



NATIONAL TRANSPORTATION SAFETY BOARD

Office of Aviation Safety
Washington, D.C. 20594

August 5, 2016

Group Chairman's Weather Study Report

METEOROLOGY

ERA16FA143

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A. ACCIDENT

Location: 5 miles northeast of Canadensis, Pennsylvania
Date: March 27, 2016
Time: approximately 1147 eastern daylight time (1547 UTC¹)
Aircraft: Robinson R44, registration: N776JM

B. METEOROLOGY GROUP

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C. SUMMARY

For a summary of the accident, refer to the *Accident Summary* report, which is available in the docket for this investigation.

D. DETAILS OF THE INVESTIGATION

The National Transportation Safety Board's (NTSB) Meteorologist did not travel for this investigation and gathered the weather data for this investigation from the NTSB's Washington D.C. office and from official National Oceanic and Atmospheric Administration (NOAA) National Weather Service (NWS) sources including the National Centers for Environmental Information (NCEI). All times are eastern daylight time (EDT) on March 27, 2016, and are based upon the 24-hour clock, where local time is -4 hours from UTC, and UTC=Z (unless otherwise noted). Directions are referenced to true north and distances in nautical miles. Heights are 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 41.25° N, longitude 75.22° W, at an elevation of 1,945 feet.

¹ UTC – is an abbreviation for Coordinated Universal Time.

E. FACTUAL INFORMATION

1.0 Synoptic Situation

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 Weather Prediction Center (WPC), located in College Park, Maryland. These are the base products used in describing synoptic weather features and in the creation of forecasts and warnings for the NWS. Reference to these charts can be found in the joint NWS and Federal Aviation Administration (FAA) Advisory Circular “Aviation Weather Services”, AC-0045G CHG 1.

1.1 Surface Analysis Chart

The NWS Surface Analysis Chart for 1100 EDT is provided as figure 1, with the approximate location of the accident site marked. The chart depicted a surface low pressure center with a pressure of 1023-hectopascals (hPa) was located just east of the North Carolina Outer Banks in the Western Atlantic Ocean. A surface warm front stretched westward from western Pennsylvania into eastern Illinois. There were no surface frontal boundaries near the accident site at the accident time. The station models around the accident site depicted air temperatures in the low 40’s to low 50’s Fahrenheit (F), with temperature-dew point spreads of 7° F or less, a variable surface wind under 5 knots, cloudy skies east of the Appalachian Mountains, and mostly clear skies west of the Appalachian Mountains.

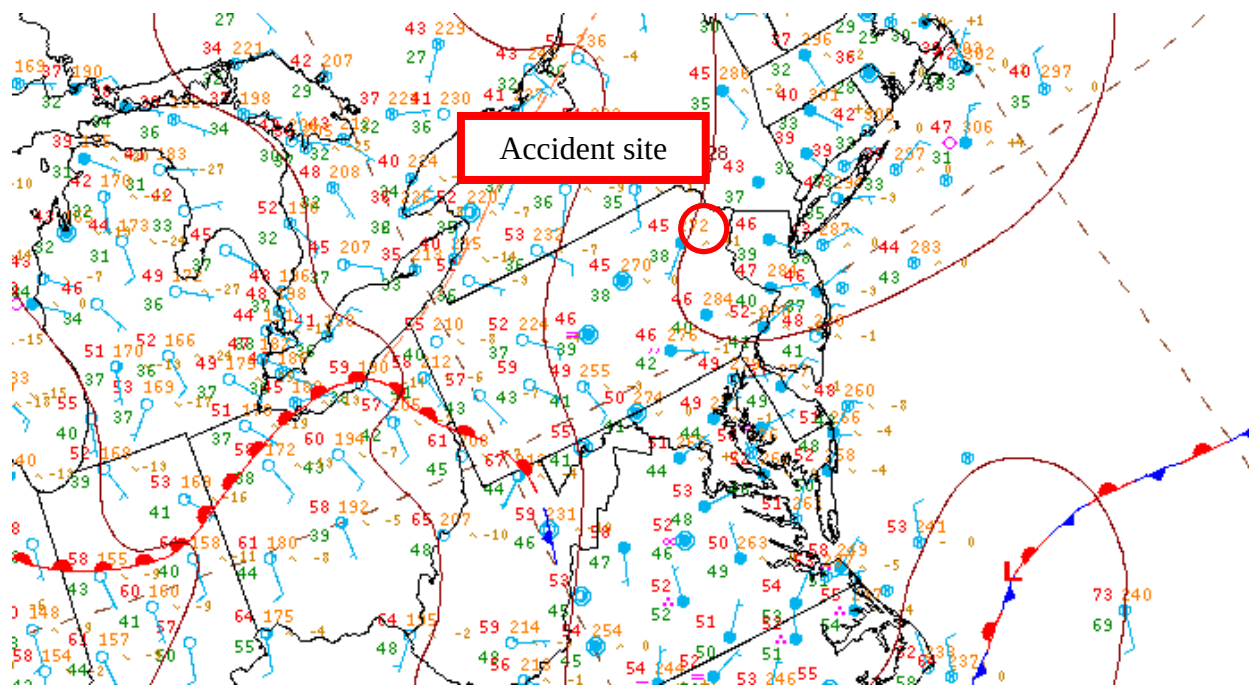


Figure 1 – NWS Surface Analysis Chart for 1100 EDT

1.2 Upper Air Charts

The NWS Storm Prediction Center (SPC) Constant Pressure Charts for 0800 EDT at 925-, 850-, 700-, 500-, and 300-hPa are presented in figures 2 through 6. There was a mid-level trough² located southwest of the accident site (figure 4) with a southwest wind from 850- to 300-hPa. At 925-hPa (figure 2), the wind was from the south to west under 10 knots. With the accident site in the vicinity of a mid-level trough (which was acting as a lifting mechanism), clouds would have been expected, however, precipitation would have only been expected if the lifting mechanisms in the atmosphere were stronger (e.g. via a surface front or stronger low- or a mid-level trough). The surface wind was from the east to northeast in the western Atlantic Ocean from New Jersey northward through Massachusetts (figure 1) and this would have helped allow cooler moist surface to push westward into the Appalachian Mountains, and combined with the mid-level trough (figure 4), allowed for the cloud cover near the accident site. Until the surface wind changed directions, cloud cover would have continued to be likely in eastern Pennsylvania.

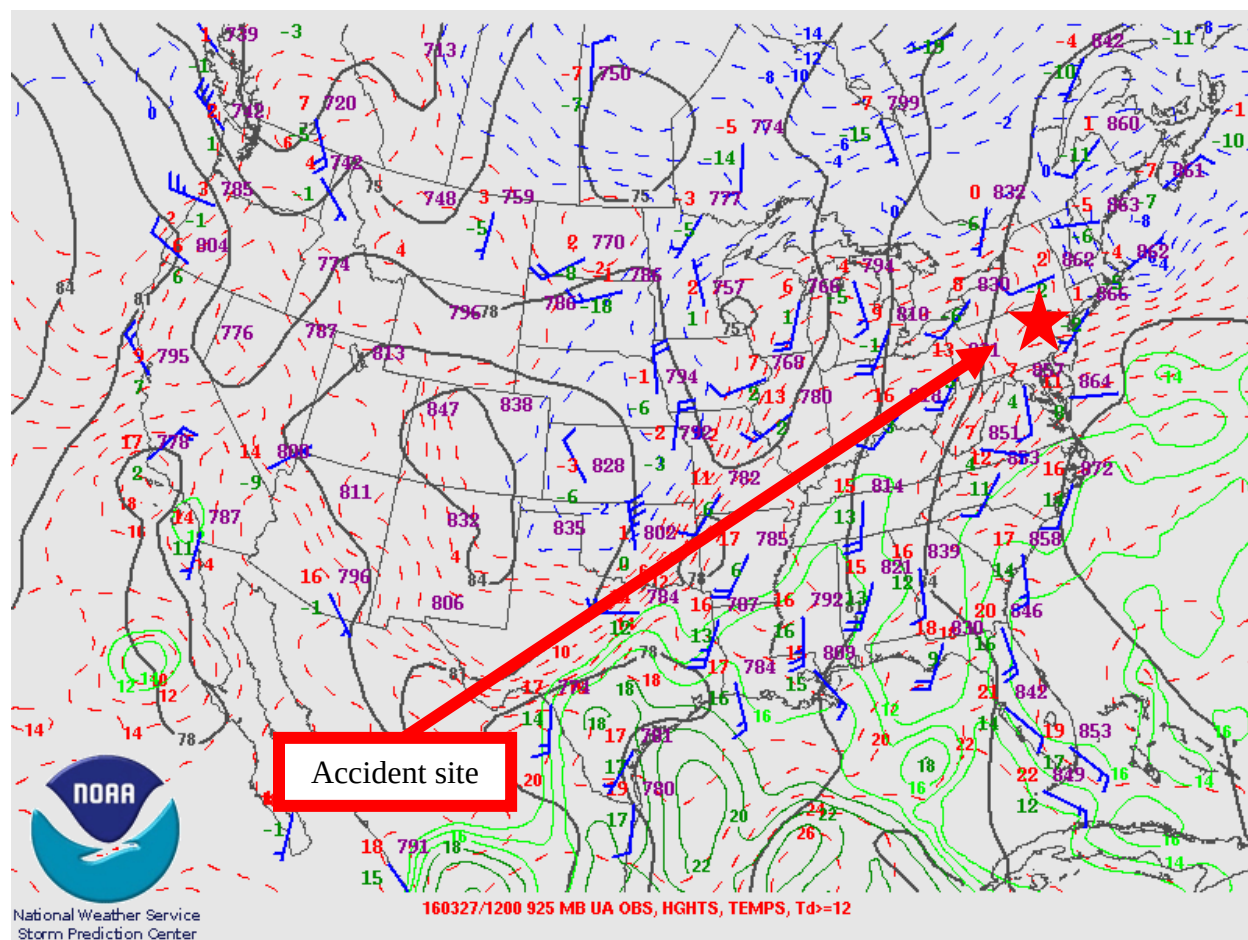


Figure 2 –925-hPa Constant Pressure Chart for 0800 EDT

² Trough – An elongated area of relatively low atmospheric pressure or heights.

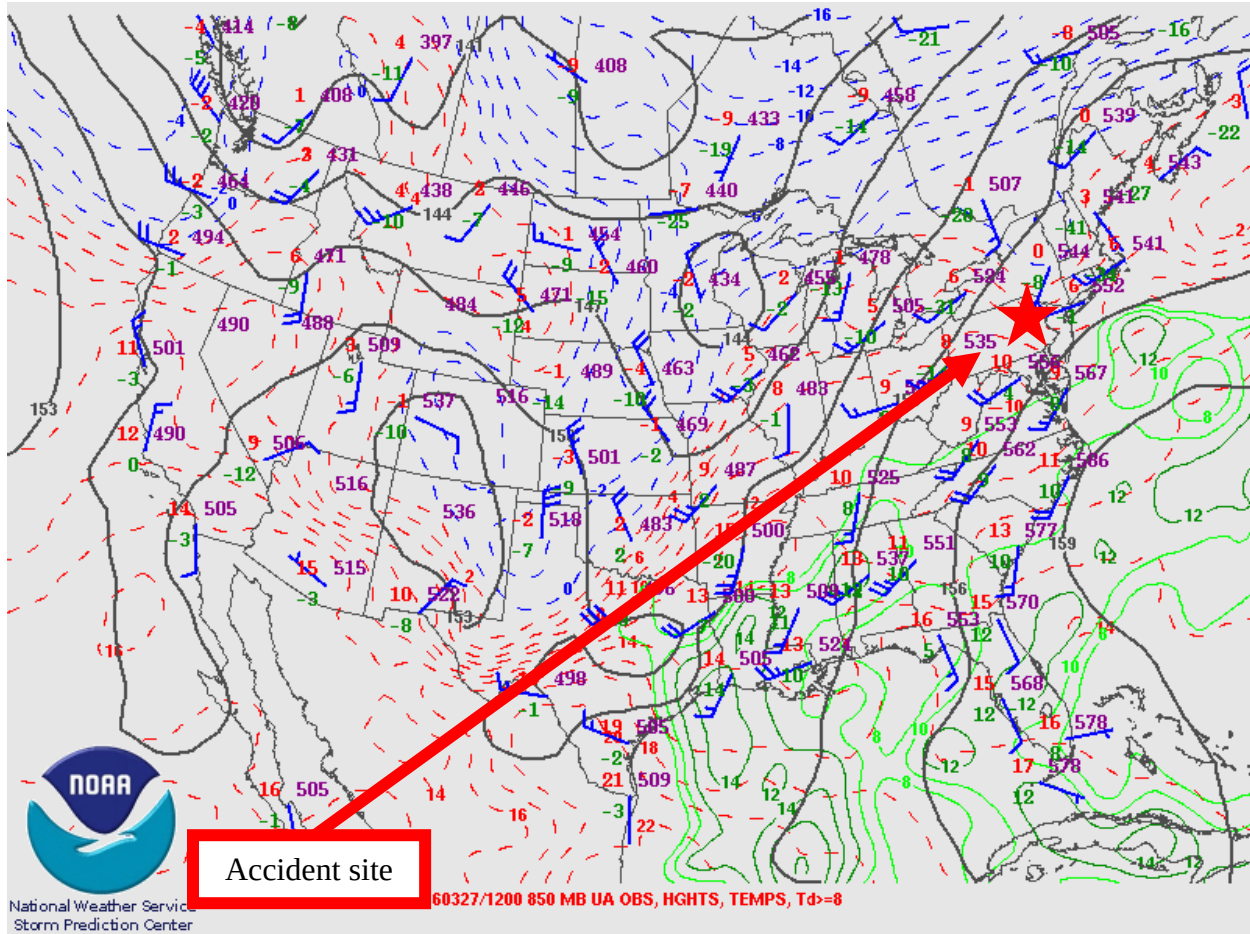


Figure 3 –850-hPa Constant Pressure Chart for 0800 EDT

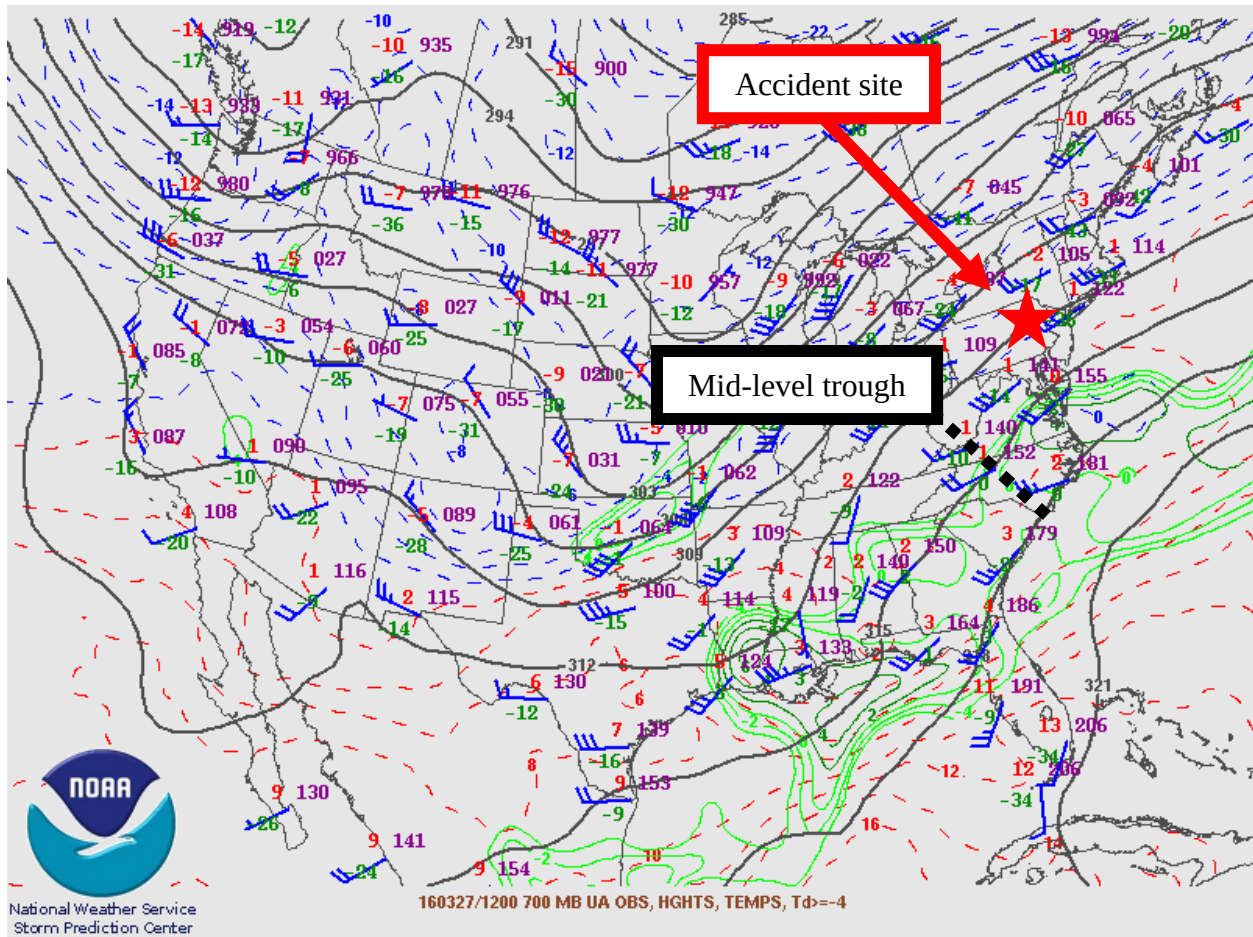


Figure 4 – 700-hPa Constant Pressure Chart for 0800 EDT

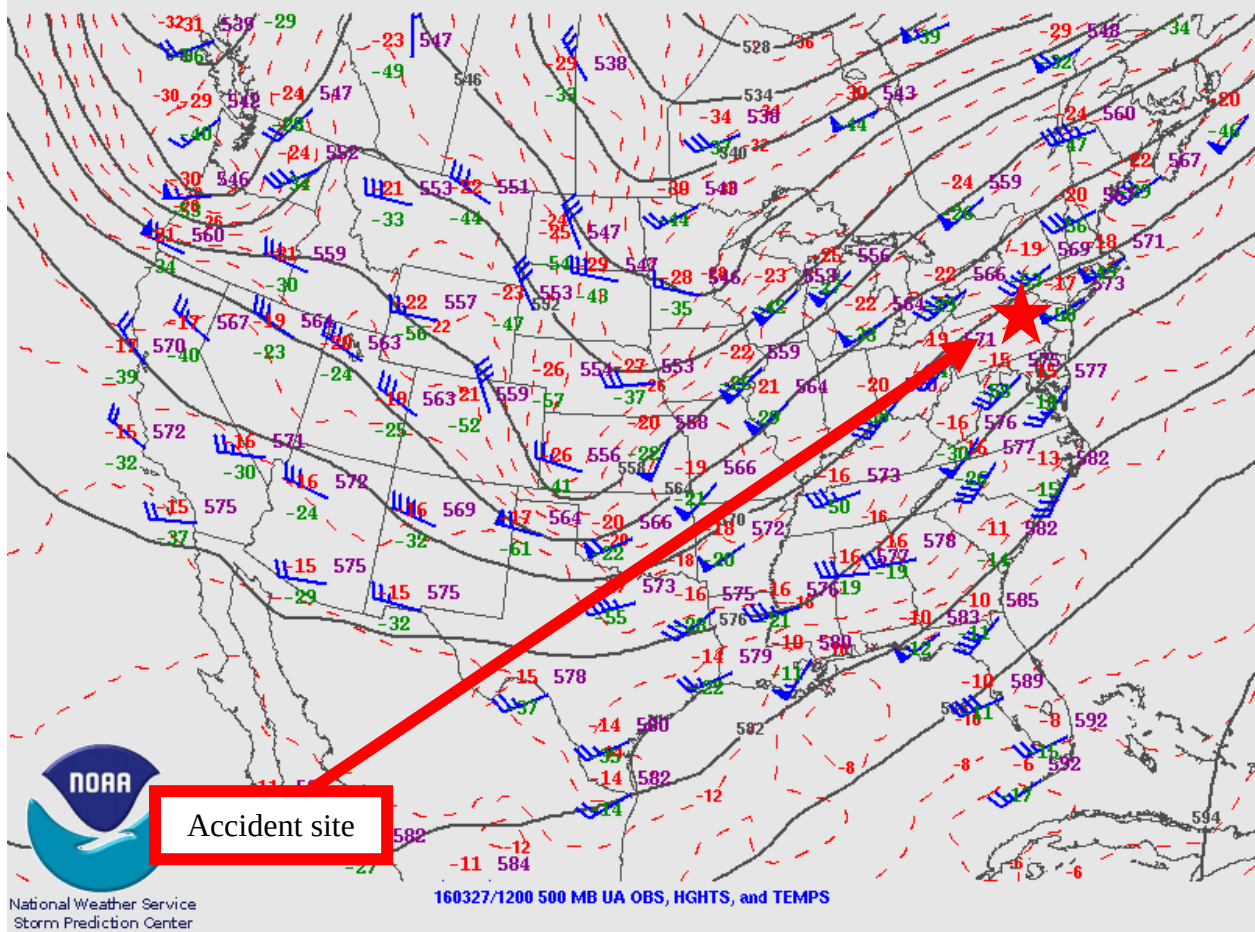


Figure 5 – 500-hPa Constant Pressure Chart for 0800 EDT

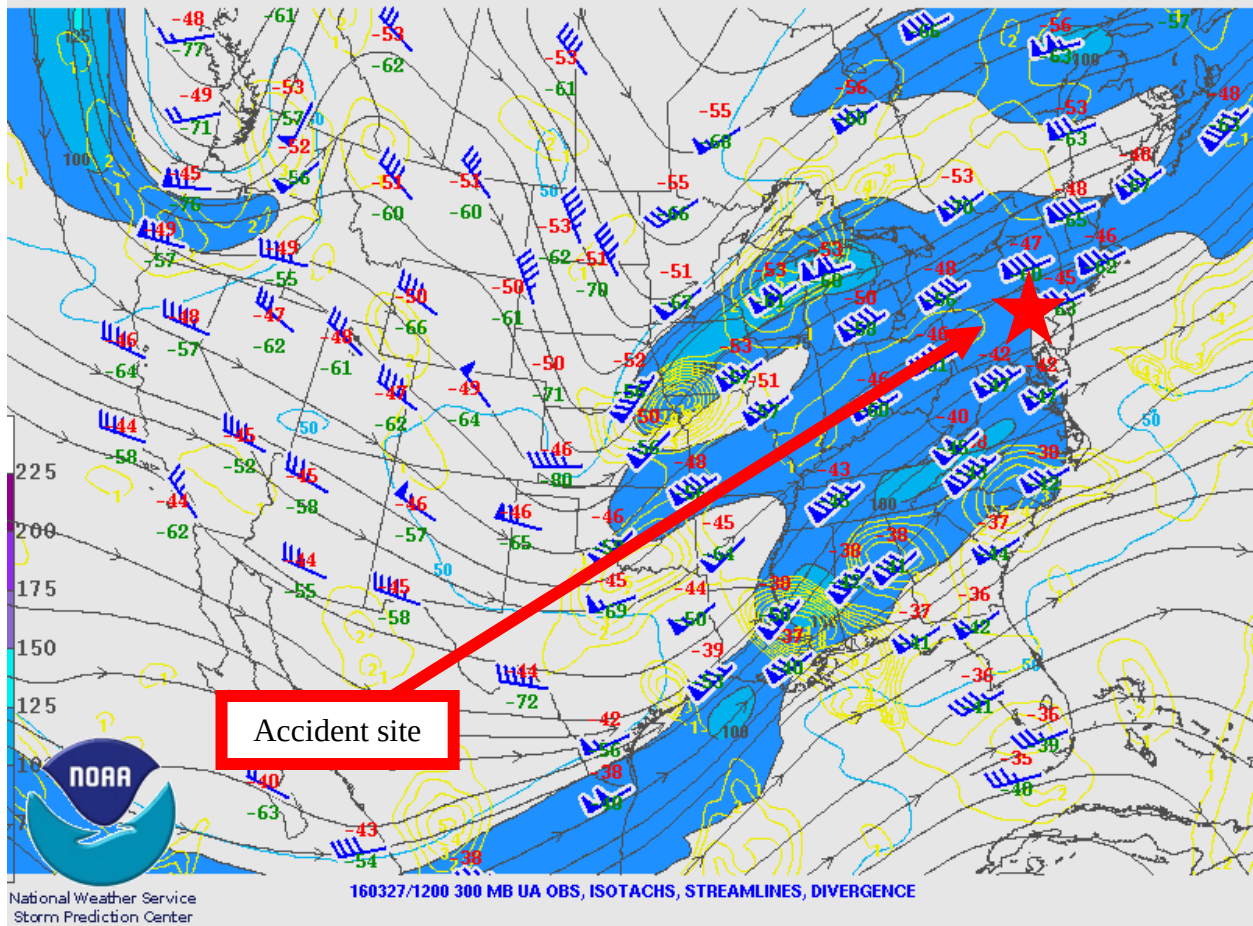


Figure 6 – 300-hPa Constant Pressure Chart for 0800 EDT

2.0 Storm Prediction Center Products

No thunderstorms or severe storms were forecast.

3.0 Surface Observations

The area surrounding the accident site was documented utilizing official NWS Meteorological Aerodrome Reports (METARs) and special METARS (SPECIs). The following observations were taken from standard code and are provided in plain language.

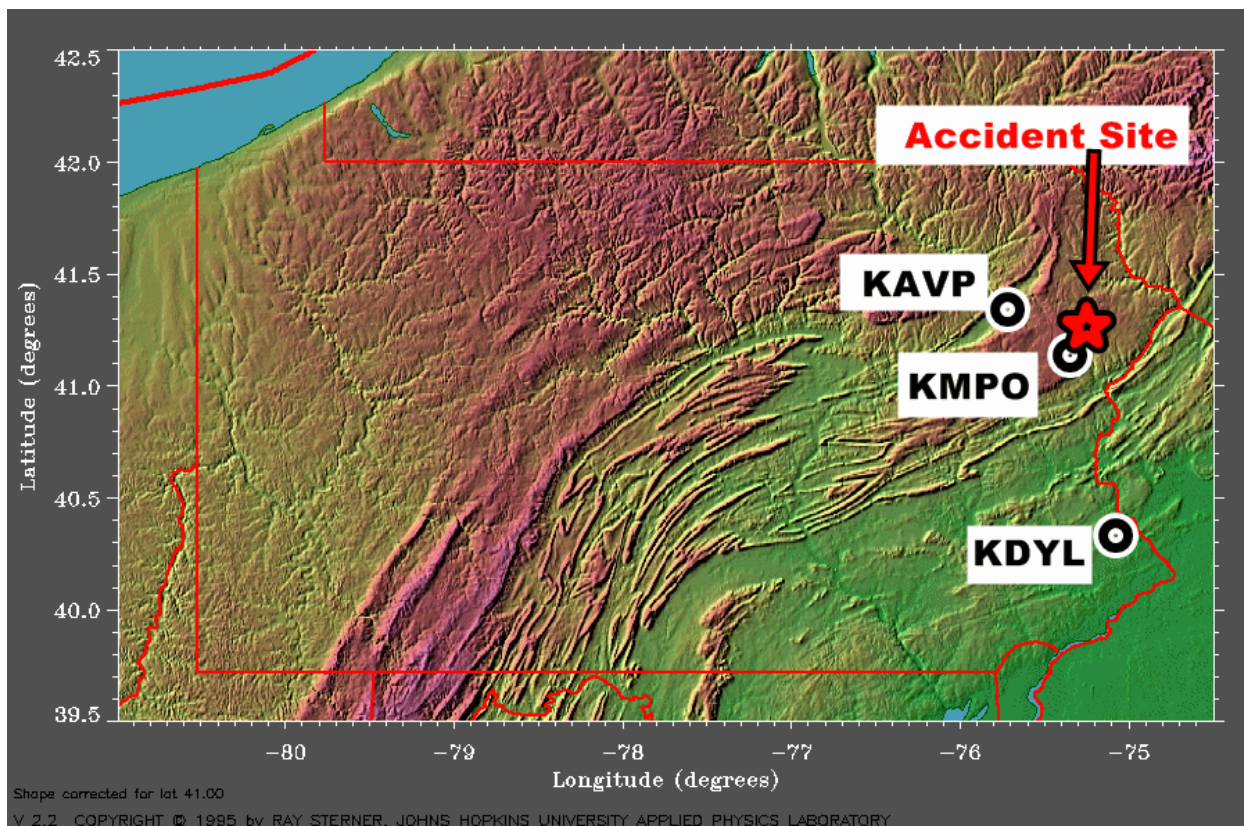


Figure 7 – Map of Pennsylvania with the location of the accident site and surface observation sites

Pocono Mountains Municipal Airport (KMPO) was the closest official weather station to the accident site and was located 2 miles northwest of Mount Pocono, Pennsylvania. KMPO had an Automated Surface Observing System (ASOS³) whose reports were not supplemented. KMPO was the closest official weather station to the intended destination airport near Greentown, Pennsylvania (PA49). KMPO was located 10 miles southwest of the accident site, at an elevation of 1,915 feet, and had a 13° westerly magnetic variation⁴ (figure 7). The following observations were taken and disseminated during the times surrounding the accident⁵:

[0953 EDT] KMPO 271353Z AUTO 17006KT 1/4SM FG VV002 03/02 A3032
RMK AO2 SLP284 T00280022 \$=

[1023 EDT] KMPO 271423Z AUTO 17009KT 3/4SM BR VV002 03/02 A3032
RMK AO2 T00280022 \$=

³ ASOS – Automated Surface Observing System is equipped with meteorological instruments to observe and report wind, visibility, ceiling, temperature, dewpoint, altimeter, and barometric pressure.

⁴ Magnetic variation – The angle (at a particular location) between magnetic north and true north.

⁵ The bold sections in this NWS product and the rest of products in the weather factual report are to highlight the individual sections that directly reference the weather conditions that are or will affect the accident location around the accident time. The local times in section 3.0 next to the METARs are provided for quick reference between UTC and local times around the accident time.

[1037 EDT] KMPO 271437Z AUTO 17007KT 1SM BR OVC002 03/02 A3032
RMK AO2 T00330022 \$=

[1045 EDT] KMPO 271445Z AUTO 17008KT 3/4SM BR OVC002 03/02 A3032
RMK AO2 T00330022 \$=

**[1053 EDT] KMPO 271453Z AUTO 17007KT 1 3/4SM BR OVC002 03/02 A3032
RMK AO2 SLP283 T00330022 50002 \$=**

**[1118 EDT] KMPO 271518Z AUTO 18006KT 3SM BR OVC002 03/03 A3031
RMK AO2 T00330028 \$=**

ACCIDENT TIME 1147 EDT

[1153 EDT] KMPO 271553Z AUTO 14007KT 7SM OVC003 04/03 A3031 RMK
AO2 SLP280 T00390028=

[1253 EDT] KMPO 271653Z AUTO 15007KT 7SM OVC004 04/03 A3029 RMK
AO2 SLP274 T00440028=

[1332 EDT] KMPO 271732Z AUTO 14005KT 7SM OVC005 05/03 A3028 RMK
AO2 T00500028=

[1353 EDT] KMPO 271753Z AUTO 12004KT 7SM OVC005 06/03 A3027 RMK
AO2 CIG 005V009 SLP264 T00560033 10056 20011 58016=

[1411 EDT] KMPO 271811Z AUTO 12005KT 9SM OVC008 06/03 A3025 RMK
AO2 CIG 006V010 T00610028=

[1430 EDT] KMPO 271830Z AUTO 13005KT 10SM SCT009 OVC017 07/03
A3024 RMK AO2 T00720033=

KMPO weather at 1053 EDT was reported as wind from 170° at 7 knots, 1 and three quarter miles visibility, mist, an overcast ceiling at 200 feet above ground level (agl), temperature of 3° Celsius (C), dew point temperature of 2° C, and an altimeter setting of 30.32 inches of mercury. Remarks: station with a precipitation discriminator, sea level pressure 1028.3 hPa, temperature 3.3° C, dew point temperature 2.2° C, 3-hourly pressure increase of 0.2 hPa, maintenance needed on the system.

KMPO weather at 1118 EDT was reported as wind from 180° at 6 knots, 3 miles visibility, mist, an overcast ceiling at 200 feet agl, temperature of 3° C, dew point temperature of 3° C, and an altimeter setting of 30.31 inches of mercury. Remarks: station with a precipitation discriminator, temperature 3.3° C, dew point temperature 2.8° C, maintenance needed on the system.

KMPO weather at 1153 EDT was reported as wind from 140° at 7 knots, 7 miles visibility, an overcast ceiling at 300 feet agl, temperature of 4° C, dew point temperature of 3° C, and an altimeter setting of 30.31 inches of mercury. Remarks: station with a precipitation discriminator, sea level pressure 1028.0 hPa, temperature 3.9° C, dew point temperature 2.8° C.

KMPO weather at 1253 EDT was reported as wind from 150° at 7 knots, 7 miles visibility, an overcast ceiling at 400 feet agl, temperature of 4° C, dew point temperature of 3° C, and an altimeter setting of 30.29 inches of mercury. Remarks: station with a precipitation discriminator, sea level pressure 1027.4 hPa, temperature 4.4° C, dew point temperature 2.8° C.

Doylestown Airport (KDYL) was the departure airport and had an official weather station. KDYL was located 2 miles north of Doylestown, Pennsylvania, and had an ASOS whose reports were not supplemented. KDYL was located 55 miles south-southeast of the accident site, at an elevation of 394 feet, and had a 12° westerly magnetic variation (figure 7). The following observations were taken and disseminated during the times surrounding the accident:

[0818 EDT] KDYL 271218Z AUTO 00000KT 10SM FEW009 OVC016 05/04
A3037 RMK AO2 T00500039=

[0854 EDT] KDYL 271254Z AUTO 00000KT 10SM SCT009 OVC016 06/04
A3037 RMK AO2 SLP290 T00560039=

[0911 EDT] KDYL 271311Z AUTO VRB03KT 10SM BKN010 OVC016 06/03
A3037 RMK AO2 T00560033=

[0921 EDT] KDYL 271321Z AUTO 00000KT 10SM SCT010 OVC017 06/04
A3037 RMK AO2 T00610039=

**[0954 EDT] KDYL 271354Z AUTO 00000KT 10SM OVC015 07/04 A3037 RMK
AO2 SLP290 T00670039=**

**[1054 EDT] KDYL 271454Z AUTO VRB03KT 10SM OVC017 07/04 A3037 RMK
AO2 SLP288 T00720044 58001=**

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**[1154 EDT] KDYL 271554Z AUTO 00000KT 10SM BKN016 OVC038 09/04
A3034 RMK AO2 SLP279 T00890044=**

**[1218 EDT] KDYL 271618Z AUTO VRB05KT 10SM SCT019 OVC038 09/04
A3034 RMK AO2 T00940044=**

[1225 EDT] KDYL 271625Z AUTO VRB03KT 10SM BKN019 OVC038 11/05
A3034 RMK AO2 T01110050=

[1254 EDT] KDYL 271654Z AUTO VRB04KT 10SM OVC021 11/04 A3033 RMK

AO2 SLP273 T01060044=

[1354 EDT] KDYL 271754Z AUTO VRB04KT 10SM SCT024 11/05 A3030 RMK
AO2 SLP264 T01110050 10117 20050 56016=

[1454 EDT] KDYL 271854Z AUTO VRB03KT 10SM OVC037 12/04 A3026 RMK
AO2 SLP251 T01170044=

KDYL weather at 0954 EDT was reported as wind calm, 10 miles visibility, an overcast ceiling at 1,500 feet agl, temperature of 7° C, dew point temperature of 4° C, and an altimeter setting of 30.37 inches of mercury. Remarks: station with a precipitation discriminator, sea level pressure 1029.0 hPa, temperature 6.7° C, dew point temperature 3.9° C.

KDYL weather at 1054 EDT was reported as variable wind to 3 knots, 10 miles visibility, an overcast ceiling at 1,700 feet agl, temperature of 7° C, dew point temperature of 4° C, and an altimeter setting of 30.37 inches of mercury. Remarks: station with a precipitation discriminator, sea level pressure 1028.8 hPa, temperature 7.2° C, dew point temperature 4.4° C, 3-hourly pressure decrease of 0.1 hPa.

KDYL weather at 1154 EDT was reported as wind calm, 10 miles visibility, a broken ceiling at 1,600 feet agl, overcast skies at 3,800 feet agl, temperature of 9° C, dew point temperature of 4° C, and an altimeter setting of 30.34 inches of mercury. Remarks: station with a precipitation discriminator, sea level pressure 1027.9 hPa, temperature 8.9° C, dew point temperature 4.4° C.

KDYL weather at 1218 EDT was reported as variable wind to 5 knots, 10 miles visibility, scattered clouds at 1,900 feet agl, an overcast ceiling at 3,800 feet agl, temperature of 9° C, dew point temperature of 4° C, and an altimeter setting of 30.34 inches of mercury. Remarks: station with a precipitation discriminator, temperature 9.4° C, dew point temperature 4.4° C.

The observations from KMPO indicated that LIFR⁶ ceilings were present at the surface around the accident area and at the accident time and before takeoff, while MVFR⁷ conditions prevailed at the surface when the accident aircraft took off from KDYL. The vertical extent of the cloud cover and the cloud tops will be further discussed in sections 4.0 and 5.0.

4.0 Upper Air Data

A North American Mesoscale (NAM) model sounding was created for the accident site for 1100 EDT. The 1100 EDT NAM sounding was plotted on a standard Skew-T log P diagram⁸ with the derived stability parameters included in figure 8 (with data from the surface to 600-hPa,

⁶ Low Instrument Flight Rules – Refers to the general weather conditions pilots can expect at the surface. LIFR criteria means a ceiling below 500 feet agl and/or less than 1 miles visibility.

⁷ Marginal Visual Flight Rules – Refers to the general weather conditions pilots can expect at the surface. MVFR criteria means a ceiling between 1,000 and 3,000 feet agl and/or 3 to 5 miles visibility.

⁸ Skew T log P diagram – is a standard meteorological plot 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.

or 14,000 feet msl.) This data was analyzed utilizing the RAOB⁹ software package. The sounding depicted the Lifted Condensation Level (LCL)¹⁰ at 2,353 feet msl, a Convective Condensation Level (CCL)¹¹ of 2,383 feet, and a Level of Free Convection (LFC)¹² at 2,353 feet. The freezing level was located at 9,065 feet. The precipitable water value was 0.34 inches.

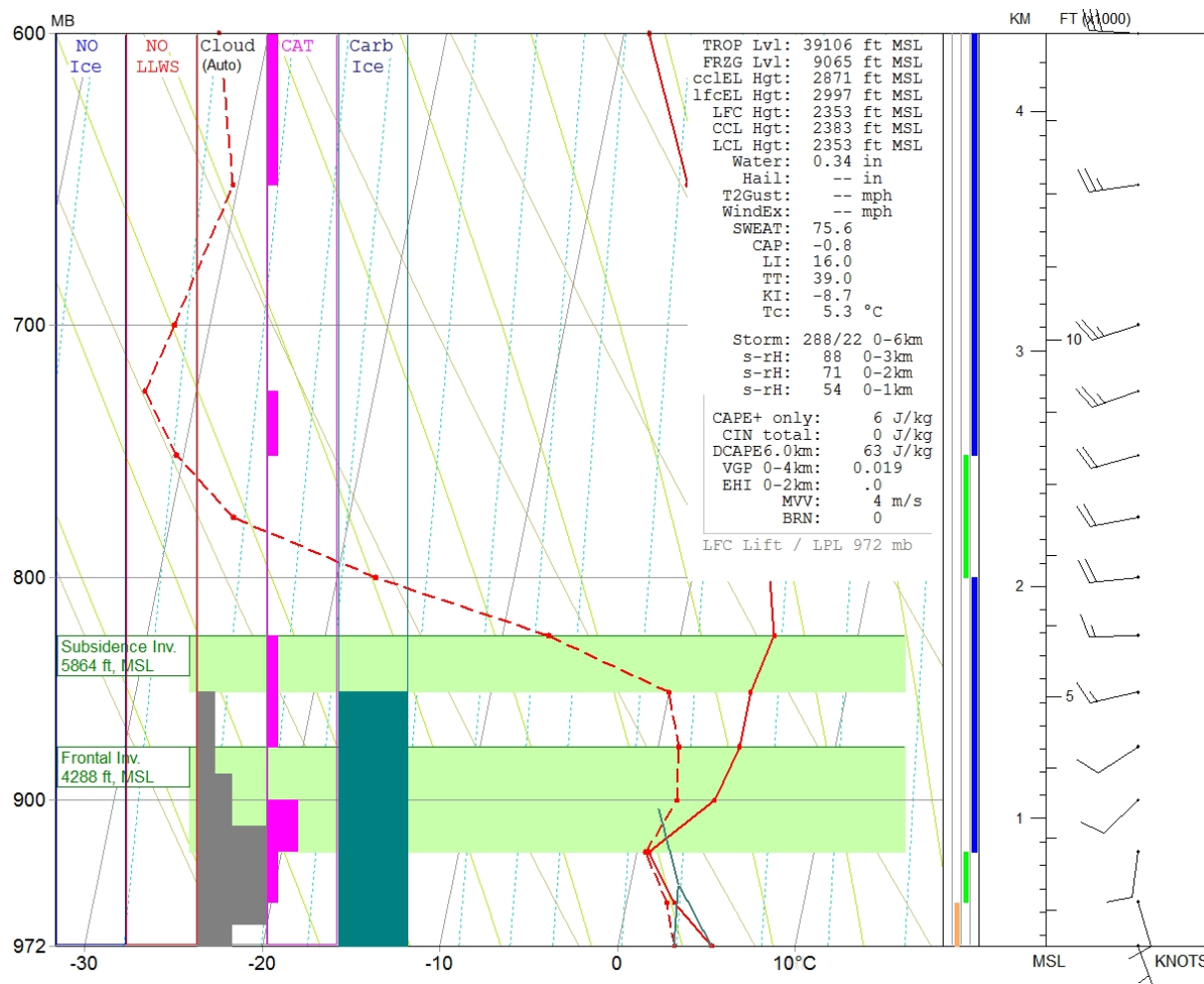


Figure 8 – 1100 EDT NAM sounding for the accident site

The 1100 EDT NAM sounding indicated a relatively moist vertical environment from the surface through 4,000 feet. Above 4,000 feet there was less abundant moisture with the vertical environment becoming very dry by 6,000 feet. With the temperature and dew point lines nearly identical from the surface through 4,000 feet, this environment would have been conducive of cloud formation as indicated by RAOB. No icing conditions were indicated by RAOB nor would

⁹ RAOB – (The complete Rawinsonde Observation program) is an interactive sounding analysis program developed by Environmental Research Services, Matamoras, Pennsylvania.

¹⁰ Lifting Condensation Level (LCL) - The height at which a parcel of moist air becomes saturated when it is lifted dry adiabatically.

¹¹ Convective Condensation Level (CCL) – The level in the atmosphere to which an air parcel, if heated from below, will rise dry adiabatically, without becoming colder than its environment just before the parcel becomes saturated.

¹² Level of Free Convection (LFC) – The level at which a parcel of saturated air becomes warmer than the surrounding air and begins to rise freely. This occurs most readily in a conditionally unstable atmosphere.

any have been expected. The weather conditions were instrument meteorological conditions (IMC) along the intended route of flight north of KMPO below 4000 feet msl. There were increasingly lower and lower cloud ceilings and visibilities (section 3.0) relative to the terrain when getting closer and closer to KMPO and the intended destination airport.

The sounding's wind profile indicated there was a surface wind from 161° at 6 knots and the wind speed remained below 20 knots through 7,500 feet. The south wind near the surface became westerly by 5,000 feet with the wind speed increasing to 30 knots by 14,000 feet msl. No low-level wind shear (LLWS) was indicated by RAOB in the lowest 2,000 feet agl and LLWS would not have been expected. Several layers of possible clear-air turbulence were identified by RAOB from 3,000 feet through 14,000 feet; however, RAOB did not indicate the clear-air turbulence would be anything stronger than light clear-air turbulence.

5.0 Satellite Data

Visible and infrared data from the Geostationary Operational Environmental Satellite number 13 (GOES-13) was obtained from an archive at the Space Science Engineering Center at the University of Wisconsin-Madison in Madison, Wisconsin, and processed using the Safety Board's Man-computer Interactive Data Access System software. Visible and infrared imagery (GOES-13 bands 1 and 4) at a wavelength of 0.65 microns (μm) and 10.7 μm retrieved brightness temperatures for the scene. Satellite imagery surrounding the time of the accident, from 0900 EDT through 1300 EDT at approximately 15-minute intervals, were reviewed and the images most applicable to the time of the accident are documented here.

Figures 9 and 10 present the GOES-13 visible imagery from 1145 and 1200 EDT at 2X magnification with the accident site highlighted in a red square. The visible imagery indicated more abundant cloud cover over the accident site and near KMPO with less cloud cover near the departure location of KDYL. The cloud cover was most abundant along the higher terrain of the Appalachian Mountains. Figure 11 presents the GOES-13 infrared imagery from 1200 EDT at 6X magnification with the accident site highlighted with a red square. The infrared imagery indicated higher cloud tops (yellow and green colors) over the accident site and points eastward and east of New Jersey into the western Atlantic Ocean. Based on the brightness temperatures above the accident site and the vertical temperature profile provided by the 1100 EDT NAM sounding, the approximate cloud-top heights over the accident site were 14,000 feet at 1200 EDT. While this cloud top temperature is much colder (and therefore higher in altitude) than the cloud layer indicated by RAOB (section 4.0), there was likely a thin band of mid-level clouds over the accident site, with a solid overcast layer of clouds from near the surface through 4,000 feet. This thin band of mid-level cloud cover is visible within the animation from visible imagery from 1000 to 1200 EDT (attachment 1). The mid-level cloud cover was moving from west to east from 1000 to 1200 EDT, while the lower cloud cover was slowly moving from south to north.

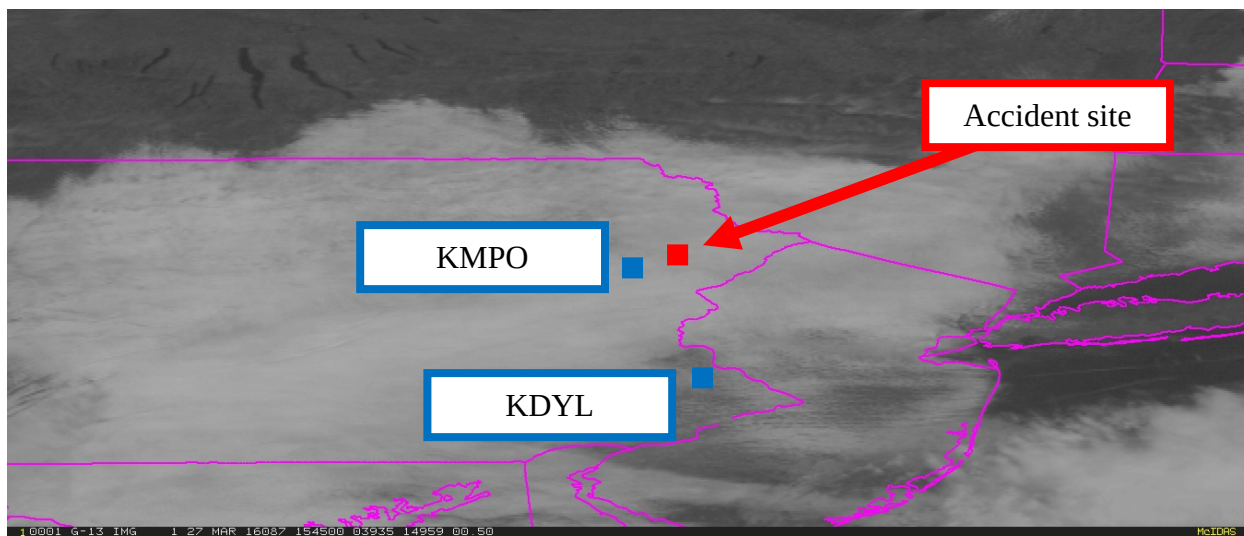


Figure 9 – GOES-13 visible image at 1145 EDT

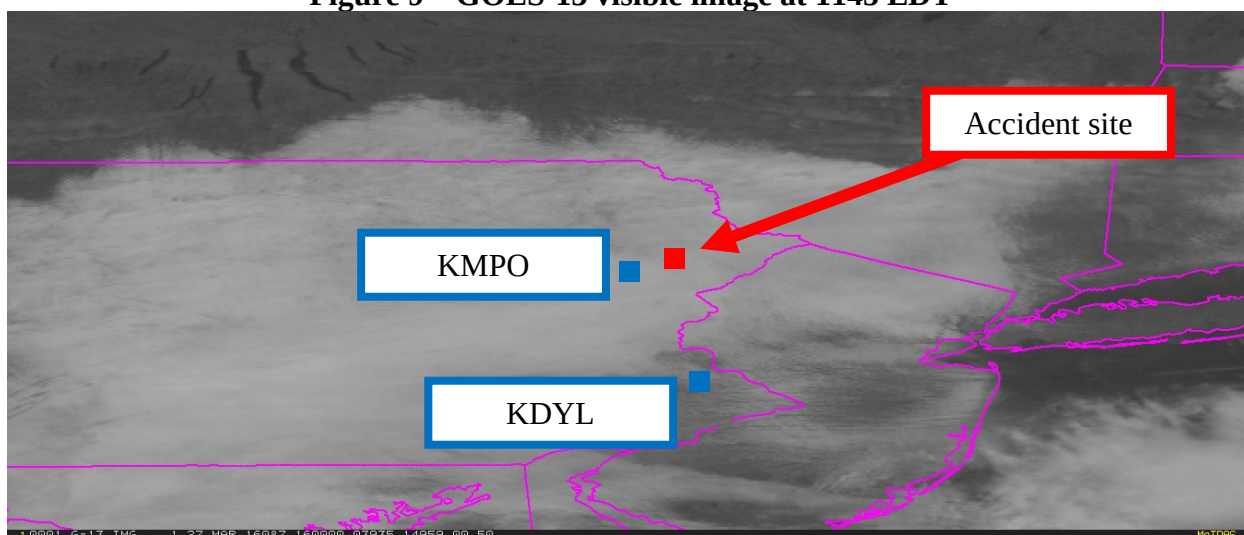


Figure 10 – GOES-13 visible image at 1200 EDT

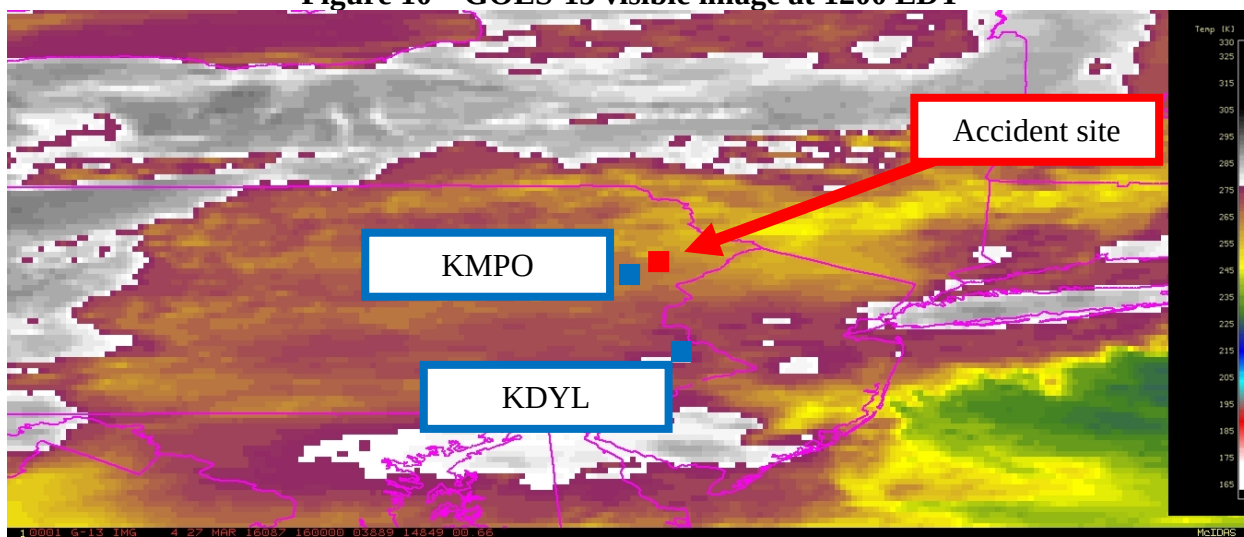


Figure 11 – GOES-13 infrared image at 1200 EDT

6.0 Radar Imagery Information

The closest NWS Weather Surveillance Radar-1988, Doppler (WSR-88D)¹³ was from Binghamton, New York, (KBGM) located 67 miles north-northwest of the accident site. Level II and III archive radar data was obtained from the NCEI utilizing the NEXRAD Data Inventory Search and reviewed. No precipitation targets were located above the accident site around the accident time.

7.0 Pilot Reports

All pilot reports (PIREPs) were reviewed close to the accident site, from around three hours prior to the accident time to around two hours after the accident time and the PIREPs displayed below are the PIREPs valid below 18,000 feet with altitude heights in feet msl:

KTTN UA /OV KTTN/TM 1300/FLNA/TP SK76/SK BKN010 =

ISP UA /OV 10 WEST OF HPN/TM 1325/FL030/TP G159/SK TOPS 028=

ABE UA /OV FJC240015/TM 1331/FL40/TP SR22/SK TOPS 030/TA 5/TB NEG =

KLNS UA /OV LRP243008/TM 1340/FL049/TP PA31/SK /SK 011 OVC 047 =

ABE UA /OV FJC240010/TM 1341/FL50/TP SR22/TB LGT TURB =

KTTN UA /OV KTTN/TM 1346/FLNA/TP PA24/SK BKN013=

KTTN UA /OV KTTN/TM 1500/FLNA/TP C56X/SK OVC019 BKN013=

ABE UA /OV 10 E ABE/TM 1538/FL050/TP C182/SK TOPS 045/TA 05/TB NEG=

Routine pilot report (UA); Over Trenton, New Jersey; Time – 0900 EDT (1300Z); Altitude – Unknown; Type aircraft – Sikorsky S-76; Sky – Broken ceiling at 1,000 feet.

Routine pilot report (UA); 10 miles from White Plains, New York, on the 270° radial; Time – 0925 EDT (1325Z); Altitude – 3,000 feet msl; Type aircraft – Grumman G-159 Gulfstream I; Sky – Tops at 2,800 feet.

Routine pilot report (UA); 15 miles from Allentown, Pennsylvania, on the 240° radial; Time – 0931 EDT (1331Z); Altitude – 4,000 feet msl; Type aircraft – Cirrus SR22; Sky – Tops at 3,000 feet; Temperature – 5° C; Turbulence – Negative.

Routine pilot report (UA); 8 miles from Lancaster, Pennsylvania, on the 243° radial; Time – 0940 EDT (1340Z); Altitude – 4,900 feet msl; Type aircraft – Piper PA-31 Navajo; Sky – sky at 1,100 feet msl with overcast ceiling at 4,700 feet.

¹³ The WSR-88D is an S-band 10-centimeter wavelength radar with a power output of 750,000 watts, and with a 28-foot parabolic antenna that concentrates the energy between a 0.87° and 0.96° beam width. The radar produces three basic types of products: base reflectivity, base radial velocity, and base spectral width.

Routine pilot report (UA); 10 miles from Allentown, Pennsylvania, on the 240° radial; Time – 0941 EDT (1341Z); Altitude – 5,000 feet msl; Type aircraft – Cirrus SR22; Turbulence – Light turbulence.

Routine pilot report (UA); Over Trenton, New Jersey; Time – 0946 EDT (1346Z); Altitude – Unknown; Type aircraft – Piper PA-24 Comanche; Sky – Broken ceiling at 1,300 feet.

Routine pilot report (UA); Over Trenton, New Jersey; Time – 1100 EDT (1500Z); Altitude – Unknown; Type aircraft – Cessna Citation Excel; Sky – Overcast skies at 1,900 feet msl with a broken ceiling at 1,300 feet.

Routine pilot report (UA); 10 miles from Allentown, Pennsylvania, on the 090° radial; Time – 1138 EDT (1538Z); Altitude – 5,000 feet msl; Type aircraft – Cessna 182; Sky – Tops at 4,500 feet; Temperature – 5° C; Turbulence – Negative.

8.0 SIGMET and CWSU Advisories

No SIGMET was valid for the accident site for altitudes below FL180¹⁴ at the accident time.

No Center Weather Service Unit (CWSU) Advisory (CWA) or Meteorological Impact Statement (MIS) were valid for the accident site at the accident time.

9.0 AIRMETs

An AIRMET Sierra for mountain obscuration that was issued at 1045 EDT and valid at the accident time, was the only AIRMET valid for the accident site at the accident time at the accident flight level¹⁵ (figures 12 and 13). This AIRMET Sierra forecasted mountain obscuration along the route of the accident flight due to clouds, precipitation, and mist. Between 0857 and 1045 EDT there was an AIRMET Sierra for both mountain obscuration and IFR conditions due to clouds, fog, and mist along the route of the accident flight and at the accident site:

WAUS41 KKCI 271445

WA1S

_BOSS WA 271445

AIRMET SIERRA UPDT 4 FOR IFR AND MTN OBSCN VALID UNTIL 272100

.

AIRMET IFR...NY NJ PA WV MD DC DE VA AND CSTL WTRS

FROM 50S SYR TO 20SSE JFK TO 30SSW CYN TO 60SE CYN TO 110SSE HTO

TO 160SE SIE TO 20NE ECG TO HNV TO 20WNW BKW TO 50WNW CSN TO 20N

SLT TO 50S SYR

CIG BLW 010/VIS BLW 3SM PCPN/BR. CONDS CONTG BYD 21Z THRU 03Z.

.

AIRMET IFR...ME NH VT MA RI CT NY

¹⁴ Flight Level – A Flight Level (FL) is a standard nominal altitude of an aircraft, in hundreds of feet. This altitude is calculated from the International standard pressure datum of 1013.25 hPa (29.92 inHg), the average sea-level pressure, and therefore is not necessarily the same as the aircraft's true altitude either above mean sea level or above ground level.

¹⁵ See ATC Factual Data for flight altitude information.

FROM HUL TO 20ENE BGR TO 20N ENE TO 20WNW PVD TO 40S ALB TO
40WNW ALB TO 30SW YSC TO 40SE YSC TO HUL
CIG BLW 010/VIS BLW 3SM BR. CONDS ENDG 15-18Z.

.
AIRMET MTN OBSCN...ME NH VT MA NY
FROM MLT TO CON TO 50ESE HNK TO 50E SYR TO 20SSE PLB TO MLT
MTNS OBSC BY CLDS/BR. CONDS ENDG 18-21Z.

.
AIRMET MTN OBSCN...NY PA WV MD VA
FROM 40SSW SYR TO 50ESE HNK TO HAR TO 40SSE PSK TO HNV TO BKW TO
30SW SLT TO 20NNW SLT TO 40SSW SYR
MTNS OBSC BY CLDS/PCPN/BR. CONDS CONTG BYD 21Z THRU 03Z.

.
OTLK VALID 2100-0300Z
AREA 1...IFR NY NJ PA WV MD DC DE VA AND CSTL WTRS
BOUNDED BY 50SW SYR-30SW SAX-30SW JFK-70SSE HTO-160SE SIE-20NE
ECG-HNV-20NW BKW-40E AIR-30SSW BUF-50SW SYR
CIG BLW 010/VIS BLW 3SM PCPN/BR. CONDS CONTG THRU 03Z.

.
AREA 2...IFR ME
BOUNDED BY 70NW PQI-40NE PQI-50WSW YSJ-30SSE BGR-40N ENE-70NW PQI
CIG BLW 010/VIS BLW 3SM BR. CONDS DVLPG 00-03Z. CONDS CONTG THRU
03Z.

.
AREA 3...MTN OBSCN ME NH
BOUNDED BY 70NW PQI-MLT-20NNW ENE-YSC-70NW PQI
MTNS OBSC BY CLDS/BR. CONDS DVLPG 00-03Z. CONDS CONTG THRU 03Z.

....
WAUS41 KPCI 271257 AAA
WA1S
_BOSS WA 271257 AMD
AIRMET SIERRA UPDT 3 FOR IFR AND MTN OBSCN VALID UNTIL 271500

.
AIRMET IFR...WV VA NC SC GA FL AND CSTL WTRS...UPDT
FROM 40SSE EKN TO 50SSE DCA TO 120E ORF TO 70ESE ECG TO 50SSW
ILM TO 20S SAV TO 40SE TLH TO 90SSE SJI TO 40W CEW TO 50SW PZD
TO GQO TO HNV TO 30W PSK TO 40SSE EKN
CIG BLW 010/VIS BLW 3SM PCPN/BR/FG. CONDS CONTG BYD 15Z THRU 21Z.

.
AIRMET IFR...ME NH VT MA CT NY NJ PA WV MD DC DE VA AND CSTL
WTRS...UPDT
FROM 40WSW YSC TO 50NNE ENE TO 20E JFK TO 20S SBY TO 40SSE DCA
TO 20SSE CSN TO 40WSW HAR TO 30E PSB TO 40WSW YSC
CIG BLW 010/VIS BLW 3SM BR/FG. CONDS CONTG BYD 15Z ENDG 15-18Z.

.
AIRMET MTN OBSCN...ME NH VT MA NY PA WV MD VA
FROM 50WSW BGR TO CON TO 40ESE HNK TO 20WSW ETX TO 30NNE GSO TO
HNV TO 20NW BKW TO SLT TO SYR TO MPV TO 50WSW BGR
MTNS OBSC BY CLDS. CONDS CONTG BYD 15Z THRU 21Z.

....

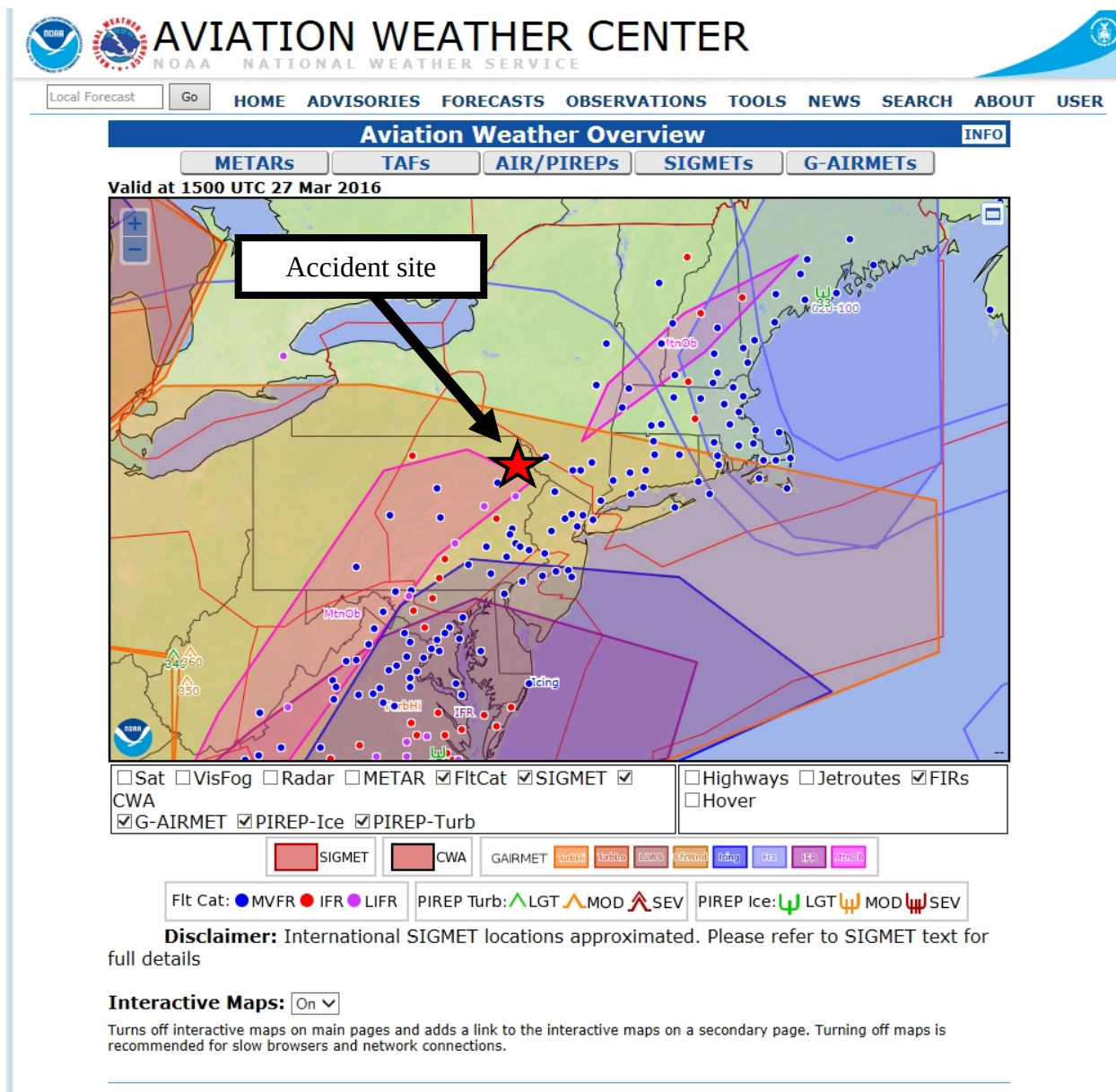


Figure 12 – AIRMETs and CWAs valid for the accident area at 1100 EDT

The AIRMETs and CWAs valid for the northeastern United States and the accident site at 1200 EDT, 1000 EDT, and 0900 EDT are provided in figures 13, 14, and 15.

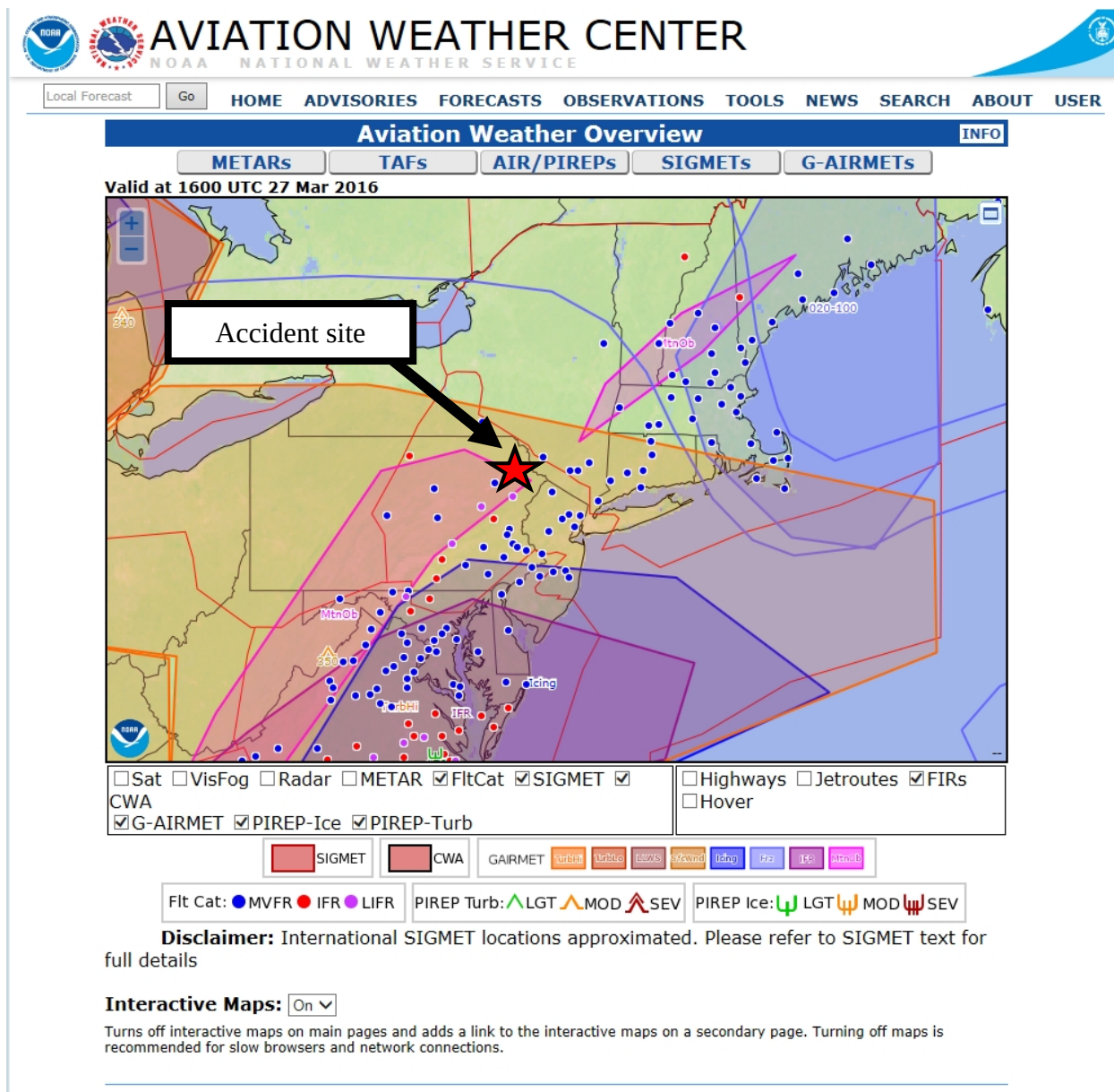


Figure 13 – AIRMETs and CWAs valid for the accident area at 1200 EDT

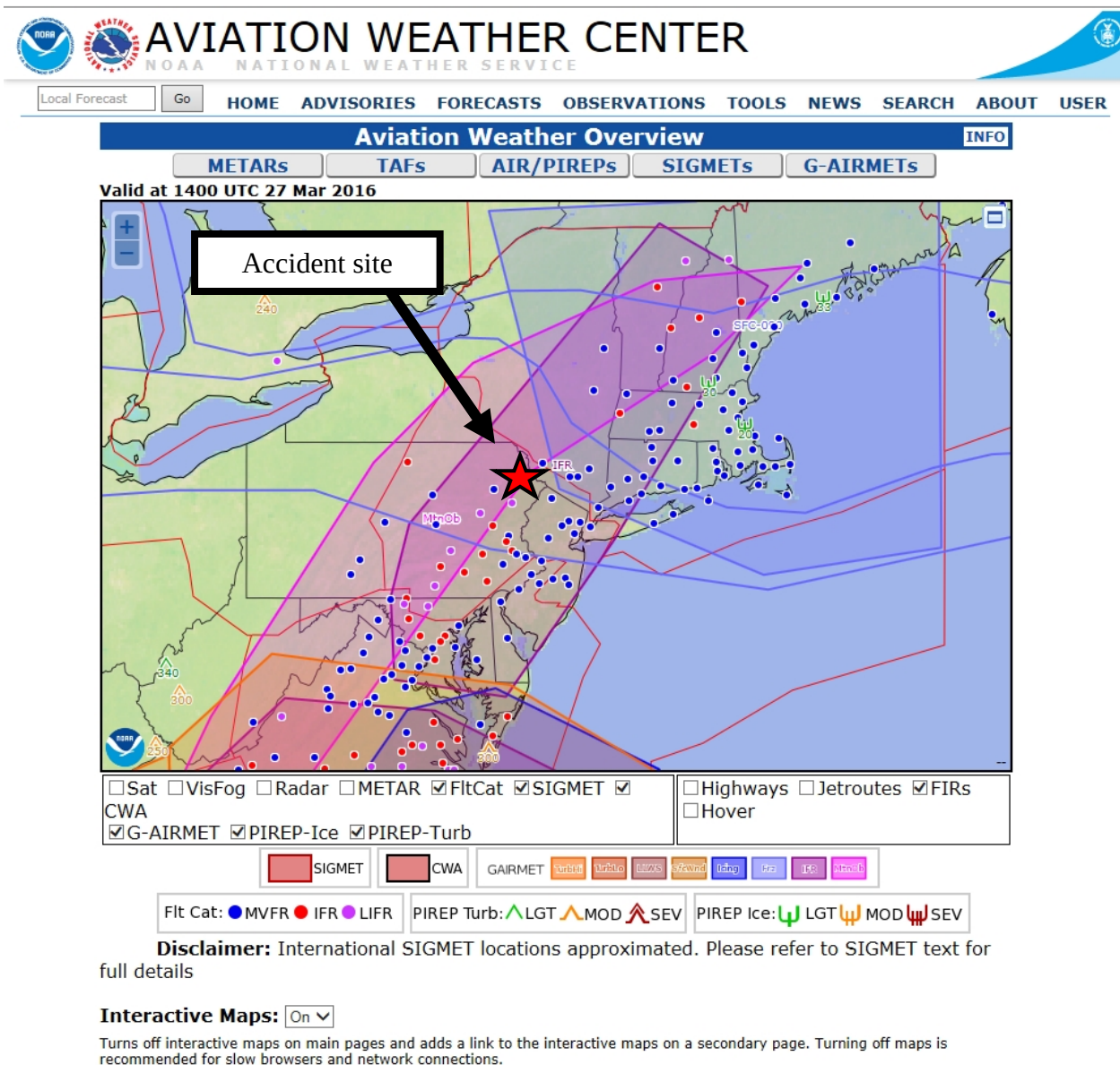


Figure 14 – AIRMETs and CWAs valid for the accident area at 1000 EDT

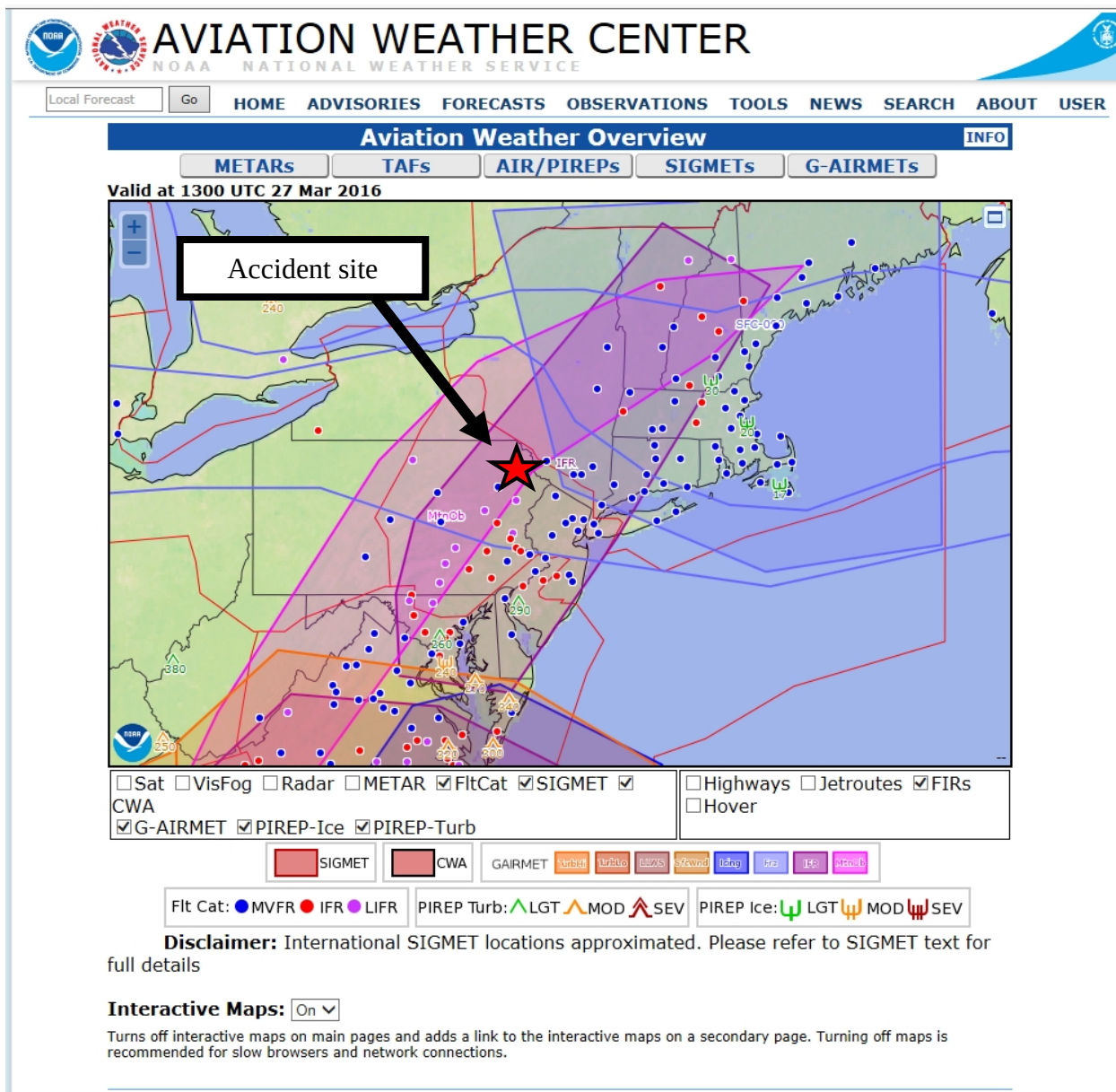


Figure 15 – AIRMETs and CWAs valid for the accident area at 0900 EDT

10.0 Area Forecast

The Area Forecast issued at 1135 EDT, valid at the accident time, forecasted an overcast ceiling between 1,500 and 2,000 feet msl with tops between 3,000 and 4,000 feet msl. The forecast expected conditions to improve between 1100 and 1400 EDT with scattered clouds at 2,500 feet msl and the broken ceiling rising to between 3,500 and 5,000 feet msl with tops at 6,000 feet msl. The Area Forecast issued at 0445 EDT and valid at the time of the accident aircraft's departure forecasted an overcast ceiling between 1,500 and 2,000 feet msl with tops between 3,000 and 4,000 feet msl. However, the 0445 EDT Area Forecast had cloud ceiling conditions improving between 0800 and 1100 EDT with the forecast expecting broken to scattered clouds between 1,500 and 2,500 feet msl, with continued improving conditions

between 1100 and 1400 EDT with scattered clouds at 2,500 feet msl and a broken ceiling between 3,500 and 5,000 feet msl and cloud tops at 6,000 feet msl:

FAUS41 KPCI 271535 AAA

FA1W

_BOSC FA 271535 AMD

SYNOPSIS AND VFR CLDS/WX

SYNOPSIS VALID UNTIL 280300

CLDS/WX VALID UNTIL 272100...OTLK VALID 272100-280300

ME NH VT MA RI CT NY LO NJ PA OH LE WV MD DC DE VA AND CSTL WTRS

.
SEE AIRMET SIERRA FOR IFR CONDS AND MTN OBSCN.

TS IMPLY SEV OR GTR TURB SEV ICE LLWS AND IFR CONDS.

NON MSL HGTS DENOTED BY AGL OR CIG.

.
SYNOPSIS...A DVLPG WRMFNT EXTDS FROM NERN OH NWWD ACRS SRN LM INTO A LOW PRES SYS OVR WRN WI. BY 03Z...A CDFNT WILL BE OVR NWRN OH. A CDFNT WILL CURVE FROM LOW ACRS WRN OH INTO CNTRL KY-TN..NWRN AL AND SERN MS AND ACRS EXTRM SERN LA SWWD INTO WRN GLFMEX. A STNRY FNTL SYS WILL EXTND SEWD FROM OH LOW ACRS NERN OH..SWRN PA AND NERN WV THEN WILL CONT AS A WRMFNT ACRS SERN VA THEN EWD INTO ATLC.

.
ME NH VT

NRN PTNS...SKC OCNL SCT CI. OTLK...VFR BECMG 0003 MVFR CIGS OVR

ME PTNS AREA.

SRN PTNS...OVC-BKN015-020 TOPS 030. BECMG 1518 SCT030.

OTLK...VFR.

.
MA RI CT...UPDT

BKN020-030 TOP 050. BECMG 1618 SCT CI. OTLK...VFR.

.
NY LO...UPDT

NERN NY...SKC OCNL SCT CI. OTLK...VFR.

WRN NY/LO...SKC. OTLK...VFR.

SERN NY/LONG ISLAND...OVC015-020 TOPS 030-040. BECMG 1518 FEW025

SCT CI. OTLK...VFR BECMG 0003 MVFR CIGS RA.

.
PA NJ...UPDT

WRN PA...SKC. AFT 17Z FEW050 SCT150. OTLK...VFR.

CNTRL PA...BKN035 TOPS 040. OTLK...MVFR CIGS.

ERN PA/NJ...OVC015-020 TOPS 030-040. BECMG 1518 SCT025 BKN035-050

TOPS 060. OTLK...VFR BECMG 0003 MVFR CIGS RA BR.

.
OH LE

NWRN OH...FEW CI. BECMG 0912 OCNL VIS 3-5SM BR. BECMG 1518

SCT050 BKN CI. OTLK...VFR BECMG 0003 VFR TSRA/SHRA.

SWRN OH...SKC OCNL SCT CI. BECMG 1518 SCT035-050 SCT150.

OTLK...VFR BECMG 0003 VFR TSRA/SHRA.

NERN OH/LE...SKC OCNL SCT CI. BECMG 1518 SCT050 SCT CI.

OTLK...VFR.

SERN OH...SCT-BKN CI. AFT 18Z SCT050. OTLK...VFR.

.
WV...UPDT

NWRN HLF...SCT-BKN CI. AFT 18Z SCT050. OTLK...VFR.

SERN HLF...SCT040 BKN CI. BECMG 1821 SCT025 BKN050 TOPS
060-080. OTLK...MVFR CIGS SHRA.

.
VA MD DC DE...UPDT
SWRN VA...BKN040 LYRD FL280. VIS 3-5SM BR. OTLK...IFR CIG DZ BR.
NWRN VA/WRN MD/DC...BKN030 LYRD FL280. OCNL VIS 3-5SM BR.
OTLK...MVFR CIGS BR.
ERN MD/DE...BKN-OVC015-020 LYRD FL280. OTLK...MVFR CIGS BR.
S CNTRL VA...BKN020 LYRD FL280. OCNL VIS 3-5SM BR. OTLK...IFR CIG
SHRA BR.
SERN VA...OVC010-020 LYRD FL280. VIS 3-5SM SCT -SHRA BR.
OTLK...IFR CIGS RA DZ BR.

.
CSTL WTRS...UPDT
NEW ENG CSTL WTRS...BKN015-020 TOPS 040-050. OTLK...MVFR CIGS.
MID ATLC CSTL WTRS...BKN015-025 LYRD FL280. ISOL -SHRA.
OTLK...MVFR CIGS SHRA.

....
FAUS41 KPCI 270845 2016087 0841
FA1W
_BOSC FA 270845
SYNOPSIS AND VFR CLDS/WX
SYNOPSIS VALID UNTIL 280300
CLDS/WX VALID UNTIL 272100...OTLK VALID 272100-280300
ME NH VT MA RI CT NY LO NJ PA OH LE WV MD DC DE VA AND CSTL WTRS

.
SEE AIRMET SIERRA FOR IFR CONDS AND MTN OBSCN.
TS IMPLY SEV OR GTR TURB SEV ICE LLWS AND IFR CONDS.
NON MSL HGTS DENOTED BY AGL OR CIG.

.
SYNOPSIS...A DVLPG WRMFNT EXTDS FROM NERN OH NWWD ACRS SRN LM
INTO A LOW PRES SYS OVR WRN WI. BY 03Z...A CDFNT WILL BE OVR NWRN
OH. A CDFNT WILL CURVE FROM LOW ACRS WRN OH INTO CNTRL
KY-TN..NWRN AL AND SERN MS AND ACRS EXTRM SERN LA SWWD INTO WRN
GLFMEX. A STNRY FNTL SYS WILL EXTND SEWD FROM OH LOW ACRS NERN
OH..SWRN PA AND NERN WV THEN WILL CONT AS A WRMFNT ACRS SERN VA
THEN EWD INTO ATLC.

.
ME NH VT
NRN PTNS...SKC OCNL SCT CI. OTLK...VFR BECMG 0003 MVFR CIGS OVR
ME PTNS AREA.
SRN PTNS...OVC-BKN015-020 TOPS 030. BECMG 1518 SCT030.
OTLK...VFR.

.
MA RI CT
OVC015-020 TOPS 030-040. BECMG 1215 BKN-SCT015-020. BECMG 1518
SCT CI. OTLK...VFR.

.
NY LO
NERN NY...SKC OCNL SCT CI. OTLK...VFR.
WRN NY/LO...SKC. OTLK...VFR.
SERN NY/LONG ISLAND...OVC015-020 TOPS 030-040. BECMG 1215
BKN-SCT015-025. BECMG 1518 FEW025 SCT CI. OTLK...VFR BECMG
0003 MVFR CIGS RA.

.
PA NJ

WRN PA...SKC. AFT 17Z FEW050 SCT150. OTLK...VFR.
CNTRL PA...SKC. BECMG 1215 BKN025 TOPS 030-040. OTLK...MVFR CIGS.
ERN PA/NJ...OVC015-020 TOPS 030-040. BECMG 1215 BKN-SCT015-025.
BECMG 1518 SCT025 BKN035-050 TOPS 060. OTLK...VFR BECMG 0003
MVFR CIGS RA BR.

.
OH LE
NWRN OH...FEW CI. BECMG 0912 OCNL VIS 3-5SM BR. BECMG 1518
SCT050 BKN CI. OTLK...VFR BECMG 0003 VFR TSRA/SHRA.
SWRN OH...SKC OCNL SCT CI. BECMG 1518 SCT035-050 SCT150.
OTLK...VFR BECMG 0003 VFR TSRA/SHRA.
NERN OH/LE...SKC OCNL SCT CI. BECMG 1518 SCT050 SCT CI.
OTLK...VFR.
SERN OH...SCT-BKN CI. AFT 18Z SCT050. OTLK...VFR.

.
WV
NWRN...SCT-BKN CI. AFT 18Z SCT050. OTLK...VFR.
SWRN...BKN-OVC CI. OTLK...VFR.
NERN...SCT-BKN CI. BECMG 1518 BKN050 TOPS 060-080. OTLK...VFR.
SERN...BKN-OVC020-025 TOPS 060. BECMG 1821 SCT025 BKN050 TOPS
060-080. OTLK...VFR BECMG 0003 MVFR CIGS SHRA.

.
VA MD DC DE
SWRN VA...CIGS BKN-OVC010-020 TOPS 060. VIS 3-5SM BR. OTLK...IFR
CIGS DZ BR.
NWRN VA/WRN MD/DC...SCT-BKN120 TOPS 160 BKN CI ABV. BECMG 1215
BKN-OVC015-020 TOPS 060-080. OCNL VIS 3-5SM BR. OTLK...MVFR
CIGS BR.
ERN MD/DE...BKN-OVC015-020 TOPS 030-040. OTLK...MVFR CIGS BR.
ERN VA...CIGS OVC010-020 LYRD FL240. OCNL -RA BR LWRG VIS 3SM.
ISOL -SHRA. OTLK...IFR CIGS RA DZ BR.

.
CSTL WTRS
NEW ENG CSTL WTRS...BKN015-020 TOPS 040-050. OTLK...MVFR CIGS.
MID ATLC CSTL WTRS...SCT-BKN015-025 BKN035-050 OVC080-100 TOPS
160 OVC CI. ISOL -SHRA. OTLK...MVFR CIGS SHRA.

....

11.0 Terminal Aerodrome Forecast

The Wilkes-Barre/Scranton International Airport (KAVP) was the closest site with an NWS Terminal Aerodrome Forecast (TAF) and it was located 23 miles west-northwest of the accident site and an elevation of 962 feet (figure 7). The TAF valid at the time of the accident was issued at 1018 EDT and was valid for a 22-hour period beginning at 1400 EDT. The TAF for KAVP was as follows:

TAF AMD KAVP 271418Z 2714/2812 **VRB03KT P6SM OVC015**
TEMPO 2715/2717 SCT015
FM271700 20006KT P6SM SCT025
FM280200 14004KT P6SM BKN025 OVC040
FM280700 11004KT 4SM -RA BR OVC015=

The forecast expected a variable wind of 3 knots, greater than 6 miles visibility, and an

overcast ceiling at 1,500 feet agl. Temporary conditions between 1100 and 1300 EDT were forecast with no cloud ceiling and scattered clouds at 1,500 feet agl.

12.0 National Weather Service Area Forecast Discussion

The National Weather Service Office in Binghamton, New York, issued an Area Forecast Discussion (AFD) at 1048 EDT. The aviation section of the AFD (made at 0700 EDT) discussed the expected the MVFR ceiling conditions near KAVP to burn off and retreat back to the southeast between 0900 and 1100 EDT:

FXUS61 KBGM 271448

AFDBGM

AREA FORECAST DISCUSSION

NATIONAL WEATHER SERVICE BINGHAMTON NY

1048 AM EDT SUN MAR 27 2016

.SYNOPSIS...

PLEASANT EARLY SPRING WEATHER, WILL CONTINUE THROUGH TODAY. A COLD FRONT, WILL BRING RAIN, LATE TONIGHT THROUGH MIDDAY MONDAY. DRY CONDITIONS WILL RETURN TUESDAY, ALONG WITH COOLER TEMPERATURES AND BREEZY CONDITIONS.

&&

.NEAR TERM /UNTIL 6 PM THIS EVENING/...

1040 AM UPDATE...

THE MAIN FORECAST CHALLENGE TODAY WILL BE THE EXTENT OF THE STRATUS CLOUD LAYER. AS OF LATE MORNING, IT HAD MADE IT ABOUT AS FAR NORTH AS THE PA/NY BORDER AREA. HOWEVER, VERY RECENT SATELLITE IMAGERY HAS INDICATED THAT THE NORTHWARD PROGRESS HAS ESSENTIALLY HALTED. ALSO, MOST OF OUR MODEL GUIDANCE SHOWS THAT, IF ANYTHING, THE CLOUDS MAY ERODE BACK SOUTHWARD A BIT THIS AFTERNOON. THUS, WE'VE CONTINUED WITH A MAINLY SUNNY FORECAST FOR MUCH OF OUR CENTRAL NY COUNTIES, WHILE SKIES RANGE FROM PARTLY SUNNY TO CLOUDY OVER MOST OF NORTHEAST PA.

CORRESPONDINGLY, WE ALSO HAVE A SOMEWHAT WIDER HIGH TEMPERATURE RANGE THIS AFTERNOON, GOING FROM THE LOW-MID 60S IN OUR NY LAKE PLAIN REGIONS, TO THE LOW-MID 50S OVER THE POCONOS PLATEAU.

PREVIOUS DISCUSSION...

SATELLITE EARLY THIS MORNING SHOWS CLEAR

SKIES ACROSS MOST OF THE REGION EXCEPT FOR THE SOUTHERN CATSKILLS AND POCONOS WHERE LOW CLOUDS HAVE MOVED IN UNDER SOUTHEAST FLOW. THIS MARINE LAYER WILL CONTINUE MOVING THROUGH NE PA AND POSSIBLY REACH THE SOUTHERN TIER BY DAYBREAK. ONCE THE SUN RISES BOUNDARY LAYER MIXING WILL ALLOW PARTLY SUNNY SKIES TO DEVELOP EVEN ACROSS THE FAR SE FA. FOR THE REMAINDER OF THE REGION SFC HIGH PRESSURE OFF THE NEW ENGLAND COAST WILL MAKE FOR A MOSTLY SUNNY DAY WITH JUST THIN HIGH CLOUDS. MAX TEMPS WILL RANGE FROM THE MID 50S IN THE SOUTHERN CATSKILLS/POCONOS TO MID 60S IN THE LAKE PLAIN.

&&

.SHORT TERM /6 PM THIS EVENING THROUGH TUESDAY NIGHT/...

TONIGHT/MONDAY...SFC LOW PRES WILL TRACK TO SOUTHERN ONTARIO NEAR LONDON BY 12Z MON THEN CONTINUE DOWN THROUGH LAKE ONTARIO TO NRN NY BY LATE DAY. SYSTEM IS VERTICALLY STACKED WITH SFC OCCLUSION EXPECTED TO CROSS REGION FROM MID MORNING THROUGH EARLY AFTERNOON. RAIN WILL BE MOST WIDESPREAD JUST AHEAD AND ALONG BOUNDARY FOLLOWED BY MORE SHOWERY ACTIVITY DURING THE AFTERNOON AND PRIMARILY

CONFINED TO THE NE PORTION OF FA. TOTAL RAINFALL WILL RANGE FROM 3 TO 5 TENTHS OF AN INCH. OVERNIGHT LOWS WILL RANGE FROM AROUND 40 IN THE SOUTHERN CATSKILLS TO UPPER 40S IN THE LAKE PLAIN. HIGHS ON MONDAY WILL RANGE FROM THE UPPER 40S TO MID 50S WITH MAXES OCCURRING AROUND MIDDAY THEN CAA BEHIND BOUNDARY WILL BRING TEMPS DOWN DURING THE EARLY/MID AFTERNOON.

MONDAY NIGHT...WRAP AROUND MOISTURE AND WEAK LAKE ENHANCEMENT AS T85 DROPS TO -7C WILL KEEP THE CHANCES FOR MIXED RAIN/SNOW SHOWERS ACROSS THE NRN SUSQUEHANNA REGION TO THE WESTERN MOHAWK VALLEY. A FEW TENTHS OF SNOW ARE POSSIBLE IN THE HIGHER ELEVATIONS. LOW WILL DROP INTO THE UPPER 20S TO MID 30S.

TUESDAY/TUESDAY NIGHT...SFC HIGH PRES WILL BUILD IN FROM THE OHIO VALLEY THEN RESIDE OVER THE MID ATLANTIC REGION TUESDAY NIGHT. IT WILL BE SEASONABLY COOL TUES WITH MAXES IN THE LOWER TO MIDDLE 40S ACROSS CNTRL NY AND MID/UPR 40S NE PA. THE GUSTY WINDS WILL MAKE IT FEEL EVEN COOLER BUT AT LEAST IT WILL BE MOSTLY SUNNY. TUE NIGHT LOWS WILL DROP INTO THE MID/UPR 20S.

&&

.LONG TERM /WEDNESDAY THROUGH SATURDAY/...

2 AM UPDATE...

STILL MUCH MODEL DISAGREEMENT. LITTLE CHANGE TO FORECAST. WARM AND DRY WED WITH HIGH PRESSURE. WARM AND WET THURSDAY INTO FRIDAY WITH A COLD FRONT...BUT AT THIS TIME THE UPPER LEVEL TROF IS BACK OVER THE WESTERN GREAT LAKES AND MIDWEST. UNSETTLED AND BECOMING INCREASING COLD FRIDAY TO SUNDAY. TIMING OF COLD FRONT HAS MUCH VARIETY WITH GFS FIRST LATE THURSDAY THEN CAN THU NGT THEN EURO FRI MORN. WPC GOING IN THE MIDDLE AND NOT LEANING WITH THE SLOW EURO.

PREVIOUS DISCUSSION...

FOR TUESDAY NIGHT AND WEDNESDAY, HIGH PRESSURE AND UPPER LEVEL RIDGING WILL KEEP FAIR, MILD AND DRY EARLY SPRING WEATHER FOR OUR AREA WITH HIGHS WEDNESDAY WELL INTO THE 50S AND EVEN LOW 60S. MEDIUM RANGE MODELS HAVE A SYSTEM PUSHING EASTWARD AS THE SURFACE HIGH AND UPPER LEVEL RIDGE RETREATS OFFSHORE. A SOUTHERLY FLOW OF EVEN Milder AIR WILL ONCE AGAIN ENGULF NY AND PA WEDNESDAY NIGHT INTO THURSDAY. MODEL DIFFER ON THE EVOLUTION OF THE SURFACE AND UPPER LEVEL FEATURES BUT THE GIST OF IT IS A TROUGH WILL MOVE INTO THE MIDWEST/PLAINS WITH A SURFACE LOW AND FRONTAL SYSTEMS IN ADVANCE OF THE UPPER LEVEL TROUGH. THERE WILL BE MOISTURE AND WARM AIR ADVECTION WHICH EVENTUALLY WILL BRING THE NEXT BATCH OF SHOWERS INTO OUR AREA. THE CMC HOLDS THE PRECIP OFF THE LONGEST WITH THE EURO BRINGING IT IN THE QUICKEST. THE GFS IS IN BETWEEN. SO FOR NOW KEPT SLGHT CHC TO CHC POPS FOR SHOWERS TUESDAY NIGHT AND CHC TO LIKELY POPS FOR THURSDAY AS ALL MODELS SHOW SOME PRECIP FOR THURSDAY.

MODELS REALLY BEGIN TO DIVERGE THURSDAY NIGHT AND FRIDAY WITH THE GFS AND CMC BRINGING THE FIRST FRONTAL SYSTEM THROUGH THE REGION THU NGT AND A SFC WAVE WHICH COULD BRING MORE SHOWERS TO OUR AREA FRIDAY ESPECIALLY THE CMC AND TO A LESSER EXTENT THE GFS. THE EURO HANGS BACK THE MAIN LOW FRIDAY AND DELAYS FROPA UNTIL FRIDAY AFTERNOON. SO FOR DIFFERENT REASONS ALL THREE MODELS SUGGEST AT LEAST SOME SHOWERS THURSDAY NGT TO FRIDAY. SO HAVE CHC TO LIKELY POPS FOR SHOWERS THU NGT AND CHC POPS FOR SHOWERS FRIDAY. THEN FRIDAY NIGHT AND SATURDAY COLD AIR ADVECTION BEGINS AND MODELS BEGIN TO AGREE AGAIN ON A POTENTIALLY RECORD BREAKING EARLY APRIL COLD AIR MASS WHICH MOVES INTO THE GREAT LAKES SAT. PRIOR TO THIS

LATE SEASON ARCTIC FRONT SATURDAY SHOULD SEE LESS CHANCE FOR ANY
PRECIP AS WEAK HIGH PRESSURE BUILDS IN. IT WILL BE COLDER SO A
MIX OF RAIN AND SNOW SHOWERS WILL BE IN THE FORECAST W/ SLGHT CHC
TO CHC POPS.

BASICALLY FOLLOWED SUPERBLEND AND USED ISC TO COLLABORATE WITH
NEIGHBORING WFOS.

&&

.AVIATION /15Z SUNDAY THROUGH THURSDAY/...

7 AM UPDATE...

**MAINLY VFR INTO THIS EVENING WITH HIGH PRESSURE. A LOW LEVEL
ONSHORE FLOW MADE IT TO AVP BUT NOT QUITE TO BGM THIS MORNING.
FUEL ALTERNATE MVFR CIGS WILL BURN OFF AND RETREAT BACK SE BETWEEN
13Z AND 15Z. NY SITES SCATTERED HIGH CLOUDS TODAY.**

TONIGHT LOW LEVEL MOISTURE COMING IN AHEAD OF A FRONT. HAVE A 4K
FT CIG COMING IN THIS EVENING FROM THE SW. IT SHOULD FALL TO MVFR
QUICKLY. 2Z AVP, THEN BY 6Z ITH/BGM/ELM. LATE TONIGHT FUEL
ALTERNATE CIGS AND MVFR VSBYS IN RAIN FOR SOUTH CENTRAL NY AND
AVP. AT RME/SYR MVFR SHOULD COME IN AROUND 12Z MONDAY.

E TO S WINDS EARLY THIS MORNING MOSTLY AT 3 TO 7 KTS. ELM/AVP
COULD BE CALM MUCH OF THE TIME. SE TO S WINDS DURING THE DAY INTO
TONIGHT WITH SPEEDS OF 8 TO 10 KTS.

.OUTLOOK...

MON...RESTRICTIONS LIKELY IN RAIN.

MON NGT...RESTRICTIONS POSSIBLE ESPECIALLY NY IN MIXED PRECIP.

TUE-WED...VFR.

THU...RESTRICTIONS PSBL IN SHOWERS...ESPECIALLY PM.

&&

.BGM WATCHES/WARNINGS/ADVISORIES...

PA...NONE.

NY...NONE.

&&

\$\$

13.0 Winds and Temperature Aloft Forecast

The NWS 1000 EDT Winds and temperature aloft forecast valid for the flight is included below:

WINDS ALOFT FORECASTS

DATA BASED ON 271200Z

VALID 271800Z FOR USE 1400-2100Z. TEMPS NEG ABV 24000

FT	3000	6000	9000	12000	18000	24000	30000	34000	39000
----	------	------	------	-------	-------	-------	-------	-------	-------

AVP	1810	2515+06	2525+02	2622-04	2637-18	2559-30	256746	269953	761363
-----	------	---------	---------	---------	---------	---------	--------	--------	--------

The AVP forecast indicated a wind at 3,000 feet from 180° at 10 knots, at 6,000 feet from 250° at 15 knots with a temperature of 6° C.

14.0 Pilot Weather Briefing and Dispatch Information

A search of official weather briefing sources, such as Lockheed Martin Flight Service (LMFS) and Direct User Access Terminal Service (DUATS), revealed that the accident pilot did not contact LMFS. No information was received from DUATs (likely due to the request for

information being made after their 15 day archive expiration from date of services). There is no knowledge of any additional weather briefing information the accident pilots received.

15.0 Astronomical Data

The astronomical data obtained from the United States Naval Observatory for the accident site on March 27, 2016, indicated the following:

SUN	
Begin civil twilight	0624 EDT
Sunrise	0652 EDT
Sun transit	1306 EDT
Sunset	1921 EDT
End civil twilight	1949 EDT

F. LIST OF ATTACHMENTS

Attachment 1 – GOES-13 visible imagery from 1000 to 1200 EDT

Paul Suffern
NTSB, AS-30