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APOLLO 4

PRE-LAUNCH PRESS CONFERENCE

Launch Complex 39 Press Site  
John F. Kennedy Space Center  
National Aeronautics and Space Administration

Wednesday, November 8, 1967

11:00 A.M.

Participants

Dr. Robert C. Seamans, Jr., Deputy Director, NASA  
Dr. George E. Mueller, Associate Director, Office of  
Manned Space Flight, NASA  
Major General Samuel C. Phillips, USAF, Apollo Program  
Director, Office of Manned Space Flight, NASA  
Dr. Kurt H. Debus, Director, Kennedy Space Center, NASA  
Dr. Wernher von Braun, Director, Marshall Space Flight  
Center, NASA

Mr. King: Ladies and Gentlemen of the press, we'd like to welcome you to a windy Launch Complex 39 Press Site and I'd like to introduce these gentlemen to you. From your right: Dr. Kurt H. Debus, Director of the Kennedy Space Center; Dr. George Mueller, Associate Administrator for Manned Space Flight; Dr. Robert Seamans, Deputy Administrator for the National Aeronautics and Space Administration; Major General Samuel Phillips, Apollo Program Manager; and Dr. Werner von Braun, Director of the George C. Marshall Space Flight Center.

Dr. Seamans: I'd like to start in by making a point that what you see here today and what you'll be seeing tomorrow is a result of a long-term, hard-driving effort that has been sustained in a very large number of areas throughout the country. The engines that will be used tomorrow -- the S-I engine in the first stage with a million and a half pounds of thrust, the J-2 engine in the second and third stages gives 200,000 pounds of thrust -- the development was started during President Eisenhower's administration. During the first year of President Kennedy's administration, the decision was made first to develop a major new launch vehicle capability; and second, to develop manned spacecraft with

maneuverability, to have rendezvous and docking capability. It would have the ability to operate out to lunar distances for several weeks, and would have the capability for landing on the moon and returning astronauts from the moon.

Contracts were let in 1961 and 1962, both on facilities and flight hardware. This has provided the new launch complex which you can see here, Complex 39, and the Apollo Saturn V that will be used for the first time tomorrow.

But what you see here is backed up by many other facilities for manufacturing and testing of prototype and flight hardware. It's impossible of course to capture the space environment on the ground in one facility. So we have used vibration tables, vacuum chambers, solar simulators, static test stands that qualify equipment for this flight. For operational purposes, we've added communication aircraft, communication satellites, tracking ships, and ground stations for data acquisition and for communication purposes. These facilities literally go around the world, and they will permit real-time operational decisions to be made from the Mission Control Center at

Manned Spacecraft Center in Houston.

During the peak of the development activity, 300,000 people were engaged in this effort. And today, several hundred thousand people are still required to provide the hardware, the software, and to conduct the Apollo mission. This effort, directed by General Phillips, has passed many critical milestones. I believe that in our Washington Project Status Review we have followed over 200 of these milestones in the past three years, including the recent Countdown Demonstration and the Simulated Flight Mission Testing. But the Apollo 4 launch is, of course, the most difficult and significant milestone to date. We decided several years ago not to proceed incrementally, step by step, on the Apollo Saturn V, but to use an all-up concept to the maximum extent possible. We know we proceeded more rapidly on more fronts using this policy. But bear in mind that tomorrow we'll be flight testing the Saturn V for the first time. We'll be flight testing an Apollo spacecraft entering the atmosphere at lunar return speeds for the first time. We'll be live-testing our launch

and operational facilities for the first time, and we'll be testing our development and operational team in its first major mission attempt for the first time.

I am certain this team, headed by the people here with me today, will not be found wanting. I would now like to introduce Dr. George Mueller, Associate Administrator for Manned Space Flight.

Dr. Mueller:

Good morning. This is the first time in some little while that we had a day before the launch press conference and I certainly am pleased to be back here at this time with the launch vehicle and the spacecraft in the kind of condition it is today. I would like to emphasize two points that Dr. Seamans has made. First of these is that the flight tomorrow represents one of the critical steps in our attempt to go to the moon and perhaps is the most difficult step we're going to encounter. What people don't recognize sometimes is that the unmanned flight which has to replace the manned with the mechanical or electronic device is a more difficult flight to pull off than a manned flight, from the standpoint of the hardware itself. That's particularly true because we also

are not able to use many of the redundant systems that are a part of the capability that we've built into the spacecraft for the manned missions. So this is indeed one of the most difficult flights that we will have to encounter. It reminds me of the Gemini II mission which again was perhaps the most difficult mission for us to get through, in a hardware sense, in the entire Gemini program. Secondly, I'd like to emphasize that there are, in the concept that we've adopted for the Apollo program of all-up testing, real possibilities that not all of the mission objectives will be met on each flight.

We are, for the first time in our experience at NASA, flying a vehicle in which the first stage and the second stage are being flown for the first time, both operating. We will be flying the S-IVB stage in a modified form from that used on the Saturn IB, because in this case we again have introduced for the first time, a restart capability on that third stage. And we're flying for the first time the spacecraft with a new heat shield and at the re-entry velocity characteristic of



the lunar mission itself. There is a risk then that we ought to recognize and yet we have carefully weighed that risk against the progress that we can make, and in our judgement, we will make more progress with less overall program risk by going to all-up testing than we can by the prior system of the individual stage testing, and in our judgement by any other means at our command.

I am looking forward to, and know that every member of the group we have on the program is looking forward to, a successful flight tomorrow. But, if we are not successful, we will still continue. Thank you.

Dr. Seamans:

I would now like to introduce the Program Director, General Sam Phillips, who has won milestones, and is concerned about many thousands of activities that all had to be pulled together and converged in proper sequence for the flight mission to be accomplished tomorrow.

General  
Phillips:

Apollo 4 is a pivotal mission in a series of missions that will result in our achieving a manned lunar landing and return. It will tell us two

essential things. First it will validate that the development of the Saturn V launch vehicle has been done thoroughly and that it works, and it will validate that the heat shield which is required for lunar return and re-entry of the spacecraft has been adequately designed and that it works.

It will tell us another major thing which is very important to the program, namely that our operation organizations around the world are indeed adequate to carry out the missions that are ahead. The work in developing the Apollo/Saturn V has been done thoroughly, and has been done with great rigor by a very competent team. This mission is ready to go. The countdown is on schedule. There is some marginality to the weather forecast for in the morning in terms of wind conditions. There is one open failure report that I am going to be considering later today which developed during the night, a problem with one battery. The battery has been replaced and the count is proceeding on time. The open failure report needs evaluating. There is a problem also with switching in the



television monitors that is required to monitor the preparation of the vehicle for flight. This requires adequate resolution by this afternoon. So there are then three areas that are under consideration that bear on the flight - a battery, television monitors and a marginal weather forecast condition regarding wind. I am extremely proud and pleased with the performance of the Government and industry teams that has brought us up to a state of launch readiness, and I expect to see the results of this work successfully demonstrated in this flight tomorrow.

Dr. Seamans:           The responsibility for Apollo activity is vested in four of our NASA centers in a major way. These are the Goddard Space Flight Center that has responsibility for the tracking and data acquisition network including the aircraft, the ship and the ground stations; the Manned Spacecraft Center that has responsibility for the manned spacecraft, the Apollo and the lunar module; the Marshall Space Flight Center that is responsible for the launch vehicle; as well as the Kennedy Space Center, responsible for the facilities you

see here. Two of the centers are represented here at this press conference and I would first like to introduce Dr. Wehrner von Braun, Director of the Marshall Space Flight Center.

Dr. von Braun: This is of course a crucial test. The first launching of a new and untested rocket. It's the actual test of the work performed for years and years preceding this launch. As Dr. Seamans just pointed out, Saturn V is the first attempt to test fly a 3-stage rocket of this complexity and of this size under the all-up concept. Unlike the smaller Saturns, where we first flight tested the first stage with water ballast in lieu of the second stage and went stepwise from the simple to the more complex configuration, we are trying the whole thing here on the first attempt. And we are convinced that the obvious additional risks that we are courting by doing this is compensated by the fact that we provide much better visibility into the innards of the rocket prior to takeoff. We have placed many thousands of electrical eyes and ears into the rocket that permit us to monitor the speed of every component and every vital subsystem prior to launch. So it is very unlikely



























































