

National Transportation Safety Board

Office of Aviation Safety

Washington, DC 20594



ERA25FA151

METEOROLOGY

Specialist's Factual Report

May 27, 2025

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A. ACCIDENT

Location: LaFayette, Georgia
Date: March 20, 2025
Time: 1430 eastern daylight time
1830 coordinated universal time (UTC)
Airplane: Cirrus Design Corp. SR22; Registration: N969SS

B. METEOROLOGY INVESTIGATOR

Donald Eick
NTSB Senior Meteorologist
Office of Aviation Safety
National Transportation Safety Board
Washington, DC

C. SUMMARY

On March 20, 2025, about 1430 eastern daylight time, a Cirrus SR-22, N969SS, was destroyed when it was involved in an accident near LaFayette, Georgia. The flight instructor and pilot receiving instruction were fatally injured. The airplane was operated as a *Title 14 Code of Federal Regulations Part 91* instructional flight.

D. DETAILS OF THE INVESTIGATION

The meteorology phase of the investigation was conducted remotely, collecting data from official National Oceanic and Atmospheric Administration (NOAA) National Weather Service (NWS) sources including the Weather Prediction Center (WPC), and the National Center for Environmental Information (NCEI). All times are reported as eastern daylight time (EDT) based upon the 24-hour clock, local time is -4 hours from UTC, and UTC=Z. Airport and NWS station identifiers use the standard International Civil Aviation Organization 4-letter station identifiers versus the International Air Transport Association 3-letter identifiers, which deletes the initial country code designator "K" for U.S. continental airports. Directions are referenced to true north and distances in nautical miles. Heights are in feet (ft) above mean sea level (msl) unless otherwise noted. Visibility is in statute miles and fractions of statute miles.

The accident site was located at latitude 34.692361°N and longitude 85.2889°W at an elevation of approximately 775 ft.

E. FACTUAL INFORMATION

1.0 Synoptic Conditions

The synoptic or large-scale migratory weather systems influencing the area were documented using standard NWS charts issued by the National Center for Environmental Prediction (NCEP) and the WPC located in College Park, Maryland. These are the base products used in describing weather features and in the creation of forecasts and warnings. Reference to these charts and other products can be found in the Federal Aviation Administration (FAA) "Aviation Weather Handbook", FAA-H-8083-28¹.

1.1 Surface Analysis

The NWS Surface Analysis Chart for 1400 EDT (1800Z) is included as figure 1. The chart depicted a low-pressure system at 1000-hectopascal (hPa)² over western North Carolina along a cold frontal system, which extended southward across South Carolina, southeast Georgia into northern Florida. The accident site was located on the cold air side west of the front and to the southwest of the low-pressure system. The station models depicted westerly winds at 10 to 15 knots in the vicinity of the accident site with temperature near 49° Fahrenheit (F), with dew point temperature near 30°F, with broken to overcast cloud cover.

¹ <https://www.faa.gov/regulationspolicies/handbooksmanuals/aviation/faq-h-8083-28-aviation-weather-handbook>

² Hectopascals is the standard unit for reporting pressure and is interchangeable with the former term millibar (mb) with the same units. The International Standard Atmosphere is based on a sea-level pressure of 1013.25-hPa at a temperature of 15° Celsius (C) or 59° Fahrenheit.

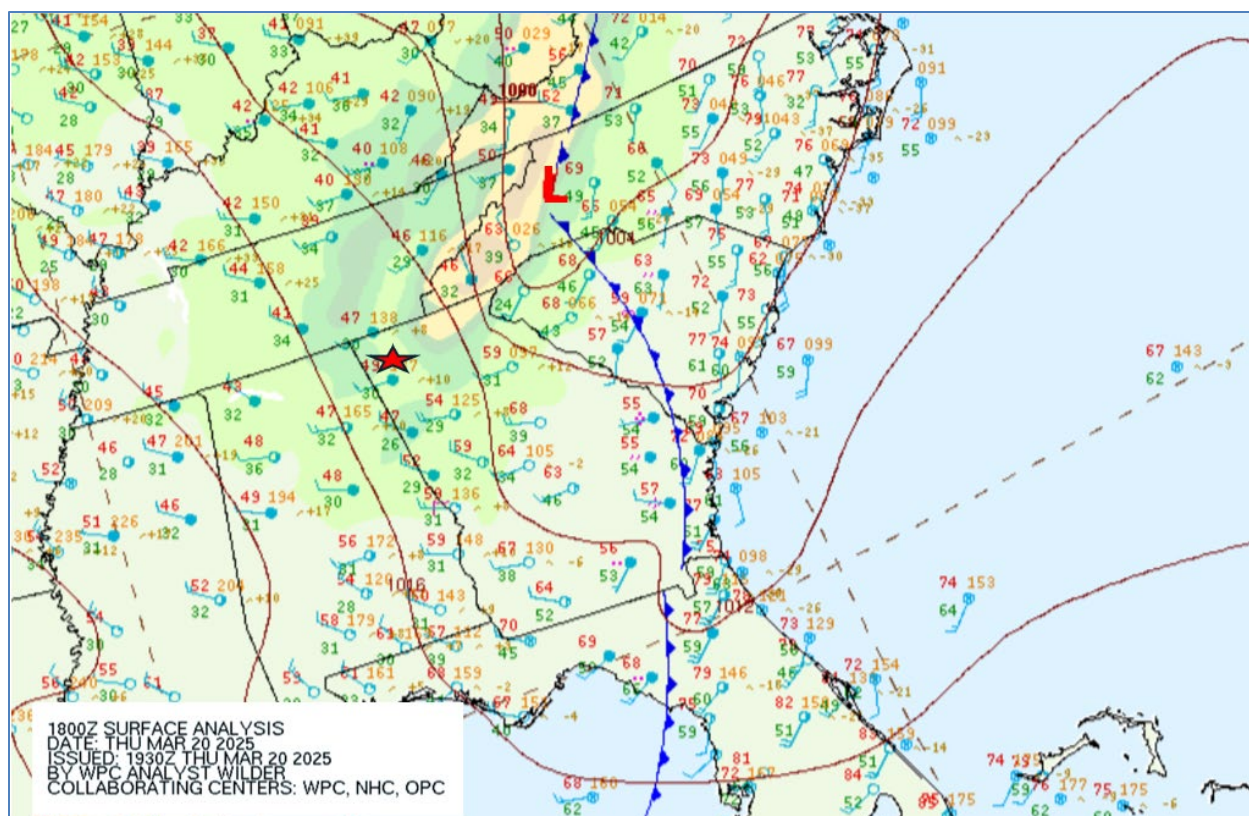


Figure 1- NWS Surface Analysis Chart for 1400 EDT with the approximate accident site marked by the red star.

1.2 Regional Radar Composite Image

The NWS Regional Composite Radar Image for 1430 EDT with the approximate accident marked by a red star is included as figure 2. The image depicted several scattered echoes of 30 dBZ³ or light intensity generally west and northwest of the accident site over Alabama, extreme northwest Georgia, and Tennessee. No defined echoes were identified over the region, and no echoes were identified within 20 miles of the accident site.

³ dBZ stands for decibels of reflectivity factor Z, which will be documented in section 5.0 of this report.

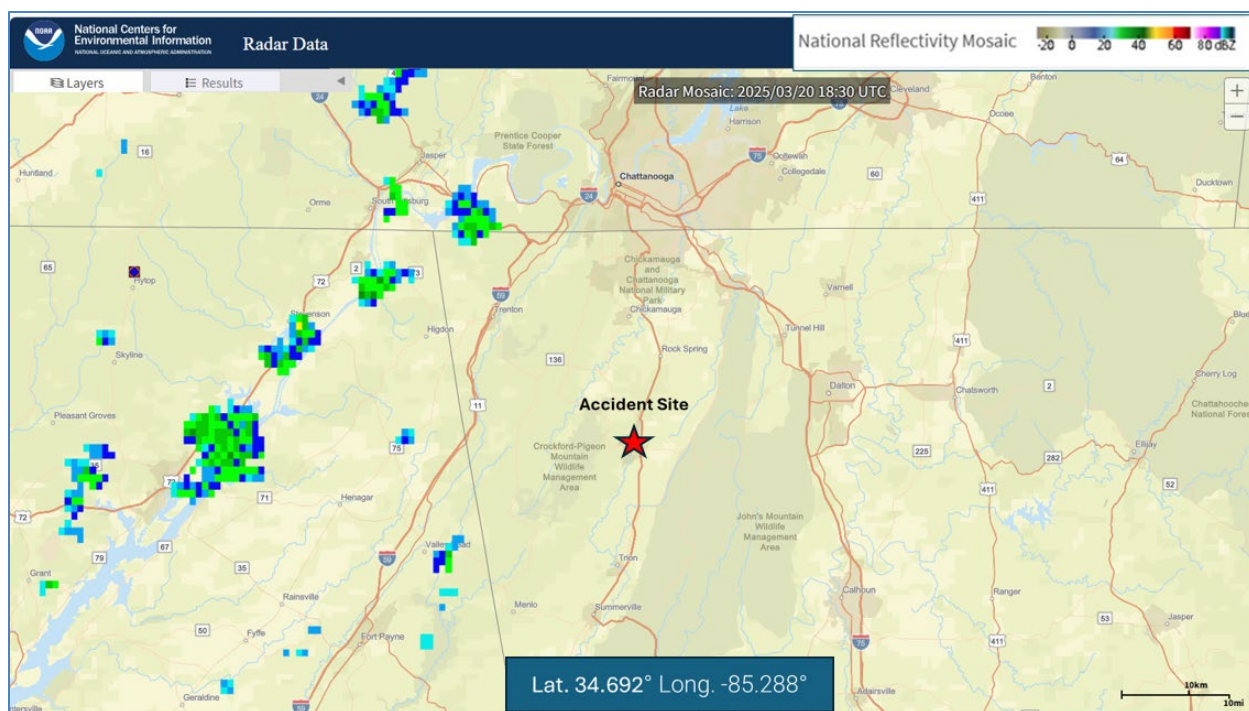


Figure 2 - NWS Regional Composite Radar Mosaic for 1430 EDT with the accident site marked.

2.0 Surface Observations

The area surrounding the accident site was documented using official Aviation Routine Weather Reports (METAR) and Aviation Selected Special Weather Reports (SPECI). Cloud heights are reported above ground level (agl) in the following section. The magnetic variation over the area was estimated at 5°W based on the latest sectional chart for the area.

2.1 LaFayette, Georgia

The accident aircraft was doing pattern work at Barwick LaFayette Airport (K9A5), LaFayette, GA, when it crashed attempting to land on runway 20. The airport lists an elevation of 777ft and had an Automated Weather Observation System (AWOS-3) installed which typically issued observations locally on 119.775 VHF and disseminated observations longline every 20 minutes on FAA weather circuits. At the time of the accident the following conditions were reported.

Barwick LaFayette Airport weather at 1415 EDT, automated, wind from 260° at 7 knots, visibility 10 miles or more, scattered clouds at 4,100 ft agl, temperature 8°C (47°F), dew point temperature 0°C (32°F), altimeter setting 29.96 inches of mercury. Remarks: automated system with a precipitation discriminator, temperature 8.3°C, dew point -0.5°C.

The raw observations and general flight categories⁴ in standard code and abbreviations with time referenced to UTC are included below with the observation decoded above in bold blue type and the time of the accident inserted.

VFR METAR K9A5 201555Z AUTO 27007KT 10SM SCT045 07/M02 A2995 RMK AO2 T00721022=
VFR METAR K9A5 201615Z AUTO 27006G14KT 10SM SCT045 07/M02 A2996 RMK AO2
T00721022=
VFR METAR K9A5 201635Z AUTO 29005KT 10SM SCT047 08/M02 A2996 RMK AO2 T00751019=
VFR METAR K9A5 201655Z AUTO 27011G15KT 10SM SCT045 08/M02 A2996 RMK AO2
T00751017=
VFR METAR K9A5 201715Z AUTO 29006G14KT 10SM SCT045 07/M02 A2997 RMK AO2
T00721016=
VFR METAR K9A5 201735Z AUTO 29008KT 270V330 10SM SCT043 08/M01 A2997 RMK AO2
T00751014=
VFR METAR K9A5 201755Z AUTO 26010KT 10SM SCT041 07/M01 A2997 RMK AO2 T00731012
10093 20070=
**VFR METAR K9A5 201815Z AUTO 26007KT 10SM SCT041 08/00 A2996 RMK AO2
T00831005=**

Accident 1830Z

VFR METAR K9A5 201835Z AUTO 33010KT 10SM SCT043 08/M01 A2997 RMK AO2 T00761011=
VFR METAR K9A5 201855Z AUTO 30005G08KT 10SM SCT041 07/M01 A2997 RMK AO2
T00741006=
VFR METAR K9A5 201915Z AUTO 32006G14KT 10SM BKN039 07/00 A2997 RMK AO2 T00700000=
VFR METAR K9A5 201935Z AUTO 29012G17KT 10SM SCT037 08/00 A2997 RMK AO2 T00751002=
VFR METAR K9A5 201955Z AUTO 31008G15KT 290V350 10SM CLR 08/00 A2997 RMK AO2
T00751004=
VFR METAR K9A5 202015Z AUTO 29006G17KT 10SM CLR 08/M01 A2997 RMK AO2 T00751008=

⁴ As defined by the NWS and the FAA Aeronautical Information Manual (AIM) section 7-1-7 defines the following general flight categories:

- Low Instrument Flight Rules (LIFR*) - ceiling below 500 ft agl and/or visibility less than 1 statute mile.
- Instrument Flight Rules (IFR) - ceiling between 500 to below 1,000 feet agl and/or visibility 1 to less than 3 miles.
- Marginal Visual Flight Rules (MVFR**) - ceiling from 1,000 to 3,000 ft agl and/or visibility 3 to 5 miles.
- Visual Flight Rules (VFR) - ceiling greater 3,000 ft agl and visibility greater than 5 miles.

* By definition, IFR is a ceiling less than 1,000 ft agl and/or visibility less than 3 miles while LIFR is a sub-category of IFR. ** MVFR is a subset of VFR.

2.2 NWS Aviation Weather Center Observation Depiction

NWS Aviation Weather Center's (AWC) surface observation display with the regional composite weather radar image overlaid is included as figure 3 with the accident site noted within the red circle. Several scattered light reflectivity echoes were scattered over northwestern Georgia, Tennessee, and Alabama predominately to the southwest, west, and north of the accident site.

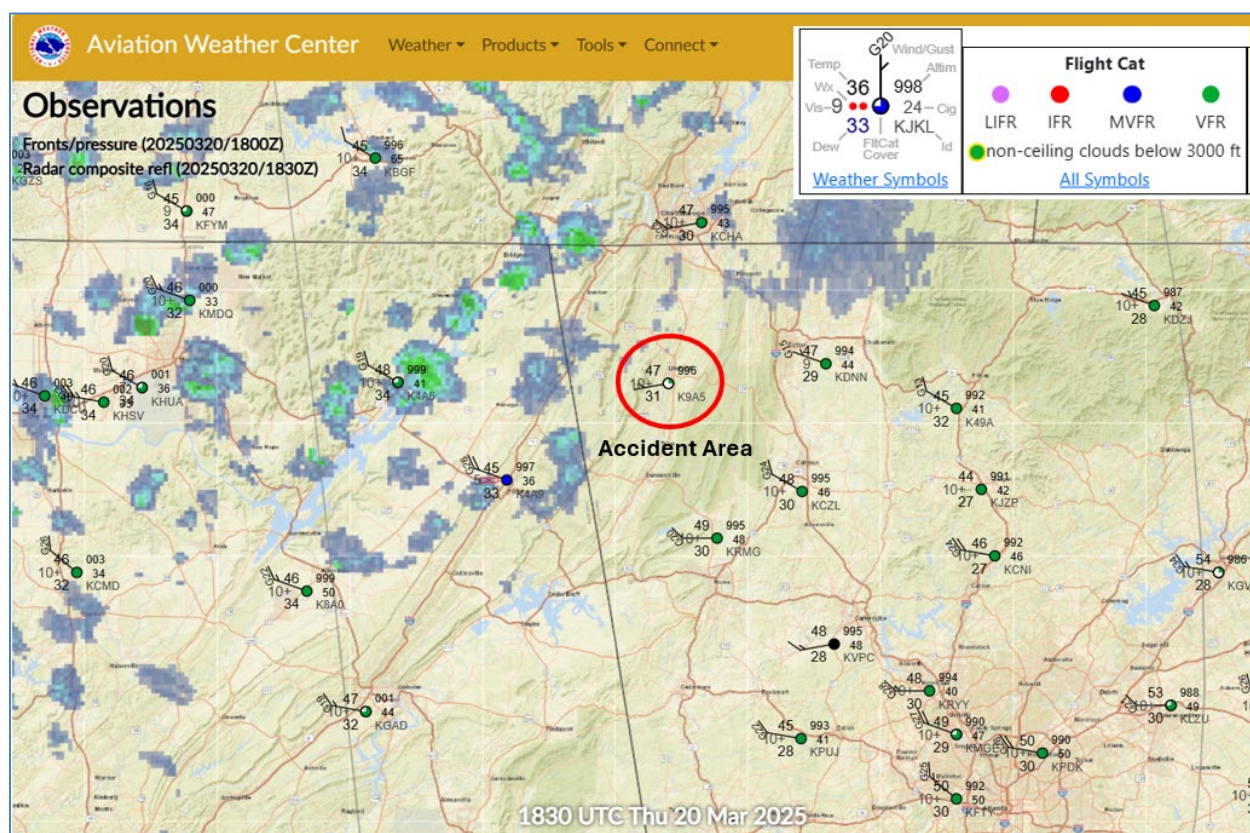


Figure 3 - NWS Aviation Weather Center observation and composite radar display for 1430 EDT with the accident site marked within the red circle.

3.0 Sounding

A High-Resolution Rapid Refresh (HRRR)⁵ numerical model data was obtained from the NOAA Air Resources Laboratory archive for 1400 EDT for the nearest grid point to the accident site. The data was then plotted on a standard Skew T/log P

⁵ The HRRR is a NOAA real-time 3-kilometer (km) resolution, hourly-updated, cloud-resolving, convection-allowing atmospheric model, initialized by 3 km grids with 3 km radar assimilation. Radar data is assimilated in the HRRR every 15 minutes over a 1-hour period.

diagram⁶ using the RAOB Analysis software⁷ from the surface to 500-hPa or about 18,000 ft and is included as figure 4.

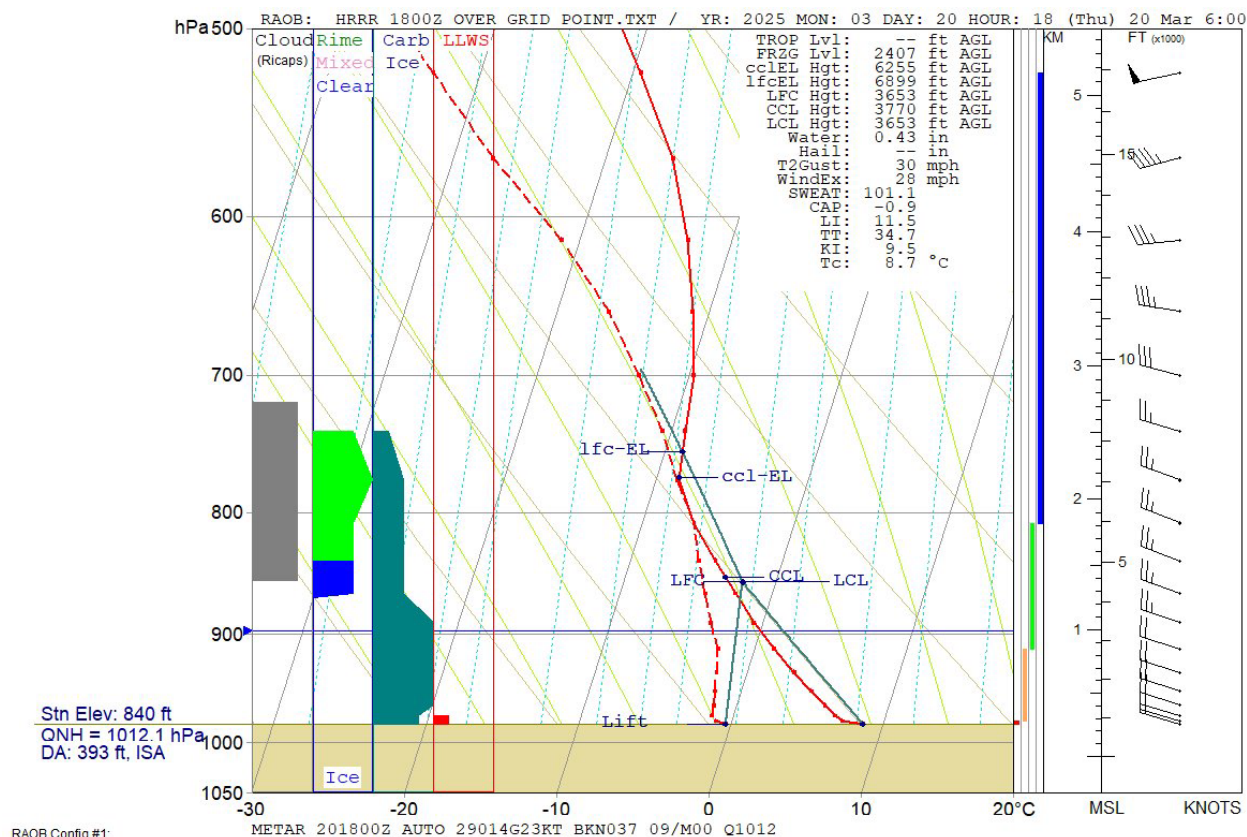


Figure 4 - High-Resolution Rapid Refresh numerical model for 1400 EDT over the area.

The sounding depicted an elevation of 840 ft over the grid point with a temperature of 8.7°C (47.7°F), a dew point temperature of -0.3°C (31.5°F), with a relative humidity of 53%. The lifted condensation level (LCL) and level of free convection (LFC) were at 3,653 ft agl, and the convective condensation level (CCL) at 3,770 ft agl. The precipitable water content was 0.43 inches. Below 3,000 ft the adiabatic lapse rate depicted an unstable environment, with a more stable atmosphere above with the resultant Lifted Index of 11.5 and no positive Convective Available Potential Energy (CAPE) was noted. The RAOB Analysis program supported a broken layer of stratiform type clouds with bases at 3,700 ft agl with tops near 9,000 ft. The freezing level was identified at 3,250 ft and supported icing in-clouds between 5,000 and 8,000 ft, above the accident airplane's operating altitude during the period. The

⁶ Skew T log P diagram - is a standard meteorological plot or thermodynamic diagram using temperature and the logarithmic of pressure as coordinates, used to display winds, temperature, dew point, and various indices used to define the vertical structure of the atmosphere.

⁷ The Universal RAWinsonde OBservation (RAOB) program software - is an interactive sounding analysis program developed by Eosonde Research Services (ERS) previously known as Environmental Research Services, The Villages, Florida.

RAOB program also supported a layer below 3,000 ft msl having a high potential for carburetor type icing.

The HRRR wind profile indicated a surface wind from 290° at 14 knots gusting to 23 knots with little variation with wind direction with height through 10,000 ft. Winds exceeded 17 knots above 1,000 ft and the RAOB program supported light Low-Level Wind Shear (LLWS) threat due to the vertical shear.

A table of the sounding parameters follows with Height, pressure (Pre), temperature (T), dew point temperature (Td), relative humidity (RH), wind direction and speed, Clear Air Turbulence (CAT), LLWS, and Icing potential below 10,000 ft.

Height (ft msl)	Pre (hPa)	T (°C)	Td (°C)	RH (%)	Wind (dir/kt)	CAT (FAA)	LLWS (FAA)	Icing (USAF)
840	982	8.7	-0.3	53	288/ 14		LIGHT	
923	979	7.3	-1.0	56	288/ 16		LIGHT	
1061	974	6.7	-1.4	56	288/ 18			
1339	964	5.8	-1.5	59	289/ 19			
1703	951	4.6	-1.7	64	289/ 21			
2184	934	3.1	-2.0	69	289/ 22			
2787	913	1.3	-2.4	76	290/ 22			
3459	890	-0.6	-3.4	81	291/ 23			
4204	865	-2.4	-4.4	86	292/ 24			LGT Clear
5028	838	-4.4	-5.5	92	293/ 24			LGT Clear
5967	808	-6.6	-6.6	100	293/ 24			LGT Rime
7033	775	-8.5	-8.6	99	292/ 23	LGT		MDT Rime
8243	739	-9.1	-10.6	89	288/ 27			LGT Rime
9619	700	-9.7	-13.3	75	286/ 31			

4.0 Satellite Imagery

The NOAA Geostationary Operational Environmental Satellite number 16 (GOES-16) imagery were obtained from an archive at the Space Science Engineering Center (SSEC) at the University of Wisconsin-Madison in Madison, Wisconsin, and processed using the Man-computer Interactive Data Access System (McIDAS) software. The infrared band 13 imagery at a wavelength of 10.3 microns (μM) provided a resolution of 2 kilometers (1 NM), while the visible band 2 imagery at 0.64 μm provided a resolution of 0.5 km (0.25 nm).

Figure 5 is the GOES-16 infrared image for 1401 EDT at 6X magnification with a standard enhancement curve applied. The image depicted an extensive area of low stratiform to stratocumulus clouds over the area with a radiative cloud top temperature of 265 Kelvin or -8.16°C , which based on the HRRR sounding corresponded to tops near 7,000 ft. Figure 6 is the GOES-16 visible image for the same period at 2X

magnification. The image depicts some broken cloud coverage over the area with stratocumulus type clouds with some clouds oriented parallel to the terrain.

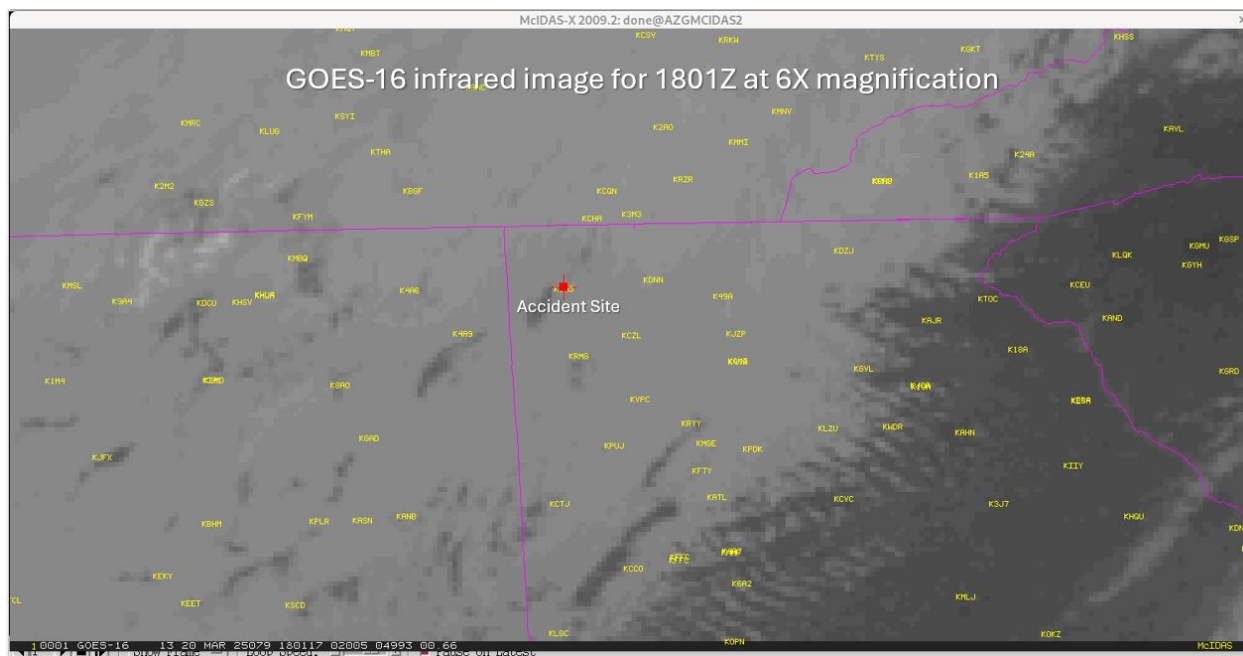


Figure 5 - GOES-16 infrared image for 1401 EDT at 6X magnification with accident site marked.

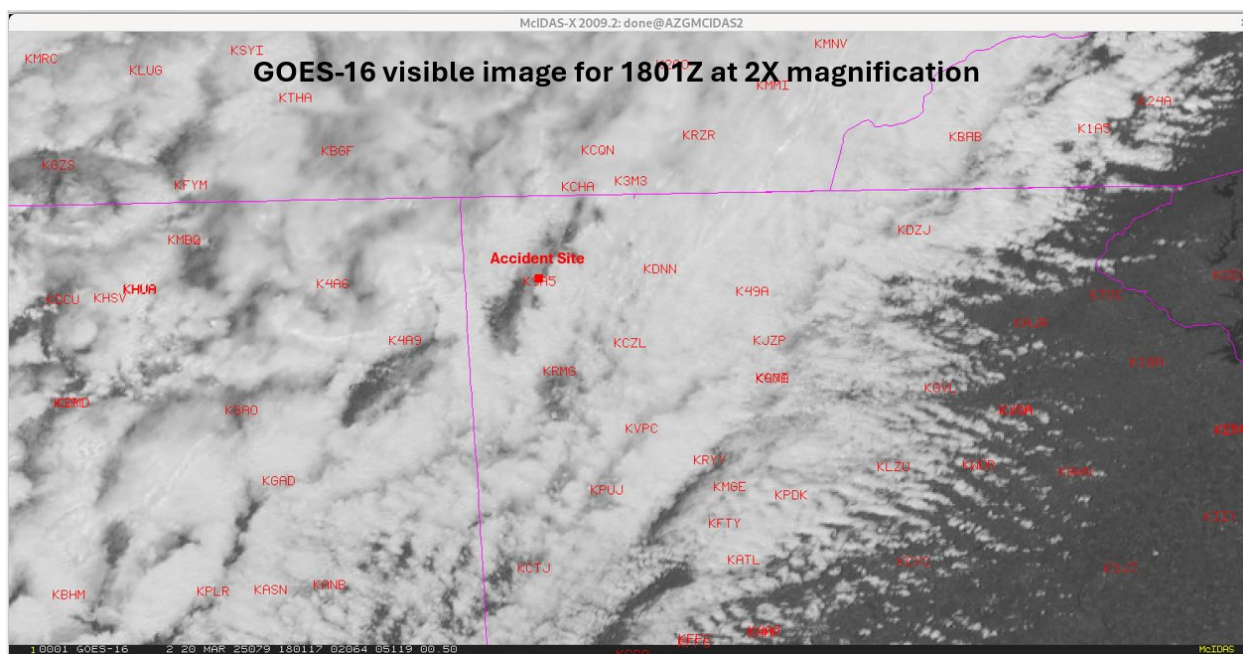


Figure 6 - GOES-16 visible image for 1401 EDT at 2X magnification with accident site marked.

5.0 Weather Radar Imagery

The closest NWS Weather Surveillance Radar 1988 Doppler (WSR-88D)⁸ was located at Huntsville (KHTX), Alabama, about 42 miles west-northwest of the accident site. During the period the KHTX WSR-88D was operating in precipitation mode using volume scan pattern 215 (VCP-215) where the radar makes 14 different elevation scans in 6 minutes. This scanning strategy is typically considered the best vertical resolutions of any of the VCPs for general surveillance of an area. Based on the KHTX radar antenna elevation of 1,859 ft, the lowest elevation scan of 0.48° was centered near 5,170 ft over the accident site. With the radar sampling the airspace between 3,050 ft through 7,280 ft assuming standard refraction of the radar beam.

Reflectivity is the measure of the efficiency of a target in intercepting and returning radio energy. With hydrometeors⁹, it is a function of the drop size distribution, number of particles per unit volume, physical state (ice or water), shape, and aspect. Reflectivity is normally displayed in decibels (dBZ)¹⁰ and is a general measure of echo intensity. Figure 7 relates the NWS former video integrator and processor (VIP) intensity level (1-6) versus the WSR-88D's display levels (0-15), precipitation mode reflectivity in decibels (DBZ) and rainfall rates.

⁸ The WSR-88D is a S-band 10-centimeter wavelength radar with a power output of 750,000 watts, with a 28-foot parabolic antenna concentrating the energy into a 0.95° beam width. The radar produces three basic types of products reflectivity, radial velocity, and spectral width, with reflectivity being the most common display of data. Coverage is outwards to 460 km (248 nm), with doppler product and higher resolution data to 230 km (124 nm).

⁹ Hydrometeors are any product of condensation or sublimation of atmospheric water vapor, whether formed in the free atmosphere or at the earth's surface. Hydrometeors are classified as; (a) Liquid or solid water particles suspended in the air: cloud, water droplets, mist or fog. (b) Liquid precipitation: drizzle and rain. (c) Freezing precipitation: freezing drizzle and freezing rain. (d) Solid (frozen) precipitation: ice pellets, hail, snow, snow pellets, and ice crystals.

¹⁰ Decibels (dBZ) is a nondimensional "unit" of radar reflectivity which represents a logarithmic power ratio (in decibels, or dB) with respect to radar reflectivity factor, Z.

NWS VIP/DBZ CONVERSION TABLE

NWS VIP	WSR-88D LEVEL	PREC MODE DBZ	RAINFALL
0	0	< 5	
	1	5 to 9	
	2	10 to 14	
1 Very Light	3	15 to 19	.01 in/hr
	4	20 to 24	.02 in/hr
	5	25 to 29	.04 in/hr
2 Light to Moderate	6	30 to 34	.09 in/hr
	7	35 to 39	.21 in/hr
3 Strong	8	40 to 44	.48 in/hr
4 Very Strong	9	45 to 49	1.10 in/hr
5 Intense	10	50 to 54	2.49 in/hr
6 Extreme	11	55 to 59	>5.67 in/hr
	12	60 to 64	
	13	65 to 69	
	14	70 to 74	
	15	> 75	

Figure 7 - NWS Video Integrated Processor (VIP) intensity and Reflectivity table.

The NWS KHTX WSR-88D 0.48° base reflectivity image for 1426 EDT is included as figure 8 and depicted echoes of -5 dBZ¹¹ over the area with no defined cells in the immediate vicinity of the airport. No convective outflows were identified in the vicinity of the accident site.

¹¹ Light rain is typically reported at the surface when reflectivities values are over 20 dBZ, and reflectivities less than 20 dBZ are not detectable on airborne weather radar, Flight Information Broadcast (FIS-B) composite radar imagery displays, or displayed on Air Route Traffic Control Center (ARTCC) WARP weather displays.

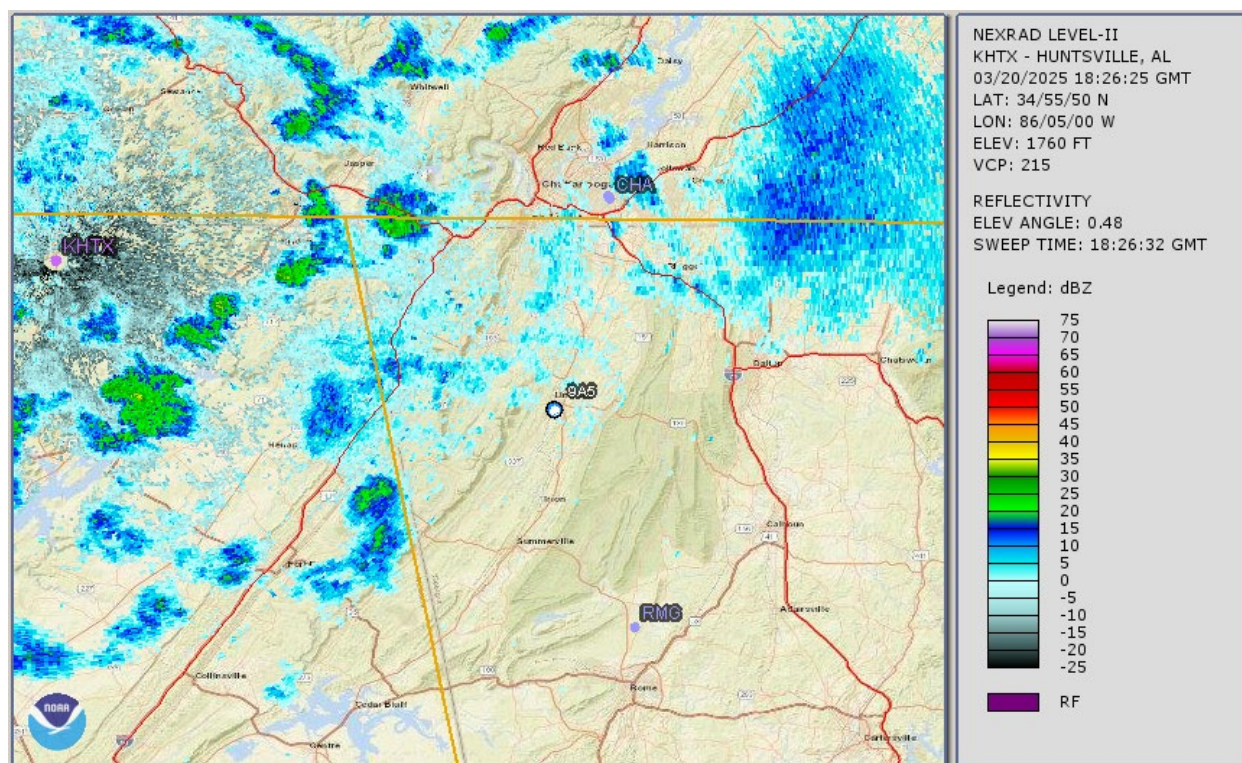


Figure 8 - NWS Huntsville (KHTX) WSR-88D 0.48° base reflectivity image for 1426 EDT.

6.0 Pilot Weather Reports

The following pilot weather reports (PIREPs) were transmitted longline¹² within 60 miles of the accident site between 1100 and 1600 EDT. The reports above 18,000 ft have been excluded. The reports below are in standard code and abbreviations, with time referenced to UTC.

CHA UA /OV CHA270010/TM 1544/FLDURD/TP E50P/SK OVC048

CHA UA /OV CHA340017/TM 1548/FLDURD/TP SF50/TA M08/IC LGT RIME 070

CHA UA /OV GQO130030/TM 1554/FL055/TP PA30/TA 00/TB NEG/IC NEG/RM ZTLFD-38

ATL UA /OV 25NW ATL/TM 1557/FL090/TP GA5C/TB MOD TURB BTWN 090-120

CHA UA /OV CHA330011/TM 1610/FLDURD/TP A319/TA M06/IC LGT RIME 055

CHA UA /OV GQO/TM 1613/FL180/TP C414/TB MOD/RM ZTLFD-05

¹² Longline refers to transmitting the data to the FAA Weather Message Switching Center Replacement (WMSCR) which makes the observations available to users through various links and the internet.

CHA UA /OV CHA030007/TM 1639/FLDURD/TP PA24/TA M07/IC LGT RIME BLO 060

CHA UA /OV CHA160031/TM 1652/FLDURD/TP CRJ9/IC LGT MX 080

CHA UA /OV GQO010030/TM 1724/FL250/TP PC12/TB MOD/RM ZTLFD-37

CHA UA /OV CHA180005/TM 1758/FL068/TP A320/TA M06/IC LGT MIX/RM 040-068 LGT MIXED ICE

RMG UA /OV RMG280020/TM 1804/FL290/TP A321/TB NEG/IC NEG/RM ZTLFD-06

CHA UA /OV CHA/TM 1816/FLDURD/TP E145/TA M09/IC LGT RIME/RM LGT RIME 075-048

ATL UA /OV GQO090035/TM 1849/FL340/TP B737/TB NEG/RM ZTLFD 37

PUJ UA /OV PUJ/TM 1858/FL070/TP C525/TA -08/IC LIGHT RIME

CHA UA /OV CHA/TM 1923/FL066/TP CRJ9/TA -8/IC MOD MIXED

ATL UA /OV ATL355030/TM 1923/FL070/TP B739/TB NEG/IC TRACE-LGT MX/RM DURC 070 120 NEG
ICE AND VMC ZTLFD38

GAD UA /OV GAD040010/TM 1946/FL080/TP BE36/TA M1/IC LGT RIME/RM ZTLFD05

CHA UA /OV CHA/TM 2015/FL097/TP C68A/TA 05/IC LGT RIME

ATL UA /OV PUJ/TM 2050/FL060/TP B350/WX IMC @ 060/TA -3/IC LT RIME

CHA UA /OV CHA270010/TM 1544/FLDURD/TP E50P/SK OVC048

CHA UA /OV CHA340017/TM 1548/FLDURD/TP SF50/TA M08/IC LGT RIME 070

CHA UA /OV GQO130030/TM 1554/FL055/TP PA30/TA 00/TB NEG/IC NEG/RM ZTLFD-38

The majority of the PIREPs reported icing conditions above 5,000 ft through 12,000 ft over the region. There were also two reports of moderate turbulence between 8,000 ft and 12,000 ft. There were no reports of any low-level wind shear (LLWS) or turbulence in the terminal areas or any urgent PIREPs of hazardous conditions.

7.0 NWS Forecasts

7.1 Terminal Aerodrome Forecast

A Terminal Aerodrome Forecasts (TAF) is a weather forecast for a given airport and is valid for a 5-mile radius of the airport center point. It is issued by the local NWS WFO every 6 hours and provides details such as wind direction and speed, visibility, precipitation and other obscurations, cloud cover, and low-level wind shear when required. No TAFs are issued by the NWS for K9A5. The closest TAF to the accident site was issued for Chattanooga (KCHA) located about 23 miles north of the accident site. While not technically valid for the accident site, pilots, briefers, and flight planning systems will often display the closest TAFs for familiarization of the local conditions. The morning TAF issued for KCHA at 0727 EDT was as follows.

*TAF KCHA 201127Z 2012/2112 27010G18KT P6SM BKN050
FM201700 29015G25KT P6SM OVC050
PROB30 2019/2024 6SM -SHRA OVC035
FM210500 32006KT P6SM FEW050=*

The forecast expected from 1300 EDT general VFR conditions to prevail with the wind from 290° at 15 knots gusting to 25 knots, with visibility 6 miles or more, ceiling overcast at 5,000 ft agl. A 30% probability between 1500 through 2000 EDT of visibility 6 miles in light rain showers with a ceiling overcast at 3,500 ft agl.

The next schedule TAF was issued at 1322 EDT and was as follows.

*TAF KCHA 201722Z 2018/2118 29015G25KT P6SM VCSH OVC045
PROB30 2018/2023 6SM -SHRA OVC035
FM210200 31007KT P6SM BKN250
FM210500 32006KT P6SM FEW050
FM211200 VRB03KT P6SM SKC=*

The updated forecast for KCHA from 1400 through 2200 EDT continued to expect VFR conditions to prevail with wind from 290° at 15 knots gusting to 25 knots, visibility 6 miles or more, with showers in the vicinity¹³ of the airport, ceiling overcast at 4,500 ft agl, with a 30% probability¹⁴ of light rain, and ceiling overcast at 3,500 ft agl between 1400 and 1900 EDT.

¹³ Vicinity is defined as an area between 5 and 10 statute miles from the center of the airport's runway complex and used to communicate the perceived level of threat of various weather conditions.

¹⁴ A 30% probability of at least 0.01 inch of precipitation will fall on a specific location within a forecast area.

7.2 Aviation Forecast Discussion

The NWS Aviation Forecast Discussions (AFD) are issued by each WFO to describe the short-term weather conditions within their region with an aviation section that includes the general conditions as they relate to the creation of the TAF. These are useful for additional aviation-related issues that cannot be encoded into the TAF and provide some reasoning behind the forecast. The NWS Peachtree (KFFC) Weather Forecast Office (WFO) issued the AFD at 1325 EDT and was as follows:

*FXUS62 KFFC 201731
AFDFFC*

*Area Forecast Discussion
National Weather Service Peachtree City GA
131 PM EDT Thu Mar 20 2025*

...New 18Z Aviation Discussion...

*.SHORT TERM...
(Today through Friday)
Issued at 357 AM EDT Thu Mar 20 2025*

- Light rain this morning will be pushed through the CWA out ahead of a cold front.*
- Gusty winds behind the front may warrant the need for a wind advisory, especially in the higher elevations of NE Georgia.*
- Freezing temperatures on the backside have prompted a Frost advisory tomorrow, but the advisory may need to be expanded.*

A cold front moving through Alabama is bringing some light rain and gusty winds to the SE. Fortunately, the front is moving into very dry air which has eliminated the storm and flooding threat. That being said, the front is dragging the mid-level jet across the south bringing strong winds and cold air with it.

As a result a wind advisory may be needed for the higher elevations of northern GA. Wind values will likely prompt the need for a Fire Danger Statement, but that will depend on the rainfall totals and whether or not 10 hour fuels are available. For more information on that, please see the Fire Weather Forecast.

High temps today will struggle to get into the 60s and overnight lows will be below freezing along and north of I-85 for Thursday night and into Friday morning. If you tried to get a head start on your garden, it's probably a good idea to cover things up until temps can bounce back this weekend.

Vaughn

*.AVIATION...
(18Z TAFS)
Issued at 125 PM EDT Thu Mar 20 2025*

SHRA from this morning has moved southeast of all TAF sites, giving way to VFR conditions across the area. A BKN cloud deck around 040-050 has developed over northwest Georgia and continues to advance east into the metro ATL area. This cloud deck is expected to linger until scattering out late tonight. Winds will be NW through the period, starting the period at 15-20 kts with gusts of up to 30 kts. Winds will begin to diminish overnight, becoming 7-10 kts by 06-08Z.

*//ATL Confidence... 18Z Update...
High confidence on all elements.*

7.3 Graphic Forecast for Aviation

The NWS Graphic Forecast for Aviation (GFA) is a graphical depiction of surface wind, thunderstorms, precipitation, color-coded general flight categories, and cloud cover bases and tops reported in msl heights, from graphical output from the NWS National Digital Forecast Database (NDFD) with the Graphic-Airmen's Meteorological Information (G-AIRMET) for IFR conditions, mountain obscuration, icing conditions, and strong surface wind overlaid. The GFA provides a forecast for the enroute phase of flight and for locations without a TAF. The GFA is available at the NWS AWC website and through other weather briefing services such as ForeFlight, which the pilot used for his preflight briefing.

The NWS 3-hour southeastern GFA surface and cloud forecasts current for the period were issued at about 1200 EDT and were valid for 1400 EDT and are included as figures 9-10. The surface forecast indicated northwest winds at 15 knots with gusts to 25 knots, with unrestricted visibility, while the cloud forecast indicated overcast clouds at 4,500 ft with tops to 10,000 ft. A Graphic-AIRMET for icing conditions was depicted over the area.

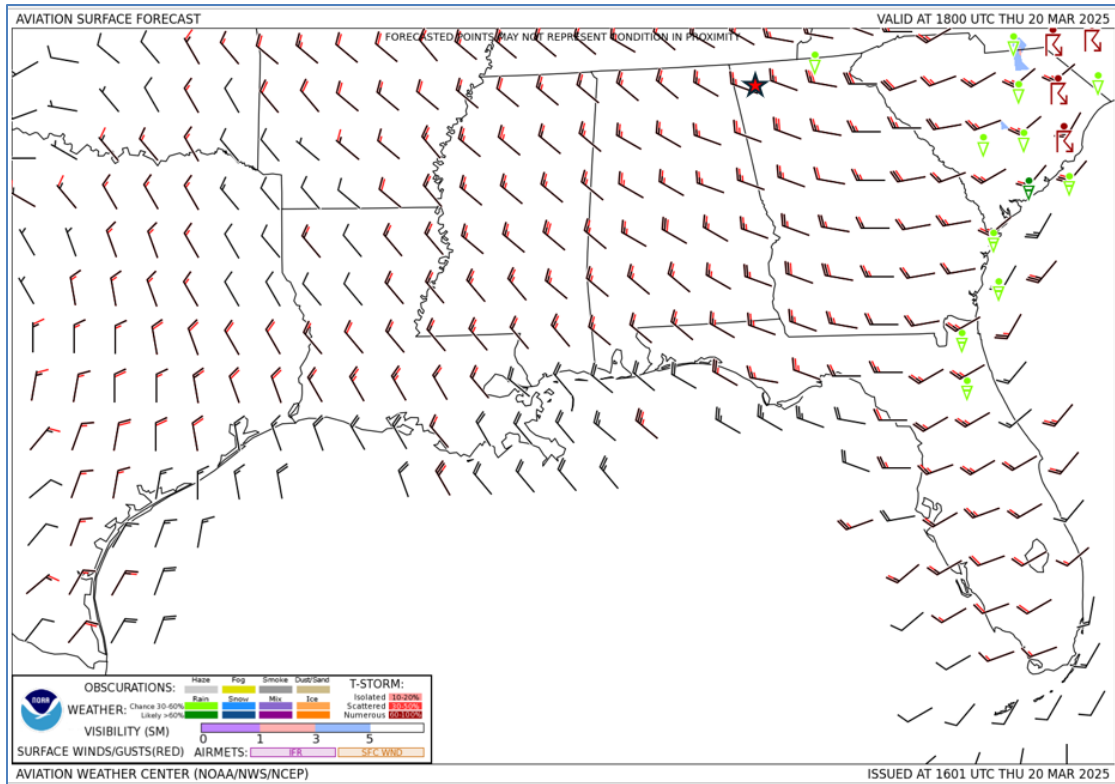


Figure 9 - NWS 3-hour Graphic Forecast for Aviation (GFA) surface forecast valid for 1400 EDT.

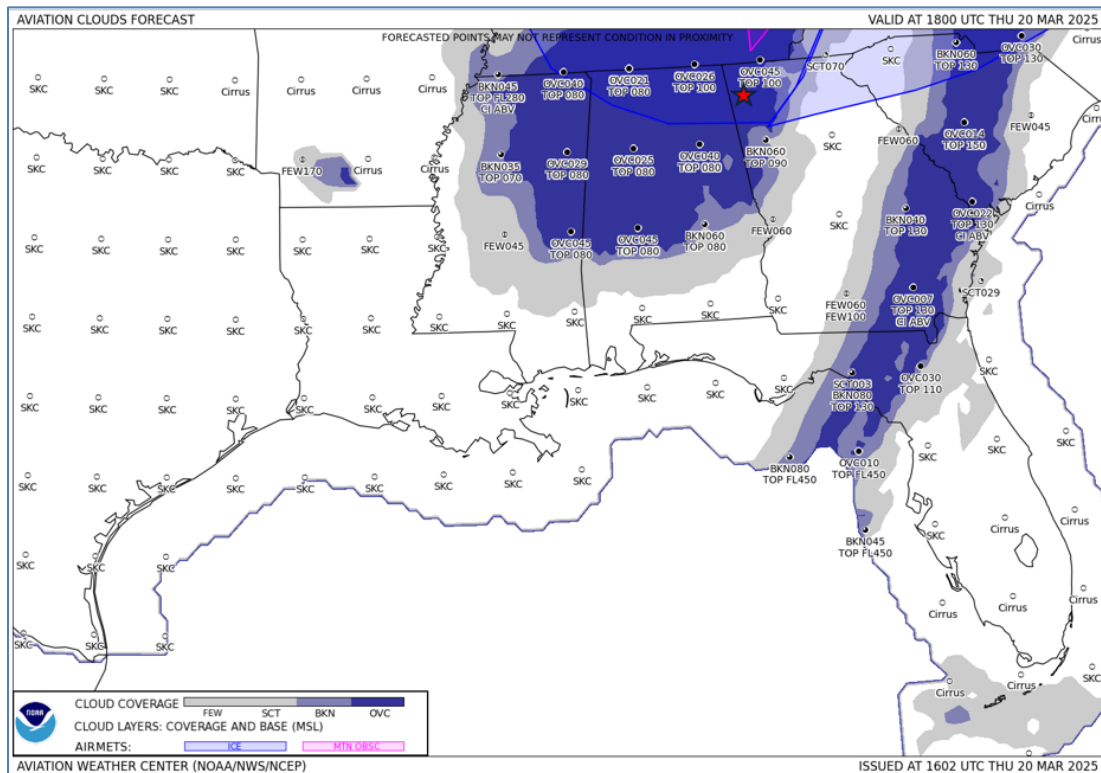


Figure 10 - NWS 3-hour Graphic Forecast for Aviation (GFA) cloud forecast valid for 1400 EDT.

8.0 Inflight Weather Advisories

Inflight Aviation Weather Advisories are forecasts that advise en route aircraft of the development of potentially hazardous weather. They are issued by the NWS AWC, as well as from the CWSU at the various Air Route Traffic Control Centers (ARTCCs). There are four basic types of inflight aviation weather advisories: the Significant Meteorological Information (SIGMET), the Convective SIGMET, the Graphic-Airmen's Meteorological Information (G-AIRMET), and the Center Weather Advisory (CWA). Inflight advisories serve to notify en-route pilots of the possibility of encountering hazardous flying conditions that may not have been forecast at the time of the preflight briefing.

During the period there were no SIGMETs, Convective SIGMETs, or CWA's current over the area. The NWS did have a Graphic-AIRMET Zulu current for icing conditions over the region and is depicted in figure 11 from the freezing level near 3,000 ft to tops near 8,000 ft.

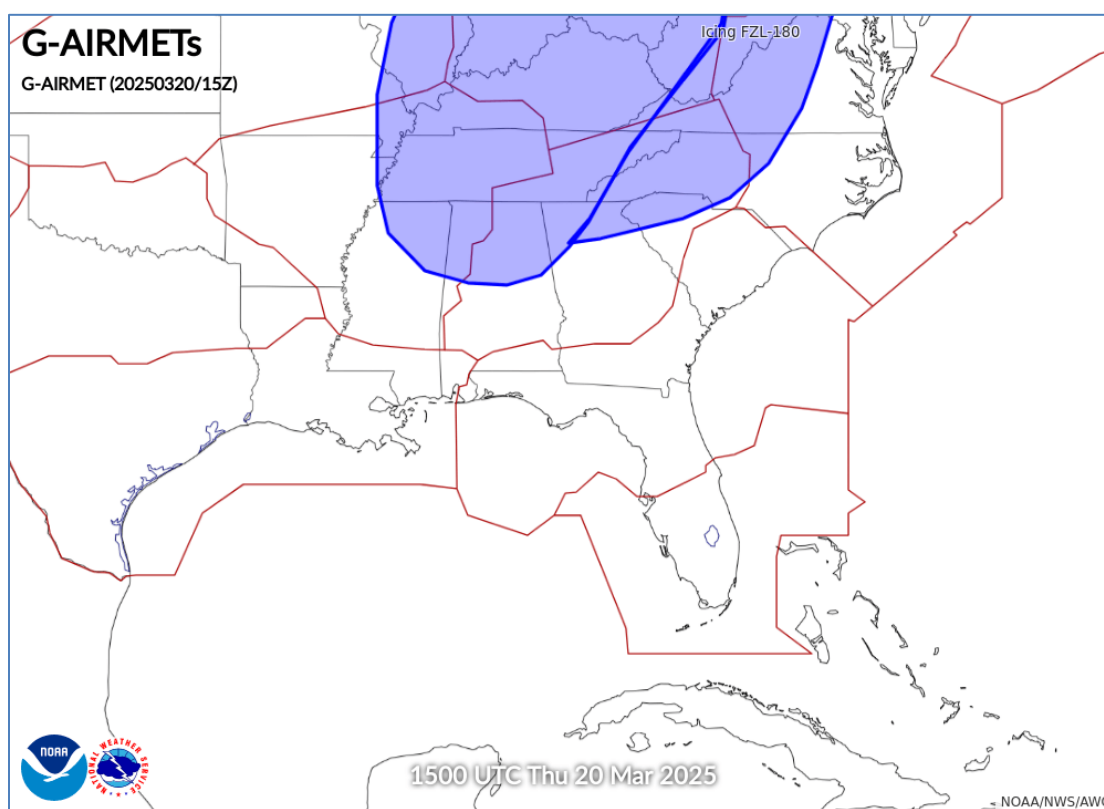


Figure 11 - Depiction of AIRMET Zulu for icing conditions current during the period for occasional moderate icing from the freezing level to 18,000 ft.

9.0 Astronomical Conditions

The United States Naval Observatory's website provided the following astronomical conditions on the day of the accident for LaFayette, Georgia.

SUN	Time
Begin of civil twilight	0719
Sunrise	0744
Upper Transit	1348
<i>Accident</i>	<i>1430</i>
Sunset	1953
End of civil twilight	2018

At the approximate time of the accident the Sun was 54° above the horizon at an azimuth of 198° , or directly in line with runway 20 as depicted in figure 12.

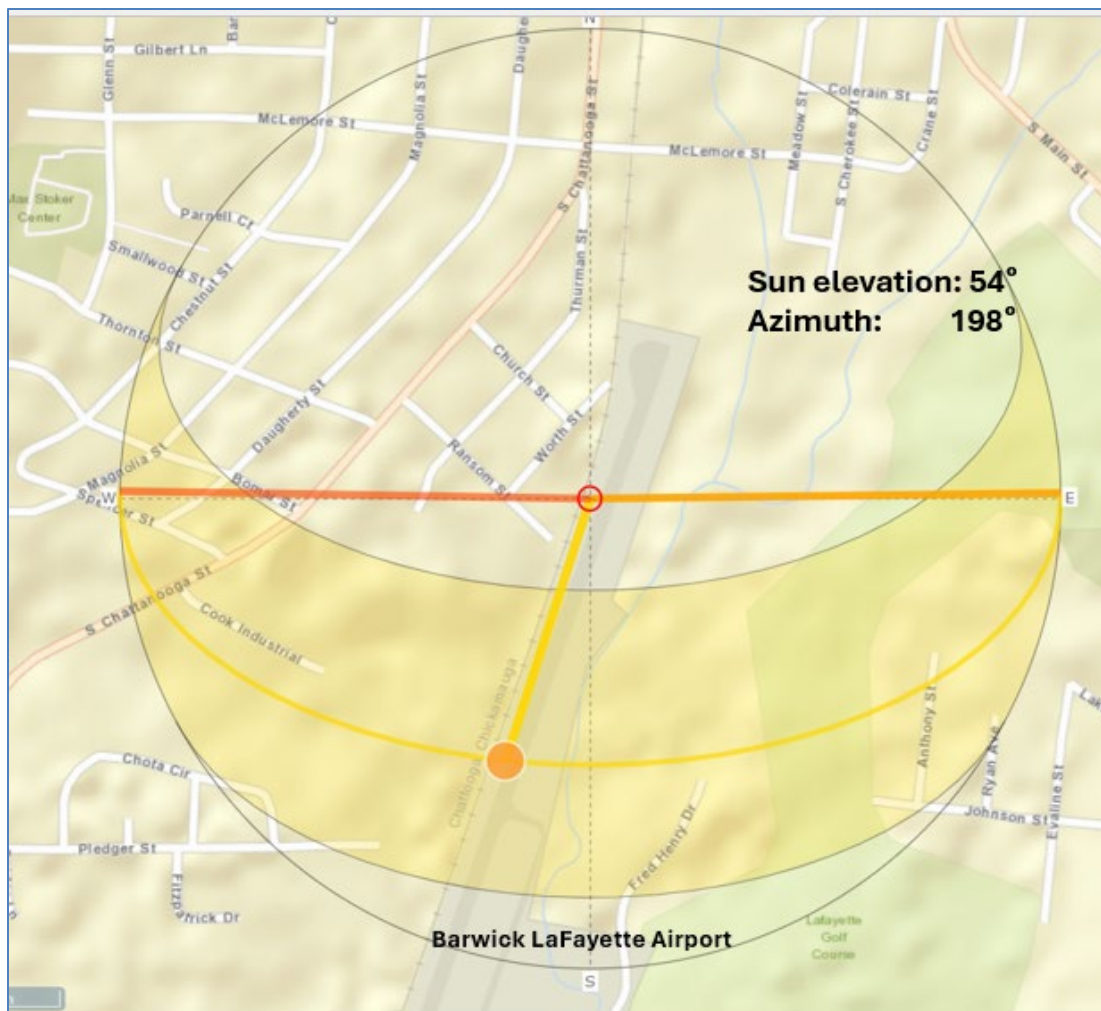


Figure 12 - Depiction of the Sun angle at 1430 EDT in relationship to runway 20 at K9A5.

Submitted by:

Donald Eick
NTSB Senior Meteorologist