NATIONAL TRANSPORTATION SAFETY BOARD

Office of Aviation Safety
Washington, D.C. 20594

February 20, 2019

Weather Study

METEOROLOGY

ERA18FA120

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A. ACCIDENT

Location: Daytona Beach, Florida
Date: April 4, 2018
Time: 0953 eastern daylight time
1353 Universal Coordinated Time (UTC)
Airplane: Piper PA-28R-201; Registration: N106ER

B. METEOROLOGIST

Don Eick
Senior Meteorologist
Operational Factors Division (AS-30)
National Transportation Safety Board

C. SUMMARY

On April 4, 2018, at 0953 eastern daylight time, a Piper PA-28R-201, N106ER, collided with terrain following an in-flight breakup shortly after takeoff from Daytona Beach International Airport (DAB), Daytona Beach, Florida. The airline transport pilot and private pilot were fatally injured, and the airplane was destroyed. The airplane was registered to and operated by Embry-Riddle Aeronautical University and operated under the provisions of 14 *Code of Federal Regulations* Part 91 as an instructional flight. Day visual meteorological conditions prevailed at the time of the accident, and no flight plan was filed for the local flight, which departed DAB at 0927.

D. DETAILS OF THE INVESTIGATION

The National Transportation Safety Board's Senior Meteorologist was not on scene for this investigation and conducted the meteorology phase of the investigation from the Washington D.C. office, collecting data from official National Weather Service (NWS) sources including the Weather Prediction Center (WPC) and the National Center for Environmental Information (NCEI). All times are eastern daylight time (EDT) based upon the 24-hour clock, local time is -4 hours from UTC, and UTC=Z. NWS airport and 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. 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 29.158611° N and longitude 81.08500° W at an elevation of approximately 35 ft.

E. WEATHER 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) 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 can be found in the joint NWS and Federal Aviation Administration (FAA) Advisory Circular "Aviation Weather Services", AC 00-45H.

1.1 Surface Analysis Chart

The southeast section of the NWS Surface Analysis Chart for 0800 EDT on April 4, 2018 is included as figure 1 with the Daytona Beach area enclosed within the red circle. The chart depicted a cold front stretching from Georgia, Alabama, into southern Mississippi, Louisiana, and into the Gulf of Mexico. A squall line was depicted ahead of the cold front stretching from the Florida panhandle west-southwestward across the northern Gulf of Mexico south of Louisiana. A ridge of high pressure extended over central Florida and over the Daytona Beach area. The chart depicted a weak pressure gradient over Florida at the time, with the accident site well ahead of the approaching cold front in the warm moist tropical air mass.

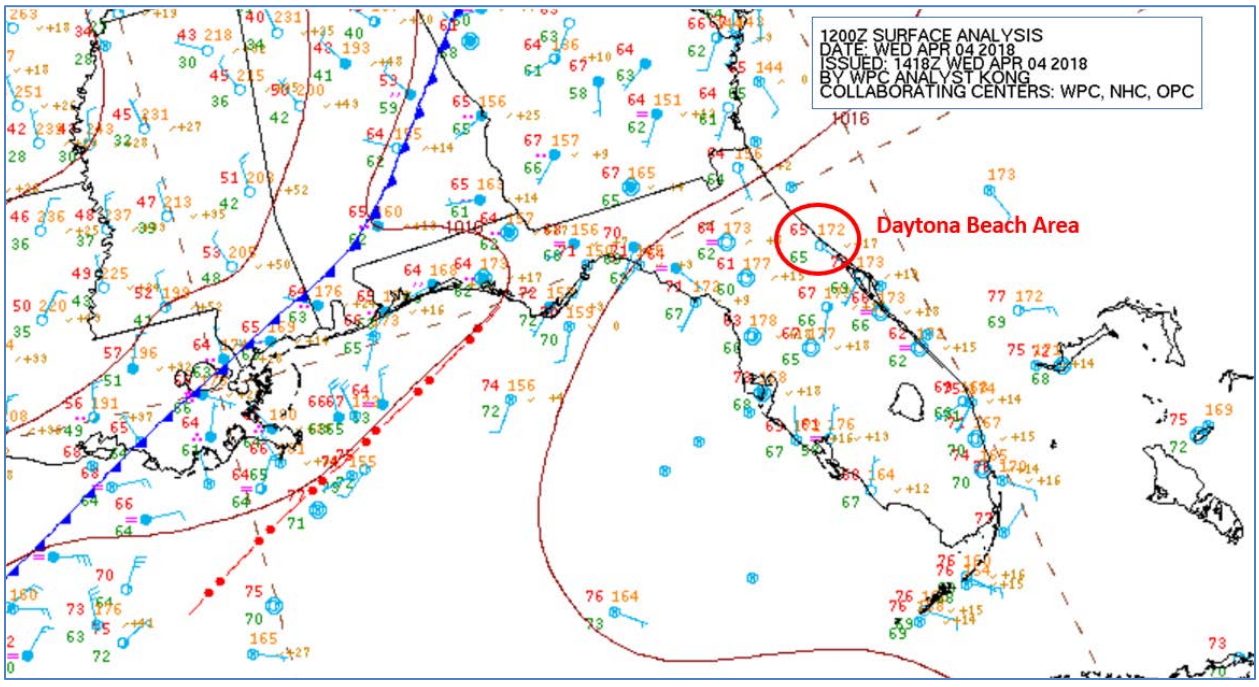

Figure 1 - Southeast section of NWS Surface Analysis Chart for 0800 EDT

The station models surrounding the area depicted calm to light winds of 5 knots or less, generally clear to scattered clouds, with temperatures in the mid 60's degrees Fahrenheit (F) over the area, with several stations reporting visibility restrictions in mist. The station model for Daytona Beach specifically indicated a wind from the south at 5 knots, scattered clouds, temperature and dew point temperature 65° F.

1.2 National Composite Radar Mosaic

The southeast section of the National Composite Radar Mosaic for 0950 EDT is included as figure 2 with the accident site marked by a red star. The chart depicted several bands of echoes over the Georgia, southern Alabama, into the Florida panhandle and the Gulf of Mexico. A separate area of scattered echoes was located off the Florida Atlantic coast approximately 90 miles east of the Daytona Beach area. No echoes were identified in the vicinity of the accident site.

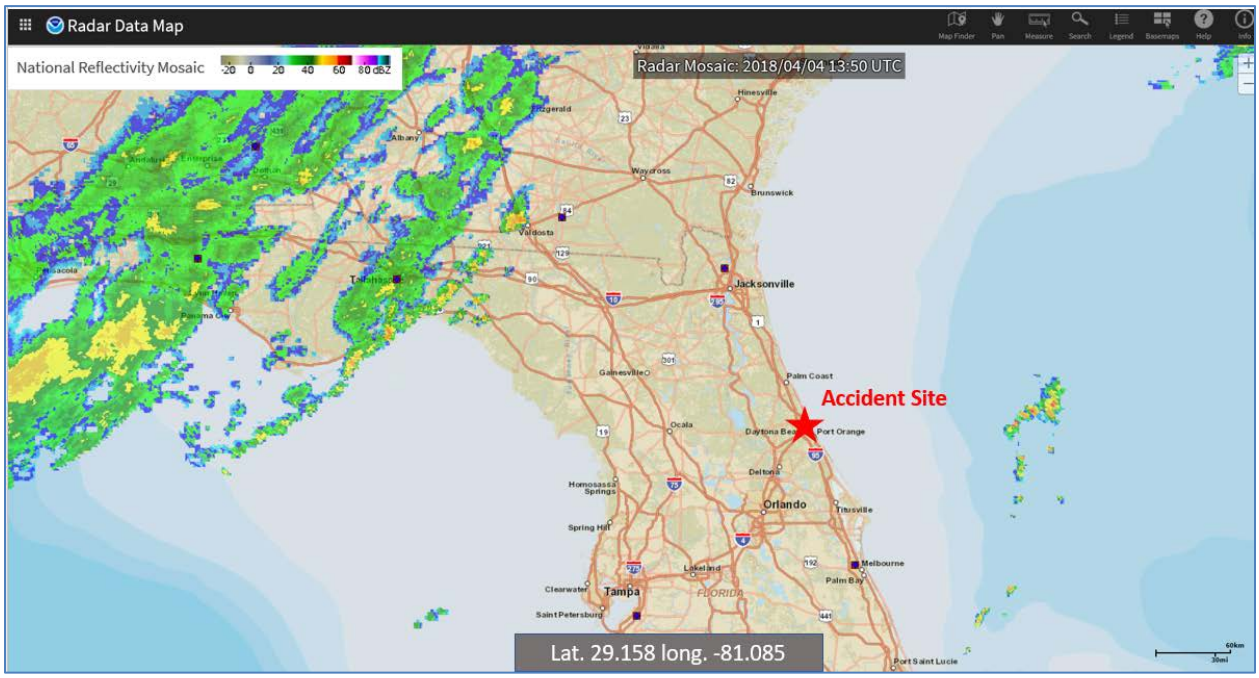

Figure 2 – Southeast section of the National Composite Reflectivity Mosaic for 0950 EDT

1.3 Convective Outlook

The NWS Storm Prediction Center's graphic Convective Outlook issued at 0852 EDT is included as figure 3 and depicted where organized thunderstorms were expected during the next 24-hour period. The chart depicted a general risk of ordinary thunderstorms over northern and eastern Florida during the period, with no organized severe thunderstorms expected over Florida. The main support for strong to severe thunderstorms was expected for the mid-Atlantic region from Delaware to eastern North Carolina, with a slight risk of severe thunderstorms.

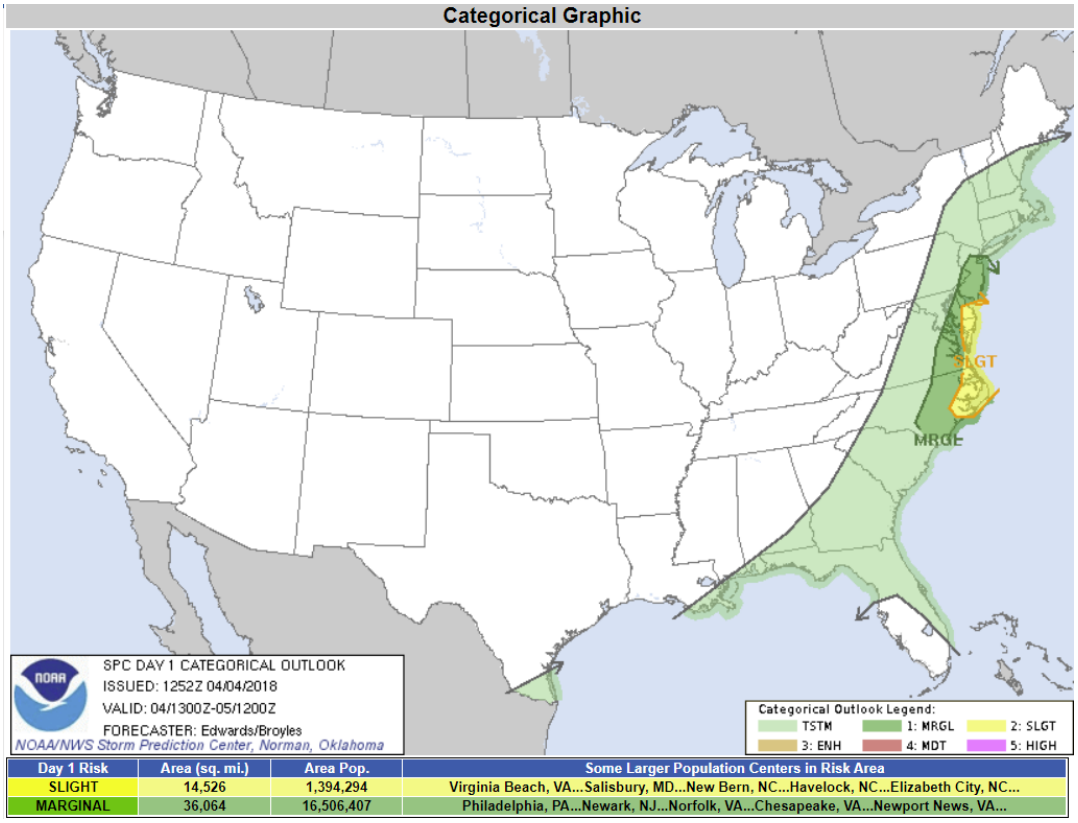

Figure 3 - NWS Storm Prediction Center Convective Outlook issued at 0825 EDT

The Convective Outlook (AC) bulleting associated with the graphic was as follows:

ACUS01 KWNS 041253
SWODY1
SPC AC 041252

Day 1 Convective Outlook
NWS Storm Prediction Center Norman OK
0752 AM CDT Wed Apr 04 2018

Valid 041300Z - 051200Z

...THERE IS A SLIGHT RISK OF SEVERE THUNDERSTORMS OVER PARTS OF THE TIDEWATER REGION FROM EASTERN NORTH CAROLINA TO DELMARVA...

...THERE IS A MARGINAL RISK OF SEVERE THUNDERSTORMS ELSEWHERE FROM EASTERN NORTH CAROLINA TO NEW JERSEY...

...SUMMARY...
Thunderstorms may produce damaging gusts through this afternoon from parts of the mid-Atlantic region to eastern North Carolina.

...Synopsis...
Broadly cyclonic flow in mid/upper levels will persist through the period, across most of the nation from the Rockies eastward. The main embedded perturbation is a strong shortwave trough, now apparent in moisture-channel imagery from eastern Upper MI across the western Lower MI/Lake Michigan area to southern IL and AR. This trough is expected to proceed eastward across southern

ON and the upper Ohio Valley today, reaching southwestern QC, western portions of NY/PA, and WV by 00Z, with an embedded/500-mb cyclone over QC. By 12Z, the associated mid/upper-level low will continue northeastward and being to merge into the southeastern quadrant of a broader, complex cyclonic gyre centered over the Hudson Bay region.

At the surface, the associated low was analyzed at 11Z near the southeastern end of Georgian Bay in ON, and should move east-northeastward across southern/eastern QC to become nearly vertically stacked with the 500-mb low. The surface cold front extended across western/central PA, southwestern VA, northwestern GA, extreme southeastern LA, and deep south TX. The front is forecast to move offshore from the Mid-Atlantic coastline around 18Z, and off the Outer Banks of NC by 00Z.

...Atlantic Coast States...
A corridor of scattered thunderstorms is expected to form through midday and into the afternoon as the weakly capped BOUNDARY layer heats/mixes from the surface. Activity should gradually become better organized as it moves eastward over the marginal-risk and slight-risk areas toward the coast, offering a risk of sporadic damaging gusts and isolated severe hail. A brief tornado cannot be ruled out.

Although substantial DCVA-related large-scale lift related to the shortwave trough will pass to the north, height falls are forecast, and this area will reside beneath the right-entrance region of a cyclonically curved, 135-145-kt 250-mb speed max. Still, midlevel lapse rates are expected to remain modest. Heating-related destabilization and adjective airmass recovery each will decrease northward and westward from the slight-risk outlook area, while both frontal and synoptic/mid-upper lift weaken southward. This accounts for the probabilistic gradation depicted in the accompanying severe-risk maps. Meanwhile, the most favorable boundary layer and largest buoyancy are expected to remain offshore, though enough return flow may occur close to the coast, from Delmarva to eastern NC, to yield favorable boundary-layer thetae for severe in the western rim of the best-modified marine air. Forecast soundings over inland parts of this corridor suggest MLCAPE may reach 500-800 J/kg amidst 45-55 kt effective-shear magnitudes.

..Edwards/Broyles.. 04/04/2018

1.4 12-hour Surface Prognostic Chart

The NWS NCEP 12-hour Surface Prognostic Chart current during the period is included as figure 4 and was valid for 1400 EDT. The chart depicted the cold front moving across northern Florida during the period with scattered rain showers and thunderstorms along and ahead of the front. A weak trough of low pressure was depicted across central Florida with a chance of precipitation in rain showers and thunderstorms over the Daytona Beach area.

12 Hours Surface Prognostic

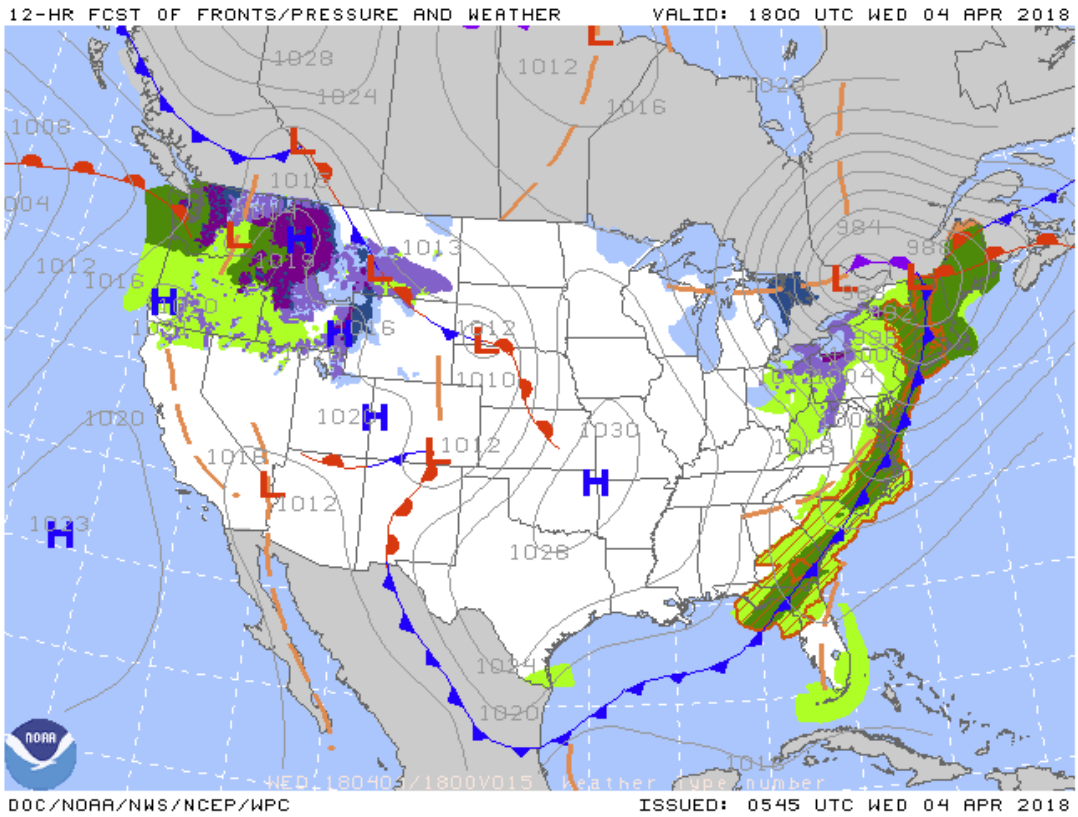

Figure 4 - 12-hour Surface Prognostic Chart current for 1400 EDT

2.0 Observations

Daytona Beach International Airport (KDAB), Daytona Beach, FL, had an Automated Surface Observation System (ASOS) which was augmented by air tower control personnel. The airport listed an elevation of 34 ft, and a magnetic variation of 6° W based on the latest sectional chart at the time. Cloud heights are reported in height above ground level (agl). At the time of the accident the following conditions were reported:

KDAB weather observation at 0953 EDT, wind from 260° at 7 knots, visibility 10 miles or more, a few clouds at 25,000 ft, temperature 24° C, dew point temperature 19° C, altimeter 30.03 inches of mercury (Hg). Remarks: automated observation system with a precipitation discriminator, sea level pressure 1016.9-hectopascal (hPa)[1], temperature 23.9° C, dew point 18.9° C, maintenance required on system.

The raw observations from 0353 through 1153 EDT surrounding the time of the accident were as follows:

[1] Hectopascals (hPa) is the new term for reference to sea level pressure and is interchangeable with millibar (mb) with the same units. Standard sea-level pressure is 1013.25-hPa.

METAR KDAB 040753Z 20005KT 8SM MIFG FEW075 FEW250 22/18 A2999 RMK AO2 SLP153 T02170178 $=

METAR KDAB 040853Z 00000KT 9SM MIFG CLR 18/18 A2999 RMK AO2 SLP155 T01830183 55005 $=

METAR KDAB 040953Z 00000KT 8SM CLR 18/18 A3001 RMK AO2 SLP160 T01830183 $=

METAR KDAB 041053Z 25003KT 7SM MIFG SCT044 SCT130 BKN200 18/18 A3003 RMK AO2 SLP166 T01780178 $=

METAR KDAB 041153Z 15003KT 10SM SCT060 SCT250 18/18 A3004 RMK AO2 SLP172 T01830183 10217 20172 53017 $=

METAR KDAB 041253Z 15003KT 10SM FEW060 23/19 A3005 RMK AO2 SLP174 T02280183 $=

Accident 1353Z

METAR KDAB 041353Z 26007KT 10SM FEW250 24/19 A3003 RMK AO2 SLP169 T02390189 $=

METAR KDAB 041453Z 27003KT 10SM FEW030 FEW250 26/19 A3003 RMK AO2 SLP169 T02610189 58003 $=

METAR KDAB 041553Z 22011KT 10SM FEW035 SCT250 28/20 A3002 RMK AO2 SLP166 T02780200 $=

A review of the observations indicated early morning shallow fog prior to the accident with no significant weather or obstruction to visibility being reported at the time of the accident.

3.0 Sounding

A High-Resolution Rapid Refresh (HRRR)[2] numerical model sounding was created from archive data from the NOAA Air Resource Laboratory for the accident site for 1000 EDT with station elevation of 39 ft. The HRRR sounding was plotted on a standard Skew-T Log P diagram[3] with the derived stability parameters included in figure 5 (with data from the surface to 450-hPa (or approximately 21,000 ft msl). This data was analyzed using the RAOB software package[4].

[2] The HRRR is a NOAA real-time three-kilometer resolution, hourly-updated, cloud-resolving, convection-allowing atmospheric model, initialized by three-kilometer grids with three-kilometer radar assimilation. Radar data is assimilated in the HRRR every 15 minutes over a one hour period.

[3] 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.

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

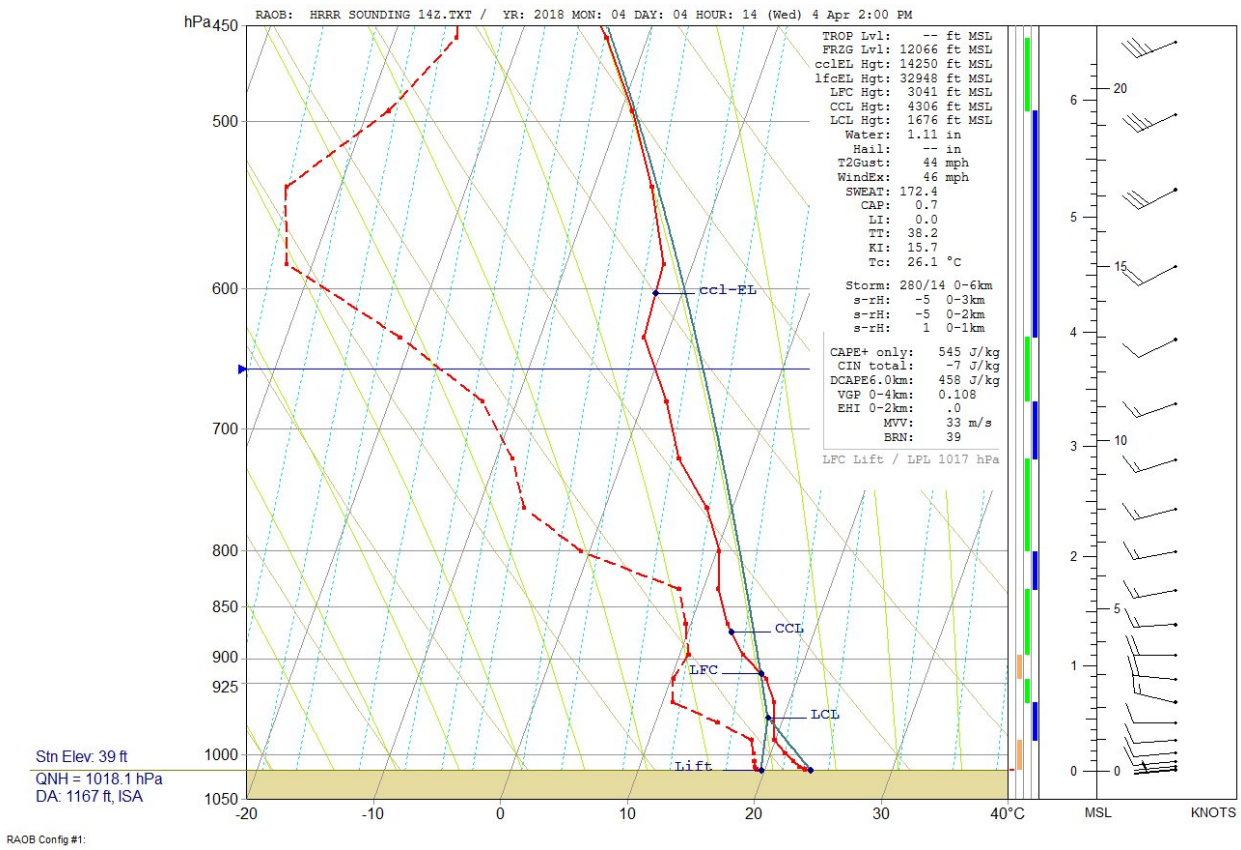

Figure 5 - HRRR numerical model over the accident site for 1000 EDT

The sounding indicated a surface temperature of 23.6° C (74.5° F), a dew point temperature of 19.7° C (67.5° F), with a relative humidity of 79%, which agreed with the observation from KDAB at the time. The lifted condensation level (LCL)[5] was at 1,637 ft agl (1,676 ft msl), and the level of free convection (LFC)[6] at about 3,000 ft, and the convective condensation level (CCL)[7] at approximately 4,300 ft. The freezing level was identified at 12,065 ft and the precipitable water content was 1.11 inches. The sounding had a high relative humidity and supported a moderate to severe risk of carburetor icing from the surface to 7,000 ft. The sounding also supported strong low-level thermals to approximately 1,500 ft. The sounding was characterized as conditionally unstable[8] with the Lifted Index[9] of 0.0, and a Convective Available Potential Energy (CAPE) of

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

[6] 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.

[7] 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.

[8] Conditional Unstable – a layer of unsaturated air when its lapse rate of temperature is less than the dry-adiabatic lapse rate but greater than the moist-adiabatic lapse rate. Under such conditions a parcel of air is unstable to upward vertical displacements if it is saturated, but stable to all vertical displacements if it is unsaturated.

[9] Lifted Index (LI) - A common measure of atmospheric instability. Its value is obtained by computing the temperature

545 J/kg and supported fair weather cumulus clouds and potential cumulonimbus clouds development during the afternoon with increased surface heating and a destabilizing atmosphere.

The sounding wind profile indicated a surface wind from 260° at 6 knots, a low-level wind maximum was identified at 2,800 ft with wind from 275° at 18 knots associated with top of the marine layer. The mean 0 to 6 kilometer (18,000 ft) wind was from 250° at 19 knots with winds from the west through the depth of the sounding with little directional variations. No strong vertical wind shears were identified to support anything other than light low-level turbulence.

A table of the HRRR model heights, pressure, temperature (T), dew point (Td), relative humidity (RH%), and wind direction and speed, and RAOB algorithm analysis of clear air turbulence (CAT), low-level wind shear (LLWS), and icing potential from the surface to 13,000 ft is included below in figure 6.

Height (ft-MSL)	Pres (hPa)	T (C)	Td (C)	RH (%)	DD / FF (deg / kts)	CAT (FAA)	LLWS	Icing - Type (AFGWC method)
39	1017	23.6	19.7	79	264 / 6			
67	1016	23.1	19.3	79	264 / 6			
152	1013	22.6	19.1	81	264 / 7			
322	1007	22.0	18.9	83	264 / 8			
578	998	21.1	18.6	86	265 / 8			
980	984	19.9	18.1	89	266 / 9			
1533	965	19.3	14.9	76	270 / 11	LGT		
2154	944	18.8	10.8	60	284 / 15	LGT		
2879	920	17.5	10.2	62	275 / 18			
3618	896	15.0	10.7	75	270 / 18			
4563	866	12.9	9.6	80	266 / 16			
5600	834	11.2	8.1	81	259 / 15			
6740	800	10.2	-0.7	47	259 / 15			
8027	763	8.0	-6.4	35	254 / 16			
9475	723	4.4	-8.7	38	252 / 17			
11144	679	1.8	-12.7	33	249 / 14			
12987	633	-1.8	-21.0	21	242 / 12	LGT		

Figure 6 - HRRR 1000 EDT sounding parameters over KDAB

4.0 Satellite Imagery

The Geostationary Operational Environmental Satellite number 16 (GOES-16) data was obtained from an archive at the Space Science Engineering Center at the University of Wisconsin-Madison in Madison, Wisconsin, and processed using the Man-computer Interactive Data Access System (McIDAS) software. Both the infrared long wave and visible band imagery were obtained surrounding the time of the accident. The infrared long wave imagery (band 13) at a wavelength of 10.3 microns (μm) provided radiative cloud top temperatures with a nominal spatial resolution

that air near the ground would have if it were lifted to 500-hPa or approximately 18,000 feet and comparing that temperature to the actual temperature at that level. Negative values indicate instability - the more negative, the more unstable the air is, and the stronger the updrafts are likely to be with any developing thunderstorms.

of 2 km. The visible imagery (band 2) at a wavelength of 0.64 µm provided a nominal spatial resolution of 0.5 km.

Figures 7 and 8 are the GOES-16 infrared and visible images at 0952 EDT. The images both depict no significant clouds over the region.

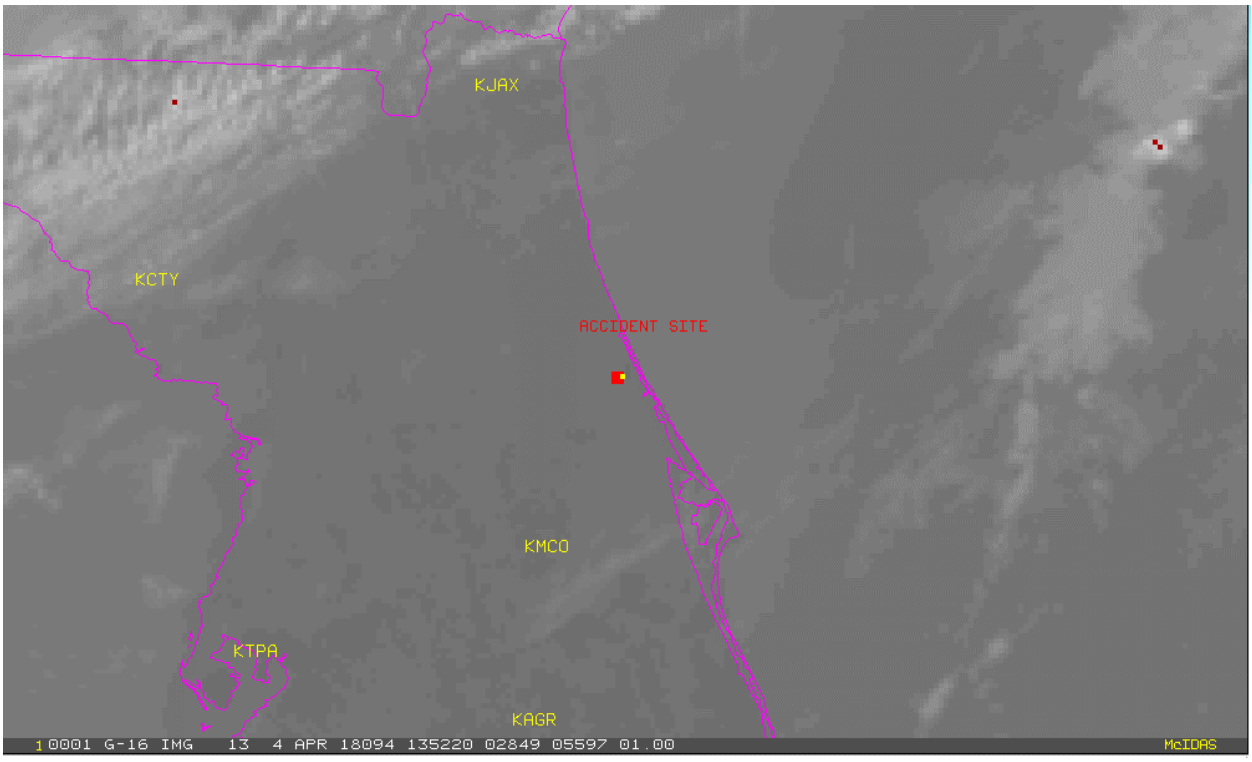

Figure 7 - GOES-16 infrared image at 0952 EDT at 4X magnification

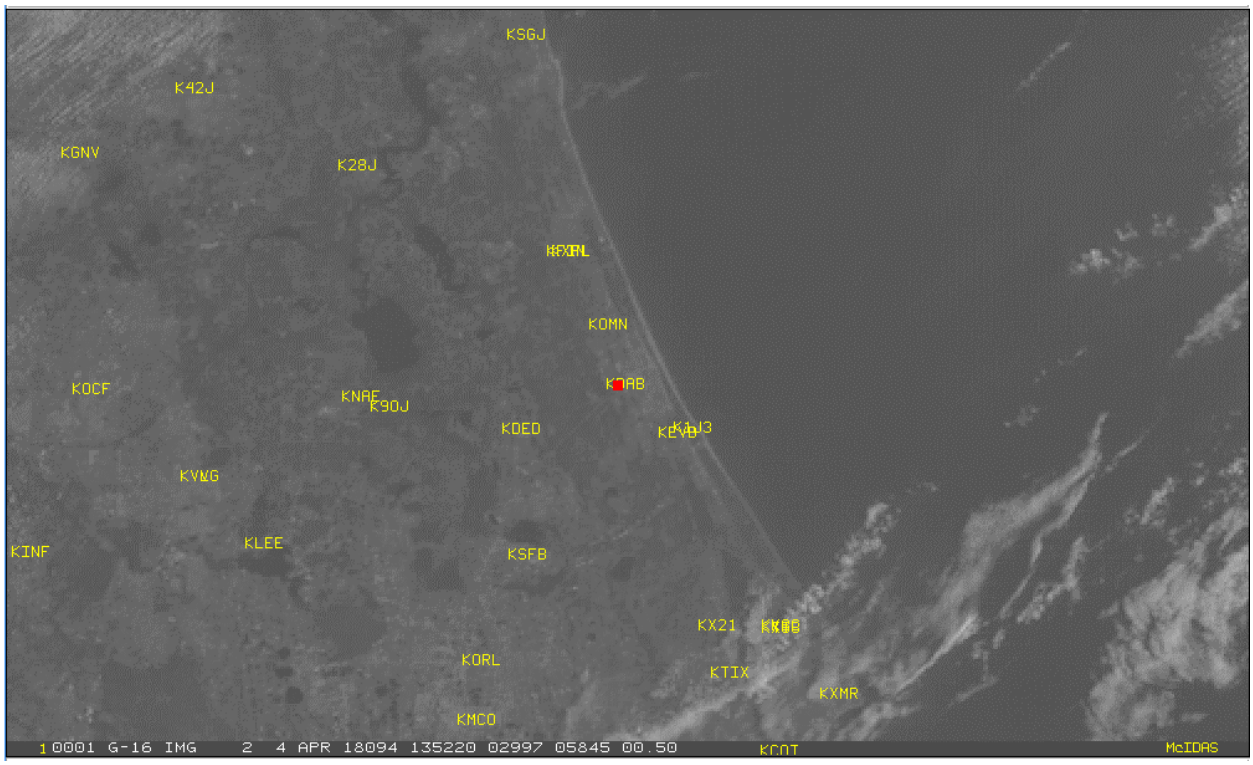

Figure 8 - GOES-16 visible image at 0952 EDT at 2X magnification

5.0 Pilot Reports

A search of the NWS database for pilot reports (PIREPs) within 50 miles of the accident site from approximately 4 hours prior to and after the accident provided the following reports:

No reports

Accident 1353Z

DAB UA /OV OVR DED/TM 1720/FL040/TP C208/SK BASES 040 TOPS 060

DAB UA /OV BARBS/TM 1803/FL070/TP BE36/SK BKN040 – TOPS090 TCU

6.0 NWS Terminal Aerodrome Forecast

The NWS Melbourne (KMLB) Weather Forecast Office (WFO) was responsible for the issuance of the KDAB Terminal Aerodrome Forecast (TAF). The forecast current at the time of the accident was issued at 0721 EDT and was as follows:

TAF KDAB 041121Z 0412/0512 19003KT P6SM BKN040
FM041400 23008KT P6SM SCT040
FM041900 26012G18KT P6SM BKN080
FM050000 34009KT P6SM SCT025 BKN080
TEMPO 0504/0506 BKN025
FM050600 35009KT P6SM SCT020 BKN060

TEMPO 0506/0509 BKN020=

The forecast from 1000 through 1500 EDT expected surface wind from 230° at 8 knots, visibility 6 miles or more, with scattered clouds at 4,000 ft agl.

7.0 Inflight Weather Advisories

Inflight Aviation Weather Advisories are forecasts to advise en route aircraft of development of potentially hazardous weather. Inflight aviation weather advisories in the conterminous U.S. are issued by the NWS AWC, as well as from the Center Weather Service Units (CWSU) associated with FAA Air Route Traffic Control Center's (ARTCCs).

There are four basic types of inflight aviation weather advisories; the Significant Meteorological Information (SIGMET), the Convective SIGMET, the Airmen Meteorological Information (AIRMET), and the Center Weather Advisory (CWA). Several advisories were issued during the period; however, there were no SIGMETs, Convective SIGMETs, CWAs, or AIRMETs current over the Daytona Beach Area. The advisories that were issued for the southeast are listed below, with figure 9 a plot of the GOES-16 satellite image and the AIRMETs Sierra, Tango, and Zulu during the period.

Convective SIGMET

WSUS31 KKCI 041255
SIGE
-MKCE WST 041255
CONVECTIVE SIGMET 23E
VALID UNTIL 1455Z
ME AND CSTL WTRS
FROM 90SE BGR-20ESE ENE
LINE EMBD TS 40 NM WIDE MOV FROM 24050KT. TOPS TO FL310.

CONVECTIVE SIGMET 24E
VALID UNTIL 1455Z
NC AND NC SC GA CSTL WTRS
FROM 80SSE ECG-130ESE CHS
DVLPG LINE TS 30 NM WIDE MOV FROM 27015KT. TOPS TO FL380.

OUTLOOK VALID 041455-041855
AREA 1...FROM 60E CYN-100SE SIE-80E ORF-120E ECG-170SE ECG-180SSE ILM-200ESE LEV-30SW CEW-30SW CAE-SIE-60E CYN
WST ISSUANCES EXPD LT IN PD. REFER TO MOST RECENT ACUS01 KWNS FROM STORM PREDICTION CENTER FOR SYNOPSIS AND METEOROLOGICAL DETAILS.

AREA 2...FROM 30SE HUL-50WSW YSJ-170ESE ACK-130SE ACK-40SE ACK-30NNE ENE-30SE HUL
WST ISSUANCES POSS ERY IN PD. REFER TO MOST RECENT ACUS01 KWNS FROM STORM PREDICTION CENTER FOR SYNOPSIS AND METEOROLOGICAL DETAILS.

CWAs

FAUS23 KZJX 041126
ZJX3 CWA 041130
ZJX CWA 301 VALID UNTIL 041300
FROM 50SSE ILM-135SE SAV
40NM WIDE AREA SHRA/TS MOV FROM 24025KT. TOPS TO FL380.
MOD TO HVY PCPN.

AIRMETs

WAUS42 KKCI 040845
WA2S
MIAS WA 040845
AIRMET SIERRA UPDT 1 FOR IFR AND MTN OBSCN VALID UNTIL 041500
.
AIRMET IFR...GA FL AND CSTL WTRS
FROM 60WNW SAV TO 40SSE AMG TO 40W PIE TO 100S CEW TO 80SSE SJI
TO 40W CEW TO 50SW PZD TO 50SSE LGC TO 60WNW SAV
CIG BLW 010/VIS BLW 3SM PCPN/BR. CONDS CONTG BYD 15Z ENDG 18-21Z.
.
AIRMET MTN OBSCN...NC SC GA ME NH VT MA NY PA WV MD VA
FROM 70NW PQI TO MLT TO CON TO HAR TO CLT TO ATL TO GQO TO HMV
TO HNN TO JHW TO SYR TO 20NE MSS TO YSC TO 70NW PQI
MTNS OBSC BY CLDS/PCPN/BR. CONDS CONTG BYD 15Z THRU 21Z.
....
WAUS42 KKCI 040845
WA2T
MIAT WA 040845
AIRMET TANGO UPDT 1 FOR TURB AND LLWS VALID UNTIL 041500
.
AIRMET TURB...NC SC GA FL AND CSTL WTRS
FROM 160SE SIE TO 180E ECG TO 30WNW CRG TO 130ESE LEV TO 40W CEW
TO 50SW PZD TO GQO TO HMV TO 20NE ECG TO 160SE SIE
MOD TURB BLW FL180. CONDS CONTG BYD 15Z THRU 21Z.
.
WAUS42 KKCI 040845
WA2Z
MIAZ WA 040845
AIRMET ZULU UPDT 1 FOR ICE AND FRZLVL VALID UNTIL 041500
.
AIRMET ICE...NC SC GA FL NY LO PA OH WV MD DC DE VA AND CSTL WTRS
FROM 30E JHW TO HNK TO 30W ETX TO SBY TO 20S ORF TO 40ESE FLO TO
40N SAV TO 110SSW TLH TO 130ESE LEV TO 40W CEW TO 50SW PZD TO GQO
TO HMV TO HNN TO 50W HNN TO 20W AIR TO 40ENE EWC TO 30E JHW
MOD ICE BTN FRZLVL AND FL230. FRZLVL 070-140. CONDS CONTG BYD 15Z
THRU 21Z.
.
OTLK VALID 1500-2100Z...ICE NC SC GA FL NJ MD DC DE VA AND CSTL WTRS
BOUNDED BY 20W CYN-80ESE SIE-160SE SIE-110SE ILM-100SE CHS-50ESE
CRG-40WNW PIE-170SE LEV-130ESE LEV-40W CEW-50SW PZD-20S ATL-30ESE
ODF-20NNE CLT-30SE PSK-30WSW EMI-20W CYN
MOD ICE BTN FRZLVL AND FL230. FRZLVL 070-130. CONDS CONTG THRU 21Z.
.

FRZLVL...RANGING FROM SFC-160 ACRS AREA
MULT FRZLVL BLW 110 BOUNDED BY HMV-50SE HMV-30N ODF-50WNW ATL-GQO-HMV
080 ALG 40WNW ATL-40S PSK
120 ALG 60SE SJI-60SE CEW-50SSW SAV-180SE CHS-190SSE ILM
120 ALG 130SE ILM-110SSE ECG-110SE ECG-160ESE ECG-190ESE ECG
....

Plot of AIRMET

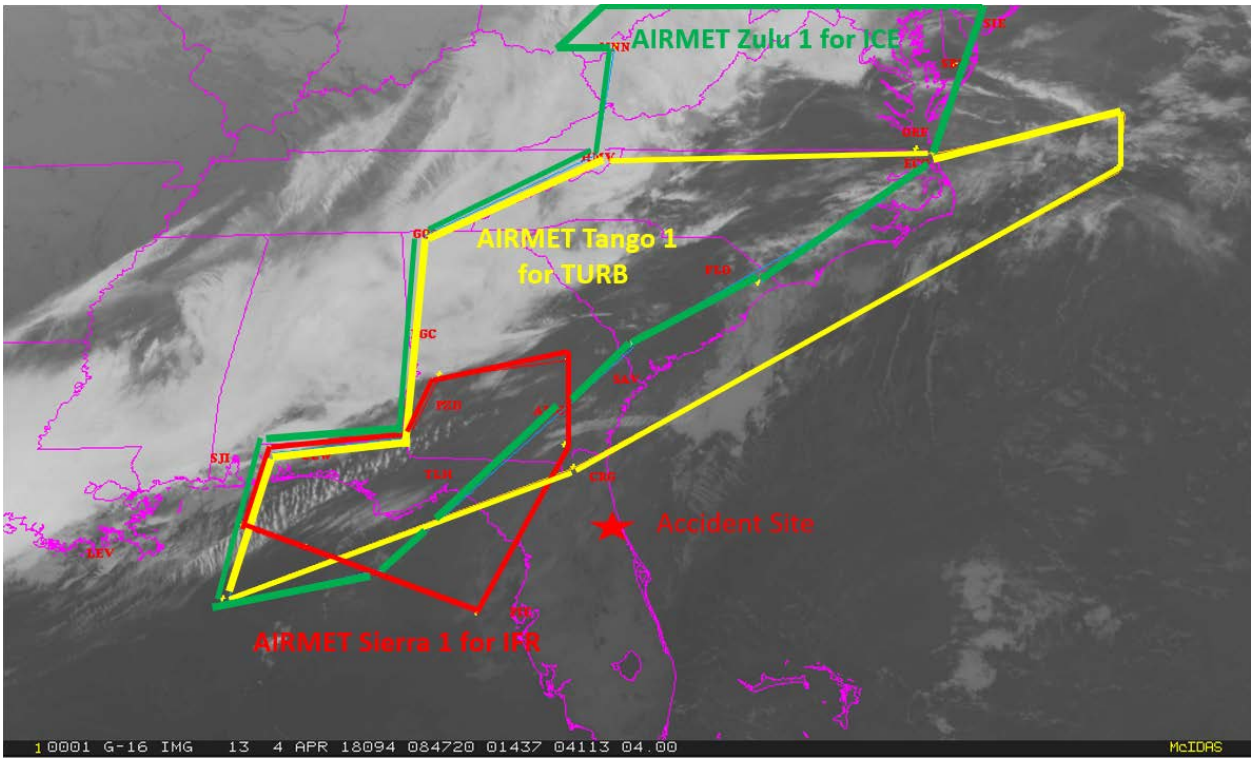

Figure 9 - AIRMETs current during the period

8.0 Winds and Temperature Aloft Forecast

The Winds and Temperature Aloft Forecast current for the region was valid for 0800 EDT and for use between 0400 and 1100 EDT and was as follows:

WINDS ALOFT FORECASTS
DATA BASED ON 040600Z
VALID 041200Z FOR USE 0800-1500Z. TEMPS NEG ABV 24000

FT	*3000*	*6000*	*9000*	*12000*	*18000*	*24000*	*30000*	*34000*	*39000*
JAX	*2524*	*2529+11*	*2623+06*	*2521+01*	*2432-11*	*2548-23*	*256538*	*258146*	*258656*
MLB	*2209*	*2506+12*	*2512+06*	*2613+02*	*2527-08*	*2640-20*	*264837*	*265646*	*266155*

The forecast for Jacksonville (JAX) approximately 85 miles north of the accident site expected wind at 3,000 ft from 250° at 24 knots. The forecast for Melbourne (MLB) approximately 64 miles south of the accident site were from 220° at 9 knots. At both stations the wind direction

varied little with height with increasing speeds. Both stations reported freezing temperatures above 12,000 ft.

Submitted by:

_____

Don Eick
Senior Meteorologist