

This is Gemini Launch Control. We're proceeding very satisfactorily at the present time. To repeat some points that might have lost earlier communication; our countdown has been proceeding very well, there have been no holds and no problems thus far. At this point we're right on time, aiming toward the lift-off of the first of our two vehicles this morning, Atlas/Agena at 10:00 a.m. EST. The Gemini Launch Vehicle fueling began at 10:30 p.m. EST last night, and three hours 28 minutes later the fuel was aboard both the first and second stages, that is the fuel and the oxidizer for the Gemini Launch Vehicle. The first portion of the very complex simultaneous countdown began at 1:50 a.m. EST, when the crew at Launch Complex 14 brought power aboard the Agena vehicle. The Atlas/Agena count has been in progress since that time. Just a matter of some 15 minutes ago at the 360 minute mark in the count the Gemini 9 spacecraft joined the countdown. The final major aspect of the count, that is the Gemini Launch Vehicle will be coming in at the T-240 minute mark. About 50 minutes ago the back-up crew for the Gemini 9 mission, Astronauts Jim Lovell and Buzz Aldrin came into the white room at Launch Complex 19, and went aboard the Gemini 9 spacecraft. They will remain in the spacecraft for all the preliminary checkouts, until the Prime Crew comes to the Launch Pad later this morning. All systems looking good at the present time, now T-343 minutes and 52 seconds<sup>and</sup> counting. This is Gemini Launch Control.

END OF TAPE

Gemini Launch Control, we've just passed the 320 minute mark in our simultaneous countdown, all systems looking good. We have no problems at the present time. The count is 319 minutes and 15 seconds and counting. To correct the timing on an earlier statement, let's go back over when the various countdowns picked up this morning. To report earlier, the Gemini Launch Vehicle was fueled, starting at 10:30 p.m. EST last night, the operation lasted about three hours and 28 minutes. The range count came on at about 12:15, 15 minutes after midnight, EST this morning at the 680 minute mark in the count. The Agena Vehicle was powered up at Launch Complex 14 at the T-615 minute mark. That's what we're looking as basically the start of the count of the Atlas/Agena, that came at 1:20 a.m. EST. In the meantime, the spacecraft, the Gemini 9 spacecraft joined the countdown at 360 minute mark and the backup pilots for the mission are currently in the spacecraft making their preliminary checks. All systems looking good at T-318 minutes and counting. This is Gemini Launch Control.

END OF TAPE

This is Gemini Launch Control. We're at T-285 minutes/<sup>and</sup> counting, T-285 and counting, right on time on this morning's countdown for the Gemini 9 Mission. At the present time at Launch Complex 14 where the Atlas/Agena is located the crew is making preparation to start loading the fuel aboard the Agena second stage, this will start occurring some four or five minutes from this time. All systems going well at Pad 14 as they are at Launch Complex 19 where in the white room the back-up pilots for the Gemini 9 Mission, Astronauts Jim Lovell and Buzz Aldrin are still aboard the spacecraft making final preliminary checks of the Gemini 9. The Prime Pilots for the Mission Astronaut Tom Stafford and Gene Cernan are still in the Crew Quarters at the Kennedy Space Center's Merritt Island facility. They're due to be awakened about 20 minutes from this time. All systems looking good, now T-284 minutes/<sup>and</sup> counting, this is Gemini Launch Control.

END OF TAPE

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This is Gemini Launch Control. T-250 minutes and counting. T-250 minutes and counting, all systems looking good on both countdowns, that is, the countdown at Launch Complex 14 with the Atlas/Agena and the count at Launch Complex 19 with the Gemini 9 Vehicle and spacecraft. The prime pilots for the mission, Astronauts Tom Stafford and Gene Cernan were awakened a short while ago and they will be getting ready at this time for their brief physical examination and break..breakfast. All systems looking good at T-249 minutes, 25 seconds and counting. This is Gemini Launch Control.

END OF TAPE

This is Gemini Launch Control, we're T-244 minutes and counting on the Gemini 9 Mission and all systems are looking good. The prime pilots for the mission, Astronauts Tom Stafford and Gene Cernan have been awakened at the Crew Quarters at the Kennedy Space Center on Merritt Island some six to seven miles from the launch pad. At this time they are taking their physical examination at the Crew Quarters. Meanwhile at Launch Complex 14 where the Atlas/Agena is located and Complex 19 where the Gemini 9 is located, all systems are proceeding satisfactorily. Coming up in a matter of three or four minutes, the final major function of the countdown, that is the count of the Gemini Launch Vehicle at Pad 19 will join the over-all simultaneous count. At 240 minute mark in the count, some 3 minutes from this time we will then have nine separate countdowns going out at the same time and being run simultaneously, one of the most complicated countdowns that has occurred at the Cape Kennedy Launch Site. Meanwhile at Launch Complex 14 coming up at about the same time, the crew is ready now to pull back that huge gantry service tower, as the countdown proceeds normally/<sup>they're</sup> aiming for a lift-off a little less than two and a-half hours from this time of the Atlas/Agena. All systems looking good, now T-242 minutes and 36 seconds and counting, this is Gemini Launch Control.

END OF TAPE

This is Gemini Launch Control. T-234 minutes and counting. All systems looking good on the Gemini 9 Mission at this time. At this point in the count, the prime pilots for the mission, Astronauts Tom Stafford and Gene Cernan should be sitting down to breakfast at the Crew Quarters at the Kennedy Space Center. We will have a report on the breakfast, itself, and the guests they have a little later. Meanwhile at Launch Complex 14 and 19, the countdown is proceeding satisfactorily as it has all morning, today. There have been no problems and no holds encountered. At this time at Launch Complex 14, the Gantry Service Tower is being removed from the Atlas/Agena Vehicle, we're about two hours and 15 minutes away from the planned lift-off of the Atlas/Agena at Launch Complex 14. Following the securing of the Gantry Tower at 14, the crew will proceed to load the oxidizer, the acid oxidizer, aboard the Agena second stage of the vehicle. At Launch Complex 19, the backup pilots for the mission, Astronauts Jim Lovell and "Buzz" Aldrin, are still aboard the Gemini spacecraft. They have been aboard since about 5:00 a.m. EST this morning and they are making checks, overall checks of the spacecraft, itself. All is proceeding satisfactorily at 19. Our weather conditions are acceptable both here at Cape Kennedy and throughout the tracking range. The forecast for Launch time in the Cape Kennedy area gives us partly cloudy weather, but with<sup>an</sup> unlimited ceiling. Winds will be from the southeast at 10 knots, the sea state off the Cape about two feet and we expect a temperature of about 82 degrees. In the Atlantic recovery area, where the aircraft carrier Wasp is located today, there will be broken clouds about a 1500 foot ceiling, winds from the southeast at about 15 knots a sea state of three to five feet, scattered showers. That location is about 1000 miles east of Miami. In the eastern Atlantic recovery area, we have also scattered cloud conditions, winds to 15/knots, and a five foot sea. About the same goes for the mid-Pacific, we have a little more cloudy weather there, with six foot seas, but acceptable. Typhoon Erma, that typhoon

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that was mentioned several days ago, is still in the Pacific, now located in the South China Sea, west of the Philippines, it will have no effect on our launch operations or a plan to launch today, however. It is still possible that the astronauts, when they are inserted into orbit, may get a chance to look down and get a good look at this typhoon some time over the next day or so. Our weather is good and our countdown is good at the present time. T-231 minutes and counting. This is Gemini Launch Control.

END OF TAPE

This is Gemini Launch Control, T-214 minutes and counting. Just a little less than two hours away from the planned Atlas/Agena liftoff, the first of two launches planned this morning in the Gemini 9 Mission. All systems are looking good as they have all morning both at Launch Complex 14 where the Atlas/Agena is located and Complex 19 where we have the Gemini 9. At the astronaut crew quarters in the Manned Spacecraft Operations Building of the Kennedy Space Center located at Merritt Island some seven miles from Launch Complex 19 the prime pilots for the mission, astronauts Tom Stafford and Gene Cernan are having breakfast at this time. They have some five to six astronauts who joined them for breakfast. The following were at the breakfast this morning: the complete Gemini 10 crew; i.e., the prime pilot for Gemini 10, astronaut John Young; the pilot, Mike Collins, and the backup team, Astronauts Alan Bean and Clifton Williams. Also at the breakfast, one of our newest astronauts, one of the men selected in the newest group of 19, Astronaut Ed Givens. He spells his name G i v for Victor e n s. Also joining the team for breakfast was Deke Slayton who is Director of Flight Crew Operations for the Manned Spacecraft Center. The breakfast menu was the usual astronaut fare, i.e., filet mignon, scrambled eggs, toast and coffee. The prime pilots for the mission will be departing the crew quarters at the Kennedy Space Center some 20 minutes from this time. Meanwhile, at Launch Complex 19 the backup pilots for Gemini 9, Astronauts Jim Lovell and "Buzz" Aldrin are still in the Gemini 9 spacecraft and checking out the various systems awaiting the arrival of the prime pilots a little later in the countdown. All systems looking good in this simultaneous count. Now T-212 minutes and counting. This is Gemini Launch Control.

END OF TAPE

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This is Gemini Launch Control at T-204 minutes and counting. Our simultaneous countdown continues to go well as far as all nine counts are concerned at the present time. All systems looking good. The prime pilots for the mission, Astronauts Tom Stafford and Gene Cernan are finishing up breakfast with their guests and are expected to leave the crew quarters at the NASA Kennedy Space Center, Merrit Island some 10 minutes from this time to pursue - to proceed to the trailer adjacent to Launch Complex 19 where they will don their suits and make final preparation before going to the pad. The physical conducted this morning was handled by Dr. Duane Catterson. Dr. Catterson reported in a quote "The astronauts rested well and are absolutely in top physical condition". It was reported that the astronauts were obviously in good spirits as they went down the hall from their quarters to the medical room to take the physical. They chattered with a number of the workers and kidded both going down to the medical check and coming back to the quarters. In the meantime, at Launch Complex 14, where the Atlas Agena is located and the launch is now some one hour and 46 or 47 minutes from this time, the crew is readying at this time to load the acid oxidizer aboard the Agena stage. This is one of the final fueling process at Launch Complex 14. The fuel for the Agena was loaded earlier in the count and the final fueling operation, that is the loading of the liquid oxygen aboard the Atlas first stage, will occur a little later in the countdown. All systems going well. To get a status on the overall mission and the situation as far as the Control Center is concerned, we will now switch you to the Manned Spacecraft Center in Houston.

Good morning. This is Gemini Control Houston at 202 minutes and two seconds before liftoff of the spacecraft Gemini 9 and T-106 minutes and 56 seconds

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Agena time. Here in Mission Control the White Team of Flight Controllers is beginning to drift in and take their positions at consoles. The Green Team has been on position here since midnight Houston time. All the network stations appear to be in a go condition around the network with two minor problems, one at California with background noises on a UHF transmitter and a power supply on a 12 volt timing system at the Carnarvon station, has no estimated time of operation but they can support. Meanwhile in the recovery the prime recovery vessel USS WASP is on station approximately 520 nautical miles southeast of Bermuda and 1,085 miles east by south of Cape Kennedy. The wind out there is from the south at 14 knots with two feet seas. The temperature is 78 degrees. Visibility is unlimited in the WASP area. Countdown is proceeding very well here at Mission Control. This is Gemini Control, Houston at T-200 minutes and 29 seconds.

END OF TAPE

.....from the planned Atlas/Agena liftoff. All systems continuing to look good as they have all morning in the simultaneous countdown. The activities are preceeding normally both at Launch Complex 14 and 19. The Prime Pilot Astronaut Tom Stafford and Gene Cernan, are now leaving the crew quarters at the NASA Kennedy Space Center in Merritt Islands some seven miles from the launch pad and are preceeding to the suit up trailer, the ready room located adjacent to Launch Complex 19. When they do get to the ready room they will first put on the sensors and then don their suits for the final check-outs before preceeding to the launch pad. They will go to the pad at about the 125 minute mark in the count. At Launch Complex 14 we are now preceeding with loading the oxidizer that nitric acid aboard the Agena second stage. At Launch Complex 19 the distrust packages are being placed aboard and connected on the Gemini Launch Vehicle. These are the packages that would destroy the vehicle in the event that the flight did go awry. Of course, the abort system would be in effect prior to that time and the astronauts would take the proper abort action. All systems are going very well at this time. There have been no holds and no difficulties encountered in this very complex countdown thus far. T-192 minutes and 30 seconds and counting. This is Gemini Launch Control.

END OF TAPE.

This is Gemini Launch Control, T-184 minutes and counting on the Gemini 9 launch. All conditions looking good at both launch pads and as far as the overall simultaneous countdown -- nine countdowns going simultaneously are concerned. All systems are looking good and we have no problems at the present time, nor have we had any to any degree whatsoever during the complete countdown which started shortly after midnight this morning. Astronauts Tom Stafford and Gene Cernan the prime pilots are due to arrive at the ready room which is adjacent to Launch Complex 19 some five to six minutes from this time. At Launch Complex 14 we are continuing to load the acid oxidizer aboard the Agena second stage. This is about a 30 minute operation as we load some 30,000 pounds of the acid aboard the vehicle. At Launch Complex 19 is also proceeding satisfactorily. The backup pilots for the mission Astronauts Jim Lovell and Buzz Aldrin left the Gemini 9 spacecraft a short while ago. They had been in the spacecraft some  $3\frac{1}{2}$  hours this morning checking out the various systems and they will be ready to report to the prime pilots on the mission on the status of the spacecraft. About half an hour from this time, Lovell and Aldrin will return to the spacecraft and will greet the prime pilots when they come up to the White Room at about 115 mark in the countdown. All conditions looking good and we are proceeding. T-182 minutes and 26 seconds and counting. This is Gemini Launch Control.

END OF TAPE

This is Gemini Launch Control. Now at T-174 minutes and counting. About an hour and 15 minutes away from the planned Atlas/Agena Launch. All systems still looking good. Astronauts Tom Stafford and Gene Cernan have arrived at the ready room and are now getting a mission briefing. They are being told that all systems are go for their Gemini 9 Mission this morning. Shortly after this time they will start to don their suits and make their final preparations prior to going to Launch Complex 19. At Launch Complex 14 we are proceeding with the Atlas/Agena countdown. The control of the clock, a key item in the simultaneous count, now has reverted to Launch Complex 14 and this control of the clock will remain at 14 through the Atlas/Agena liftoff. Since we have nine countdowns going on simultaneously on the Gemini 9 Mission, the control of the clock is a key item. That is, now at this point the Atlas Launch Vehicle Test Conductor has control. If a hold has to be declared all nine countdowns have to be stopped. One man calls the hold and from this point down to liftoff of the Atlas/Agena it will be the Atlas/Agena Test Conductor. It will then revert back to Launch Complex 19 through the remainder of the mission. All systems still looking good. T-172 minutes, 40 seconds and counting. This is Gemini Launch Control.

END OF TAPE

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This is Gemini Launch Control. T-164 minutes and counting. It is now about an hour and eight or nine minutes away from the planned Atlas/Agena liftoff. The first of two Gemini 9 mission this morning. Our complete countdown, our simultaneous count, still is proceeding very satisfactorily at the present time with no problems. At the ready room at Launch Complex 16, which is adjacent to Launch Complex 19, the prime pilots for the mission, Astronauts Tom Stafford and Gene Cernan are donning their spacesuits at this time and they will be check out as they make their final preparations before proceeding to the launch pad. At Launch Complex 19, we are proceeding. The Gemini launch vehicle is being pressurized at the present time. We pressurized the vehicle with nitrogen, both stages, in order to bring it up to flight readiness. All systems looking good. Now T-163 minutes six seconds and counting. This is Gemini Launch Control.

END OF TAPE

This is Gemini Launch Control we're at T-154 minutes and counting. The test conductor at Launch Complex 14 has just advised that we are having some minor difficulties loading the oxidizer, that nitric acid aboard the Agena second stage at Launch Complex 14. As a result a hold will be declared in the countdown some three minutes and 39 seconds from this time or at the T-150 minute mark in the count. All nine counts in the simultaneous countdown will hold as the test conductor at Launch Complex 14 declares it at the T-150 minute mark in the count. The problem is concerned with the loading system for the acid oxidizer of the Agena. We are still loading the oxidizer aboard the Agena but it is going aboard slower than it should. We do not know the exact problem at this time. It is estimated that the loading process will take an additional 10 to 15 minutes, other than the usual amount of time. So the estimate of the hold is about 10 minutes. We will hold at T-150 minutes. We will now switch you to the Mission Control Center in Houston.

This is Gemini Mission Control in Houston. Here in Mission Control our white team of flight controllers has taken over the consoles, headed by our Flight Director Gene Kranz. Also on hand is the Mission Director, William Schneider from Washington, D.C., NASA headquarters. In the viewing room we have a group of the latest astronauts to join the team. They will experience this launch by viewing it and listening to the console chatter that comes during the launch. We are now about 57 minutes and 10 seconds from the Agena launch. Here are some of the important events that we will be monitoring and that we hope to be able to verify for you during the Agena liftoff. Of course, our flight crew aboard

the Gemini spacecraft at Cape Kennedy, Tom Stafford and Gene Cernan will also see the Agena liftoff via a monitor which has been placed above the spacecraft windows. First of all we will call the liftoff itself, when the combined booster, sustainer, and vernier engines ignite. The two outboard booster engines will drop off after about two minutes and 11 seconds while the sustainer engine continues to burn for another two minutes and approximately 24 seconds. After five minutes of flight the two vernier engines will cutoff. These are small engines at the base of the Atlas and they control the steering to keep the vehicle on its programmed course. Three seconds later the Agena separates from the Atlas booster. At about five minutes and 53 seconds, the secondary propulsion system on the Agena will ignite. The secondary propulsion system is - consists of 16 pound thrust engines that drive the Agena forward. Forward fast enough to force fuel backward into the primary propulsion system combustion chamber area. At about six minutes and 11 seconds into the flight we should have ignition of the Agena main engine. This is called the primary propulsion system. The small 16 pound thrusters will be shut down in a few seconds after primary propulsion ignites. In eight seconds after primary propulsion system ignites at about six minutes, 21 seconds, the nose shroud that covers the docking adapter into which Tom Stafford and Gene Cernan will steer the Gemini spacecraft this shroud will be jettisoned. At nine minutes and 16 seconds we should be in orbit with Agena. This is Gemini Control Houston. We return you now to the Launch Control team at the Cape.

....minutes and holding. T-150 minutes and holding. This hold is expected to last 10 minutes from this time. The problem is concerned with the loading of the nitric acid oxidizer aboard the Agena second stage. We have had difficulties

loading it aboard, its just a slower fill than we usually have encountered. Suspect in the problem is perhaps a partially clogged filter or some other item in the system which does not permit us to complete the fast fill that we usually are able to accomplish. We now have a report that the estimate on the hold will be 20 minutes from the time that it was declared just about a minute ago. The oxidizer is still going aboard the Agena stage but slower than usual. This is not expected to have any great effect on the launch operation this morning except its going to take a little longer than it usually does. T-150 minutes and holding. Hold expected to last 20 minutes. This is Gemini Launch Control.

END OF TAPE.

This is Gemini Launch Control. Still at T-150 minutes and holding. The Atlas Test Conductor at Launch Complex 14 advises that the team is completing the load of the nitric acid aboard the Agena. It was determined that half way through the loading of this acid that the pressure in one of the lines that feed the acid aboard was low. They suspect that some type of minor problem such as clogged filter could have interrupted this flow and lowered the pressure in the flow. As a result, it's going to take us about twice as long to load the acid oxidizer aboard than it usually would under normal circumstances. This is not anticipated to be a problem that would have any final effect on the launch at this time. It's just going to take us a little longer to load the oxidizer aboard. With nine countdowns going at the same time it was determined that the count should stop so that everyone once again will be together once the count is resumed. We expect to get further information from the test conductor shortly and we will pass it on at the time. The estimate was some 15 to 20 minutes at the start of the hold. We are still holding at the present time at T-150. This is Gemini Launch Control.

END OF TAPE

This is Gemini Launch Control. The Atlas Test Conductor has advised that we expect to resume the countdown momentarily. Mark -- T-149 minutes 56 seconds and counting. We are once again counting on the Gemini 9 mission. This was a hold of about 16 minutes duration. The Test Conductor advised that the gages in the Blockhouse of Launch Complex 14 showed that they had completed the loading of that nitric acid oxidizer aboard the Agena. They have now completed that function. We have the completely fueled Agena second stage at this time and we are proceeding. The Astronauts Tom Stafford and Gene Cernan are continuing their checkouts in the ready room. We have now resumed the count of course and we know of no other problems at the present time. Now at T-149 minutes 15 seconds and counting. This is Gemini Launch Control.

END OF TAPE

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This is Gemini Launch Control. T-140 and counting. T-140 and counting. Countdown proceeding very satisfactorily both at Launch Complex 14 and 19 once again. At Complex 14 the crew is now readying to load the liquid oxygen aboard the Atlas first stage. The launch first goes through a chill down sequence. They chill down liquid oxygen tanks in the stage and proceed to load the liquid oxygen aboard. Some 18,000 gallons of liquid oxygen are loaded. This is the final phase of the fueling operations, both for the Atlas/Agena and the Gemini. The Gemini launch vehicle fuel is loaded aboard the last evening. This is the final operation with the Atlas as far as fueling is concerned. The liquid oxygen will be loaded aboard and because it kept at such severe low temperatures, it will boil out during the final phases of the count and will be replenished down to a few seconds before launch when the valves will be closed and the vehicle will be flight ready. The astronauts, Tom Stafford and Gene Cernan will be leaving the ready room some 10 or 15 minutes from this time. All situations looking good at both complexes and as far as the overall count is concerned. It is now T-138 minutes 40 seconds and counting. This is Gemini Launch Control.

END OF TAPE

This is Gemini Launch Control. Now at T- 131 minutes and counting. T-131. All phases of the countdown looking good at this time. We have now been informed from the blockhouse that we will be aiming toward a liftoff time, if all goes well through the remainder of the count, a liftoff time of the Atlas/Agena of 10:15 A. M. EST. This gives us a hold time of 15 minutes. I believe it was reported at 16 minutes. It was reported from the blockhouse at 16 minutes earlier. The hold time was 15 minutes and we're now aiming for 15 minutes after the hour for the launch, EST. At Launch Complex 14 at this time, in addition to the liquid oxygen going aboard the Atlas first stage, a series of auto pilot tests are going on. This is a part of the guidance and control system that drives the Atlas during the early phases of flight. The auto pilot is located on one of the pods on the side of the vehicle. A part of this test is to actually gimble or swivel the three engines at the base of the Atlas vehicle to insure that they will respond to the direction of the auto pilot. The astronauts Tom Stafford and Gene Cernan are still in the ready room. It is expected that they will be coming out some four or five minutes from this time. We're now switch you to the Manned Spacecraft Center in Houston.

This is Gemini Control in Houston. Our Flight Director, Gene Kranz, a few minutes ago conducted a status check of his

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Flight Controllers. He got a go from every station. All the buttons are green on the Flight Director's console. The weather in the planned landing area in the Atlantic and Pacific is good. One interesting weather item, the spacecraft 9 will be flying over, during the first day, a typhoon designated Irma which is located in the South China seas. The hold that was experienced in the Agena countdown will not materially affect rendezvous and EVA because these items are programmed in Ground Elapsed Time, however, the rendezvous time may change a minute or two due to the day/night cycle but EVA will not be affected at all. This is Gemini Control.

END OF TAPE

.....of the count, to insure that everyone is ready. All monitors reported back GO. We have the same GO situation at Launch Complex 14 where we are receiving. All systems looking good as we await the departure of the prime pilots from the ready room. In the Gemini IX spacecraft at the White Room level, the backup pilots, Astronaut Jim Lovell and Buzz Aldrin, are still making some final checks and they will be awaiting prime crew in the White Room to give them a status report when they arrive. This is Gemini Launch Control.

END OF TAPE.

MISSION COMMENTARY, 5/17/66, 8:49 AM TAPE 19 PAGE 1

This is Gemini Launch Control. Now T-120 minutes and counting. Correction T-121 minutes and counting and all proceeding satisfactorily. The prime pilots, Astronauts Tom Stafford and Gene Cernan are going to be several minutes late according to the countdown on their departure from the ready room. Though we have been advised by the Director of the Flight crew operation, Deke Slayton, that they are expected to depart in about a minute or so from this time. In the meantime at pad 14 we are going through some final telemetry checks on the Agena second stage. They are proceeding satisfactorily. The check outs in the white room of the Gemini 9 spacecraft are also going very well at this time. All systems looking good as we await the departure of the prime pilots from their ready room to Launch Complex 19. This is Gemini Launch Control.

END OF TAPE

This is Gemini Launch Control. T-119 minutes and counting. The prime pilots Tom Stafford and Gene Cernan are on their way to Launch Complex 19. They are expected to arrive momentarily. The transfer van is now coming into Complex 19 and in a matter of minutes the two pilots will be in the White Room at Launch Complex 19. They will receive a quick status report from the pad leader and their backup pilots, Astronauts Jim Lovell and Buzz Aldrin and then proceed to come aboard the spacecraft. They are due to go aboard at the 115 minute mark in the countdown or about  $2\frac{1}{2}$  minutes from this time. It is expected they will be a little late but we don't feel it will effect the countdown at this point. The two pilots now have left the transfer van and are about to board the elevator that will take them to the White Room and the final phase and final countdown of the Gemini mission. We are now some 25 minutes away from the Atlas Agena liftoff. Our final checks at Launch Complex 14 are proceeding very satisfactorily at this time. This is Gemini Launch Control.

END OF TAPE

This is Gemini Launch Control, T-115 minutes and counting. Right on time on the astronaut countdown. The two pilots have just boarded the Gemini IX spacecraft. They received a quick report from the pad leader and the backup pilots, Jim Lovell and Buzz Aldrin, prior to entering the spacecraft, just a matter of seconds ago. We are now some 20 minutes away from the Atlas/Agena liftoff. Once Stafford and Cernan are aboard we will proceed with closing the hatches and making initial checks. When Stafford and Cernan did come into the White Room the pad crew in the White Room presented Tom with an eight ball. What it was, was a rubber ball, a little larger than a tennis ball. There was a design on it similar to the so called eight ball which designates spacecraft attitude. That is, one of the dials in the spacecraft itself. The reason they presented this eight ball to the command pilot was that during the preparations for the Gemini IX mission Stafford on several occasions had pointed out to the pad crew that the needle on the eight ball appeared to be slightly out of adjustment. At one time Stafford mentioned that it was half of the needles width out of adjustment. The needles total width is 30,000ths of an inch. The pad crew did make three adjustments on the needle and as a result as a bit of a joke and a personal joke between the pad crew and the command pilot, they presented him with an eight ball just before he entered the spacecraft. He of course returned it back to the crew. We are now at T-113 minutes and 20 seconds, all is proceeding very satisfactorily. We will now switch you to Mission Control in Houston.

This is Gemini Control, Houston. Just a few minutes ago we had a final status check of all our controllers, conducted by Flight Director Gene Kranz. All the lights on his console were green and GO at the conclusion

of the check. Just prior to that our spacecraft communicator, Neil Armstrong, conducted a voice check, UHF voice check with the world wide tracking station network and everyone is reading loud and clear this morning. Communications are very good. This is Gemini Control, 112 minutes, 40 seconds before liftoff of Gemini.

END OF TAPE

MISSION COMMENTARY, 5/17/66, 9:00 A.M. TAPE 22 PAGE 1

This is Gemini Launch Control. T-110 minutes and counting. And our simultaneous countdown going very well at this time. Astronauts Tom Stafford and Gene Cernan now in the Gemini 9 spacecraft and making preliminary check. The hatches on the spacecraft should be closed some nine and a half minutes from this time as we lead toward the Atlas/Agena liftoff due at 15 minutes after the hour. At Launch Complex 14, all is going very well at this time. We have just completed some range safety final command checks with the Agena second stage. We first do most of our wrapup with the Agena. The Agena goes on internal power at about the three minute mark in the countdown as we lead down. It is now some - coming up on 15 minutes, 15 minutes and 50 seconds away from the Atlas/Agena liftoff. All systems are going well. Back at the white room and Gemini 9 Tom Stafford received a final briefing from his backup command pilot, Jim Lovell. They have been class mates at the Naval Academy, Class of 1952 and have known each other for some 20 years. Of course, they had another class reunion back in December at a rather high altitude of the Gemini 6 and Gemini 7 missions. Now T-108 minutes and 36 seconds and counting. This is Gemini Launch Control.

END OF TAPE

This is Gemini Launch Control at T-105 minutes and counting. T-105 and now 15 minutes away - 10 minutes away from the Atlas/Agena liftoff. T-10 minutes and counting toward the Atlas/Agena at Launch Complex 14. Our countdown continues to proceed exceptably at this point. In fact, we got a very excellent countdown except for a 15 minutes hold at one point in order to complete loading of the Agena second stage. All systems are going well. The prime pilots are checking in with the block-house and with the pad leader and crew in the White Room level and all systems are going well there. We are also going through a final status check now to get a GO for launch on the Agena. T-104 minutes and 13 seconds and counting. This is Gemini Launch Control.

END OF TAPE

This is Gemini Launch Control, T-100 minutes and counting. T-5 minutes and counting as far as the Atlas/Agena is concerned at Launch Complex 14. All systems going well. The hatches on the Gemini IX spacecraft has just been closed in the White Room on top the pad at Launch Complex 19.

Astronauts Tom Stafford and Gene Cernan will not be able to observe the Atlas/Agena launch. They will get a report from the blockhouse. There is no television equipment in the White Room for them to look through the small hatch windows to see it. As a result they will not be able to see it visually but will get a complete report on its status. Meanwhile at Launch Complex 14, they are going through the terminal phases of the count. A status check has just been in effect, all systems are going very well. Now, coming up on T-99 minutes and 10 seconds. **MARK.**

T-99 minutes, 10 seconds and counting some four minutes and 10 seconds away from the Atlas/Agena liftoff. Now 99 minutes and counting. This is Gemini Launch Control.

END OF TAPE

This is Gemini Launch Control. T-98 minutes and counting, and three minutes away from the planned Atlas/Agena liftoff. We have closed the hatches at Launch Complex 19 on the Gemini 9 spacecraft. We're now going through the terminal phases of the countdown at Launch Complex 14. All is proceeding well at this time. Just a matter of some 30 seconds ago, telemetry went on internal power in the vehicle at the pad. During the final phases of the Atlas/Agena count, the launch sequencer comes into effect in the countdown at the nineteen second mark of the count. This is the final sequence. Everything is automatic from that time down. There could be a brief hold at the 19 second mark as the sequencer is put into effect. The engines on the Atlas will ignite at the four second mark in the countdown and about the zero mark we will get liftoff with full thrust of those three engines at the base of the Atlas vehicle. That is the sustainer and the two booster engines give us a total thrust of 390,000 pounds. Now just passing the two minute mark on the Atlas/Agena count. At this point the range safety commands have gone on internal power in the vehicle and some 30 seconds from now the complete vehicle will go on its internal power, that is, the flight batteries. One minute and 40 seconds away. Our final phase of checkout is still looking good at this time. T-90 seconds and counting. T-90 seconds and counting. The Atlas vehicle is completely on internal power

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at this point. Now one minute and 15 seconds away from Atlas/  
Agena liftoff. The Gemini Launch Control, T-60 seconds and  
counting. T-60. T-60 seconds and counting. At this point  
the launch vehicle test conductor has a series of lights on  
his console that will turn from amber to green as the count  
continues. This is automatic. T-40 seconds and counting.  
T-30 seconds and counting and our final checks still give us  
a go condition at this time. T-20. T-19, 18. 18 holding  
momentarily. T-15 seconds and counting. T-10, 9, 8, 7, 6,  
5, 4, 3, 2, 1. Ignition! We have a liftoff. It looked like  
15 minutes and four seconds after the hour. We will get a re-  
finement on that momentarily. T+10 seconds. T+20 seconds.  
Trajectory is looking good. T+32 seconds. Trajectory still  
looks good. Flight Dynamics says the trajectory looks good.  
T+one minute, 2 seconds into the flight. Our Agena is follow-  
ing exactly the overlay of our plot work here. At this time  
Agena is about 3,000...moving at about 3,000 feet per second.  
Trajectory is still looking good. Agena is about 15 miles, 17  
miles in altitude and is approximately 18 to 19 miles downrange.  
Liftoff took place 15 minutes and three seconds after the hour.  
BECO. The booster engine has cutoff. Here at Mission Control  
we had a temporary loss of data, it is coming back in now.  
Here at Mission Control according to our plot boards we do not  
as yet have second stage ignition. Our Flight Dynamics Officer  
just reported to the Flight Director that he believes we have  
second stage ignition. T+3 minutes and 20 seconds. We appear

to have lost some of our data on our plot boards here at Mission Control. T+4 minutes and 10 seconds. We have lost the data on our plot boards here. Our Flight Director, Gene Kranz, is attempting to raise the Range Safety Officer at Cape Kennedy. As yet with no success. T+4 minutes, 30 seconds. We have a report here passed on by Flight Dynamics, the Range Safety Officer we understand says we are flying low with the Agena and may come in. We have a report now of second staging ignition. That report of SECO was second stage cutoff, not ignition. Agena advises we have had VECO, the vernier engine cutoff and separation. Here in Mission Control our plot boards do not give us the data that we need to report to you. We are now five minutes and 50 seconds into the mission. T+6 minutes, 20 seconds. We still have no actual word on the condition of our bird. T+6 minutes, 30 seconds. We still have no definite word on the condition of our bird. The data on our plot boards does not give us the figures we need to read out. Mission Director, Bill Schneider, said that we do not have any definite word on our bird but it does not look good at this time. Six minutes, coming up on seven minutes into the flight.

END OF TAPE

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T plus 7 minutes and 30 seconds and still no word, no definite word on the condition of the Agena. As reported previously, our plotboard here at Mission Control does not give us figures we need to read out this flight. Our Mission Director, William Schneider, said that we do not, at this time, know the condition of the bird. He added that it does not look good. T plus eight minutes.

This is Gemini Control eight minutes and 47 seconds into the mission. We do not know exactly what happened to the Agena but the word now is that we have lost it. We do not know where it would come in. It evidently happened at staging according to our Mission Director, Bill Schneider. We repeat, we evidently have lost the Agena vehicle. It appears that it has come in or is on its way in somewhere. It did not make it into orbit and we have lost it and we are standing by for additional word to see what will happen to the remainder of this flight. That is the flight concerned with the Gemini spacecraft. This is Mission Control and we are now nine minutes and 35 seconds since the Agena did liftoff at Cape Kennedy. We have lost the bird. This is Gemini Control.

This is Gemini Control we are 10 minutes 28 seconds after the Agena liftoff. We have lost the Agena bird. Our Mission Director, Bill Schneider has scrubbed the entire mission. Gemini 9 will not fly today. We will now attempt to get an evaluation of exactly what happened and after that is determined we will then of course look into plans for completion of Gemini

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at a later date. As of right now, this mission is scrubbed entirely, both the Agena mission, because we lost the bird and therefore, our Mission Director, Bill Schneider has scrubbed the Gemini mission, which was to rendezvous and dock with the Agena. It is now 11 minutes, 18 seconds since the Agena lifted off. The problem will be looked into. It evidently happened sometime during staging of the Agena and our Flight Controllers now will attempt to get a handle on the situation, and find out what happened and then make plans for a future date. This is Gemini Control 11 minutes and 41 seconds, since the Agena lifted off.

END OF TAPE

. . . . . We now have a report of their reactions when they did hear that we had a failure on the attempt to orbit the Agena this morning. At this point we have no further information on that problem. We hope to have a Press Conference concerning the Agena operations some 30 to 45 minutes from this time. The reaction of the astronauts were as follows, when first hearing of it Tom Staffords reaction was an "Oh Shucks", but he followed this up by passing on to the crew and passing on to his Pilot Gene Cernan, that quote "You can't get your hopes up until that Agena comes across the states. I've been up here a number of times before. Gene Cernan's reaction on first hearing that we were not able to obtain an orbit on the Agena was the same phrase said three times over, "Oh no, Oh no, Oh no". This is Gemini Launch Control.

END OF TAPE