



NATIONAL TRANSPORTATION SAFETY BOARD

Office of Aviation Safety
Washington, D.C. 20594

February 18, 2020

Attachment 2 – June 1, 2018 Weather Conditions

METEOROLOGY

ERA18FA167

A review of the previous flights on June 1, 2018 from KVAJ to KLNS and return to KVAJ. The pilot logged 1.2 hours of flight time and logged 1.0 hour of actual instrument time. Figure 1 below is a plot of the round trip flights on June 1, 2018, based on ADS-B data. With an enroute cruising altitude of approximately 1,700 ft pressure altitude from KVAJ to KLNS between 1729Z through 1802Z, and 5,150 ft pressure altitude on the return leg between KLNS and KVAJ between 1916Z and 1953Z.

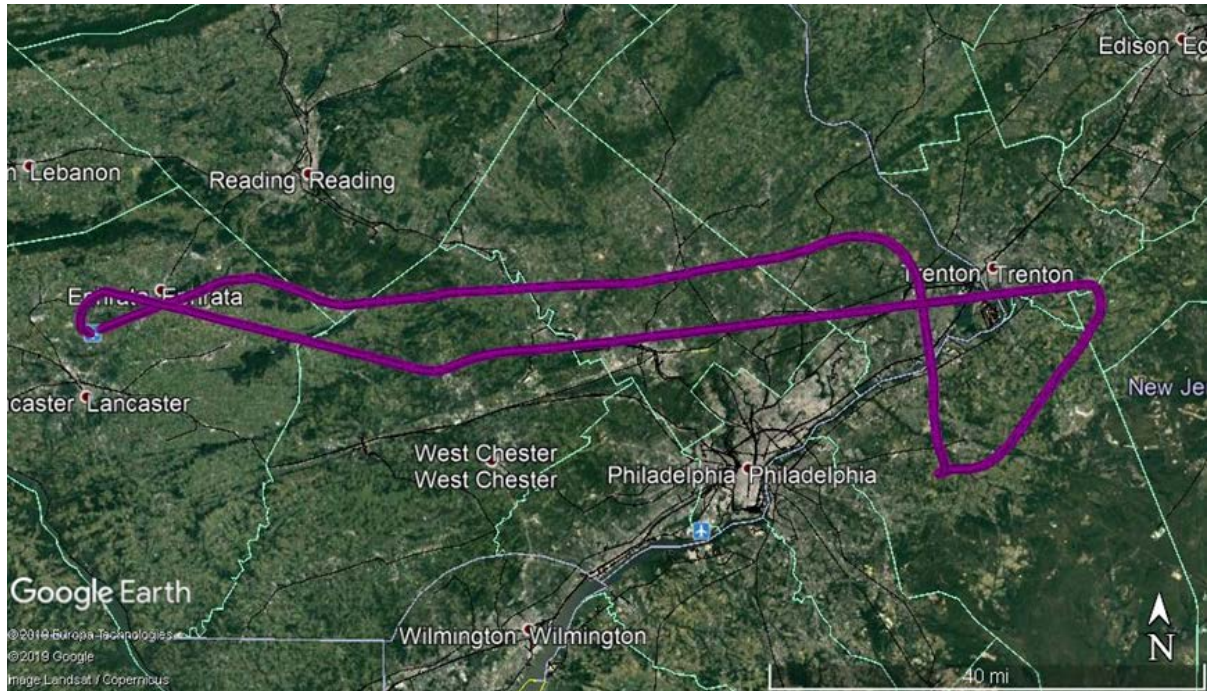


Figure 1 - Flight track from KVAJ to KLNS on bottom and return leg on the top

The general flight categories and raw METAR/SPECI reports issued during the period are included below. South Jersey Regional Airport (KVAJ), Mount Holly, New Jersey, at an elevation of 53 ft, had an Automated Surface Observation System (ASOS) that was not augmented.

LIFR METAR KVAJ 011154Z AUTO 0000KT 1 1/2SM BR OVC002 21/21 A2982 RMK AO2 SLP098 6//// 7//// T02110211 10211 20206 50003 PNO \$

LIFR SPECI KVAJ 011206Z AUTO 0000KT 3/4SM BR OVC002 21/21 A2983 RMK AO2 T02110211 PNO \$

LIFR SPECI KVAJ 011216Z AUTO 0000KT 1 1/4SM BR OVC002 21/21 A2983 RMK AO2 T02110211

LIFR SPECI KVAJ 011226Z AUTO 0000KT 3SM BR OVC002 22/22 A2983 RMK AO2 T02170217

LIFR METAR KVAJ 011254Z AUTO 0000KT 3SM BR OVC003 22/22 A2983 RMK AO2 SLP101 T02170217

IFR SPECI KVAJ 011330Z AUTO 0000KT 10SM OVC005 23/22 A2983 RMK AO2 CIG 003V008 T02280222

IFR SPECI KVAJ 011349Z AUTO 0000KT 10SM OVC007 23/22 A2983 RMK AO2 CIG 005V010

IFR METAR KVAJ 011354Z AUTO 0000KT 9SM OVC007 24/22 A2983 RMK AO2 CIG 005V010 SLP099 T02390222

MVFR SPECI KVAJ 011433Z AUTO 0000KT 10SM SCT009 OVC017 24/22 A2982 RMK AO2 02440222

MVFR METAR KVAJ 011454Z AUTO 0000KT 10SM OVC017 24/22 A2982 RMK AO2 SLP097 6//// T02440217 58004

MVFR METAR KVAJ 011554Z AUTO 0000KT 10SM BKN019 OVC025 25/22 A2982 RMK AO2 SLP097 T02500222

VFR SPECI KVAZ 011644Z AUTO 0000KT 10SM SCT028 OVC036 26/22 A2982 RMK AO2 T02560222
VFR METAR KVAZ 011654Z AUTO VRB03KT 10SM FEW017 FEW028 OVC036 26/22 A2981 RMK AO2 SLP095
T02610222
Departed 1729Z
VFR METAR KVAZ 011754Z AUTO VRB04KT 10SM SCT020 BKN041 28/23 A2979 RMK AO2 SLP088 6////
T02780228 10278 20211 58009
MVFR SPECI KVAZ 011803Z AUTO 0000KT 10SM BKN022 BKN042 27/23 A2979 RMK AO2 T02720228
VFR SPECI KVAZ 011851Z AUTO 27004KT 10SM SCT028 BKN038 28/22 A2977 RMK AO2
VFR METAR KVAZ 011854Z AUTO 28003KT 10SM SCT028 BKN038 28/22 A2977 RMK AO2 SLP081 T02780217
Arrived 1952Z
VFR METAR KVAZ 011954Z AUTO 0000KT 10SM SCT031 BKN040 28/23 A2975 RMK AO2 SLP073 T02830228
VFR METAR KVAZ 012054Z AUTO VRB03KT 10SM SCT033 BKN043 29/23 A2974 RMK AO2 SLP069 T02940233
58012

Destination: Lancaster Airport (KLNS), Lancaster, Pennsylvania, at an elevation of 403 ft. The airport had an ASOS system which was augmented by tower personnel as required. The following conditions were reported.

LIFR METAR KLNS 011253Z 24003KT 5SM BR OVC004 23/21 A2984 RMK AO2 CIG 004V009 SLP103
T02280211
IFR SPECI KLNS 011300Z 0000KT 4SM BR OVC005 22/21 A2985 RMK AO2 CIG 004V009 T02220211
IFR METAR KLNS 011353Z 0000KT 5SM BR OVC007 23/21 A2984 RMK AO2 SLP101 T02280211
IFR METAR KLNS 011453Z 28003KT 5SM BR OVC008 24/22 A2985 RMK AO2 CIG 007V011 SLP104
T02390217 53003
MVFR METAR KLNS 011553Z 0000KT 6SM HZ BKN014 26/22 A2984 RMK AO2 SLP103 T02560222
VFR METAR KLNS 011611Z 0000KT 6SM HZ SCT014 SCT030 26/22 A2984 RMK AO2 T02610222
MVFR SPECI KLNS 011633Z VRB03KT 6SM HZ BKN018 27/22 A2983 RMK AO2 T02670222
MVFR METAR KLNS 011653Z 0000KT 6SM HZ BKN018 27/22 A2983 RMK AO2 SLP097 T02720222
VFR SPECI KLNS 011705Z VRB04KT 6SM HZ SCT020 SCT025 28/23 A2983 RMK AO2 T02830228
MVFR SPECI KLNS 011729Z 07003KT 6SM HZ BKN024 BKN036 28/22 A2982 RMK AO2 T02780222
MVFR METAR KLNS 011753Z VRB03KT 6SM HZ BKN027 BKN035 28/23 A2981 RMK AO2 SLP090 T02830228
10289 20211 58014
Arrived 1802Z
VFR SPECI KLNS 011808Z 0000KT 7SM SCT027 BKN039 28/22 A2980 RMK AO2 T02830222
VFR METAR KLNS 011853Z 0000KT 7SM SCT027 29/22 A2979 RMK AO2 SLP083 T02890222
Departed 1916Z
VFR METAR KLNS 011953Z VRB03KT 7SM FEW031 SCT044 29/23 A2976 RMK AO2 SLP075 T02940228
VFR METAR KLNS 012053Z 20006KT 7SM SCT034 29/23 A2975 RMK AO2 SLP072 T02940228 56018

The observations indicated that LIFR to IFR conditions existed at both stations prior to 1100 EDT, with MVFR to VFR conditions reported at the time of departure from KVAZ and at the time of arrival at KLNS. The lowest ceiling was reported broken at 2,700 ft during the first leg which operated at 1,700 ft pressure altitude and was likely in visual meteorological conditions in haze during the first flight leg.

On the return leg, the aircraft operated at an altitude of 5,150 ft pressure altitude and while the departure from KLNS and arrival at KVAZ were both reporting VFR conditions during the time,

the aircraft likely encountered instrument meteorological conditions between 3,800 ft and 5,125 ft, with estimated cloud tops near 5,600 ft based on the model sounding below.

Figure 2 is a North American Mesoscale (NAM) numerical model sounding on June 1, 2018 at 1800Z over KVAJ. The sounding supported a cloud layer between the lifted condensation level (LCL) at 2,400 ft agl through approximately 5,600 ft, as indicated by the gray shading on the left side of the sounding diagram.

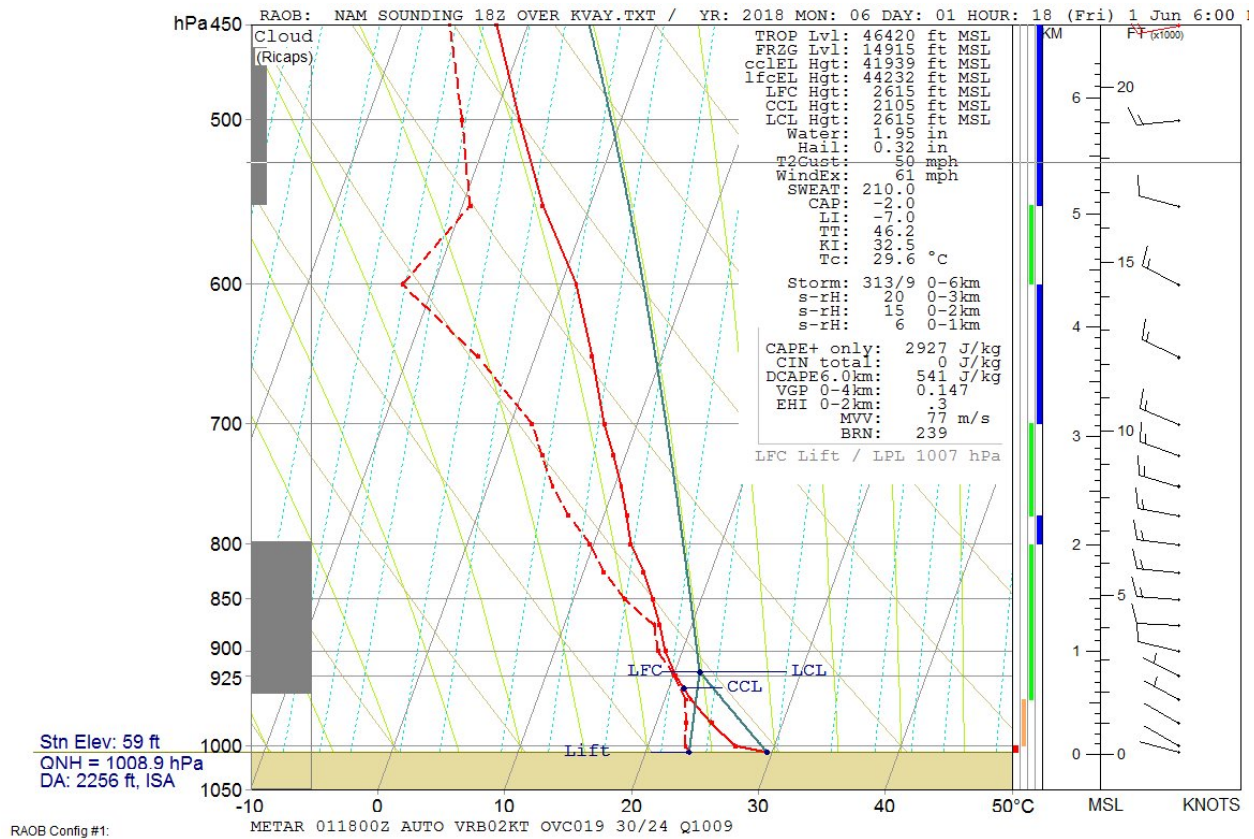


Figure 2 - NAM numerical model over KVAJ at 1800Z

A review of the flight track indicated that on the return leg the aircraft operated between 2,600 ft and 5,125 ft for approximately 27 minutes and was potentially in instrument meteorological conditions during the cruise portion of the flight. Let down and the approach were likely conducted in visual meteorological conditions.

Submitted by:

Donald Eick
 NTSB Senior Meteorologist