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Chapter 21

1st IAC History Plenary Event 2007 "50th Anniversary of the Space Era—Sputnik 1 and the International Geophysical Year"*

Introduction

The year 2007 marks the 50th anniversary of the USSR launch of *Sputnik 1* on 4 October 1957 and the conduct of the International Geophysical Year (IGY) 1957–1958. This was the very first space age "50th anniversary" and thus selected by the International Programme Committee (IPC) of the 2007 International Astronautical Congress (IAC) as one of the plenary events for the 58th IAC in 2007 in Hyderabad, India.

The objective was to celebrate the 50th anniversary of the space era, which originated by the launch of *Sputnik 1*, which in itself was a direct result of IGY 1957–1958. The prestige involved in the first Earth satellite in orbit and the following competition for new goals in the space exploration also resulted in the well-known space race between the Soviet Union and the United States.

* The First IAC History Plenary Event 2007 was conducted on 25 September 2007, Hyderabad, Pradesh, India, in addition to the Forty-First History Symposium of the International Academy of Astronautics.

The IAA Study Group 6.7 on History was tasked to organize this plenary event. In late spring 2007 a preliminary program was being prepared with panel members as distinguished guests, those who were in decision-making positions of space development at that time. The idea was to have one or two persons from the former USSR involved in the development and/or political decision-making process. In addition one panel member from the United States with a high-ranking position at the time of the *Sputnik 1* launch was also preferred to comment on the U.S. reactions, and finally a space historian as an expert of that time period. Clearly it was a difficult task to find high-ranking experts of that time, 50 years ago, still in the position to travel and take part in this event 50 years later.

The distinguished panel finally selected for this History Plenary Event had the following composition:

- Professor Boris Y. Chertok, RSC Energia, Russia, member of the Korolev team
- Professor Victor P. Legostayev, RSC Energia, Russia, space pioneer on flight control
- Dr. Robert C. Seamans, Jr., MIT, United States, former NASA Deputy Administrator
- Dr. Asif Siddiqi, United States, historian scholar on the space race
- Professor Johannes Ortner, Vice President EURISY, Austria, as panel moderator.

The Original Program

The final program of the 2007 IAC included as the morning International Academy of Astronautics (IAA) plenary event on Tuesday, 25 September 2007, the following page, quoted from the final program:

50th Anniversary of the Space Era—
Sputnik 1 and the International Geophysical Year

The Year 2007 happens to be the 50th Anniversary of Launching of the first man made satellite Sputnik 1 by the erstwhile USSR. This launch, during the 1957–58 International Geophysical Year (IGY), opened out the Space Age and was one of the defining events of the 20th century. The prestige involved in a first earth satellite in orbit and the following competition for new goals in space exploration also resulted in the space race between the Soviet Union and the USA. The launch of Sputnik 1 was officially announced by Academician Leonid Sedov during the 8th IAC in Barcelona.
A short documentary of the manufacturing and launch of the Sputnik 1 together with artifact will introduce the space pioneers of the panel. They will

present their personal memories of this event, and their own perception of the following space race in respective countries. As a moderated historical event, the space pioneers, historian scholars and the audience will have the opportunity to exchange views on this historical event 50 years ago, its significance and the results there from.

Moderator:
Prof. Johannes Ortner
Vice-President of EURISY,
(Former Managing Director of the Austrian Space Agency and IAF Past President), Austria

Participants:
Prof. Boris Y. Chertok (invited)
Chief Scientific Adviser RSC Energia, Academician of Russian Academy of Sciences, Russia

Prof. Victor P. Legostayev (invited)
Chief Scientific Adviser RSC Energia, Academician of Russian Academy of Sciences, Russia

Dr. Robert C. Seamans, Jr.
Former Deputy Administrator, National Aeronautics and Space Administration (NASA),
Professor Emeritus, Massachusetts Institute of Technology (MIT), USA

Dr. Asif Siddiqi
Associate Professor of History, Fordham University, NY, USA

Organiser:
Dr. Ake Ingemar Skoog
Sweden – IAA History Study Group (SG 6.7)

The plenary was planned for one hour and would include a short media introduction with film and sound of *Sputnik 1*. A model of *Sputnik 1* was also considered to be onsite. After a brief (6–7 minutes each) "memory introduction" by Professor Chertok, Professor Legostayev, Dr. Seamans, and Dr. Siddiqi, an exchange of experiences would be initiated by the moderator. About 20 minutes should be devoted to questions from the audience. The plenary was to be recorded on DVD.

As the available time for each of the panel members during the plenary session was limited, it was planned to give each one of the panelists an additional opportunity to present a full history paper (about 30 minutes) on his subject during session 1 ("The International Geophysical Year, *Sputnik 1*, and the Space Race") of the IAA History Symposium also held during the congress. These papers would be on the DVD with congress papers and should also be published in the regular series of the IAA History Symposia Proceedings.

The Actual History Plenary Event

In fact the conduct of the first history plenary on 25 September 2007 in Hyderabad was to be very much different from the original planning.

The high age of Professor Chertok, 95 at the time of the 2007 IAC, was a concern, as it might be difficult for him to travel abroad. Well ahead of the congress it finally turned out that Professor Chertok would not be able to personally participate. A video message was to be recorded for the plenary event, and the presentation of the paper "Sputnik-1—The First Artificial Earth Satellite" in the History Symposium, Session 1, would be given by Professor Legostayev. The planned exhibition of a *Sputnik 1* original model was in the end prevented as

> our historical treasure—a real back-up of Sputnik-1, which is stored in Energia's Museum—should be available in Moscow at that time. It will be the point #1 in celebration of this event in Russia on the Governmental level.

Dr. Robert Seamans was planning to attend the event, and only in the very last weeks before the congress he had to cancel his trip due to a serious illness. Dr. Seamans prepared and submitted by August 2007 a written note with his planned remarks for the plenary event, "Intended Remarks for the IAC 2007 History Plenary by Dr. Robert C. Seamans, Jr." A video link with Dr. Seamans was planned, but in the end it was not possible to establish it onsite. Dr. Seamans passed away on 28 June 2008. His remarks for the 2007 IAC History Plenary Event are the last known comments on this important historical event made by Dr. Seamans, and even if not given at the plenary they are included below (Appendix 1) as a historical document.

Just before the start of the IAC 2007, Professor Legostayev informed the organizers that he was not able to attend due to visa problems. His remarks for the History Plenary Event and the paper for the History Symposium, Session 1, had been prepared and were to be given by Dr. Igor V. Sorokin, Deputy Director of the Space Station Utilization Centre at S. P. Korolev Rocket and Space Corporation Energia.

In the end the moderator, Professor Johannes Ortner, got sick and could not attend the congress in Hyderabad either and with very short notice Professor Peter Jankowitsch, former Austrian Ambassador and chair of the United Nations Committee on the Peaceful Use of Outer Space (UNCOPUOS), stepped in and moderated the History Plenary Event with great dignity.

Onsite all these last minutes changes were reviewed and implemented by a team from the International Astronautical Federation (IAF), Philippe Willekens, and the IAA Study Group 6.7, Christophe Rothmund and Hervé Moulin, and the

team managed to create a revised program in a very short time in an excellent manner.

Professor Jankowitsch finally moderated a revised program of this first IAA History Plenary Event with the following content:

- Introduction with a historical perspective by Professor Peter Jankowitsch
- "Historical background on the first man-made space object" by Dr. Asif Siddiqi
- "Historical situation seen from the Soviet Union" by Dr. Igor Sorokin
- Video message from Professor Boris Chertok
- "Europe's position at the time of *Sputnik 1*" by Dr. Karlheinz Kreuzberg, European Space Agency (ESA).

Despite all this, some 420 people were given a fine First History Plenary Event regarding all the changes from the original program.

This First History Plenary Event was recorded, and the video is available on the Internet:

http://video.google.com/videoplay?docid=1741688231067893499&hl=en#

[Link is still active as of January 2012.]

Note: The full version papers by Professor Legostayev ("*Sputnik 1*—The Creation of the First Artificial Earth Satellite") and Dr. Siddiqi ("Sputnik 50 Years Later: New Evidence on Its Origins") are included in Part I of these Proceedings.

—Å. Ingemar Skoog
IAA Study Group 6.7 co-chair

Appendix 1

These are the original unedited remarks submitted by Robert Seamans Jr.

Intended Remarks for the IAC 2007 History Plenary
by Dr. Robert C. Seamans, Jr.

In January of 1953 I gave a talk before the MIT Club of Southern California. An article about my talk appeared on the 7th page of the Los Angeles Herald and Express, next to photos of models involved in a Vice Ring. I was quoted as saying the first vehicle in space would be a lightweight robot. I went on to say such satellites would be required reporting their findings to earth bound scientists and engineers, serving as guides and instructors for the design and operation of man carrying satellites. A manned bearing satellite, I said, might be launched within ten years.

I assumed the United States would take the lead. How wrong I was. Little did I know there was a Russian aeronautical engineer named Sergey P. Korolev who at the end of World War II, was sent to Peenemunde to gather engineers, equipment, and technical information involved in the German V-2 weapons development.

I was driving home from work when I learned that a vehicle called Sputnik was orbiting the Earth and was deeply disappointed the United States wasn't involved. Nor, was I aware of the drama underway at the International Geophysical Year Conference in Washington D.C. A Soviet scientist announced to the assemblage that anyone interested in listening to Sputnik when it passed overhead should turn their radios to a specific frequency. The impact there was electric and later had worldwide repercussions.

Clearly a country capable of orbital flight could develop ballistic missiles pinpointing the far reaches of the Earth. More broadly speaking, the Soviets demonstrated an advance science and technology beyond expectations. Some even believed they had surpassed the United States and that they would forever stay ahead. This misconception was the motivating force behind President Kennedy's policy discussions. He believed we not only need to be competitive in the space arena, we had to appear to be superior.

I joined NASA in September 1960 three years after Sputnik. By then the Soviets not only had orbited the Earth, but had orbited a dog, and had photographed the backside of the moon.

During this three-year period, NASA, a space agency, was formed in the United States and proceeded with both unmanned satellite development and a manned effort called Mercury. In early 1961 a Tiros satellite was providing weather information, the Van Allen radiation belts around the Earth had been discovered by instruments aboard Vanguard, and astronauts had been selected for the Mercury spacecraft. Soon after President Kennedy's inauguration, the possibility of a manned lunar landing was discussed with him. He decided to review the project for the following years budget, but a month later Gagarin orbited the Earth.

However, Shepard's suborbital flight and Glenn's orbital mission were still looming a short time ahead. Many felt we'd appear incompetent if following the Soviets success the US tried and failed suborbital. However, the President was supportive, Shepard's flight was acclaimed, and soon thereafter he went before Congress and said, *"I believe that this nation should commit itself to achieving the goal, before this decade is out, of landing a man on the Moon and returning him safely to Earth. No single space project in this period will be more impressive to mankind, or more important for the long-range exploration of space, and none will be so difficult or expensive to accomplish.*

It should be made clear that President Kennedy selected a space project that was not only impressive because of its difficulty and expense but also because he believed we had a reasonable opportunity to be first on the moon. His views were clearly expressed in a meeting at the White House in November 1962. The issue was whether $400 million should be reprogrammed from other NASA projects so that a lunar landing could be achieved at an earlier date. Mr. Webb, the NASA Administrator and I strenuously objected. The nub of the arguments can be summarized by this exchange from tapes in the Kennedy Library of a meeting at the White House on November 21, 1962:

PRESIDENT KENNEDY: *Going to the moon is the top priority project, now there are a lot of related scientific information and developments that will come from that which are important. But the whole thrust of the agency in my opinion is the lunar program. The rest of it can wait six or nine months.....)*

JAMES WEBB: *Why can't it be tied to preeminence in space which are your own...."*

PRESIDENT KENNEDY: *Because, by God, we've been telling everybody we're preeminent in space for five years and nobody believes it because they (the Soviets), have the booster and the satellite... I do think we ought to get it really clear that the policy ought to be that this is the top priority program of the agency, and one of the two things, except for defense, the top priority of the United States Government. I think that is the position we ought to take. We ought to be clear, otherwise we shouldn't be spending this kind of money because I'm not that interested in space. I think it's good, I think we ought to know about it, we're ready to spend reasonable amounts of money. But we're talking about these fantastic expenditures which wreck our budget and all these other domestic programs and the only justification for it in my opinion to do it in this time or fashion is because we hope to beat them and demonstrate that starting behind, as we did by a couple of years, by God we passed them."*

Following the meeting and at President Kennedy's request, a letter was sent to him outlining our total program but emphasizing that only the manned lunar effort carried a DX priority. Our views were accepted by the President.

Korolev and his Sputnik team had prodded the United States to initiate a broad ranging unmanned and manned space flight program and the pressure continued throughout the 1960's. They also made me clairvoyant. Thanks to Korolev, my 1953 predictions that man would orbit the earth in less than ten years came true.