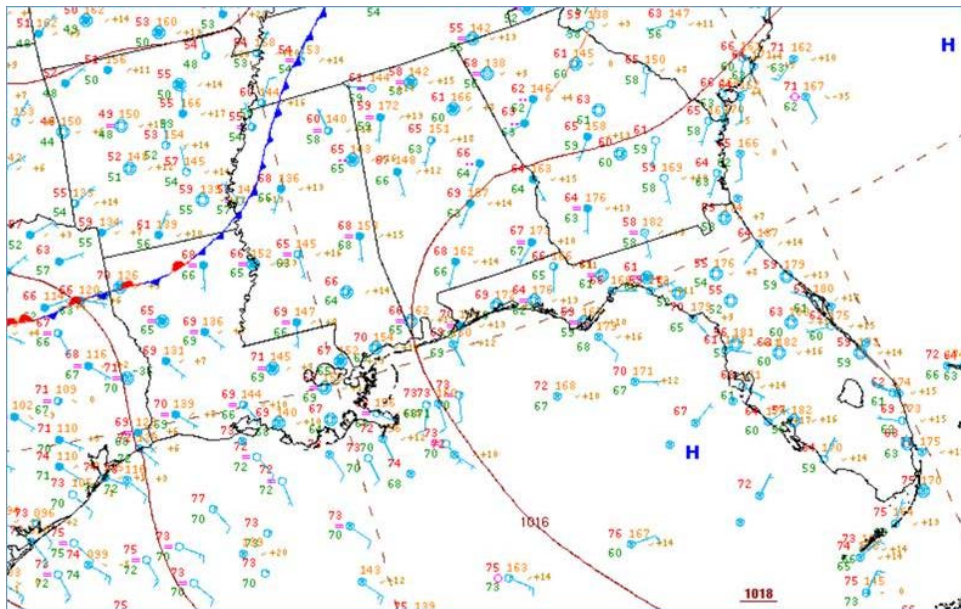


From: [REDACTED]
To: [REDACTED]
Subject: Aberdeen, MS Weather
Date: Wednesday, March 29, 2017 9:11:48 AM
Attachments: [image001.png](#)
[image006.png](#)
[image008.png](#)

Weather conditions on March 28, 2017 surrounding Aberdeen, Mississippi regarding Mooney M20J, N643RJ accident

Synoptic conditions – The southeast section of the NWS Surface Analysis Chart for 1200Z or 0700 CDT on March 28, 2017 depicted a slow moving cold front extending over Tennessee into northwestern Mississippi, into northern Louisiana. High pressure systems were located off the Carolina coast and off the Florida Gulf coast, which resulted in a weak pressure gradient over the region. The station models over northern Mississippi and Alabama surrounding the accident site depicted calm to light southwesterly winds of 5 knots, broken to overcast sky conditions, with several stations reporting light rain to mist. Temperatures were near 65° Fahrenheit (F) with temperature dew points spreads of less than 2° F across the region.



A review of the regional radar mosaic indicated very light intensity echoes associated with ground clutter associated with a low-level temperature inversion over the area. No high reflectivity cores associated with any organized areas of thunderstorms or heavy rain showers were identified over the area between 1100 and 1200Z.

Observations – the closest reporting station to the accident site was Columbus Air Force Base (KCBM), Columbus, MS located approximately 15 miles south of the accident site at an elevation of 218 feet.

Columbus special weather observation at 0603 CDT, automated, wind from 150° at 4 knots, visibility 8 miles, ceiling broken at 1,800 feet agl, overcast at 2,400 feet, temperature and dew point 18° C, altimeter 29.93 inches of mercury.

The raw observations were as follows:

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METAR KCBM 280958Z AUTO 15003KT 9SM R13C/5500FT -RA BKN017 OVC022 18/18 A2991 RMK AO2 DZB08E16RAB16E18RAB53 SLP130 P0000 $  
SPECI KCBM 281002Z AUTO 15003KT 7SM R13C/5500FT BKN017 BKN021 18/18 A2991 RMK AO2 RAE02 SLP130 $  
SPECI KCBM 281007Z AUTO 16004KT 6SM R13C/5000FT BR SCT016 BKN022 18/18 A2991 RMK AO2 RAE02 CIG 015V022 BKN V OVC SLP130 $  
SPECI KCBM 281012Z AUTO 16004KT 6SM R13C/5000FT BR SCT019 BKN024 17/17 A2991 RMK AO2 RAE02 CIG 016V024 SLP130 $  
SPECI KCBM 281027Z AUTO 15003KT 7SM R13C/5500FT BKN020 18/18 A2992 RMK AO2 RAE02 SLP133 $  
SPECI KCBM 281052Z AUTO 14003KT 8SM R13C/5500FT OVC021 18/18 A2993 RMK AO2 RAE02 SLP137 $  
SPECI KCBM 281057Z AUTO 15003KT 9SM R13C/5500FT OVC019 18/18 A2993 RMK AO2 RAE02 OVC V BKN SLP137 $  
METAR KCBM 281058Z AUTO 15003KT 9SM R13C/5500FT OVC019 18/18 A2993 RMK AO2 RAE02 OVC V BKN SLP137 P0000 T01790179 $
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SPECI KCBM 281103Z AUTO 15004KT 8SM BKN018 OVC024 18/18 A2993 RMK AO2

Accident 1117Z

SPECI KCBM 281152Z AUTO 00000KT 10SM -RA OVC019 18/18 A2995 RMK AO2 RAB52 SLP143 \$

SPECI KCBM 281157Z AUTO 00000KT 10SM -RA OVC021 18/18 A2995 RMK AO2 RAB52

METAR KCBM 281158Z AUTO 00000KT 10SM -RA OVC021 18/18 A2995 RMK AO2 RAB52 SLP143 P0000 60001 70003 T01830183 10196 20174 52016 \$

SPECI KCBM 281159Z AUTO 00000KT 10SM OVC021 18/18 A2995 RMK AO2 RAE58

SPECI KCBM 281214Z AUTO 00000KT 10SM OVC025 18/18 A2995 RMK AO2 RAE1158

SPECI KCBM 281219Z AUTO 00000KT 10SM OVC024 18/18 A2996 RMK AO2 RAE1158 SLP147 \$

SPECI KCBM 281229Z AUTO 00000KT 10SM OVC025 19/19 A2996 RMK AO2 RAE1158

SPECI KCBM 281239Z AUTO 19003KT 10SM OVC024 19/19 A2996 RMK AO2 RAE1158

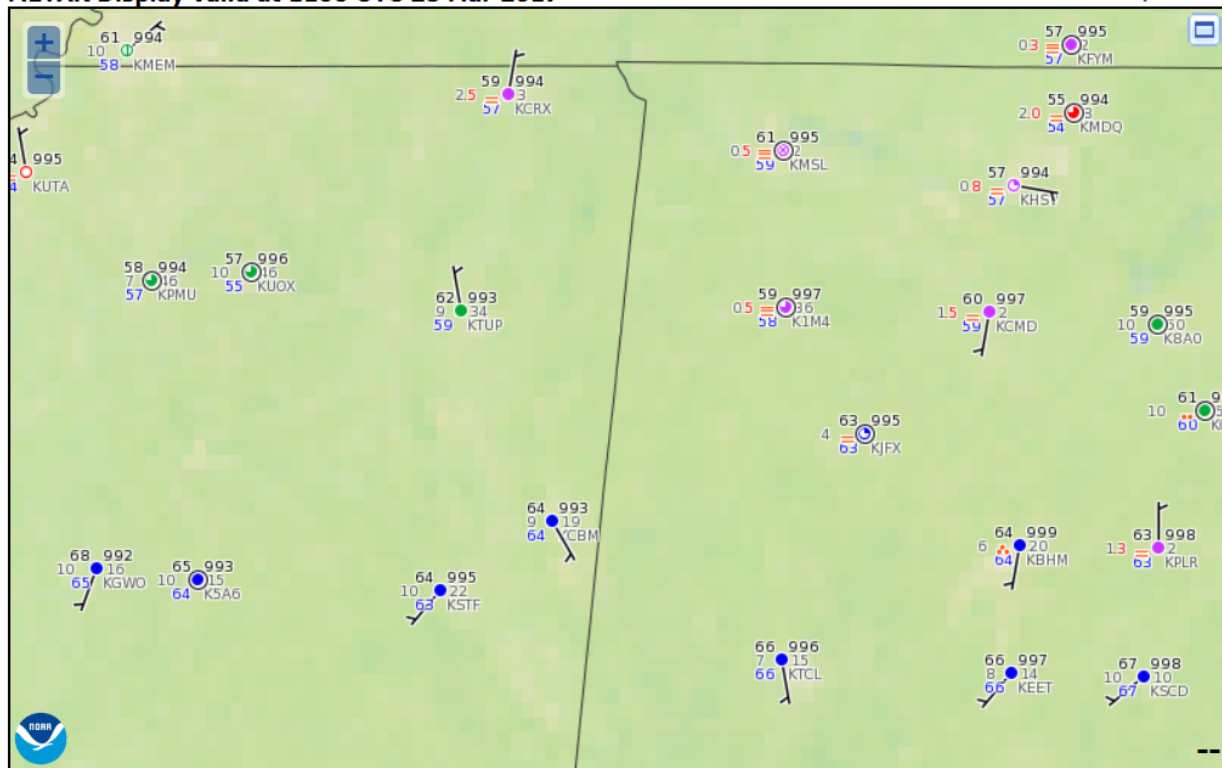
METAR KCBM 281258Z AUTO 20004KT 10SM OVC022 19/19 A2997 RMK AO2 RAE1158 SLP150 P0000 T01920189 \$

The observations surrounding the period indicated light southerly winds less than 5 knots, visibility between 6 and 10 miles in mist, with a ceiling broken to overcast variable between 1,500 to 2,500 feet agl, with temperature and dew point at 18° Celsius (C) or 64° F. Light rain or drizzle was reported surrounding the period prior to and after the time of the accident, with little impact on visibility during the period.

The NWS Aviation Weather Center (AWC) METAR display of observations at 1100Z and 1200Z are included in the attached graphics and indicate the general flight categories (VFR, MVFR, IFR, LIFR conditions) and shows significant LIFR conditions in fog or mist and low ceilings to the north through west of the region over northern Mississippi and Alabama surrounding the period.

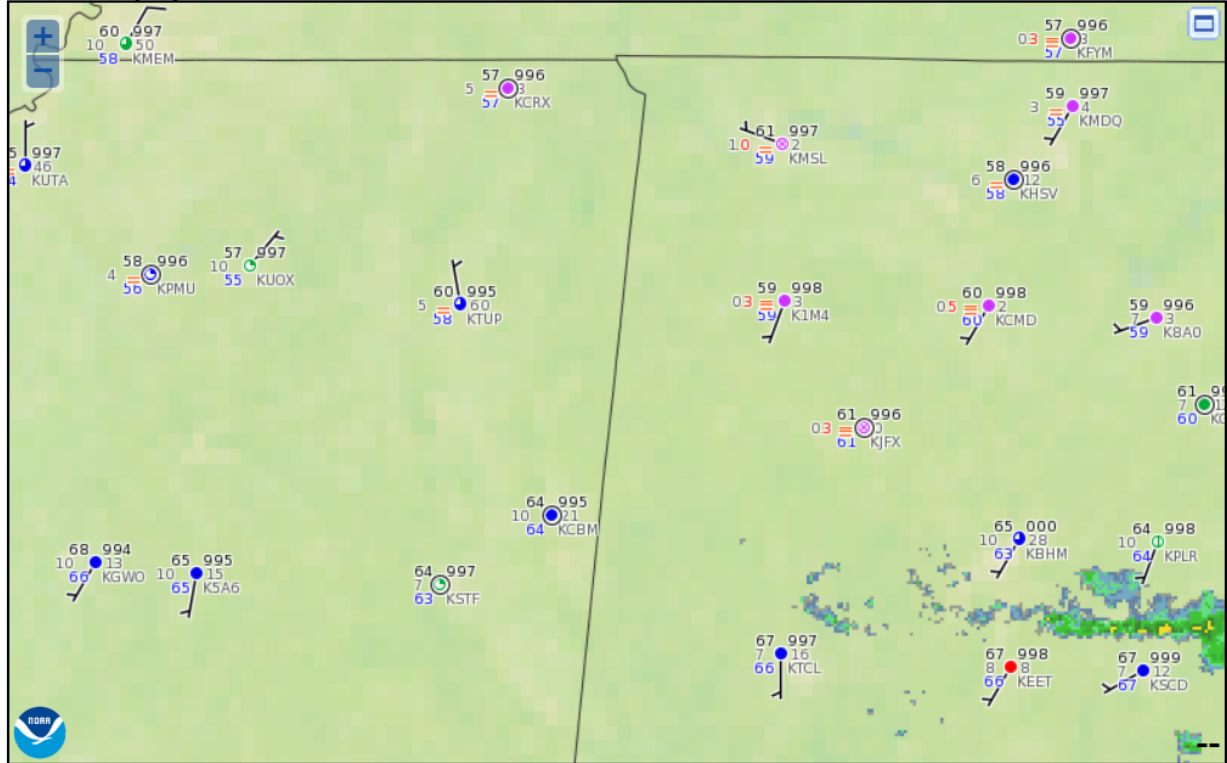
METAR Display valid at 1100 UTC 28 Mar 2017

[permalink](#)

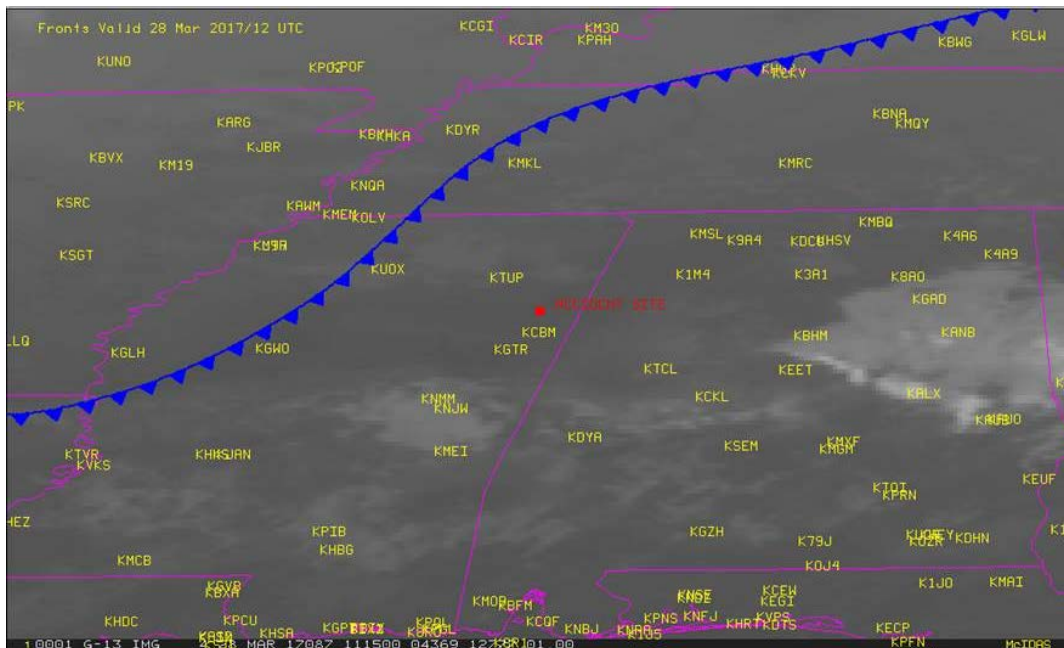


METAR Display valid at 1200 UTC 28 Mar 2017

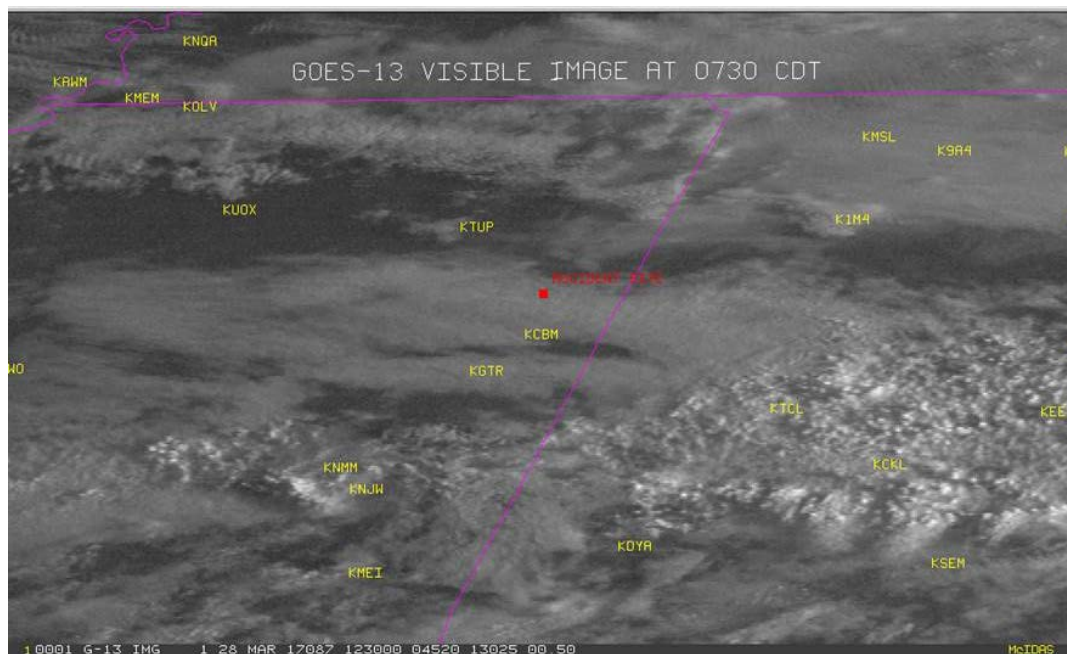
[permalink](#)



Satellite Imagery – GOES-13 infrared imagery at 4X magnification with the 1200Z position of the fronts is included. The image detected a band of low stratiform type clouds over the area. The radiative cloud top temperature over the region was 288° Kelvin or 14.84° C, which corresponded to cloud tops near 3,250 feet.



Due to the low sun angle the visible imagery was not useable at the time of the accident. The image at 0730 CDT or 1230Z with an enhancement applied showed the cloud cover over the region immediately after the accident and confirmed a low band of stratiform type clouds over the region.



Area Forecast – current for the period:

FAUS44 KPCI 280945

FA4W

-DFWC FA 280945

SYNOPSIS AND VFR CLDS/WX

SYNOPSIS VALID UNTIL 290400

CLDS/WX VALID UNTIL 282200...OTLK VALID 282200-290400

OK TX AR TN LA MS AL

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...09Z CDFNT NCNTRL TN-NRN LA-S PLAINS TX. 04Z LO PRESS S
PLAINS TX. CDFNT S PLAINS TX-BIG BEND TX. WRMFNT S PLAINS TX-NERN
TX. STNR FNT NERN TX-NRN LA-NERN AL. OCFNT S PLAINS TX-NERN NM.

MS

N..BKN030 TOP 050. TIL 13Z OCNL VIS 3SM BR. 13Z OVC010. 19Z BKN035. 22Z SCT040. OTLK...VFR.

CNTRL-S..OVC010-015 TOP 030. VIS 3SM BR. 15Z OVC020. 19Z SCT-BKN040 TOP 060.

ISOL -TSRA CNTRL PTNS. CB TOP FL390. OTLK...VFR TIL 00Z TSRA.

Terminal Aerodrome Forecast (TAF) – for the departure and destinations:

TAF TAF AMD KCBM 281021Z 2810/2915 VRB04KT 9999 BKN020 BKN030 QNH2987INS

TEMPO 2810/2813 BKN019

BECMG 2812/2813 VRB04KT 9999 SCT020 BKN035 QNH2987INS

BECMG 2820/2821 VRB06KT 9999 VCSH BKN035 QNH2989INS

BECMG 2901/2902 27004KT 9999 NSW BKN020 QNH2992INS

BECMG 2911/2912 30004KT 9999 BKN010 QNH2996INS TX26/2821Z TN17/2909Z AMD 281021

TAF KJAN 280548Z 2806/2906 19009KT P6SM BKN050

FM280730 21007KT P6SM OVC015

FM280900 20003KT 3SM BR OVC007

FM281500 24003KT P6SM OVC020

FM281900 19005KT P6SM VCTS BKN050CB

TAF KHKS 280548Z 2806/2906 16003KT 5SM BR BKN050

FM280730 21007KT 5SM BR OVC015

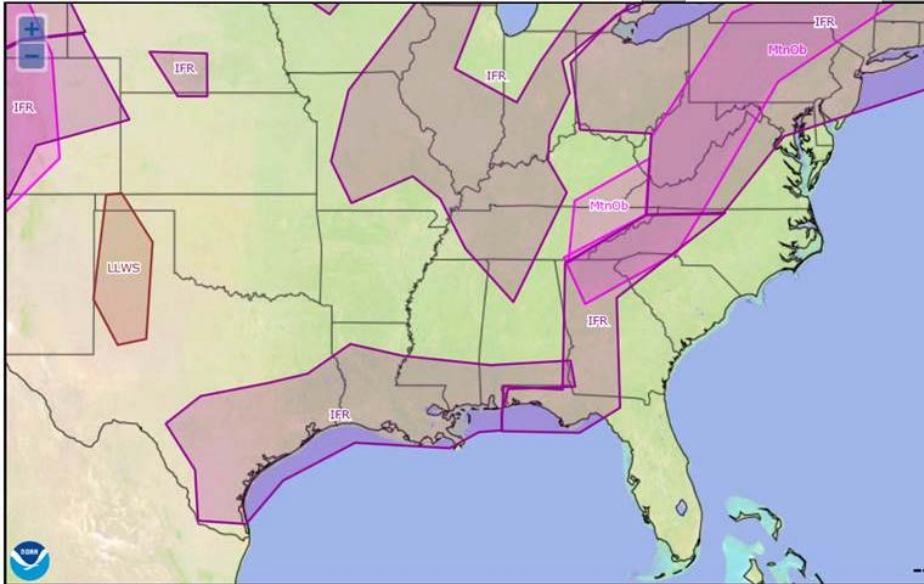
FM280900 20003KT 2SM BR OVC007

FM281500 24003KT 5SM BR OVC020

FM281900 19005KT P6SM VCTS BKN050CB

FM290000 14004KT P6SM SCT050 SCT250

Inflight Weather Advisories – the NWS had an AIRMET Sierra current for IFR conditions over the region south and northwest of the area, which did not include the accident site. The text and graphic advisories were as follows:



WAUS44 KNCI 280845

WA45

-DFWS WA 280845

AIRMET SIERRA UPDT 2 FOR IFR AND MTN OBSCN VALID UNTIL 281500

AIRMET IFR...AR TN MS AL IA MO WI LM LS MI LH IL IN KY

FROM 90ESE YQT TO SSM TO YVW TO 30SE ECK TO FWA TO CVG TO GQO TO 20WSW VUZ TO 40NE ARG TO 20NNW RZC TO 30SSE MCI TO 30NW DLL TO 20ESE BAE TO 40SSW JOT TO 30NE BVT TO 90ESE YQT

CIG BLW 010/VIS BLW 3SM PCPN/BR. CONDS CONTG BYD 15Z ENDG 15-18Z.

AIRMET IFR...TX AR LA MS AL AND CSTL WTRS

FROM SQS TO MGM TO 40SSE LGC TO 50SW PZD TO 40W CEW TO 80SSE SJI TO 30SE LEV TO 70S LCH TO 90ESE PSX TO 30NE BRO TO 40W BRO TO 60S LRD TO 30N DLF TO 70WSW TTT TO SQS

CIG BLW 010/VIS BLW 3SM BR. CONDS CONTG BYD 15Z ENDG 15-18Z.

Winds and Temperatures Aloft Forecast – current for the route:

WINDS ALOFT FORECASTS

DATA BASED ON 280600Z

VALID 281200Z FOR USE 0800-1500Z. TEMPS NEG ABV 24000

FT	3000	6000	9000	12000	18000	24000	30000	34000	39000
BHM	2830	2830+10	2824+04	2722-02	3133-11	3042-25	314941	315150	315659
HSV	2814	2829+09	2830+04	2826-01	3034-12	3045-25	315541	315850	315959
JAN	2717	2514+11	2817+06	2932+01	2826-11	2932-24	292840	283550	275160

Astronomical Conditions – the United States Naval Observatory provided the following data for Aberdeen, Monroe County, MS on March 28, 2017:

Beginning of civil twilight 0622 CDT

Sunrise 0647 CDT

Moonrise 0719 CDT

At the approximate time of the accident the Sun was -7 below the horizon at an azimuth of 81°, and the Moon was more than 15° below the horizon and provided no illumination.

Donald E. Eick
Senior Meteorologist
National Transportation Safety Board
Office of Aviation Safety
Operational Factors Division (AS-30)
490 L'Enfant Plaza East, SW
Washington, D.C. 20594-2000

