

**From:** [Eick Donald](#)  
**To:** [Mccarter Aaron](#)  
**Cc:** [Helson David](#)  
**Subject:** ERA16LA131 - Rome, GA Update  
**Date:** Thursday, June 2, 2016 9:22:36 AM  
**Attachments:** [image003.png](#)  
[image006.png](#)  
[KFFC WSR-88D\\_1900Z\\_enroute\\_image.png](#)  
[KFFC WSR-88D\\_base\\_reflectivity\\_1907Z.png](#)

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The 5-minute ASOS provided the following conditions at the time of the accident:

Richard B. Russell Regional Airport – J. H. Towers Field, (KRMG) weather at 1505 EDT, automated, wind from 240° at 16 knots gusting to 26 knots, visibility 10 statute miles, scattered clouds at 4,400 feet agl, overcast at 10,000 feet, temperature 23° Celsius (C), dew point 13° C, altimeter 29.75 inches of mercury. Pressure altitude 810 feet, relative humidity 51%, density altitude 2,000 feet, magnetic wind reported same as true. Remarks: automated weather observation system, peak wind from 210° at 26 knots occurred at 1404 EDT, temperature 23.3° C, dew point 12.8° C.

The Rome WSR-88D images as the flight descended into the area at 1500 is included as well as the radar over the airport at the approximate time of the accident, no defined microburst signatures or other outflow winds noted; however, the site was located 67 miles from the antenna site and could not detect any low-level wind shear at the range.

The moderate turbulence encountered was likely associated with the nearby convective radar echo in the area.

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**From:** Eick Donald  
**Sent:** Thursday, June 02, 2016 8:59 AM  
**To:** Helson David  
**Subject:** RE: ERA16LA131 - Rome, GA

Noticed in the preliminary they changed the time to 1508 EDT, which changes the radar image and METAR at the time of the event, I did document the 5-minute ASOS and high winds were reported.

14:05:31 5-MIN KRMG 141905Z AUTO **24016G26KT** 10SM SCT044 SCT055 BKN100 23/13 A2975 810 51 2000 240/16G26 RMK AO2 PK WND 21026/1904 T02330128

Which would have resulted in a 3 to 5 knot crosswind and a tailwind component of 16 to 26 knots.  
I would have to re-evaluate WSR-88D for microburst threat at that time.

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**From:** Eick Donald  
**Sent:** Thursday, June 02, 2016 6:13 AM  
**To:** Helson David  
**Subject:** FW: ERA16LA131 - Rome, GA

Here it is!

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**From:** Mccarter Aaron  
**Sent:** Thursday, March 17, 2016 5:26 PM  
**To:** Eick Donald  
**Subject:** RE: ERA16LA131 - Rome, GA

Thanks so much for the detailed and exceptionally prompt reply. Much appreciated. Aaron

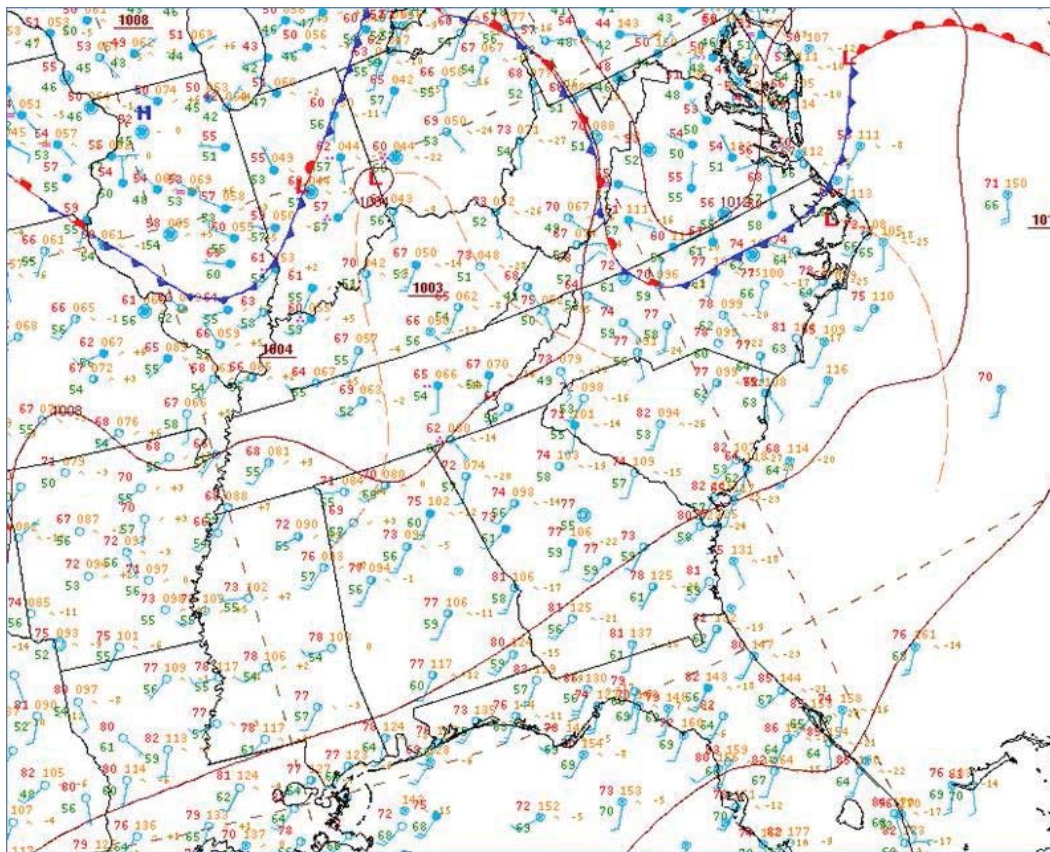
Sent with Good ([www.good.com](http://www.good.com))

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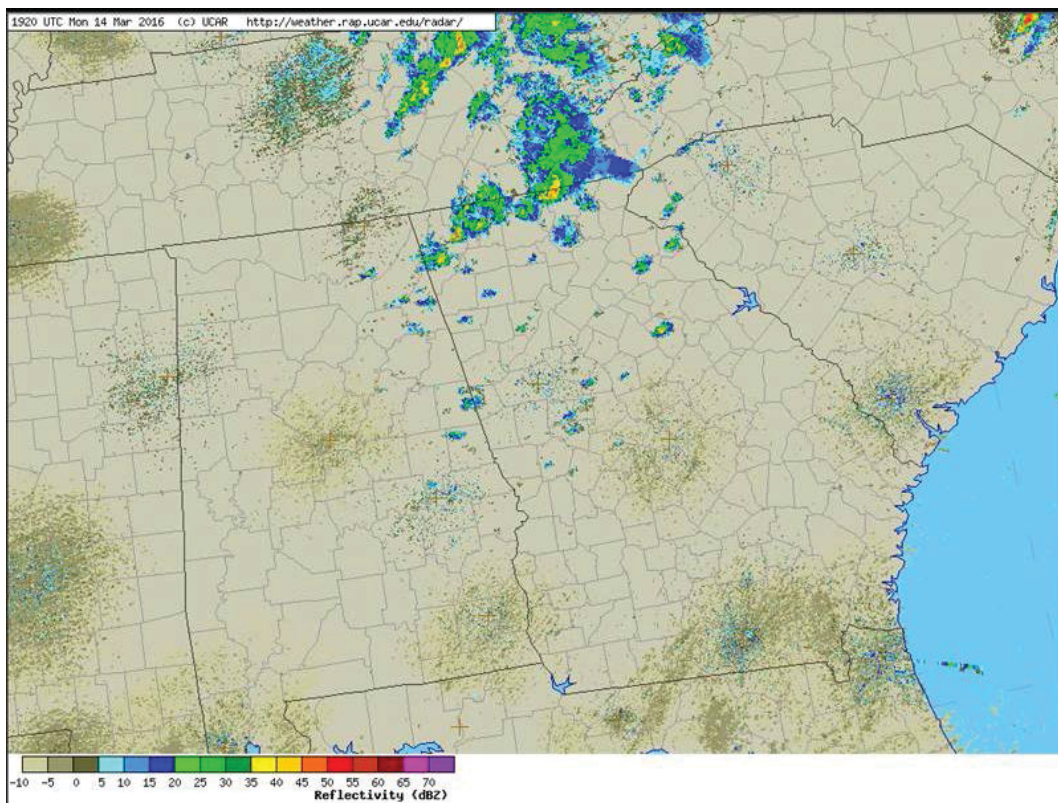
**From:** Eick Donald  
**Sent:** Thursday, March 17, 2016 4:27:26 PM  
**To:** Mccarter Aaron  
**Subject:** ERA16LA131 - Rome, GA

#### **Weather conditions on March 14, 2016 in the vicinity of Rome, Georgia**

**Synoptic conditions** – The National Weather Service (NWS) Surface Analysis Chart for 1400 EDT (1800Z) on March 14, 2016 depicted multiple low pressure systems along a frontal wave stretching from off the Maryland coast through North Carolina and back northward into Virginia, West Virginia, Pennsylvania, and Ohio. A secondary low pressure system was located over the Ohio and Indiana border with associated trough's of low pressure extending southward. The accident site was located well south of the front and troughs in the warm air sector. The isobars or lines of equal pressure and the station models indicated southwesterly winds of 10 to 15 knots across northern Georgia, with broken sky cover, and temperatures in the 70's degrees Fahrenheit (F). Several stations in Tennessee immediately north reported light to moderate rain and overcast skies.



A review of the regional radar mosaic for 1520 EDT depicted several scattered echoes over northern Georgia, extreme western North Carolina and eastern Tennessee.



**Observations** – The accident occurred on landing at Richard B. Russell Regional Airport – J. H. Towers Field, (KRMG), Rome, Georgia, which lists an

elevation of 644 feet and a magnetic variation of 2° W. The airport had an Automated Surface Observation System (ASOS) installed and reported the following conditions at the time of the accident (based on 5-minute ASOS) report:

*Richard B. Russell Regional Airport – J. H. Towers Field, (KRMG) weather at 1520 EDT, automated, wind from 230° at 15 knots gusting to 25 knots, wind 190° variable 260°, visibility 10 statute miles, a few clouds at 4,800 feet agl, scattered clouds at 6,500 feet, overcast at 9,500 feet, temperature 23° Celsius (C), dew point 12° C, altimeter 29.74 inches of mercury. Pressure altitude 810 feet, relative humidity 49%, density altitude 2,000 feet, magnetic wind reported same as true. Remarks: automated weather observation system, peak wind from 210° at 26 knots occurred at 1404 EDT, temperature 23.3° C, dew point 12.2° C.*

A review of the wind for a landing on runway 7 with the wind from 230° 15G25KT resulted in a 5 to 9 knot crosswind and 14 to 25 knot tailwind component.

With the variable wind from 190° to 260°, the components ranged from 13 to 2 knot crosswind and 7 to 15 tailwind based on 15 knots, and up to a 22 knot crosswind and 25 knot tailwind based on the gust factor.

The raw observations reported surrounding the period were as follows:

METAR KRMG 141553Z AUTO 24005KT 10SM SCT025 BKN034 OVC055 19/15 A2982 RMK AO2 SLP092 T01940150=  
METAR KRMG 141653Z AUTO 20009G17KT 10SM BKN034 BKN060 22/14 A2979 RMK AO2 SLP083 T02170139=  
METAR KRMG 141753Z AUTO 21012G17KT 10SM FEW044 SCT055 BKN095 22/14 A2977 RMK AO2 SLP074 T02220139  
10233 20111 58020=

METAR KRMG 141853Z AUTO VRB04KT 10SM SCT043 SCT055 BKN100 24/13 A2975 RMK AO2 SLP067 T02390133=

Accident 1920Z

METAR KRMG 141953Z AUTO 23013G21KT 190V260 10SM BKN050 BKN090 OVC110 23/13 A2974 RMK AO2 PK WND  
21026/1904 SLP063 T02280128=

METAR KRMG 142053Z AUTO 25012G19KT 10SM FEW049 SCT070 BKN095 23/13 A2974 RMK AO2 SLP065 T02330133  
55008=

The 5-minute ASOS observations surrounding the period were as follows:

14:00:31 5-MIN KRMG 141900Z AUTO 21012G18KT 10SM SCT044 BKN055 BKN100 24/13 A2974 810 49 2100 220/12G18 RMK AO2 T02390128

14:05:31 5-MIN KRMG 141905Z AUTO 24016G26KT 10SM SCT044 SCT055 BKN100 23/13 A2975 810 51 2000 240/16G26 RMK AO2 PK WND 21026/1904  
T02330128

14:10:31 5-MIN KRMG 141910Z AUTO 23014G26KT 10SM FEW048 SCT055 BKN070 23/12 A2975 810 49 2000 240/14G26 RMK AO2 PK WND  
21026/1904 T02330122

14:15:31 5-MIN KRMG 141915Z AUTO 23013G24KT 210V270 10SM FEW048 BKN065 OVC095 23/12 A2975 810 49 2000 240/13G24 210V270 RMK AO2  
PK WND 21026/1904 T02330122

14:20:31 5-MIN KRMG 141920Z AUTO 23015G25KT 190V260 10SM FEW048 SCT065 OVC095 23/12 A2974 810 49 2000 230/15G25 190V260 RMK AO2  
PK WND 21026/1904 T02330122

14:25:31 5-MIN KRMG 141925Z AUTO 23013G25KT 10SM FEW048 FEW065 OVC090 24/13 A2974 810 49 2100 230/13G25 RMK AO2 PK WND  
21026/1904 T02390128

14:30:31 5-MIN KRMG 141930Z AUTO 23012G21KT 10SM FEW047 BKN085 OVC100 24/13 A2974 820 49 2100 240/12G21 RMK AO2 PK WND  
21026/1904 T02390128

14:35:31 5-MIN KRMG 141935Z AUTO 23009G17KT 200V260 10SM FEW049 FEW065 OVC095 24/13 A2974 820 47 2100 240/09G17 200V260 RMK AO2  
PK WND 21026/1904 T02440128

14:40:31 5-MIN KRMG 141940Z AUTO 24010G22KT 210V300 10SM FEW049 BKN095 24/13 A2974 820 49 2100 250/10G22 210V300 RMK AO2 PK WND  
21026/1904 T02390128

14:45:31 5-MIN KRMG 141945Z AUTO 24010G22KT 10SM SCT049 BKN090 BKN100 23/13 A2974 820 51 2000 250/10G22 RMK AO2 PK WND  
21026/1904 T02330128

14:50:31 5-MIN KRMG 141950Z AUTO 22012G21KT 10SM BKN049 BKN090 OVC100 23/13 A2974 810 51 2000 230/12G21 RMK AO2 PK WND  
21026/1904 SLP064 T02330128

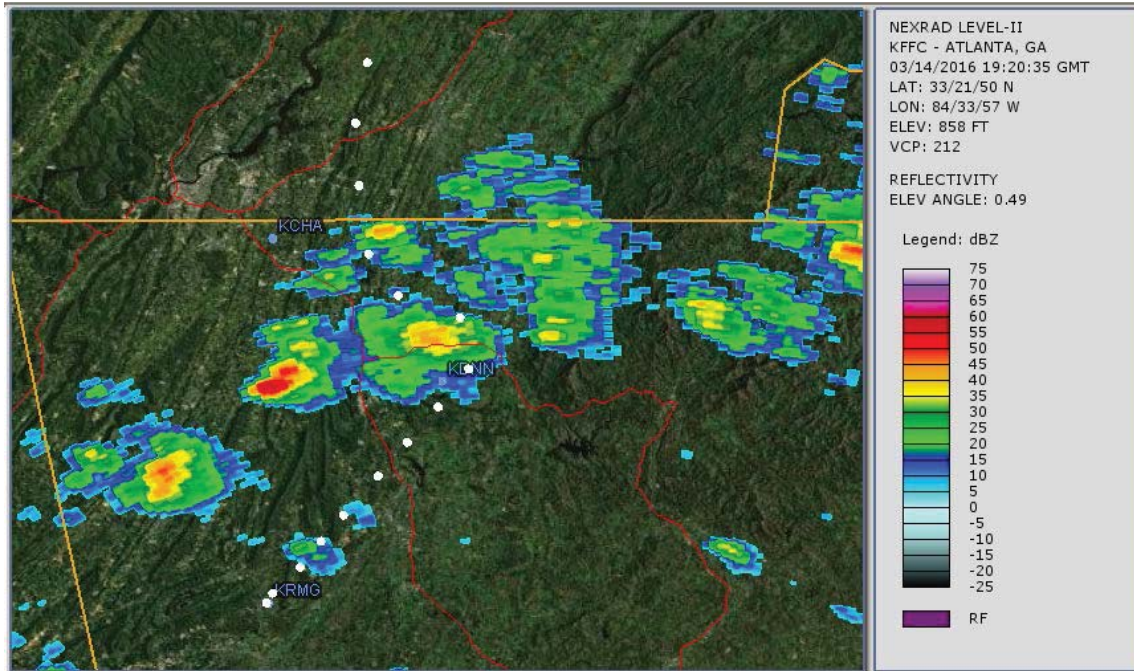
**Terminal Aerodrome Forecast (TAF)** - The NWS does not issue a TAF for KRMB, the closest TAF was issued for Cobb County International Airport – McCollum Field (KRYV), Atlanta, Georgia, located 34 miles southwest. The following TAFs issued during the period were as follows:

TAF AMD KRYV 141602Z 1416/1512 21007KT P6SM BKN025  
FM141800 23009G17KT P6SM VCSH BKN035  
TEMPO 1420/1422 -TSRA BKN040CB  
FM150000 26006KT P6SM SCT040  
FM150300 23003KT P6SM SCT250=

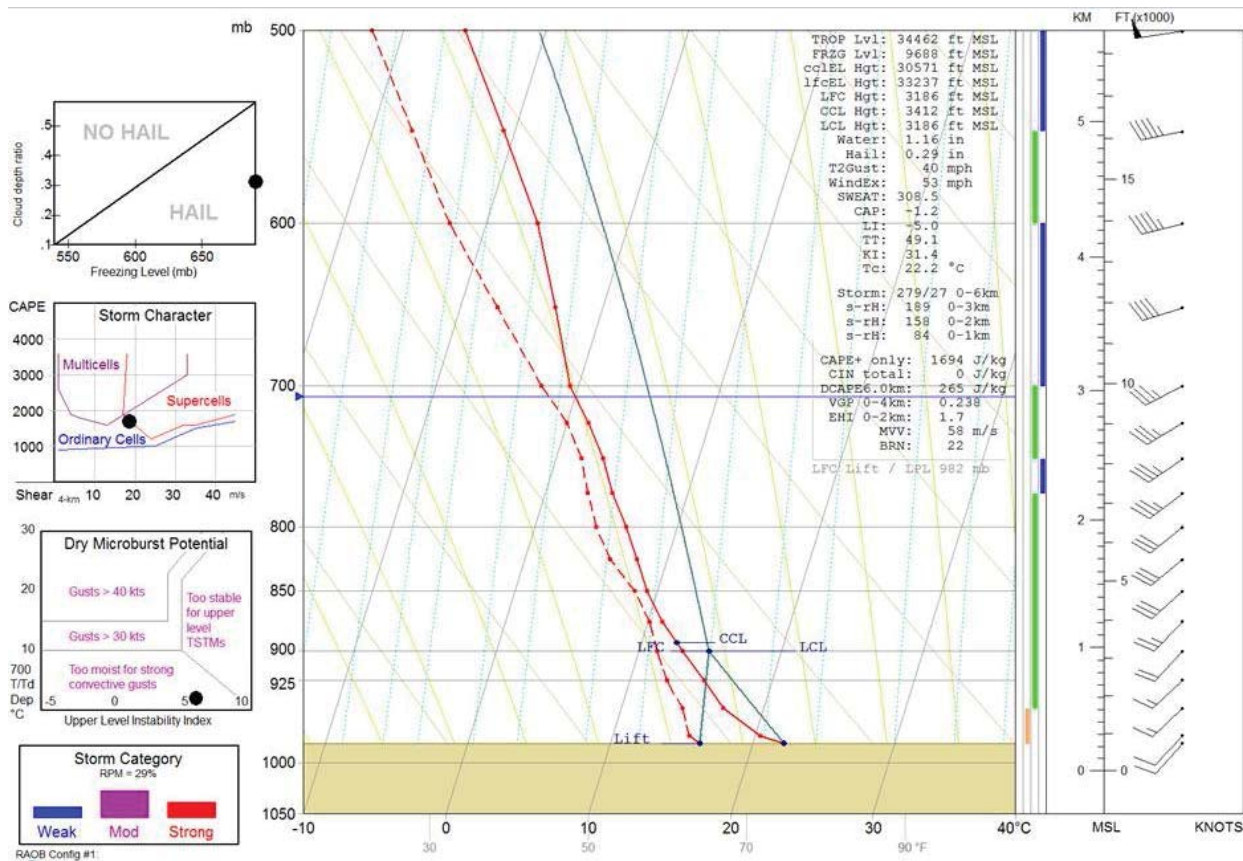


TAF KRYV 141743Z 1418/1518 23009G17KT P6SM VCSH BKN035  
TEMPO 1420/1422 -TSRA BKN040CB  
FM150000 26006KT P6SM SCT045  
FM150500 23003KT P6SM SKC  
FM151700 21008KT P6SM SKC=

**NWS Weather Radar (WSR-88D)** – plot of closest WSR-88D and flight track shows the flight deviating around echoes on descent into the terminal area with an isolated echo about 3 miles northeast of the airport at the time of the accident. That echo had a reflectivity core of approaching 35 dBZ and was associated with a rain shower, which had passed over KRMG at 1505 EDT near the time of the peak wind recorded. Another more defined echo associated with an intense to severe thunderstorm was located 20 miles north.



**Sounding Data** – The North American Mesoscale (NAM) numerical weather model for March 14, 2016 for 1400 EST (1800Z) was run and provided the following sounding. The sounding indicated a conditional unstable atmosphere with wind from the southwest at 10 knots with little variation with height through 10,000 feet, with the wind then veering to the west. Winds are included in the text box below.



Height (ft-MSL)	Pres (mb)	T (C)	Td (C)	RH (%)	DD/FF (deg/kts)	CAT (AF)	LLWS
738	982	22.2	16.3	69	219/9		
942	975	20.4	15.4	73	221/10		
1676	950	17.2	14.3	83	224/16		
2422	925	15.2	12.6	84	224/17		
3183	900	13.1	11.3	89	220/18		
3959	875	11.0	10.1	94	222/23	LGT	
4752	850	9.3	8.4	94	226/29	LGT	
5564	825	7.9	6.0	88	228/32		
6396	800	6.4	4.3	86	229/32		
7250	775	4.7	3.0	89	231/33		
8126	750	3.3	1.8	90	233/33		
9027	725	1.5	0.0	90	237/34		
9952	700	-0.6	-2.6	86	241/35	LGT	
11888	650	-3.3	-7.4	73	252/40		
13955	600	-6.4	-12.6	61	255/43		
16170	550	-10.8	-17.2	59	258/46		
18553	500	-15.7	-22.2	57	261/51		
21131	450	-21.6	-28.4	54	262/56		
23941	400	-28.4	-34.3	57	265/57		
27032	350	-36.3	-42.5	53	270/60		
30485	300	-43.9	-51.5	43	269/61		
34462	250	-48.4	-67.4	9	265/63		
39270	200	-49.5	-70.1	7	262/56		

**NWS Forecasts and Advisories –**

FAUS42 KKCI 141745  
 FA2W  
 -MIAC FA 141745  
 SYNOPSIS AND VFR CLDS/WX  
 SYNOPSIS VALID UNTIL 151200  
 CLDS/WX VALID UNTIL 150600...OTLK VALID 150600-151200  
 NC SC GA FL AND CSTL WTRS E OF 85W  
 .  
 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...NO SIG SFC FNTS/TROFS IN THE RGN. UPR LVL TROF AT 18Z  
OVR AL WL MOV EWD AND GENERATE WDLY SCT TSRA FM CNTRL FL NWD TIL  
05Z.

GA  
**NRN...BKN045 TOP 070. OVC030 VIS 3-5SM IN WDLY SCT -TSRA/-SHRA.**  
**CB TOP FL400. TS POSS SEV.** BECMG 0104 SCT040. OTLK...VFR BECMG 0912 MVFR BR.  
CNTRL...BKN035 TOP 060. OVC020 VIS 3-5SM IN WDLY SCT -TSRA/-SHRA. CB TOP FL400.  
BECMG 0104 SCT025. OTLK...VFR BECMG 0912 MVFR BR.  
SRN...SCT040. AFT 21Z ISOL -TSRA/-SHRA. CB TOP FL400. BECMG 0306 SCT020.  
OTLK...MVFR BR BECMG 0811 IFR CIG BR.

ACUS01 KWNS 141619  
SWODY1  
SPC AC 141617

DAY 1 CONVECTIVE OUTLOOK  
NWS STORM PREDICTION CENTER NORMAN OK  
1117 AM CDT MON MAR 14 2016

VALID 141630Z - 151200Z

...THERE IS A SLGT RISK OF SVR TSTMS OVER PARTS OF GA/TN/VA/NC/SC...  
...THERE IS A MRGL RISK OF SVR TSTMS OVER PARTS OF THE EASTERN STATES...  
...THERE IS A MRGL RISK OF SVR TSTMS OVER PARTS OF NEB/IA/MO...

...SUMMARY...  
A RISK FOR ISOLATED LARGE HAIL AND DAMAGING WIND IS FORECAST ACROSS  
PARTS OF THE CENTRAL APPALACHIAN STATES AND CAROLINAS THIS AFTERNOON  
AND EVENING. A MARGINAL THREAT FOR LARGE HAIL MAY ALSO DEVELOP LATE  
TONIGHT ACROSS THE MID MISSOURI VALLEY.

...NC/SC...  
THE LATEST WATER VAPOR LOOP SHOWS A PROGRESSIVE COMPACT SHORTWAVE  
TROUGH MOVING ACROSS KY/TN. THIS FEATURE WILL AFFECT THE MID  
ATLANTIC REGION AND CAROLINAS THIS AFTERNOON AND EVENING...PROVIDING  
AMPLE LIFT FOR CONVECTIVE DEVELOPMENT. VISIBLE SATELLITE SHOWS  
CONSIDERABLE HEATING IS OCCUR IN MUCH OF THIS REGION...WHERE SURFACE  
DEWPOINTS ARE IN THE 50S TO LOWER 60S. COOLING MID LEVEL  
TEMPERATURES WILL STEEPEN LAPSE RATES THROUGH THE  
AFTERNOON...YIELDING MUCAPE VALUES OF 1000-2000 J/KG.

**A CLUSTER OF SHOWERS AND THUNDERSTORMS OVER EAST TN AND NORTHERN GA  
IS EXPECTED TO INTENSIFY BY EARLY AFTERNOON...TRACKING EASTWARD INTO  
WESTERN NC AND NORTHERN SC. OTHER STORMS WILL LIKELY FORM OVER THE  
MOUNTAINS OF WESTERN NC AND SPREAD EASTWARD THROUGH THE LATE  
AFTERNOON AND EVENING. LOCALLY DAMAGING WINDS AND HAIL WILL BE  
POSSIBLE WITH THIS ACTIVITY. MODELS CONTINUE TO SUGGEST THAT THE  
POTENTIAL FOR ISOLATED SEVERE STORMS MAY PERSIST FOR SEVERAL HOURS  
AFTER DARK...POSSIBLY REACHING PARTS OF EASTERN NC BY MIDNIGHT.**

**Winds and Temperature Aloft Forecast** – current for the route of flight:

WINDS ALOFT FORECASTS  
DATA BASED ON 141200Z  
VALID 141800Z FOR USE 1400-2100Z. TEMPS NEG ABV 24000  
FT 3000 6000 9000 12000 18000 24000 30000 34000 39000 45000 53000  
FWA 2110 2215+06 2115+00 2320-05 2325-18 2329-29 213746 214053 243253  
MKG 2709 2722+07 2522+00 2526-06 2517-18 2416-31 223147 232852 233052  
CMH 1816 2021+07 2132+01 2135-05 2229-17 2121-29 231245 221954 253051  
IND 9900 1405+06 1705+00 2008-04 2414-17 2221-29 213546 222853 242952 243353 232759  
CVG 1920 2129+06 2230+00 2227-05 2115-17 2111-28 191946 212353 253252  
LOU 2119 2226+05 2231+00 2227-05 2118-17 2017-29 172446 222450 253151 244053 242960  
BNA 2315 2527+05 2528-01 2630-05 2834-17 2944-29 284944 274048 264650 255053 253562  
TYS 2216 2225+07 2234+01 2140-04 2443-18 2443-30 244343 254148 254750  
HSV 2322 2534+06 2635+01 2742-03 2852-15 2860-28 286245 275850 275351  
ATL 2116 2434+08 2437+02 2540-02 2651-16 2759-29 276844 276849 266549 256454 254565  
BHM 2428 2531+07 2635+04 2743-01 2753-15 2862-28 286645 276450 275851 256655 264964

Advise if you need any further information.

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