

**NEWS RELEASE**  
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**CHRONOLOGY OF EVENTS**  
**LEADING TO LAUNCHING**

Cape Canaveral, Fla.--The story behind the decision to launch the Army scientific earth satellite and the teamwork that went into the pre-launching and launching activity was told today.

The decision to postpone the launching for 24 hours from Wednesday, January 29, the originally scheduled date, was made by Major General John B. Medaris, who commands the Army Ballistic Missile Agency, Huntsville, Alabama.

It was General Medaris who decided Wednesday, January 29 to postpone the launching 24 hours due to unfavorable wind conditions at high altitude.

The launching date of January 29, 1958 had been selected weeks ago, following the announcement by the Department of Defense that the Army would attempt a satellite launching as a contribution to the International Geophysical Year program.

Surveying the weather situation during the morning of the 29th, General Medaris was informed the weather aloft that night would not be good. A jet stream of 146 knots velocity poured out of the West altitudes between 36,000 and 40,000 feet.

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This information was relayed to the Aeroballistics and Guidance and control laboratories at the Missile agency. Scientists there concluded the chances of successful flight would be marginal.

Surface weather also looked bad. The forecasts indicated thunderstorm activity. With a multistage rocket such as the JUPITER-C, igniters are employed to fire the solid propellant motors of the upper stages. The sensitive igniters might be detonated by nearby lighting.

Faced by these factors, General Medaris decided upon a postponement. Wednesday evening he received more data from the Air Force weather detachment at Patrick Air Force Base, commanded by Major Robert F. Durbin. The outlook for the next day, Thursday, January 30, was better -- but still not ideal by any means.

General Medaris discussed the situation by phone with Lt. John L. Meisenheimer of the weather detachment and Dr. Kurt Debus, Director of the Missile Firing Laboratory of the Army agency.

He asked for special observations early on the 30th, made possible by the use of weather balloons. A slow rising balloon went up at 7 AM, and a fast rising balloon later. The latter returns data from high altitudes more quickly.

At 9 AM Thursday, General Medaris went to the weather station and pored over the data. Thirty years of flying experience under all kinds of conditions has given him an understanding of weather found among meteorologists or top pilots.

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Having briefed himself thoroughly with the help of Lt. Meisenheimer and Major Robert L. Miller, he drove to the Army test facilities at the Cape. There he discussed the situation with Dr. Debus, Dr. Walter Haeussermann, Director of Guidance and Control Laboratory, Dr. Ernst Stuhlinger, Chief of the Research Projects Office of ABMA, and others.

The predicted winds at 30,000 to 40,000 feet altitude that evening would be in the neighborhood of 177 knots. Back went the data to the Missile Agency for evaluation. The reply this time indicated a launching could be attempted, if the trend towards more favorable winds continued, particularly because no thunderstorm activity was foreseen.

At 11:15 AM, General Medaris ordered launching arrangements to begin. He announced a final decision would be reached by 9:30 PM, having requested the Weather Detachment to give him the latest data available by that hour. Missile preparation proceeded smoothly.

Slow rising balloons were released at 1 PM and 5 PM, which require from three to three and one-half hours to develop full information. A fast rising balloon was sent up at 7:30 PM to check the wind velocity in the jet stream.

The ground weather outlook indicated there would be no precipitation, two-tenths low clouds, some middle clouds, a wind of 15 knots with gusts as high as 20 knots, which presented no launch problem.

If the weather factor became marginal at 9:30 PM, General Medaris said another postponement would be ordered. Otherwise, the attempt to launch the first United States earth satellite would proceed.

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Lt. Meisenheimer reported to the Army blockhouse at 8:50 PM carrying his charts. They revealed a maximum wind velocity between 30,000 and 40,000 feet of 198 knots, far above hurricane force.

The wind data was transmitted to the Missile Agency where it was fed into an electronic flight simulator, which calculates the strains and stresses to which the rocket would be subjected. The reply came back that the impact of the jet stream upon the rocket and its payload would be intolerable because an excessive angle of attack would result.

General Medaris conferred with Dr. Debus, Dr. Haeussermann, Dr. Stuhlinger, Col. Leonard Orman, Director of the Army tests at the Cape, and Missile Firing Lab personnel. Two representatives of the Jet Propulsion Laboratory, which supplied the high speed upper stages of the rocket and packaged the satellite, also took part. They were Dr. Jack Froehlich and Dr. Homer Joe Stewart.

The group examined the profile of wind gradients and the simulator information. At 9:10 PM, General Medaris decided to postpone the test before fueling with liquid oxygen.

The Missile Agency Commander called Major General D. N. Yates, who commands the Air Force Missile Test Center and who was in charge of Air Force Weather Service formerly. He looked over the weather data and the two Generals concluded that the jet stream would build up to a maximum velocity of 225 knots the night of Friday, January 31.

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General Medaris then faced another decision--whether to postpone the launching on a day-to-day basis or put it off until next week. Realizing the strain upon his firing team, he was opposed to keeping them on the pad throughout the week-end.

Covering all of Florida, the jet stream was far above the normal level of approximately 120 knots. General Medaris requested the release of another balloon during the night and said he would make his decision on further postponement early Friday.

Shortly after 8 AM Friday, Lt. Meisenheimer advised Dr. Debus that the readings during the night indicated an unexpected and substantial drop in the velocity to about 148 knots. By 9 AM, General Medaris felt the situation warranted another look and asked for a balloon ascent at 11 AM. Arrangements were set up to flash the data from this flight to the Missile Agency upon receipt.

At 1:40 PM, General Medaris learned the jet stream had reduced to a velocity somewhat in excess of 120 knots and decided to proceed with the launch at 10:30 PM because the forecast indicated the velocity might reduce still further.

The weather station lofted another balloon during the afternoon and with this confirmation of the earlier report, General Medaris gave the "Go-Ahead".

The rocket lifted off at 10:48 PM,

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