



NATIONAL AERONAUTICS AND SPACE ADMINISTRATION  
WASHINGTON, D.C. 20546

18650  
Foreign Relations  
ASTP  
Working Group  
Meeting - July 9-20, 73

REPLY TO  
ATTN OF: MA

JUL 24 1973

MEMORANDUM

TO: A/Administrator  
AD/Deputy Administrator

THRU: M/Associate Administrator for Manned Space Flight

FROM: MA/Program Director, Apollo/Soyuz Test Project

SUBJECT: US/USSR July Working Group Meeting

*Daly*  
AUG 1 1973

A meeting of the Apollo/Soyuz Test Project Working Groups #0 and #1, the Soviet cosmonauts, and American astronauts was held at the Johnson Space Center July 9-20, 1973. On the week-end of July 14, a number of the Soviets and their U.S. counterparts visited the Rockwell International plant at Downey, California. A copy of the signed minutes of the Working Groups will be forwarded separately. The following are general observations.

The meetings were tentatively scheduled for approximately three weeks. Upon arrival Professor Bushuyev stated that they would be returning to the USSR at the end of two weeks because of the work requirements at home, and that he was sorry he could not take advantage of the invitation to visit Cape Kennedy and observe the Skylab launch. In discussing the trip to Rockwell International, Professor Bushuyev was interested as to what they would see and stated that he would appreciate seeing the ASTP hardware and assembly facilities but implied that they were not interested in the manufacturing or other facilities not associated with ASTP.

Professor Bushuyev was accompanied at all sessions by Mr. Igor Prisevok, who I understand, is a member of the Inter Cosmos and on the staff of Academician Petrov. Mr. Prisevok speaks and understands English quite well but was not the interpreter. He took copious notes at all sessions. Mr. Prisevok appears to be an intelligent and reasonable person, more reasonable than some of the others that have sat in his position at these meetings. His forte seems to be in organizational aspects and he made some valuable contributions during the meetings.

18650

Salyut 2

In our discussions about Salyut 2, we informed the Soviets of the widespread and unanimous press reports and Congressional opinion that Salyut 2 was an apparent failure. It was emphasized that our interest had to do with any possible related failure modes to ASTP. Dave Scott stated that during his visit to Russia in June, he had the opportunity to see Salyut training hardware. He noted that the main engines, the control panel and control stick were identical to Soyuz and that the attitude control system engines appeared to be the same except that on Salyut they used a cluster instead of a single engine. Professor Bushuyev stated that Salyut 2 was a successful flight, completed all of its objectives and that it was deorbited into the Atlantic Ocean. He also stated that he was not associated with the program, but that he had followed the mission insofar as systems similar to Soyuz were involved and there was no problem for our concern.

With the support of Code W, we were able to show the Soviets copies of the GSFC Satellite Situation Reports for April and May 1973. These reports provide orbital data on all satellites and space debris and we specifically noted the data on Salyut 2 main element and associated pieces. We also prepared a plot of the main element that indicated three maneuvers and a decay without a deorbit maneuver impacting at about 15°N Lat. 141°E Lon. The Soviets were quite surprised to see these reports and very interested. General Shatalov spent some time reviewing data presented. There was considerable question by the Soviets about the number of pieces. In particular he noted that one piece had orbital parameters considerably different from the main unit. (The summary report does not provide sufficient detail to verify the separation trajectories of the pieces from the main unit.) Professor Bushuyev was obviously relieved when General Shatalov discovered this and made a remark as to the advantage of having an experienced and knowledgeable individual such as General Shatalov sitting in on our discussions. The Professor repeated his original statement about Salyut 2 and, that there was no related concern for the ASTP mission. He then made a short statement as to the U.S. open policy for all manned and unmanned flights and the USSR policy of less openness on their missions; and, that he would not comment on these policies, but he recognized that their policy left room for misinterpretation.

Soyuz 11

We later discussed the Soyuz 11 flight. Professor Bushuyev stated that he had already told us in March about the Soyuz 11 failure and that corrective action had been taken. It was explained to him that more details were required to satisfy safety and reliability requirements for our mission. (In fact, from his information it was difficult

to reconstruct the failure and it provided little on the corrective action.) It was requested that considerable more detail be provided. He was obviously reluctant to commit to this and appeared to stall by stating the Soviets should then get copies of the Apollo failure reports. Fortunately we were able to obtain and show him a message from Academician Keldysh acknowledging receipt of the Apollo 13 Accident Report. Professor Bushuyev later agreed to work on this problem. He would not agree to include this action in the formal minutes of the meeting, but did agree that it be included in an open letter Glynn Lunney plans to write to him. During this conversation, Professor Bushuyev also stated that there would be several Soyuz flights both manned and unmanned, including flights to Salyut, before the ASTP mission. Modifications made to the Soyuz for the joint mission would be tested in these flights.

#### Public Affairs Plan

A draft of the Public Affairs Plan for the pre-mission period was provided to the Soviets in March 1973, they were not prepared to formally approve it at this meeting. Again Professor Bushuyev indicated that he had no specific objections but that others wanted the document to be more specific. He will provide comments by the end of August. He also suggested that we should be proceeding to the PAO plan for the mission period. The plan for the mission phase will undoubtedly be more difficult to reach agreement. It does raise the issue of what NASA's position should be in negotiating what coverage the U.S. press will be allowed in Russia during the mission. Undoubtedly, this issue will raise a number of questions in which high level policy guidance is necessary. An item for such consideration is: Should NASA in negotiating the PAO plan take a strong position for the U.S. press (and in doing so probably drag the international press along) or let the press negotiate on their own. I currently favor support of the U.S. press position, although this question requires a great deal more examination and advice.

#### Soviet Control Center

The Soviets stated that their control center for ASTP would be in Moscow and that the U.S. mission personnel would have the opportunity to visit and train there. The Soviets visited the JSC control center and although they said their control center was similar, they evidenced much interest and continue to ask questions regarding the chain of command and the interaction within the control center team. They continue to indicate surprise at the authority and responsibility granted our control center team individuals.

#### Communications

The Soviet communications working group performance has not been satisfactory. Commitments for information and documents are not being

met on time by the Soviets. Professor Bushuyev agreed with this conclusion and stated that the Soviets would "beef-up" their side. Glynn Lunney tactfully noted that perhaps the Soviet Co-chairman needed to be changed. Professor Bushuyev replied that in Russian "beef-up" can mean replacement of personnel as well as adding people to the group. Contrary to what one might expect he seemed to appreciate Glynn's frank suggestion.

#### Rockwell International Visit

The Soviets were very enthusiastic about their visit to Downey and to Disneyland. Professor Bushuyev stated he would like to go back sometime. During the conversation it was noted that there was a Disneyworld near Cape Kennedy. Professor Bushuyev got the point immediately and replied that a later visit to Cape Kennedy was not excluded. It was pointed out to him that there was only one more manned U.S. launch after the upcoming Skylab 3 before ASTP. We should perhaps pursue further a visit by the Soviets to the Skylab 4 launch. It may be appropriate for Dr. Fletcher or Dr. Low to extend an invitation to Academician Keldysh and/or others in the Soviet ASTP program. However, I would point out that Dave Scott reports that when he gave Professor Bushuyev the Lunney letter inviting the Professor and cosmonauts to the Skylab 3 launch, that he was rather surprised that Lunney could offer such an invitation. Therefore it may be advantageous to again have Lunney issue the invitation, through the Working Group activities. It is recommended that this item receive further discussion with and consideration from top level management.

#### Authority of U.S. Technical Director

Professor Bushuyev was quite frank to comment that Glynn Lunney was able to respond very quickly, and apparently without necessarily going to higher authority, to most questions and requests; whereas, he was not always authorized to respond so quickly. This is emphasized by the fact that he asked for a list of any questions and requests the U.S. might have so that he could carry it back to Russia and get the answers. This is the first time this has been so openly discussed.

#### Experiments

The discussion regarding experiments has been covered in Dr. Henry Smith's memo.

#### Working Group Progress

The flight plan for the mission has reached the stage where except for experiments, it would be adequate to fly with. Contingency plans and mission rules are in work.

Safety assessment reports covering such subjects as inadvertent release of latches, manufacturing, test and checkout plans including ground and flight test, fire, pyrotechnics, and ground command of spacecraft of both sides are in process.

During discussions about the considerations and preparations for the launch of a second Soyuz, should it be necessary, the Soviets emphasized that one of the major constraints on duration of the second Soyuz was a single landing area in the Soviet Union requiring that the second Soyuz land on the same day planned for the first Soyuz. Yet in separate discussions with Cosmonaut Leonev, he was very frank and descriptive of the landing points of previous Soviet manned missions. Obviously, some of these were emergencies and therefore not the primary landing point, but it does indicate that a single designated landing point should not necessarily be a major constraint on the duration of the second Soyuz.

#### Simulators

The Soviet cosmonauts were very much interested in the sophistication of the U.S. simulators and how similar the spacecraft is to an aircraft cockpit. The backup cosmonauts are young, very interested, several speak good English and in general appear more knowledgeable in the new systems and techniques.

#### Cosmonaut Training

The initial training session for the cosmonauts apparently went well. General Shatalov paid a great deal of attention to this and in conversation implied that he intended to do even better for the American astronauts. At a meeting with the Technical Directors, General Shatalov presented his plan and runout schedule for exchange of training visits. It was quite apparent that he took this action on his own initiative, and that he is the decision maker on cosmonaut training. From other indications he appears to operate with a pretty free hand.

#### Summary

In general, all indications are that the Soviets are meeting their key milestone dates. They presented a film made of their docking system for development tests after it was manufactured and assembled. I have not seen the film yet (a copy is being made for the Program Office) but reports are that it looks very good. The Soviets are very proud that they are meeting the key milestone date of development tests with the U.S. docking system. Their unit will be delivered on schedule by late August 1973. This exemplifies that in the area of hardware the Professor is better able to meet his commitments. However, it is becoming increasingly

evident that as the planning reaches the more detailed and commitment stage, resolution of specific and programmatic items become more agonizing and that the Soviet Working Groups latitude for decisions becomes more constrained. Professor Bushuyev frankly admits that because of the Soviet internal system he does have a problem in meeting commitments on documentation and providing replies to specific questions and requests for amplifying information, but that he does not have this problem to the same degree with hardware.

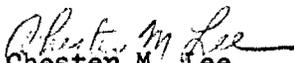
When he first arrived in Houston on this trip, Professor Bushuyev appeared to be tired and under strain. It wasn't until after the trip to Downey and towards the end of the 2nd week (when most of the Working Group minutes were in the final stages) that he appeared more relaxed. It is conjecture at this point, but it does appear that the strain could be due to the internal conflict of getting things done and the growing realization of how much work remains to be accomplished.

Glynn Lunney and I have discussed this at some length. We agree that perhaps a meeting between Mr. Myers and Academician Petrov or Dr. Low and Academician Keldysh under the category of a "Review of the Status and Report on ASTP" might be most helpful in avoiding future problems and delays in the Working Groups progress, particularly as we move into the more specific plans for the mission.

As stated previously, we need to start developing our position with regard to the mission phase PAO plan and our position concerning the U.S. press.

It is also evident from casual conversation with some of the Soviets that they are thinking beyond the current joint effort. It is therefore recommended that we give early consideration as to the U.S.'s position on this subject.

Finally, in spite of the problems, real and potential, that I have discussed here, I am convinced that the Soviets are fully committed to making this mission a success. I am very impressed with the working relationships of the majority of the members of both side's Working Groups; and in particular, the frankness, confidence and personal working relationship between the two Technical Directors of the Working Groups: Dr. Lunney and Professor Bushuyev. I believe that we should continue to carefully, but frankly, pursue answers, information and agreements on issues that may be touchy but are related to the mission. In this manner, we will not only provide greater confidence of ASTP success, but we can also gradually eliminate some of the time consuming barriers to smooth and expeditious working relationships with the Soviets in space cooperative efforts.

  
Chester M. Lee