The oral histories placed on this CD are from a few of the many people who worked together to meet the challenges of the Shuttle-Mir Program. The words that you will read are the transcripts from the audio-recorded, personal interviews conducted with each of these individuals.

In order to preserve the integrity of their audio record, these histories are presented with limited revisions and reflect the candid conversational style of the oral history format. Brackets or an ellipsis mark will indicate if the text has been annotated or edited to provide the reader a better understanding of the content.

Enjoy “hearing” these factual accountings from these people who were among those who were involved in the day-to-day activities of this historic partnership between the United States and Russia.

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VALERI MORGUN

July 17, 1998

Interviewers: Rebecca Wright, Paul Rollins, Carol Butler
[Interview conducted with interpreter from TTI]

Wright: Today is July 17, 1998. We are speaking, as part of the Shuttle-Mir Oral History Program, with Dr. Valeri Morgun.

We thank you again for coming in. We would like to begin with you explaining to us your role in the Shuttle-Mir Program.

Morgun: We started working in Phase 1 in 1993, before it was known as Phase 1. At that time the program was called Mir-Shuttle. There were two flights in that program that involved the Mir-18 and Mir-19 expeditions. After that, the management on both sides, both Russian and American sides, decided to extend efforts in joint space exploration, and the program became known as Mir-NASA, or Phase 1, as we've come to know it.

Roger Billica and I have been working from the very start of Phase 1, and we together are co-chairs of the working group on medical support. Our group had levied upon it a number of very responsible problems, issues, to solve; for example, medical support and preparation of both cosmonauts and astronauts, the medical support in the course of space flight, and support in the post-flight period. Our group developed and compared joint medical standards. We concurred in a medical monitoring system. We concurred in questions related to practical medical issues, and we concurred in questions regarding the preparation of medical experiments to be carried out.

I consider that perhaps the most important job that our group had was when we made our determinations and later presented our findings to our managements with regard to the selection of cosmonauts and astronauts and, in effect, saying that they are fit for all manner of training and for the flight itself. The result of our work was a Russian-American joint requirement document for medical operations that was compiled, concurred, and signed by both sides, and it was this basic document that was worked throughout Phase 1.

However, I want to say that all of this didn't come particularly easily and was all something that was smooth and quick and without problems at all. There were indeed some disagreements, and there were times that we needed to step back and assess individual questions with regard to medical support, with regard to biomedical issues, training, and all of this was based on the simple fact that the United States and Russia had different approaches with regard to their training, their systems were different, and basically we had to work through that so that we could create the document that I had spoken about before.

What I'm about to say, I'm not just saying for you, but for the Russian, the American people, and

for the specialists involved. I would like to thank Roger Billica and his entire medical staff for the work that they've done, for their ability to understand, for their professional understanding of the issues that have to be addressed, because it is thanks to that understanding that we were able to perform as well as we did in Phase 1.

As concerns the medical training portion for cosmonauts and astronauts, if we break down the ratio with regard to particular flights, there were particular missions for which up to 70 percent of the training time was indeed for medical training or training of astronauts and cosmonauts, and I think that's what I can say with regard to our joint efforts in this area, given the limited amount of time. I could go on for an infinite amount of time, but we had successes, we had failures, we had small successes, and indeed, even yesterday we had success.

Today we're no longer Drs. Billica and Morgun; we're friends. This whole period has taught both him and me that this is the way to work. I'm very happy that both U.S. and Russian medical teams are moving on into Phase 2. I know that this will make our work in Phase 2 easier. It will make it more simple, because we already know each other, we know each other's styles of work, we're aware of some of the difficulties that are in front of us and how to eliminate those difficulties. So it's a very positive outlook for such cooperation in Phase 2.

Wright: Is there a time during Phase 1 that you can recall that you knew that you and Dr. Billica were more than just colleagues, that your relationship became a friendship as well?

Morgun: I can even tell you the exact date when it occurred. I can tell you that it was the 29th of March, 1995, which is the day we signed, with a great deal of understanding on both sides, joint requirements for medical training.

Wright: During those negotiations for that document, there were great differences between the two nations. Did you also find similarities, how you two did medical procedures and standards?

Morgun: I'll answer your question this way. We understood the goals and objectives. We understood that Russian cosmonauts and American astronauts were going to fly to the Mir station, and this was a kind of point of definition in our common point of view.

Wright: How do you feel that both nations have benefited from working together on Phase 1 with the medical standards?

Morgun: Well, as I've said, this document became a defining document and allowed us to have a common

set of standards regarding, for example, astronaut health, which, in turn, allowed us to assess in an objective manner fitness for space flight. What else this particular document did was it allowed each side, in examining the standards of the other side, to reassess its own standards as well.

Second, it allowed us to solve issues related to standards having to do with the presence of cosmonauts and astronauts on the station. These standards have to do with the environment on the station, with the life support system, and a number of others that have to do with the safety of a crew aboard the station.

Third, the document allowed us to correctly undertake all rehabilitative efforts for crew members after they landed on the Earth. But perhaps the most important result and the most important finding of the document is that it allowed us to preserve, maintain crew member health, and, furthermore, to quickly and effectively restore that health after a launch and to prepare crew members for future flight, follow-on flights. This is for both the Mir and the shuttle. Again, the most important result was that it allowed us to preserve and to maintain the necessary level of health and to allow for work to be done both before, during, and after a flight, and, after a flight, to restore individuals' health so that they may proceed to undertake new professional duties.

Wright: American medical staff was in Russia to work with the crew members that were on the Mir during their flight. Did you have Russian medical staff here in Houston training and working with the staff as well?

Morgun: Yes, per an agreement that had been reached on a management level between NASA and the Russian Space Agency, Russian crews and doctors do undergo training here at Johnson Space Center. In fact, today there is the fifth flight surgeon present. Right now we have flight surgeons who work here, a couple of Russian cosmonauts in their work as designated Shuttle crew members. They monitor their health, they participate in all medical activities that NASA has planned for such crew members, and they work closely together with Shuttle crew flight surgeons. Then after completion of training, a certificate is issued, and this allows the crew flight surgeon to work and provide medical aid and perform medical monitoring of Shuttle crews on a level equivalent with that of American flight surgeons, just as American flight surgeons who successfully complete their training in Russia either in the course of their work at GCTC, which is the Gagarin Cosmonaut Training Center, or at the Moscow Mission Control Center also are able to become certified.

I might add that the American and Russian crew flight surgeons have performed remarkably well. It's as if they're a single team. I can, at this point, even with a smile on my face, note that they were able to

figure out what's what even somewhat faster than Roger Billica and I. [Laughter] If we were to assemble all of the Russian and American crew flight surgeons who worked Phase 1, you'd find that this is a very tight, cohesive, and a highly professionally qualified group. And it is indeed a pleasure for me to say that today, since we can see the benefit from results of their work.

Wright: Will you keep this group together moving into the new Phase 2?

Morgun: Yes. I'm happy to say that practically the entire group of Russian and American flight surgeons will be moving on to work in Phase 2, and I can, in addition, note that on the 15th of May of this year, we certified the first four crews of cosmonauts and astronauts to fly aboard the International Space Station, and we certified both Russian and American flight surgeons for work in Phase 2. This group is very good. They know how to work, they know what it is that awaits them, they know how to deal with issues, they know how to deal with uncertainties and unknown factors. I'm very happy that this group is going to continue on to work in Phase 2.

Wright: So many benefits resulted from Phase 1. What are your expectations of the future in this area?

Morgun: Phase 1 is a start. We're talking here of tremendous development in terms of space science and medical science and advances of knowledge in these areas. It turns out that both the United States and Russia have both developed scientifically-based systems of cosmonaut/astronaut training, and the result is a tremendous intellectual investment in space. Phase 1 basically was the start of a long-term cooperation between the Earth's two great space-faring nations, and right now we're on the threshold of Phase 2.

What's ahead? Well, we've got perhaps future projects perhaps to the moon, to Mars. One thing, however, is certain, that if we don't do it together, it won't be achieved, and I have confidence in future success. This all will allow advances in medical technology and in space science and other areas and will allow us to achieve and improve the quality of both technical, applied, and fundamental forms of science, and I think this is all to the good.

Wright: This concludes our time with you. Is there anything else that you would like to add about your experiences with Phase 1 or any comments at all? We'd be glad to hear them.

Morgun: I'd like to say thank you. It's been a pleasure spending time with you and talking with you.

I would like to, however, mention, yesterday we concurred and signed a document on medical operations and support during Phase 1, but that's only really the first phase, first stage of a common

document, a joint document. We do plan to put together a report on medical support of Phase 1. This will be an assessment in a medical sense only, developed by both sides, and we would like it to be a fundamental document, a foundation document that would serve as a good medical handbook not only for Russian and American doctors, but also for all of our other colleagues from other nations who are working in Phase 2, all our international partners.

Wright: We have been honored for you to spend time with us. We wish you much success in Phase 2.

[End of interview]