

FXUS62 KRAH 060223  
AFDRAH

AREA FORECAST DISCUSSION  
NATIONAL WEATHER SERVICE RALEIGH NC  
1023 PM EDT SAT JUL 5 2008

.SYNOPSIS...

A STATIONARY FRONT WILL REMAIN STALLED ACROSS VIRGINIA AND WEST VIRGINIA. A WARM AND HUMID AIRMASS WILL REMAIN IN PLACE SUPPORTING THE DEVELOPMENT OF MAINLY AFTERNOON AND EVENING THUNDERSTORMS THROUGH MONDAY.

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.NEAR TERM /THROUGH SUNDAY/...  
AS OF 1020 PM SATURDAY...

SCT CONVECTION PERSISTING ACROSS PORTIONS OF CENTRAL NC LATE THIS EVENING. CONVECTION FORMED THIS AFTERNOON ALONG A CONVERGENCE BOUNDARY DRIVEN BY A REGION OF DIFFERENTIAL HEATING IN A MODERATELY UNSTABLE AIRMASS. THE SFC BOUNDARY GENERALLY EXTENDED FROM THE NORTHERN COASTAL PLAIN SW ACROSS THE PIEDMONT AND INTO UPSTATE SC. HIGH TEMPS RANGED FROM 93 AT KFAY AND 92 AT KRWI TO 82 AT KGSO AND 80 AT KINT.

CONVECTION THIS EVENING PRODUCED VERY HEAVY RAIN WITH KRWI REPORTING MORE THAN 3 INCHES OF RAIN THIS AFTERNOON. COCORAHS SPOTTERS REPORTED 0.98 INCHES OF RAIN IN 60 MINUTES NEAR BURLINGTON AND A SKYWARN SPOTTER REPORTED 1.30 INCHES OF RAIN IN LESS THAN 25 MINS NEAR CHAPEL HILL. 00Z KGSO RAOB WAS VERY MOIST WITH PW VALUES OF 1.71 OR AROUND 140 PERCENT OF NORMAL SUPPORTIVE OF FLASH FLOODING.

SCT CONVECTION SHOULD PERSIST THROUGH THE OVERNIGHT HOURS AS UPPER TROF REMAINS TO OUR WEST WITH SEVERAL PERTURBATIONS IN THE CYCLONIC FLOW ALOFT APPROACHING THE REGION. WILL GRADUALLY SCALE BACK POPS FROM LIKELY RANGE AROUND MIDNIGHT TO CHANCE AROUND DAYBREAK. BOUNDARY LAYER HAS LARGELY STABILIZED AND THE THREAT OF SVR WEATHER HAS DISSIPATED. BUT HIGH MOISTURE CONTENT OF ATMOS WILL MAINTAIN THE THREAT OF HEAVY RAIN OVERNIGHT.

LOWS TONIGHT SHOULD RANGE IN THE UPPER 60S TO LOWER 70S WITH MOSTLY CLOUDY SKIES.

SUNDAY SHOULD BE A SIMILAR PERFORMANCE OF TODAY WITH NUMEROUS SHOWERS AND THUNDERSTORMS BREAKING OUT IN THE AFTERNOON HOURS. MLCAPES ONCE AGAIN RISE TO 1500-2000 J/KG AND PRECIPITABLE WATERS REMAIN AROUND 2 INCHES. UPPER LEVEL DIVERGENCE WILL PERSIST ACROSS THE REGION WITH THE TROUGH AXIS ORIENTED NORTH TO SOUTH ACROSS THE OHIO AND TENNESSEE VALLEYS. IF ANY SUBTLE SHORTWAVES ROTATE OUT OF THE BASE OF THE TROUGH...THEY WILL ONLY SERVE TO FURTHER ENHANCE CONVECTIVE COVERAGE ACROSS CENTRAL NORTH CAROLINA. POPS ONCE AGAIN WELL INTO THE LIKELY RANGE. PERSISTENCE FOR HIGHS... GENERALLY MID

TO UPPER 80S.

SEVERE POTENTIAL WILL BE ISOLATED ONCE AGAIN DUE TO WEAK SHEAR. HIGH PRECIP WATERS POINT TO HEAVY RAINFALL AND LOCALLY DAMAGING WET MICROBURSTS AS THE MAIN THREATS WITH THE STRONGER STORMS. FLASH FLOODING MAIN BE THE MORE SIGNIFICANT ISSUE AS HIGH PW VALUES WILL ONCE AGAIN SUPPORT CONVECTION WITH HEAVY RAIN.

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.SHORT TERM /SUNDAY NIGHT THROUGH MONDAY NIGHT/...  
AS OF 130 PM SATURDAY...

SUNDAY NIGHT:

THE UPPER LOW JUST TO OUR WEST OVER THE TN/OH VALLEYS IS EXPECTED TO BEGIN TO WEAKEN SUNDAY NIGHT THROUGH MONDAY MORNING AS IT DRAWS CLOSER TO THE SOUTHERN APPALACHIANS. EVEN SO...THERE ARE STILL INDICATIONS THAT SOME SHORTWAVE ENERGY ROUNDING THE BASE OF THE UPPER LOW WILL CROSS FROM SOUTH TO NORTH OR SSW TO NNE OVER CENTRAL NC AT SOME POINT(S) DURING THE NIGHT. ADDITIONALLY...FCST SOUNDINGS SHOW ABOVE NORMAL PRECIPITABLE WATER VALUES (AROUND 2.00") THROUGHOUT THE NIGHT. A VERY MOIST JULY ATMOSPHERE PLUS AN UPPER LOW JUST TO THE WEST IS MORE THAN ENOUGH REASON TO KEEP IN A CHANCE (30-40%) OF SHOWERS/STORMS THROUGHOUT THE NIGHT. COVERAGE WILL DEPEND ON THE EXTENT OF UPPER LEVEL LIFT DURING THE NIGHT AND ALSO ON ANY PRE-EXISTING CONVECTION AND ASSOC OUTFLOW BOUNDARIES LINGERING FROM AFTERNOON/EVENING CONVECTION ON SUNDAY. LOW TEMPS WILL BE MILD...IN THE UPPER 60S TO LOWER 70S.

MONDAY:

THE UPPER LOW IS EXPECTED TO HAVE WEAKENED TO AN OPEN WAVE BY THIS TIME...AND SHOULD BE LOCATED SOMEWHERE ALONG THE SOUTHERN APPALACHIANS (WESTERN NC/VA AND WV MOUNTAINS). BOTH THE 12Z NAM/GFS SHOW THE UPPER WAVE ENTERING THE FOOTHILLS OR FAR WESTERN PIEDMONT BY 00-06Z TUE MORNING. FCST SOUNDINGS ARE CONTINUING TO SHOW A VERY MOIST AIRMASS ACROSS THE ENTIRE AREA...WITH PRECIPITABLE WATER VALUES AROUND 1.75-2.00"...WITH THE LOWER VALUES IN THE WESTERN PIEDMONT. GIVEN THE PROXIMITY OF THE UPPER LEVEL WAVE TO THE WESTERN PIEDMONT...THE BETTER UPPER LEVEL LIFT DURING THE DAY MONDAY MAY BE SHIFTED A BIT EAST TOWARD THE TRIANGLE/FAY AREA AND COASTAL PLAIN. FOR THIS REASON (IN ADDITION TO BETTER MOISTURE/INSTABILITY IN THE EAST)...WILL SHOW THE HIGHEST CHANCES FOR SHOWERS/STORMS IN THE EASTERN HALF OF THE AREA...WITH RELATIVELY LOWER CHANCES IN THE WESTERN PORTION. HAVE DECIDED TO GO WITH LIKELY POPS (60%) IN THE COASTAL PLAIN...TAPERING BACK TO LOW/MID CHANCE (30-40%) IN THE FAR WESTERN PIEDMONT. LOW/MID LEVEL FLOW (0-3 KM) IS 20 KNOTS OR LESS MONDAY AFTERNOON...GENERALLY NOT ENOUGH TO ORGANIZE CONVECTION...AND THEREFORE ANY SEVERE THREAT SHOULD BE CONFINED TO ISOLATED CELLS WITH A PRIMARY THREAT OF STRONG GUSTY WINDS IN DOWNBURSTS DUE TO WATER LOADING AND EVAPORATIVE COOLING.

MONDAY NIGHT:

THE UPPER LEVEL WAVE IS EXPECTED TO FURTHER DEAMPLIFY OVER THE MID-ATLANTIC MONDAY NIGHT AS IT PROGRESSES A BIT FURTHER EAST INTO CENTRAL NC/VA. TOUGH TO SAY WHETHER OR NOT THERE WILL BE CONVECTION AFTER MIDNIGHT TOWARD SUNRISE TUE...AND THIS WILL LIKELY DEPEND ON THE LOCATION/COVERAGE OF CONVECTION AND ANY BOUNDARIES AFTER SUNSET

MON EVENING...AND THE EXACT POSITION OF THE UPPER LEVEL WAVE DURING THIS TIME. WILL NEED TO CARRY AT LEAST A SLIGHT CHANCE OF SHOWERS AND THUNDERSTORMS ACROSS THE ENTIRE AREA...AND MAY GO WITH LOW CHANCE (30%) IN THE EASTERN HALF OF THE AREA WHICH IS MORE LIKELY TO BE IN A BETTER POSITION W/RESPECT TO THE UPPER LEVEL WAVE. WILL GO WITH PERSISTENCE FOR LOW TEMPS...RANGING FROM THE UPPER 60S TO LOWER 70S. -VINCENT

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.LONG TERM /TUESDAY THROUGH SATURDAY/...  
AS OF 230 PM SATURDAY...

THE UPPER LEVEL PATTERN BECOMES MORE UNIDIRECTIONAL FOR THE REST OF THE UPCOMING WORK WEEK...WITH VERY BROAD TROUGHING ACROSS THE EASTERN CONUS...PRIMARILY FROM THE MID-ATLANTIC / TN VALLEY AND POINTS NORTH. BOTH THE GFS/NAM FORECAST WEAK LEE SURFACE TROUGHING EACH DAY ACROSS CENTRAL NC...AND FCST SOUNDINGS SHOW A TYPICAL EARLY/MID JULY ATMOSPHERE WITH ENOUGH MOISTURE/INSTABILITY THAT A LOW CHANCE (30%) OF SHOWERS/STORMS EACH DAY DURING THE PEAK-HEATING AFTERNOON/EVENING HOURS LOOKS PRETTY REASONABLE. BETTER CHANCES MAY BE POSSIBLE FROM WED EVENING THROUGH FRI MORNING WHEN A WEAK FRONT (ASSOCIATED WITH AN UPPER LEVEL LOW AROUND THE NORTHERN GREAT LAKES REGION AND A SFC LOW MOVING INTO NEW ENGLAND) MAKES ITS WAY INTO THE LOWER MID-ATLANTIC AND CAROLINAS. WILL ADVERTISE 40% POPS DURING THAT GENERAL TIME FRAME. OTHERWISE...HIGH/LOW TEMPS SHOULD BE NEAR-NORMAL FOR THIS TIME OF YEAR. -VINCENT

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.AVIATION /02Z SUNDAY THROUGH THURSDAY/...  
AS OF 1020 PM SATURDAY...

SCT CONVECTION PERSISTS ACROSS CENTRAL NC WITH FORECAST CONDITIONS VARYING AT EACH TERMINAL SITE. SCT CONVECTION WILL LIKELY CONTINUE THROUGH THE OVERNIGHT BEFORE TAPERING OF TOWARD DAYBREAK.

SVR THREAT OF HIGH WINDS AND HAIL HS LARGELY ABATED BUT HIGHER MOISTURE CONTENT OF ATMOS SUPPORTS HEAVY RAIN POTENTIAL. ALL TAF SITES HAD PRECIPITATION TODAY WITH MOST SIGNIFICANT PRECIP AT KRWI AND KRDU WHERE MVFR FOG AND STRATUS IS LIKELY OVERNIGHT.

NUMEROUS SHOWERS AND THUNDERSTORMS ARE ONCE AGAIN EXPECTED SUNDAY AFTERNOON/EVENING. CBS INCLUDED IN TERMINAL FORECAST FOR SUNDAY BEGINNING IN THE EARLY AFTERNOON.

UNSETTLED WEATHER WITH MAINLY AFTERNOON AND EVENING CONVECTION EXPECTED THROUGH THE UPCOMING WORK WEEK WITH POTENTIAL FOR EARLY MORNING FOG AS WELL.

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.RAH WATCHES/WARNINGS/ADVISORIES...  
NONE.

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SYNOPSIS...BLAES

NEAR TERM...BLAES

SHORT TERM...VINCENT

LONG TERM...VINCENT

AVIATION...BLAES