the mail, so I was

really a little irate. I didn't understand why no one could pick up the mail. As we walked out, Kawai turned to me, and she'd only been in Star City three or four hours, and said, "The one thing that Star City needs is a good social worker." But I fixed the problem because then I went in and I talked to Natasha [Dorishenko], who was absolutely wonderful—she was Russian, but she was working for NASA there. You couldn't have asked for anybody that was better, that was a better friend, that helped you navigate everything. I said, "Look, I'm signing up for the van," because they had a place you could sign up. I said, "Sign up this time, this time, this time." So, I signed up every Friday first thing in the morning.

She said, "Shannon, aren't you in class?"

I said, "I'm entitled to the van. I'm signing the van up, so it'll go into Moscow and pick up the mail." She just laughed and laughed.

She said, "Shannon, I'll make sure that the mail is picked up." And she did.

ROSS-NAZZAL: That raises another question. Did you develop a close group of friends when you were in Russia? Obviously, John and Brenda. But you mentioned Natasha. Were there other folks that you became friends with and did things with?

LUCID: What you don't understand is we were pretty isolated. John and I went across through the gate into the working part of Star City every day. We were there, the two of us in a room, with the instructor, day after day after day.

ROSS-NAZZAL: There was only one instructor?

LUCID: At a time. You didn't really interact with anybody else. Then you'd go home and you'd try to figure out what it was that had been talked about that day, and then just repeat it the next day. Now you did interact a little bit with the people in the Prophecy. I knew the flight docs that were there. They were very, very interested in making sure that things were going okay, but they were working with Norm. They were totally stressed out too.

So no, there was not a whole lot of socialization. Like I said, the good times were when Kirby invited us over for supper. Those were the high points. A lot of times she invited the flight docs over too and the NASA people there. Obviously, you got to know the Russians that were working in the NASA office there, and they spoke very good English. They were superb; they were absolutely superb.

ROSS-NAZZAL: What about church? I know church is important to you. What was that like when you were over there?

LUCID: Oh, it was great. Before I left to go to Russia—and I'd already mentioned Travis [R.] Brice, he was such an asset trying to manage what was going on. He was a good friend of Norm's, so Norm had had some contact with him and that had helped. So Travis was doing his very best to help John and me and the whole bit. He was a real asset, most probably NASA didn't realize what a great asset he was.

Travis took Russian lessons with us, and he worked to ease the way with the Russians that came over here to NASA, the ones that were flying on the Shuttle. He was in charge of all that. Before we left, we were talking. We were talking about going to Russia, so then I asked

him, “Well, Travis, have you any inkling where I could go to church on Sunday? I really would like to go to church.”

He said, “Shannon, you must be dreaming. You’re going to Russia.”

ROSS-NAZZAL: That’s why I was wondering.

LUCID: We laughed. But then it was really funny, because in the first week or two when I was there—there’s a little English paper published in Russia, so when somebody went into the embassy, they would pick it up if one was laying around. You’d get them and read it, because it had a little bit of news in there and some ads. In the one I saw, it just said, “Come, and you can worship with a group of people.” It was in some movie theater.

I thought, “Oh, okay, I’ll try that.” It worked out super. I figured out where it was, and I rode the metro, then walked a little bit. There was this huge cinema. I would walk in, go upstairs, and there was a group of people. There were some people from the embassy. They had an American person that was preaching; I think he was a Baptist. The Baptists had sent him over there. He was doing other things, but then he would preach on a Sunday.

But then what was so cool, there were all these international people. There were a lot of people from Africa because they had gotten stuck there in Russia. There were students. The Russians had paid for them to come to a Russian university, and then of course when everything fell apart they were stranded there. They couldn’t get home; they didn’t have any money and they didn’t have support in Russia. It was really bad. But anyway, it was so cool. They wanted to learn English, because all these people were there. I say all these people, it wasn’t a huge crowd. But the majority of the people were internationals from different countries, like the

international students that had gotten stranded there. It was just really, really nice. I looked forward to going to church all week.

By the time I left my apartment and rode the train in and got there, I think it was a two-hour trip. But the trains worked on time, and I could walk out and walk in. So, I would go to church in this movie theater, but you had to get right out because they were going to show a movie later in the afternoon. Then I'd always plan someplace to go see in Moscow. I would stop by the marketplace or the stalls on the street to pick up stuff. I had a bag that I carried with me, and then when my bag got full I knew it was time to head back to the train station and do the reverse trip.

It was so nice. It'd be in the late winter evening because I did try to get back to Star City before dark. You'd be walking. There was an asphalt path that led from the train station to the gate you walked through in Star City, and there'd be a lot of people on it because they'd gotten off the train and they were coming back. It was so nice to walk because it was in the forest and the trees. After the busy bustle of Moscow then you felt like you had come back to the serenity of nature there for a little bit. It was just really cool.

The one really cool thing in the spring every time as the snow began to melt, every Sunday it was like whoa, the world is really changing, because spring was just popping up. You would hear different birds there at the train station. One time I heard a cuckoo bird. It was really going cuckoo, and it was the first time I'd ever heard one, and it was just really cool. I just had a good time.

ROSS-NAZZAL: Was there anyplace in particular that you looked forward to seeing that you went to multiple times when you were sightseeing in Moscow?

LUCID: Oh, I was only there for a year, I didn't have time to go to multiple places. Sometimes it took me several weeks to find what I was hunting for.

John and I, obviously, we were having Russian language lessons, but we were being taught technical Russian. Technical Russian is different than everyday language. It's interesting that the engineering technical language is not what you would really use in talking to people. John and I realized right off that we didn't want to spend—well, at that time we were going to spend four months on Mir—four months with our Russian crewmates talking about ways of producing oxygen. We thought we'd like to have a little broader vocabulary.

We tried to get NASA to get a tutor that would come in and talk to us in the evening. Of course that wasn't approved, so John and I paid for one. We found this wonderful, wonderful woman. Everybody wanted to make a little money, so she came over to John's apartment one night a week, I think just one night a week, and then she came over to my apartment. We just talked. Talking is a loose term, but she helped us converse in everyday conversation, and she was so wonderful.

It was a different culture. There I was in my apartment, and I would have on sweatpants and a top, because it was cold, and she would come through the snow to my door and she'd have her heels and her hose, totally dressed up. The Russian women dress like professionals. I felt a little bad. I wanted her to know that she could wear sweatpants, but I don't think that they had any.

She came in, and we just had such a nice time. She came in, and I had a nice apartment there; it was a one-bedroom. She walked in, looked around, and said, "You live here all by yourself?"

I said, “Well, yes.” I hadn’t thought about it.

Several times she commented, “You’re the only one in this huge apartment?” Then later when I found out how a lot of other people were living in Star City, I realized why it was such a shock to her. But anyway, she was very, very helpful.

She was interested in my trips into Moscow, so we could talk about that, and she wanted to know what I did. I said, “Well, I went to church.” She was interested. She said she had heard in the Bible there were Ten Commandments. I said, “Oh yes, there are.” She said her grandmother had mentioned that to her.

She said, “Well, what are they?” So, then we discussed that a little bit. She said, “Oh, now that would be perfect. I need to write those down, and I can hang them up in my room in school.”

Then she wanted to know—she said, “Well, could I go to church with you?”

I said, “Sure, any Sunday. We’ll just take the train and go in.”

Then she wanted to know, “What do you see in the church?”

I said, “Well, there’s just the curtain in front. It’s just a stage and a curtain in front of the stage.”

But she said, “What do you see, what figures?” Then it dawned on me she was talking about icons like you would see in the Russian church. When she realized that there was nothing to see in the church I was attending, then she was no longer interested in going. I thought that was just so interesting because that was very different in our cultures.

John and I paid her every week to come in. She was so happy. I know she hid it under her mattress because no one would put money in a bank. I think she was saving up for a mink coat because you needed to buy things before the inflation took it all. It was very interesting.

ROSS-NAZZAL: You mentioned that you lived in this nice apartment relative to what other Russians were living in. Would you talk about what the conditions were for other people in Star City that you learned about? I was curious about that. I've heard from other people who stayed in the Propy that the conditions were not very nice.

LUCID: Oh, the Propy was great. I don't understand why anybody would complain about being in the Propy. Now our apartment was a little nicer because we had a stove so that you could cook something. I know when the flight docs got over to the Propy they didn't have any way to cook anything, so they would have a rice cooker; they ate a lot of rice. I never saw anything wrong with the Propy. But I admit the apartments that John and I had were nicer, because they were real apartments. The Propy is sort of like living in a dorm.

ROSS-NAZZAL: Is that where Russians would live as well, or did they live elsewhere in Star City?

LUCID: Oh, no. The flight docs—NASA had a floor they were paying money to rent. They had an office. Then the NASA people that were living there, they had like a room, like a little dorm room.

ROSS-NAZZAL: I've read that your apartment was cold, and John's was extremely hot. Was that the case?

LUCID: Yes. You didn't have control over the heat. It was all controlled in a central location. Over there in Star City they had a certain time of the year they turned the heat on and a certain time that they turned it off, and I can remember the spring when we were there, it was so cold, and they didn't turn the heat on. You would go to class and you'd have your gloves on and your two or three pairs of socks and your winter boots and you'd just sit there and just freeze. It was so cold.

In August they turned off the hot water so they could clean the pipes. So, you didn't have hot water. You still had a shower, but you didn't have hot water. I know Kawai showed up in August, her first trip to Russia, and I forgot to tell her. She took a shower, and then she was so aghast there was no hot water and said any mother that really cared for her daughter would tell her not to come visit in August. I said, "Well, it never occurred to me."

But my apartment was very, very cold; John's was very, very hot. It was so hot that they opened up the doors that went to the outside to cool it off. I took one of the little space heaters that NASA had gotten for people in the Prophecy over to my apartment so I could huddle around it, but you had to be careful because you could blow the fuses. After I blew a fuse the first time, I saw how they reset it in the hall, so any time I blew a fuse after that I just reset it myself and didn't have to call anybody.

One night I was sitting there, and I was all huddled up trying to do what I needed to do, and all of a sudden, I heard this huge pop. Actually, I thought that it was a gun that had gone off outside. I went carefully to go look out the window. When I'd gone into the embassy I'd gotten six Diet Cokes that Sunday, so they were sitting there, and they'd frozen. One of them had burst, and of course I didn't have time to clean anything up that night, so I just set the frozen can that had burst in the sink, and the next morning it was still frozen.

ROSS-NAZZAL: I don't do well with cold, so I don't think I would have done well there.

LUCID: That's interesting, because when I was growing up in Oklahoma I always thought I didn't like the cold, because the cold would come through the house. So then I was thinking, "Oh, how am I going to do in Russia in the cold?" But the amazing thing was that I had gotten an appropriate jacket. It was down-filled and supposed to be warm well below zero. I had gotten good heavy boots, good heavy wool socks, and I had long underwear to keep underneath my jeans, and I had long underwear to put underneath my T-shirt, so every time I went out, I was very well dressed.

I found I loved the winter. Then I heard that the Russians, winter was their favorite time. It dawned on me the reason I'm enjoying this so much is because I'm appropriately dressed. Back when I was growing up in Oklahoma, I was never appropriately dressed for the cold. We didn't have a lot of money, so we didn't have a lot of different coats. It just made a huge difference when you were appropriately dressed. When I was outside, I was always well dressed so I never felt all that cold. I had a great time.

I realized one reason why winter was so much nicer than spring was because when spring came and there was the thaw and then all of a sudden everything was in bloom, but then you saw all the trash that was everywhere. What hit me when I first was there and walking through the woods and seeing everything, it was like the States back in the '50s. When I was growing up and you'd drive down the highway, you just threw stuff out the window, and there was a lot of trash along the sides of the roads. That's the way it struck me as I was walking through the paths in the woods in Russia. The snow covered it all up, and it was all pristine and pure.

ROSS-NAZZAL: We talked a little bit about training but not a lot. I wondered if you would talk about that. Obviously, it was all in Russian. But what sort of training did you participate in? Were there female trainers? What systems were you learning about?

LUCID: No, everybody was male. As a matter of fact, you had to be careful where you drank water because every building didn't have a female restroom. I don't know, it's getting a little vague now, but I do know that I had to walk a fair ways to get to a female restroom but John wasn't that inconvenienced.

Star City is divided into two parts: the living part, there's a wall, and then the working part. We'd always go through the gate where the guard was checking the IDs and go to work. When we first got there, the mornings were Russian language, and the Russians had hired two people. They were just absolutely super from, I think, the University of Moscow. They were Russian instructors, and they knew good English. They came, and they were teaching us, and I felt sorry for them. I could just see the despair in their faces as they were trying to teach John and me Russian and thinking, "Oh my goodness, these are the students we have to teach?" but they didn't give up. They were so dedicated. They were just super, and we just thoroughly enjoyed going to their class.

Then halfway through the morning we would go down to the tearoom in the building where some of the Russians and sometimes a few cosmonauts would drift in and out. We had tea and little biscuits that were laying out there. John and I would converse, and I use that term loosely, with whatever Russian came through. Sometimes Claudie [Haigneré] was there. She was the French person that was training there. We would talk Russian with her because her

Russian was really good. But then Europeans were good at languages. Her English was so good. Her Russian was so good. I assume her French was good. How would I know?

We had a good time sitting there, and you could just see they were very indulgent letting John and me talk. We talked up a storm. I doubt anybody knew what we were saying, but we had a lot to say. Then we'd go back to class, and we'd have lunch and then we'd be back to some kind of training. It was generally John and I sitting in a classroom with some Russian, the instructor, talking Russian. We never heard a word of instruction in English. Talking, just spewing out all this Russian with all these diagrams. John and I would sit there and try to figure out what on Earth was going on.

I would try to make little diagrams when they would put things on the board. The instructors we really appreciated were ones that would write words on the board, because then we could look them up that night in our dictionary. I would try to put down the sounds I heard, and then that night I would try to make these sounds into words and try to look in the dictionary to see what on Earth they could possibly be. It was gruesome trying to figure out what on Earth people were talking about. It was totally in Russian.

ROSS-NAZZAL: Why didn't NASA provide translators, or why didn't Russia provide translators? Do you have any idea?

LUCID: Because it was Russian, and because we had already gone out to Monterey and had what, three months of Russian. We were astronauts. I have no idea. It was not ideal, and it was really difficult. You had to figure out what they were talking about and say, "Hmm, this is the

way systems work, so they must mean that this goes this way.” You’re piecing things together from what you figured how things ought to work.

ROSS-NAZZAL: Your Shuttle background.

LUCID: Yes, and just common sense. But it was hard.

ROSS-NAZZAL: It sounds very different from the Shuttle training that you would take here.

LUCID: Oh, it was totally different; it was totally different. What I thought was so interesting was when Norm was up there and the flight docs would say, “Well, there was an anomaly in such and such a system,” if we were having an instruction in that system we would ask the instructor. We would say, “What about this that happened on Mir?” They had no connection with what was going on on Mir; they had no idea. They knew what they knew, and that was what they knew.

ROSS-NAZZAL: I had read in *Dragonfly: [NASA and the Crisis aboard Mir]* by Bryan Burrough, and we talked about this off the recorder last time, that the trainers were nervous that you, a female astronaut, were going to be flying on Mir. I wonder if you would talk about that.

LUCID: I think when it got close to flight it dawned on some of the people that oh, Shannon is actually going to go up. There were several times that I was asked when we were doing personal

equipment type things, and I was asked several times, “Do you think you’ll have a problem using the Russian WCS [waste collection system]?”

I said, “No, it’s going to be no problem.”

“Do you need anything special?”

“I don’t need anything special; it’s all just great.” They were really, really nice. Yelena [V. Kondakova] had been up with Norm. She was the longest-flying female; she’d been there on Mir for quite a long time. She had come back. One day they brought her in—I hadn’t expected it—sat me down and said, “Okay, you can ask Yelena any kind of questions that you want to ask.” We talked just a little bit, and she was just very, very nice.

ROSS-NAZZAL: They were accommodating.

LUCID: Oh, yes. They were so happy when I told them I didn’t need a special urinal built; I could use just exactly what they had.

ROSS-NAZZAL: What did you ask Yelena about when you had a chance to talk with her?

LUCID: She was talking in Russian, so I was trying to talk in Russian. I had very limited things that I could say, but she was very nice. I’d flown on the Shuttle, and she’d flown on Mir. There was nothing unique, but it was a very nice gesture from the Russians, and she was very accommodating.

ROSS-NAZZAL: I have read in Bonnie's transcript about how many of the Russian women were not treated equally. Did you get that sense? How did they treat you?

LUCID: Oh yes. The Russian women. You had read all these things about the world wars and how the women had done it. Actually, the women ran Russia because all the men were getting killed. But then as soon as the men started coming back then the women were put in their place. I remember I had a long discussion with one of the guys. I say long discussion. You're just putting pieces together from Russian. It was long but—and his wife was a doctor, so I was asking if she worked. No, she was at home. Then I was trying to say, "Why isn't she working?" His answer made a lot of sense. He said, "Somebody's got to go find the food and find what we need to live."

So, I got the sense that a lot of the women spent a lot of their time surviving and trying to help the families to survive. Because when we first got there things were still very difficult for the average Russian. It took a lot of time. For us it took a lot of time to find food. It takes a lot of time when you don't have all the instant conveniences and Amazon. It takes a lot of time to survive. That was part of it.

Once when we were on Mir, Yuri [I. Onufriyenko] and Yury [Usachev] were asking me something, and I had heard this rumor that the Russians got paid extra to fly with a female. I asked them. They were asking—they wanted to know how much extra I got paid for flying on Mir, and I said, "Nothing, just my regular salary."

They said, "What? You're not getting anything extra?" Because the Russians had all these bonuses. They got paid for more EVAs [extravehicular activities], and they got paid for this and this.

It was just astounding to them. They said, “You’re not getting paid any extra?”

I said, “No, just my regular salary.”

Then they said, “But why are you here, if you’re not getting extra.” I tried to explain to them.

We were talking, and they were explaining to me how they got paid. I asked them. I said, “Well, are you getting paid extra because you’re flying with an old American woman?” They just looked at each other, laughed, and didn’t answer. They were so nice, but it was so funny.

ROSS-NAZZAL: That’s interesting. How do you think you were treated? Because you were American do you feel like there was any bias?

LUCID: Oh, no, John and I, we were Americans; Americans were funding the program. People were very nice, but they wanted to make sure the money flow continued. There were days when John and I would be—some days you just felt so overwhelmed. Once, we spent hours listening to a very nice instructor telling us all about the Japanese camera, because when the Japanese journalist had flown he had left his camera up there on Mir. There were all these conversations going on and on. Then he said that we were going to have a test over it. We had no idea what had gone on.

As we were leaving that day I said, “John, what if they send us home?”

He said, “Oh, Shannon, get real. There’s no one to take our place, and they want the money, so don’t stress over trying to learn this Japanese camera.”

ROSS-NAZZAL: Probably good advice.

LUCID: Oh yes, it was super good advice because it's true; there wasn't anybody else.

ROSS-NAZZAL: You mentioned having to take tests.

LUCID: Oh yes. That was horrible.

ROSS-NAZZAL: Would you talk about that? Written tests or oral?

LUCID: Oh, no, everything's oral; Russia is a very oral society. They would bring in people, I think they were from RSA [Russian Space Agency] and then the instructors. They would have all these guys sitting there in their uniforms, and they would ask us questions. Did John and I really understand everything they were asking? No. Then the instructors were there. Part of it was a test of the instructors. Were they really teaching us anything? It was extremely extremely stressful. They would have the big paper diagrams up there, so they would ask me a question, and you could sort of tell when they were finished because they'd stop talking. You think, "Okay, well, what do I know? Oh, I know about the way oxygen is prepared." I would talk about what I knew. I memorized some phrases, so I'd give an answer.

After you had a test, you always felt sort of down. John and I would just say to each other, "Well, who else do they have? We're it." But you did want to do well because the instructors were on the line. But it was extremely stressful.

Before NASA got involved with the Russians, you went through all your training. There were no tests for the astronauts. There were no qualification things that you had to do. Now on the T-38, obviously you flew with an instructor like you do with airplanes. But there was nothing. After we got involved with the Russian—all of a sudden NASA had all these different qualification tests that they had.

Oh, my goodness. I'd worked in Mission Control; I was a CapCom [capsule communicator] before I went to Russia. I came back, and I was going to work as a CapCom. Then I had to get qualified in this system, this system, this system. I thought, "What?" It was so different; it was amazing.

NASA looked, to me, like they copied from the Russians. I thought we had a system that had been working so well, and I thought maybe the Russians should be learning from us.

ROSS-NAZZAL: How did you find out you passed anything? Would they tell you? Or was it just you took the exam and just kept moving forward?

LUCID: Yes. I remember John and I standing outside the door once because we were told to leave the room. Then we came back, and they said it was good. It was a little strange.

ROSS-NAZZAL: Yes, it sounds like a very frustrating system.

LUCID: Yes, frustrating is a mild word.

ROSS-NAZZAL: How long were you and John over there training for Mir?

LUCID: A year.

ROSS-NAZZAL: A year. That must have been difficult. At what point did you train with Yuri and Yury?

LUCID: Very little. It's interesting how I met Yuri and Yury. John and I of course wanted to know who we were going to fly with. We were thinking about training with our crew like we do here. I had heard I was going to fly with Yuri and Yury, but I hadn't met them. But like I mentioned previously, we came over to the States for a week or two, to do payload training over here. I had heard that Yuri and Yury were going to be here too, and I hadn't met them yet.

I asked the person in charge of our schedule, our training. I said, "Look, I've never met Yuri and Yury. Before we start training, you think I could get introduced and we could talk a few minutes?" But that didn't happen. So, I showed up at training. There were the Russians, and there were John and me. We knew Vasily [V. Tsibliyev]. He was one of the cosmonauts that was here. Then by process of elimination I was thinking, "Hmm, those two must be Yuri and Yury."

We had a break. I went out to the Coke machine, and they were standing there by the Coke machine. They were smoking, and I went up, and I said, "Hi, I'm Shannon. Are you Yuri and Yury? Am I going to fly in space with you?"

They said, "That's right." So that's how we got to meet and know each other.

ROSS-NAZZAL: When you read *Dragonfly*—that book was not very popular at JSC, but I did wonder about some of the comments that were made because the author talked about you and your frustration because you weren't really sure what science you were going to be doing. I wondered if that was really the case since you talked about doing some payload science here.

LUCID: I had no idea what we were going to do with the science payload. You have to understand there was not communication between NASA and us. John and I were there on our own. At least that's what we felt like. There were people in the Prophecy and there were people that came through, but they were there doing their thing and we were over here doing our thing. There wasn't a lot of interaction.

I don't remember anything from JSC coming over. I told you last time we got set up on CompuServe. But we just used that for personal things because we paid for that ourselves. I know when we would walk back from our training at the end of every day, we had done nothing except listen to Russian all day long. On the way home then, John would vent a lot, and I would listen. He would start off saying, "I'm going to call and get somebody back in JSC. I'm going to get so and so and let them know what's really going on." By the time we'd got to the apartment he had calmed down. I was able to get him calmed down all except for one time, because I think he did call and vent one time. But there was really nothing that anybody could do. But no, we didn't really know what was going on with the payloads.

One night I was in my apartment. It was getting close to the time when I was going to come back, and we were going to launch. A person from NASA Headquarters PAO [Public Affairs Office] called me up, and my first thought was, "Hmm, no one can get hold of me except someone from PAO." That says it all. Anyway, she was really nice, and she called up. She said

there was beginning to get a little bit of press interest. She was wondering if I could do some interviews, because they wanted to know what I was going to do. I said, "Well, I was wondering that myself. If I know what I'm going to do, then I'm happy to call but I don't think it would look real good to NASA if I didn't know what I was going to do."

She said, "Really?" Then she said, "I'll find out and I'll call you back." The next week she called up and says, "Oh, good news, I know exactly what you're going to do."

I said, "Oh. Okay. What's that?"

She said, "You're in charge of Priroda." That was the new element, segment, that was coming up and being docked. She says, "You're in charge of Priroda, and you're going to activate that and get that all set up."

I said, "Really. That's news to me. I haven't heard about that." I said, "Not to be disputing, but I'd be willing to bet that is not what I'm going to do."

That was just really sort of funny. Sort of toward the end, we had a test over the timeline which we were going to be doing. There was this person in there, and they said something about when are you going to be doing this. They named some kind of experiment or something and then something else and something else.

I said, "I don't know." Then he got really outraged.

He said, "You work for NASA, and you don't know what NASA is going to be doing." He evidently had some information from someplace.

I said, "Nope. Don't know that."

They were communicating, but there was no overall communication. I know that when I came back, I ran into several people and they said, "Oh, we worked so hard on the procedures that you were going to do with the experiments on Mir." So, I thanked them, but what they

didn't realize is I never saw those procedures. Because as I understand what happened, NASA put together their procedures, and in the way that NASA does, they were good procedures. But then they were turned over to Russia. Then the Russians translated them into Russian and turned them into Russian style procedures, and Russian procedures are very different from U.S. procedures.

Then somebody, and I want to think it's a Russian. It had to have been a Russian that knew English and translated them into English. By the time we saw them it was, "Whoa, what is this?"

A perfect illustration, they had a model of SAMS [space acceleration measurement system]. Now I'd done SAMS before several times on the Shuttle, and all you did basically was to just turn the switch. There was this Russian instructor, and he said, "You have to turn the switch and hold it for." I think it was like 45 minutes. We said, "That's crazy. That's not what you need to do."

It took up the whole time, and it was just a difference of translation between for and to. Instead of turning it to 90 degrees he was convinced we had to hold it for 90 degrees. So that's just one small example.

Before I launched, I was thinking, "Hmm, well, it'll be a great time. I'll have a good time, and it doesn't make any difference really if I know what I'm going to do, because I've already shown on the Shuttle that I'm capable of doing things. If it doesn't work out it doesn't work out, but it'll all work out."

The reason why it worked out great was because of Bill [William H.] Gerstenmaier. Oh, my goodness. He worked so hard to make sure that I had some procedures whenever it was time to do the different experiments. I heard that he actually had gotten the experiments, like the

ground-based experiments, brought over to where he was in Mission Control, and he spent so much time going through the experiment, understanding it, and then getting it into a short procedure that he could uplink over the Russian system to get it to me. Everything he did was perfect, and I doubt if NASA ever rewarded him enough for all the work he put in for that. But he did an absolutely wonderful job.

It was really funny because one night on Mir, Yuri Onufriyenko asked me, he said, “Shannon, how many people do they have down there in NASA working for them?”

I said, “Well, there’s Bill, and there’s Gaylen [S. Johnson], the flight surgeon. I don’t know who else.” Now they had some other people there, but I didn’t really know about it. I said, “Why do you ask?”

He said, “Because it’s just amazing. Every night if you have a question Bill has an answer for you the next day.”

I thought that was about the highest compliment anybody could have paid Bill, because that was true. He did an outstanding job. Then Gaylen Johnson the flight doc, he did too. For a long time, it just seemed like it was us three, the three musketeers, and no one else knew what was going on. It was Gaylen, Bill, and me. We were a great team.

ROSS-NAZZAL: You mentioned the flight surgeons were there when you were in Russia. What were they doing while you were in training? What were they there for?

LUCID: They were there interfacing with the Russians. There were just a lot of meetings that they went to and making sure that the Russians approved of the Americans from a medical

standpoint. They were getting their procedures together and trying to understand what the Russians were doing. They just did a monumental job; it was amazing what they did.

Mike [Michael R.] Barratt, he was there; he was Norm's flight surgeon. He picked up a lot of Russian, so he just really really knew a lot. When Norm was on orbit, they were the people that interfaced with Norm. They were like the flight director. They took care of everything that was going back and forth with Norm. The little bit we heard about what was happening on Mir, when Norm was up there, came through the flight docs like when we would stop by the Prophecy and talk to Mike Barratt. He'd tell us what he knew, which wasn't a tremendous amount, but it was more than what we knew.

ROSS-NAZZAL: When you found out that you were actually approved or graduating, I don't know what the term is, did you have some sort of celebration? Or was there some sort of event marking this change?

LUCID: No. When John and I were certified there was a huge relief. I remember going back to my apartment and thinking, "Wow, it's done. We got done there." I thought it'd be so nice, maybe somebody from NASA will contact me and say that this happened. But there was nothing. But then I thought, "What difference does it make? I'm certified. I'm going to fly."

ROSS-NAZZAL: Right, you're going.

LUCID: I told Mike.

ROSS-NAZZAL: You called Mike.

LUCID: No, you couldn't really call. I sent him an e-mail.

ROSS-NAZZAL: Was he excited that you were done?

LUCID: He wouldn't have expected otherwise. He didn't understand.

ROSS-NAZZAL: The Russians are known for having these toasts and vodka, at least from some of the people we've talked to. Was that the case when you were over there? Did you partake in some of those events?

LUCID: Oh yes, the Russians, they do tons of vodka toasts. I'd never drunk alcohol.

ROSS-NAZZAL: That's what I wondered about. You don't seem like someone who drinks.

LUCID: No, that wasn't my thing. If you want to drink alcohol, you can have what you want. I don't understand why people want to get drunk. That's beyond my comprehension. Why do you want to lose control of what's going on? But I can understand if somebody likes some wine or whatever and they drink it. That's fine; I don't care.

But you have a certain number of calories you can have in your life, and why would I waste it on something to drink when I could have some good food? Actually, I'd never drunk any alcohol, so why would I change? I was with them for all the toasts, but I never drank it.

They knew, and it didn't bother them. I could have 7UP or water. Never seemed to me it made any difference. I know a lot of people claimed you had to out-Russian the Russians, but I didn't understand why. We expected the Russians to be Russians, and certainly they expected us to be Americans. I didn't have to turn into a Russian. I was happy to be who I was. I was happy to work with the Russians and understand their culture, but it didn't mean I had to do everything just like them. So, no. Vodka was a big deal, but I never drank, and it didn't seem to bother anybody. But I didn't make a big deal out of it. You know what I mean.

ROSS-NAZZAL: I was curious about that because I know some people had talked about signing agreements or events and occasions where there was a lot of vodka being served.

LUCID: There was a lot of vodka. But live and let live.

ROSS-NAZZAL: That spawned another question just based on what you were talking about. You went to go see Yuri and Yury launch. There are a lot of traditions associated with that. Were you involved with them as they made their way to the launchpad and some of the various traditions that they have? Did you participate in that? Or were you mainly a spectator?

LUCID: Oh, no, John and I were there for the launch when Yuri and Yury launched. On launch morning they got on the bus and their families weren't on the bus, but the videos of the families were there. Once again it just seemed like the whole time we were there, whenever we were doing some event that was a little different, John and I were just a little underdressed compared to the Russians, because they always dress a little more professionally. I felt once again because

I just had my slacks on and a top that maybe we were just a tad underdressed, because they were a little more dressed up.

We got on the bus, and we were sitting back in the back. Yuri and Yury were up front. Then they played a video on the bus of the families saying goodbye to them. Oh, my goodness. You know when you read Russian literature, so much of it is just saddish in a way? It just felt like I was reading a Russian novel, that same feeling, because there was Yury's son playing the guitar singing a sad song, a plaintive song. Everything was just so like that.

We drive down through the roads going out to the launchpad. I loved it there in Baikonur because it reminded me so much of growing up in Lubbock, Texas, because it was just flat. I just loved it there. We're driving out, and then along the way there might be a few buildings you would drive by as you go through, because it's very separated; it was a long drive. They were little gray buildings. It just seemed like these little people were standing out there, and they all seemed so gray, because there wasn't a lot of color.

It all seemed so solemn. It was such a solemn, solemn thing. It was just very, very interesting.

ROSS-NAZZAL: Very different from a Shuttle launch, which is very exciting.

LUCID: Yes, it was very interesting.

ROSS-NAZZAL: Some of the traditions are taking a bio break because Yuri [A.] Gagarin did. Were you on the bus still when they did all those?

LUCID: Oh, they stopped. But John and I didn't do that because we weren't going to launch.

ROSS-NAZZAL: What are your memories of getting out there to the launchpad and then being with everyone and seeing the launch?

LUCID: It was so cold. It was so cold. The wind was blowing, it was so cold, and we were standing out there so long in the cold. Oh, my goodness. Then some Russian reporter came up and wanted to ask a question. Not only was it in Russian, but I couldn't have even moved my mouth to answer in English. It was so cold. It was so cold.

ROSS-NAZZAL: Russia does have that cold weather. You were used to Houston at that point. When you went over to Russia were you hoping that you would get to fly on a Soyuz? Or did you already know when you went to Russia you were going to—

LUCID: No, we knew that we were going to go up on the Shuttle. The Shuttle was going to go up and bring us back and forth. Norm was the first American to fly up on the Soyuz, and that was a separate program. Then when they extended the program, the Shuttle was going to bring up equipment and change the crews out. That's the way it was. Now we did train in the Soyuz because if there'd been some kind of emergency and we had to come home, the Soyuz vehicle was there and we would have come home in it. But that's what I thought was so interesting, because we didn't do much training in the Soyuz. Yuri and Yury and I did very little training together. It wasn't like a Shuttle crew at all.

But we did a few ascents together, and we never did the entries very much. I said, “This is interesting.” I asked Yuri and Yury, “Why am I doing launches with you all when you’re launching without me, and you’re doing entries with Claudie when I’m going to be up there for all this time with you? If there’s an emergency, we’re going to come and do an entry.”

They said, “That’s the way it is.”

ROSS-NAZZAL: Isn’t that what people say about the U.S. government? Trying to make sense of it.

LUCID: Yes, but it was just interesting.

ROSS-NAZZAL: Yes, that is, you would think you would spend a lot more time doing reentry procedures. You came back to the States and trained for about three weeks with the Shuttle crew you were going to be going up with.

LUCID: Yes, two or three weeks, whatever it was, very short.

ROSS-NAZZAL: What sort of training did you have to participate in?

LUCID: Oh, just whatever the Shuttle crew was doing. Like the last few entry sims.

ROSS-NAZZAL: Did you have much time to spend with your family when you came back from Russia?

LUCID: No. I was working every full day.

ROSS-NAZZAL: That must have been difficult for your family. I know your kids were grown at the time, but still.

LUCID: Yes.

ROSS-NAZZAL: You all are very close.

LUCID: But the one thing I did make sure, because Gaylen had come back at the same time, and then he was going back to Russia. Because we were spending so much time together and Gaylen was going to be the contact that Mike would have with me, I made sure that Gaylen and his wife came over to the house and met Mike. We sat here and got to know each other a little bit, so that Mike would have a face to put with if he had to contact somebody.

ROSS-NAZZAL: That's probably good contingency planning.

LUCID: Yes.

ROSS-NAZZAL: Had he met Gerstenmaier as well?

LUCID: I don't think so.

ROSS-NAZZAL: STS-76, you were launching on that. Did your family go with you to the launch to see it? Or had they been to enough launches?

LUCID: Oh, no, they went. What was really interesting is oh, I don't know, a few months before we launched Michael, who was in college, called me up. He said, "Mom." He really needed to go on this trip to Costa Rica for whatever he was studying. I said that would be wonderful. He said, "But you're scheduled to launch." You have to look at the dates. I'm not sure. "February 21st. And I won't get back into Florida until the day later. Would it be all right if I missed the launch?"

I said, "Fine, that's fine. Go look for the lizards or whatever it is that you need to look for. That's just real fine."

He said, "It'll be okay, because NASA always slides."

It was so funny because the launch date sat right there, and it never moved. It was right there. Michael really had counted on us slipping. Then he was feeling a little bad that he wasn't going to get back to Florida. I gave him the name of somebody. I said when he landed in Miami, "You can call this person and find out the status and find out whether to come to the Cape [Canaveral, Florida] or just take your trip on home."

That night before we went to bed the winds were so high that we had slipped a day. So when Michael landed in Orlando, he called up whoever's number I'd given to him and the guy said, "Oh, sorry, it slipped a day."

Michael said, "Really? I knew it would happen; I knew NASA would come through."

Later the person told me, he said, “I’ve never talked to anybody that was so excited for a launch slip.”

ROSS-NAZZAL: I bet. It’s probably the exact opposite.

LUCID: Yes. So it was real funny.

ROSS-NAZZAL: That is funny. This might be a good time to stop because then we can talk about Mir next time.

LUCID: Okay, that sounds good.

ROSS-NAZZAL: Okay.

[End of interview]