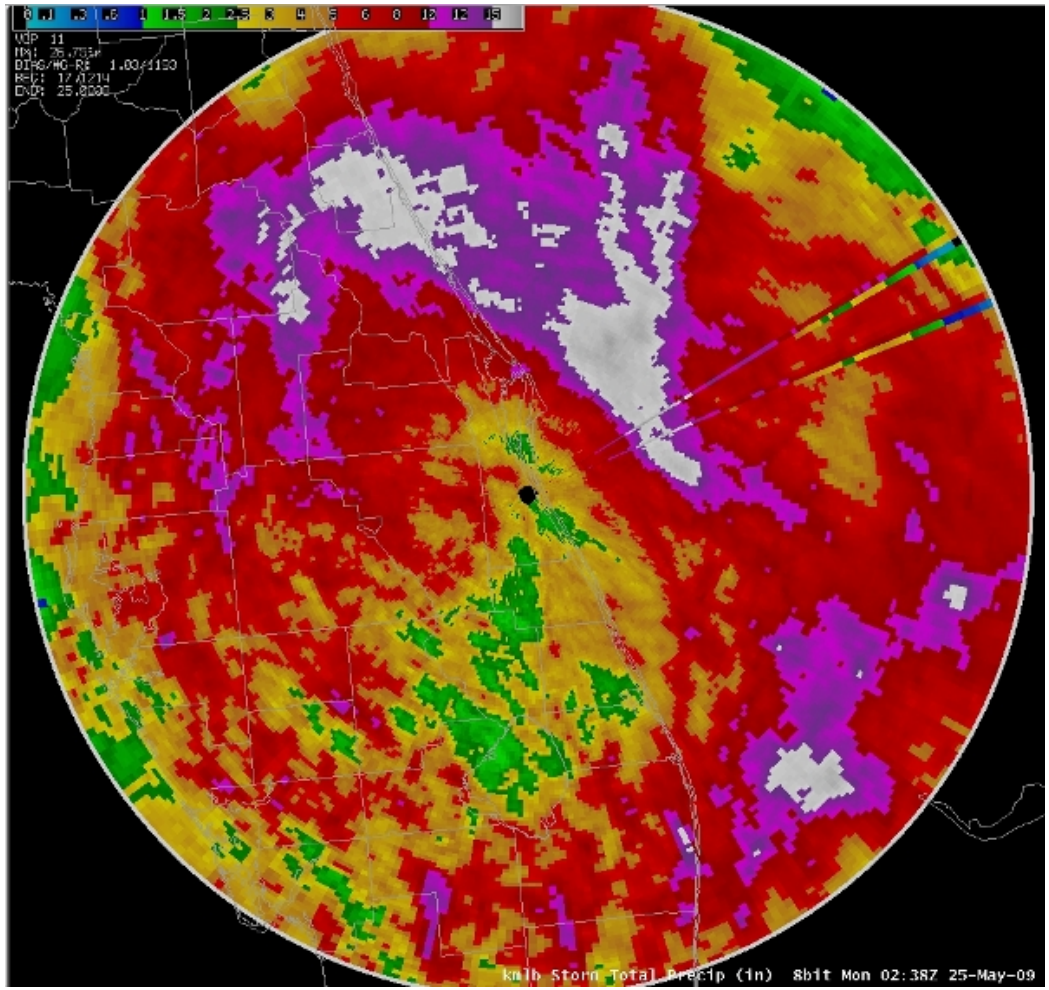
Daily Weather Situation

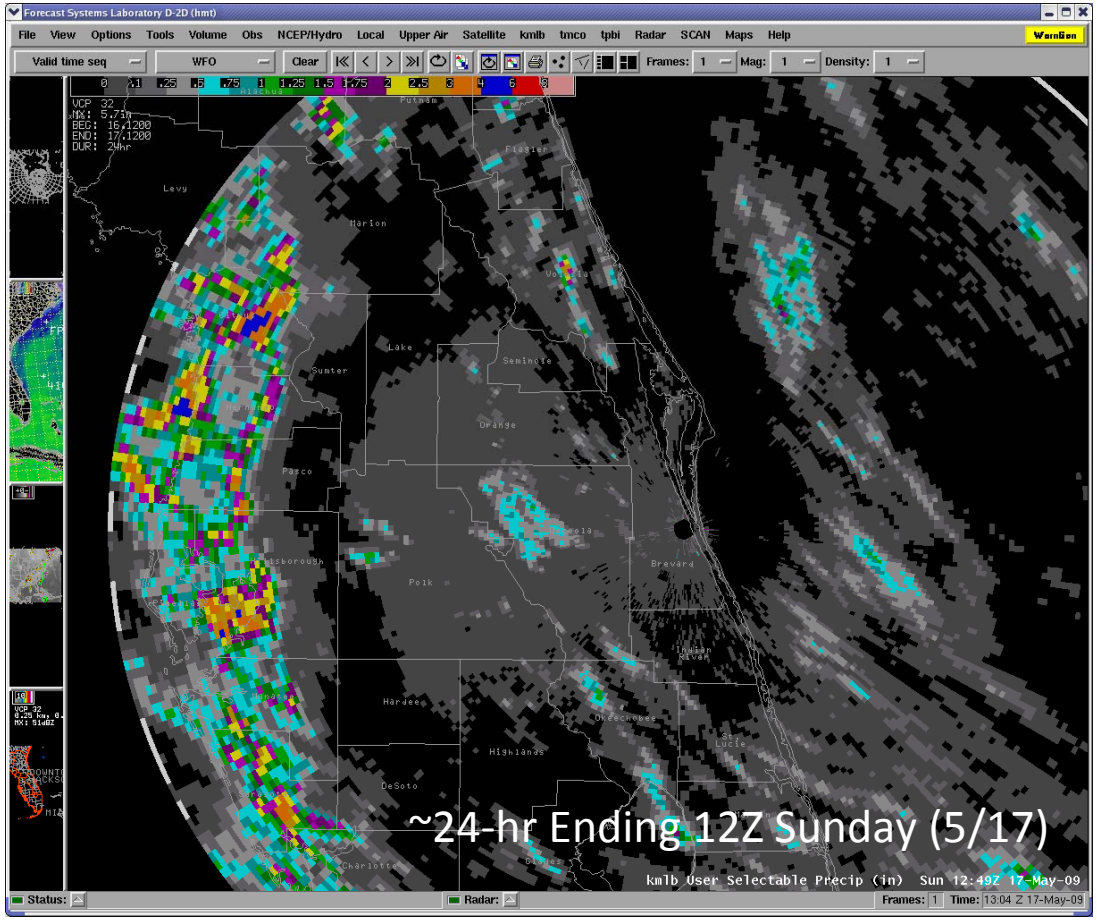
(with incremental radar estimates)



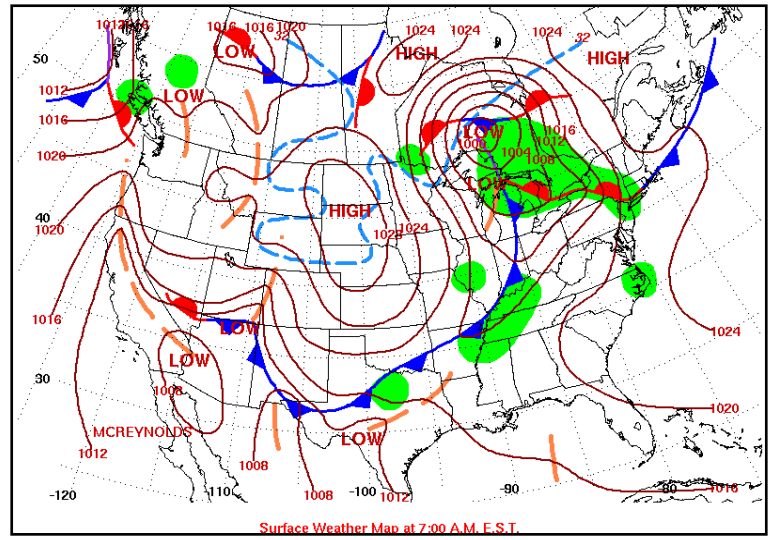
17-23 May, 2009 Flood Event
WFO Melbourne, FL

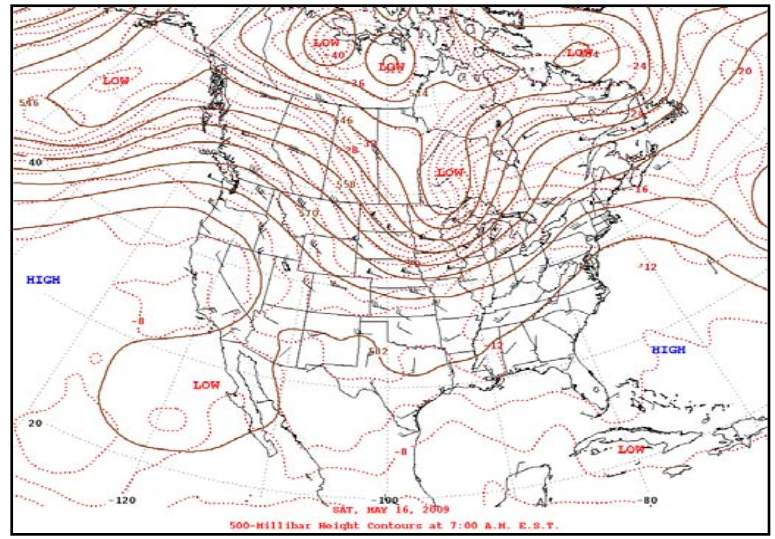
Saturday (5/16)

Surface ridge axis located north of Florida with high pressure aloft. Peninsular convection focused on the west coast; limited random showers and storms over ECFL. Volusia County receives an isolated/localized 1-3 inch rain total toward center of county.



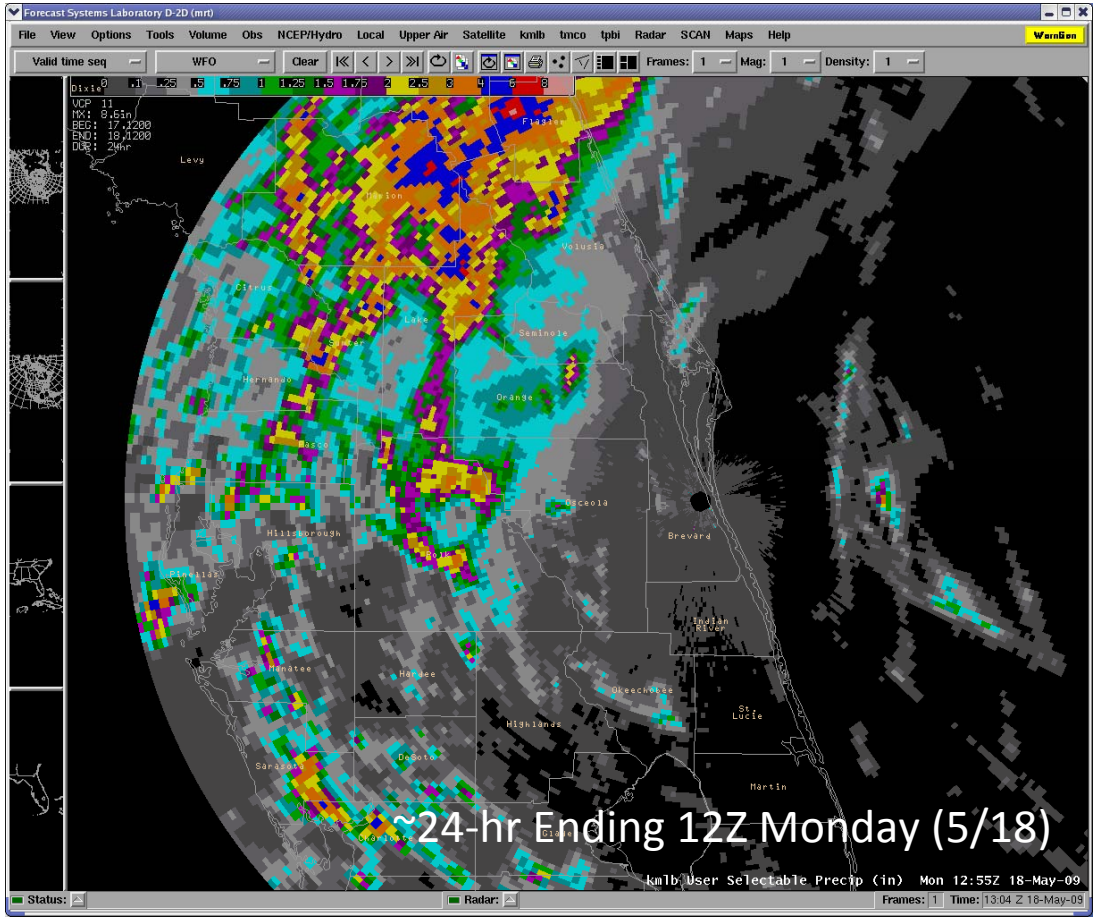
Caution: Product legend subject to changes.

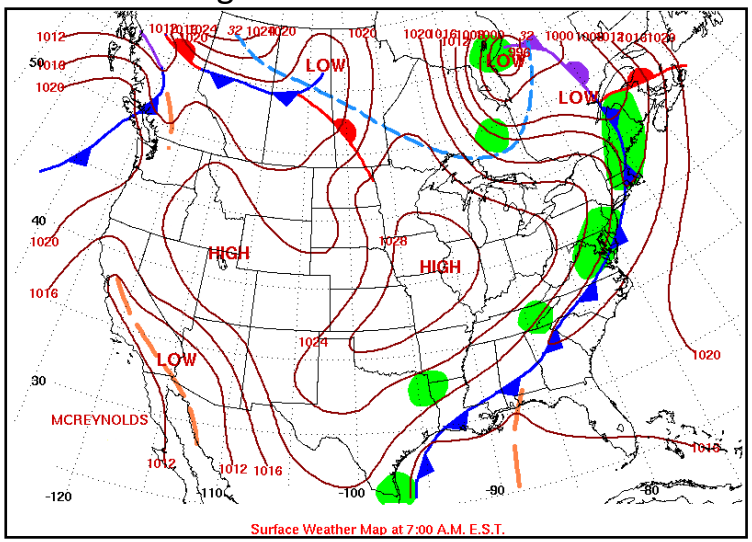


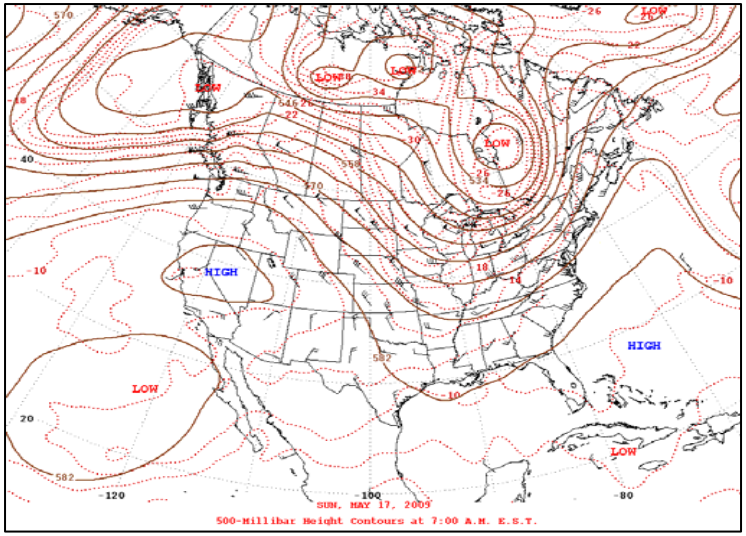


Sunday (5/17)

A “cool” surface front moves into the Deep South as the local surface ridge axis adjusts southward and seaward. Axis drapes across Central Florida for maximum convective setup along and north of the Interstate-4 corridor, pushing well-inland south of the axis but back toward the coast north of the axis. Pockets of 4 to 6 inch totals over extreme northern Volusia and Lake Counties, to include adjacent counties along their northern borders.



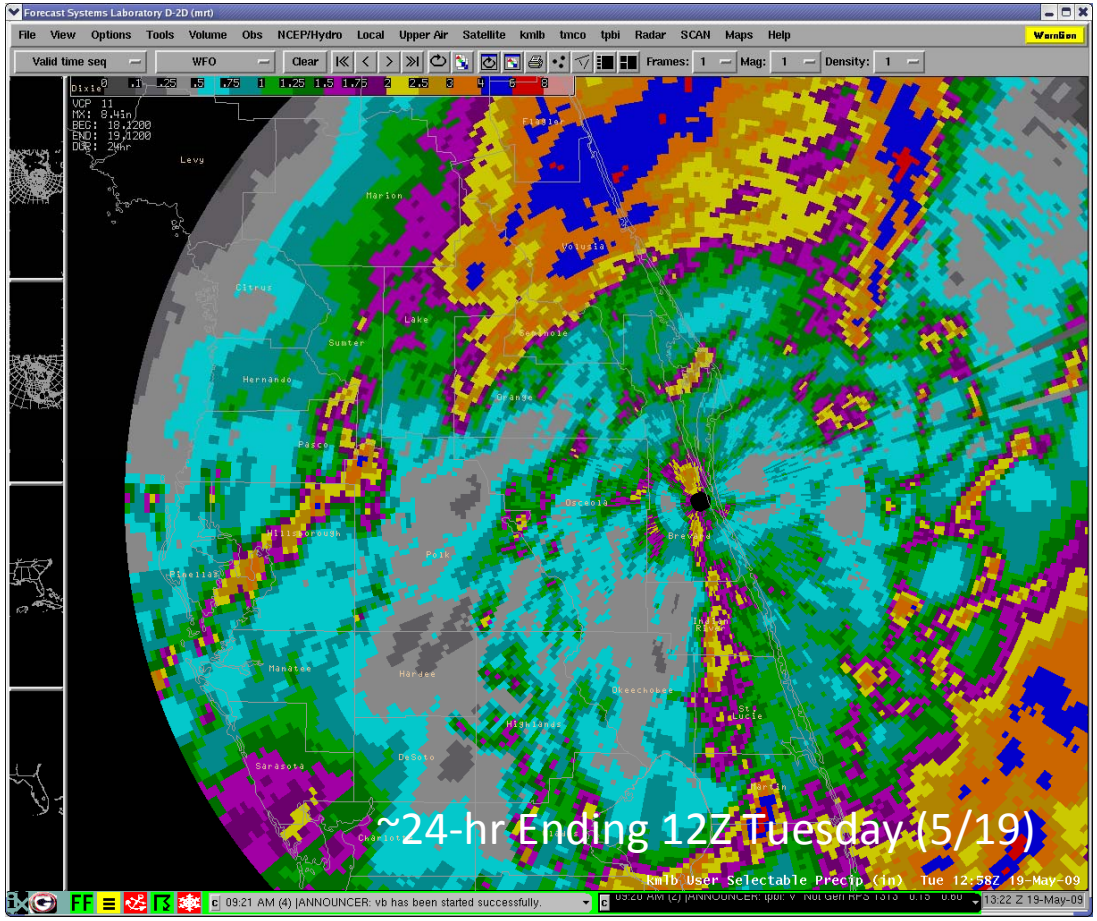


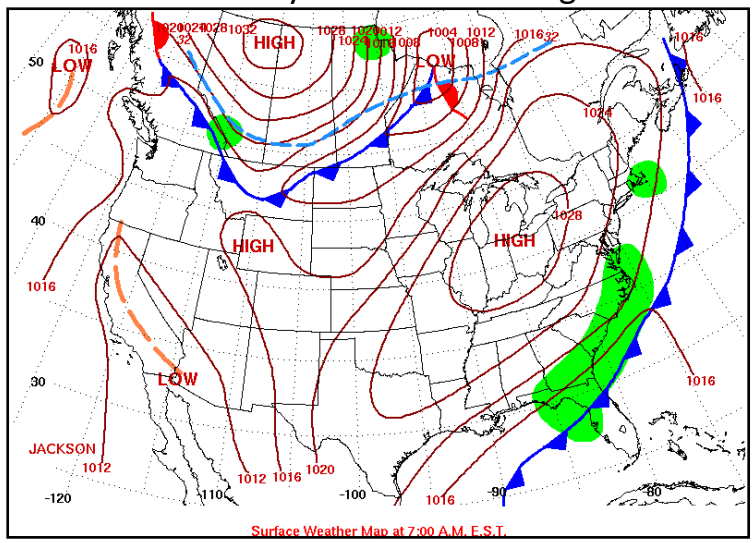


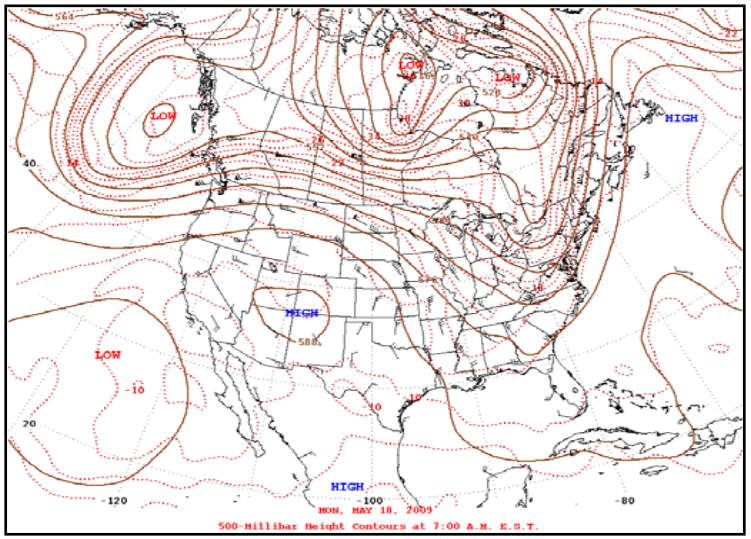
Caution: Product legend subject to changes.

Monday (5/18)

The surface “cool” front moves into Peninsular Florida and slows down. It serves to both force and focus the increasing moisture and convection (just ahead). Associated upper support provided by a rather deep 500 mb trough rotating eastward along the Atlantic Seaboard, cooling temperatures aloft, and upper diffluent flow and divergence. Prime area of convective focus remains Volusia and Lake Counties in vicinity of the front. Larger areas of 4 to 6 inch totals realized.



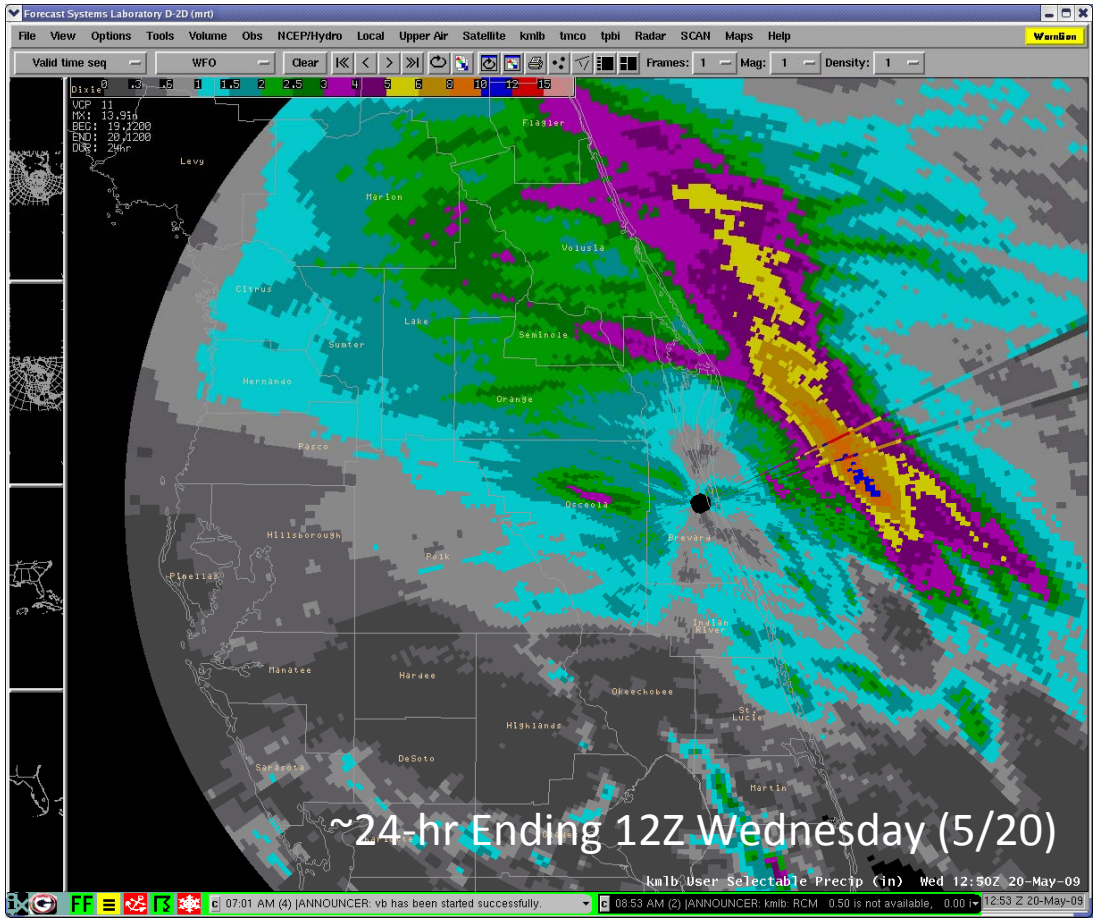


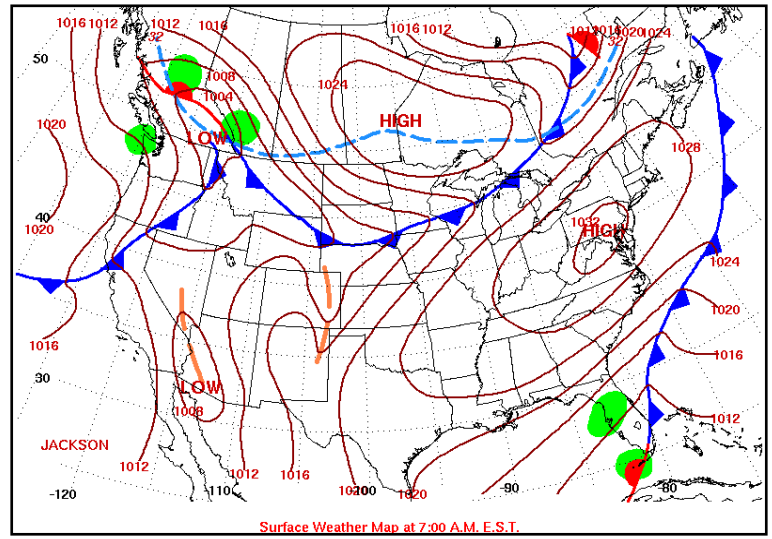


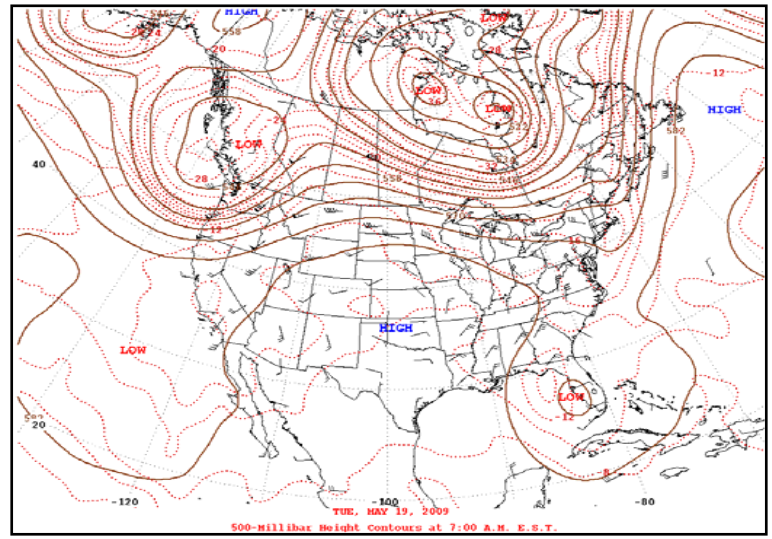
Caution: Product legend subject to changes.

Tuesday (5/19)

Surface "cool" front slows to a crawl in its southward progress overnight. The south-end of the 500 mb trough cuts-off and closes over Florida. Increased soil moisture and evapotranspiration have returned as convective fuel sources, in addition to the increased atmospheric moisture. Significant surface high pressure to the north of the state and lowering pressure over Cuba/Florida induces a tight pressure gradient and significant onshore flow; coastal convergence becomes a factor. Areas of 2 to 4 inches of rain fall over much of Volusia and North Lake Counties and just south.







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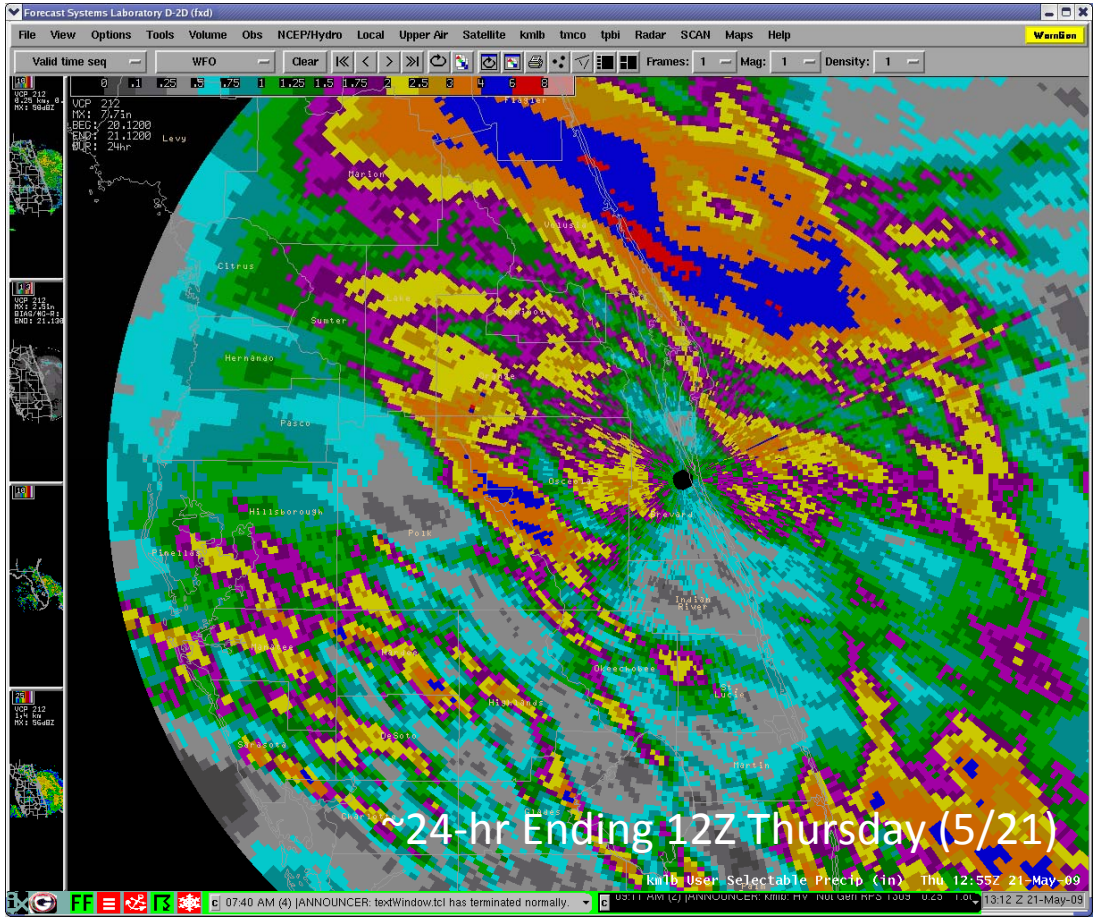
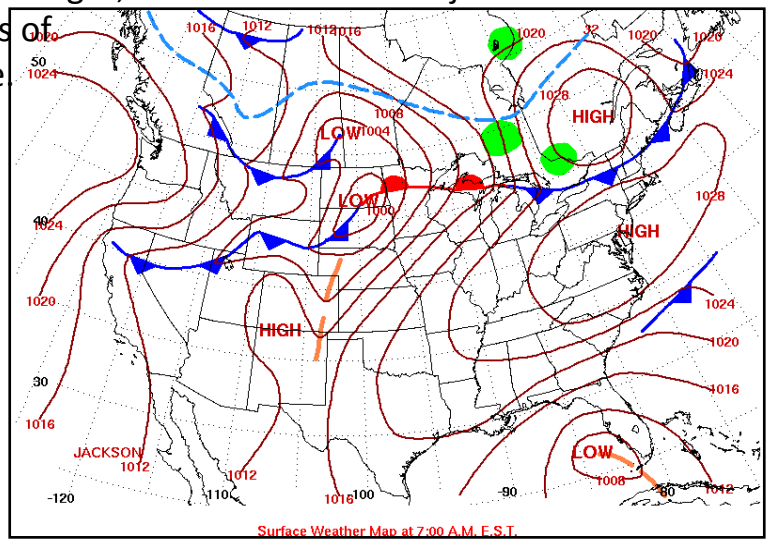
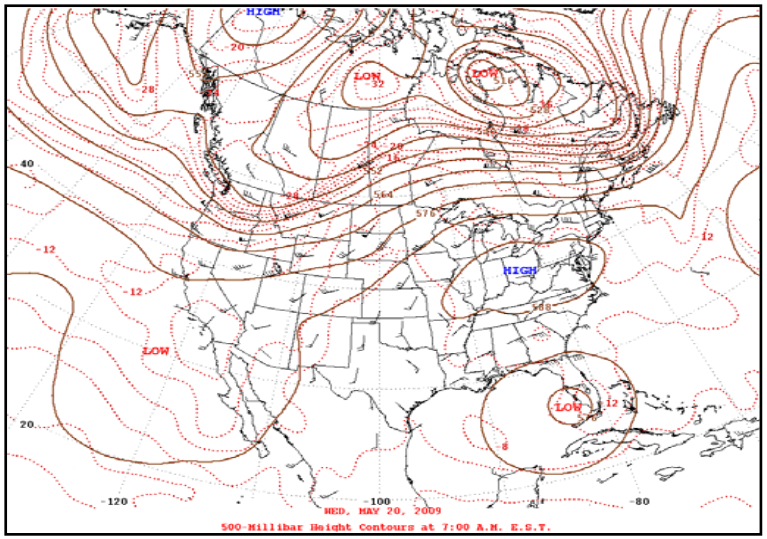
Wednesday (5/20)

Deep layer low pressure, and moisture, are now in place over Peninsular Florida and the eastern Gulf of Mexico; surface gradient remains tight with onshore southeast flow (and maritime gale conditions). The low drifts only very slowly to the northwest. As it develops, it begins to organize convection in “bands” that tend to maximize over land during the day and over the nearshore waters and coast overnight; coastal locations subject to both with added concern from coastal convergence. Areas of 4 to 6 inches of rain fall over parts of Volusia County (again) and generous elsewhere.







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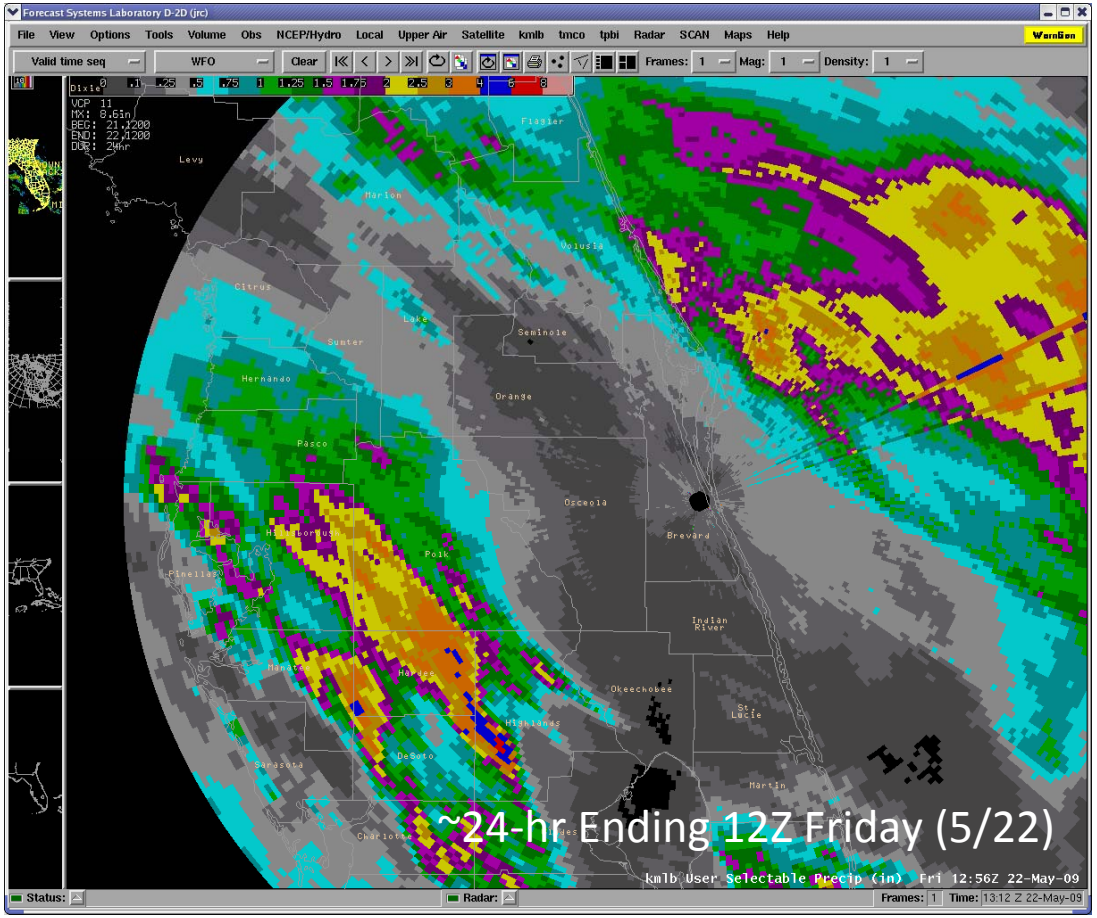
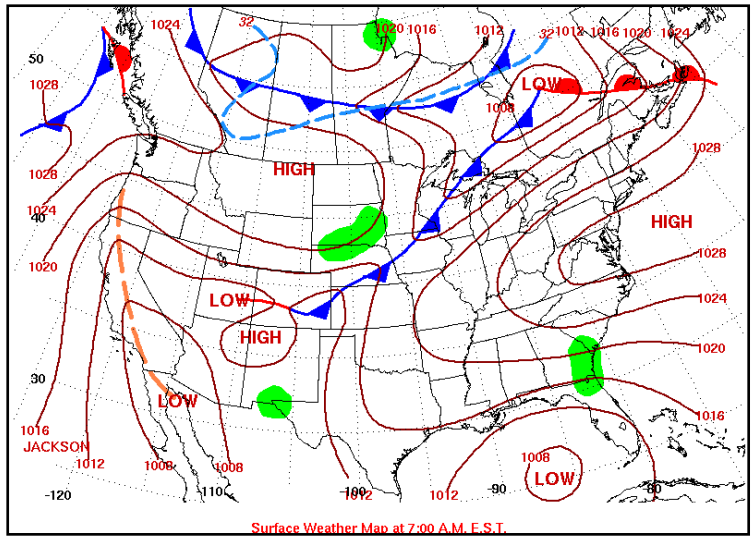
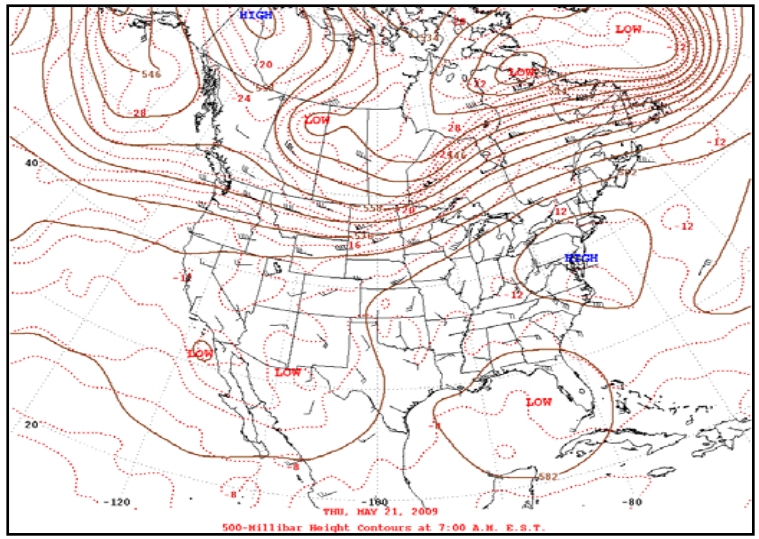
Thursday (5/21)

The low pressure system has drifted a little farther west out over the Gulf of Mexico and is acting much like a "subtropical system" with regard to its impacts. It has acquired an appreciable Tropical Caribbean moisture tap, drawing a steady supply of atmospheric moisture over parts of the peninsula. "Banded" convection occurs both over land and over the nearshore waters. Coastal Volusia County realizes another 1 to 2 inches, and is fortunate that the higher totals remained just offshore.



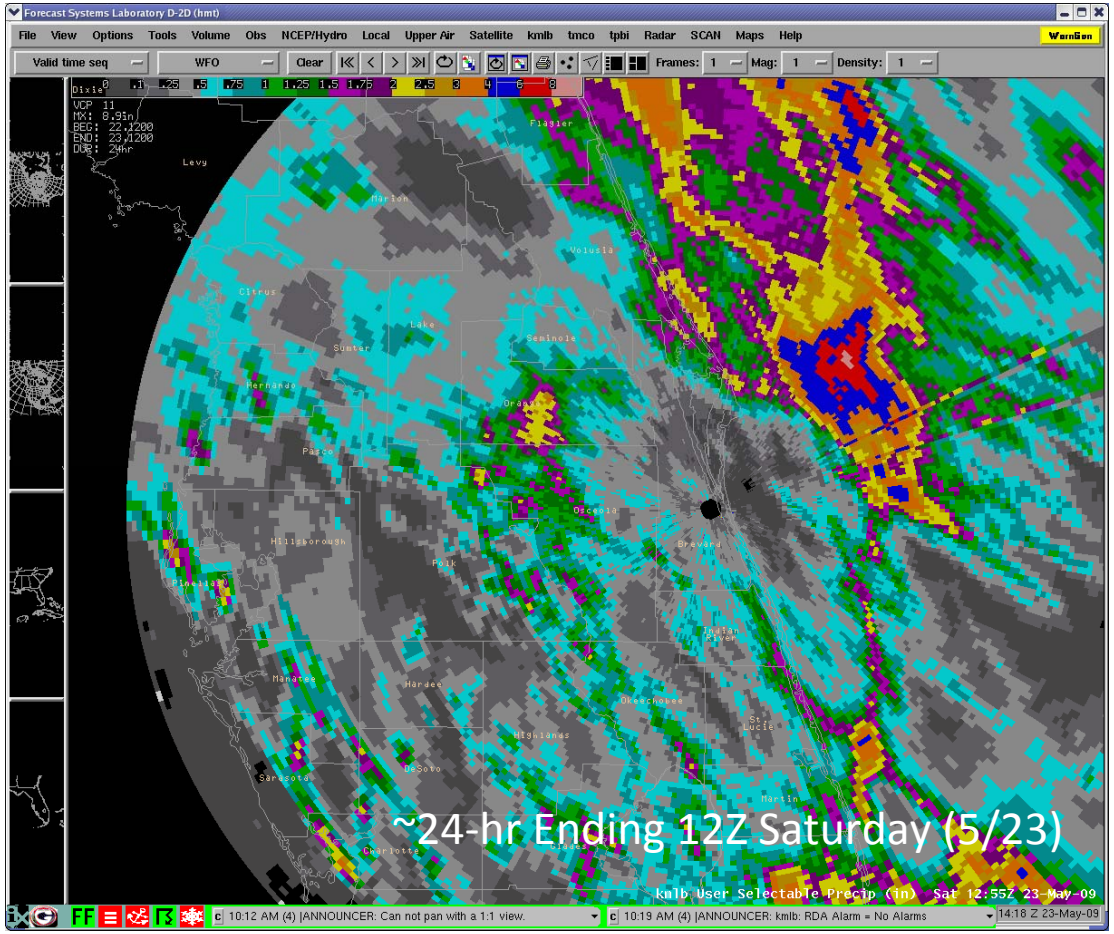




Caution: Product legend subject to changes.

Friday (5/22)

The low pressure system continues its slow drift (north)westward and maintains its tropical moisture tap. Low level flow has veered more to the south-southeast. The low keeps its tight grip on the peninsula early, then begins to relax a little with time. Intense organized convection is gradually breaking down, but differential heating teamed with moist low-levels and drying mid-levels keep showers and storms a concern. Pressure gradient is not as tight. Yet again, parts of coastal Volusia County realizes another 1 to 3 inches, with higher amounts remaining just offshore.



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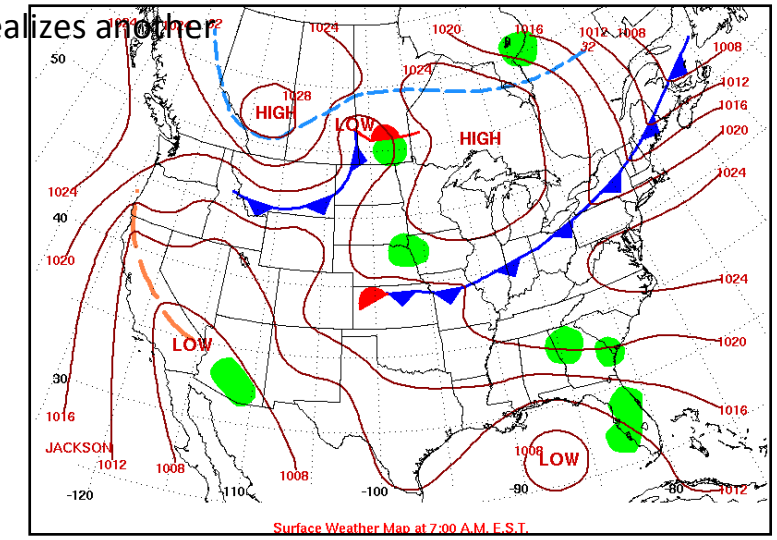
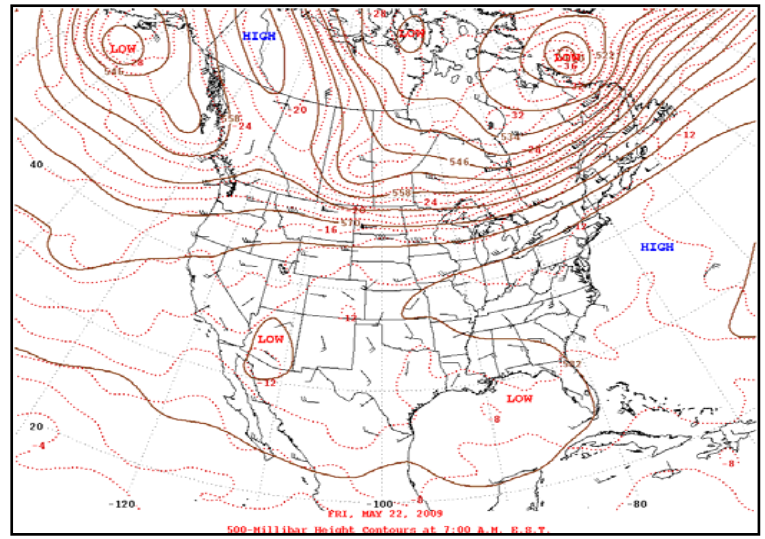
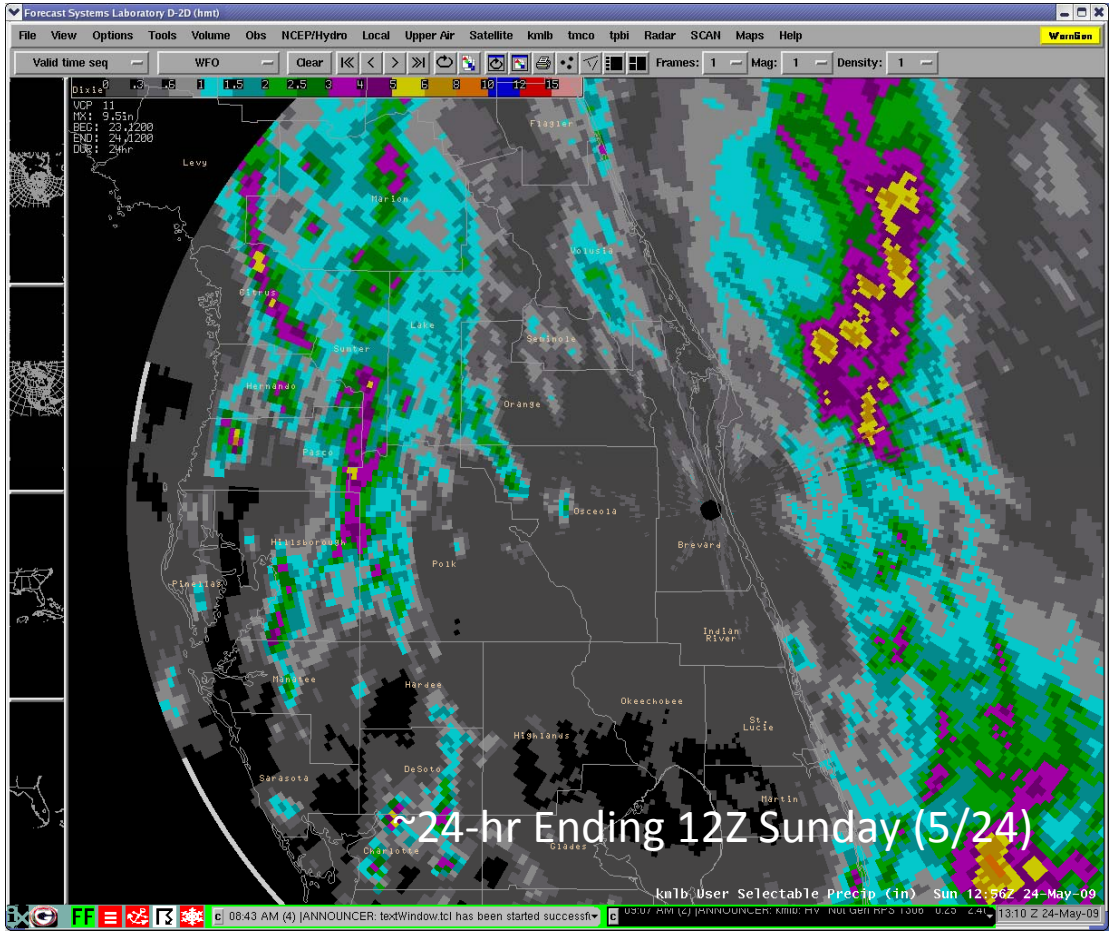




Saturday (5/23)

The surface low moves ever so slowly inland near LA/MS/AL. Peninsular Florida remains on the east side with southerly low-level flow, but convergence fields have slackened. Grip is not yet broken, but effects are weakening and shifting in location. Even so, pockets of 1 to 3 inches are realized over parts of Volusia County. Otherwise, most of the remainder of ECFL is located between two main convective areas. A transition to more traditional diurnal patterns via local circulations is experienced Sunday. The week-long flood event for Volusia and North Lake County ends.



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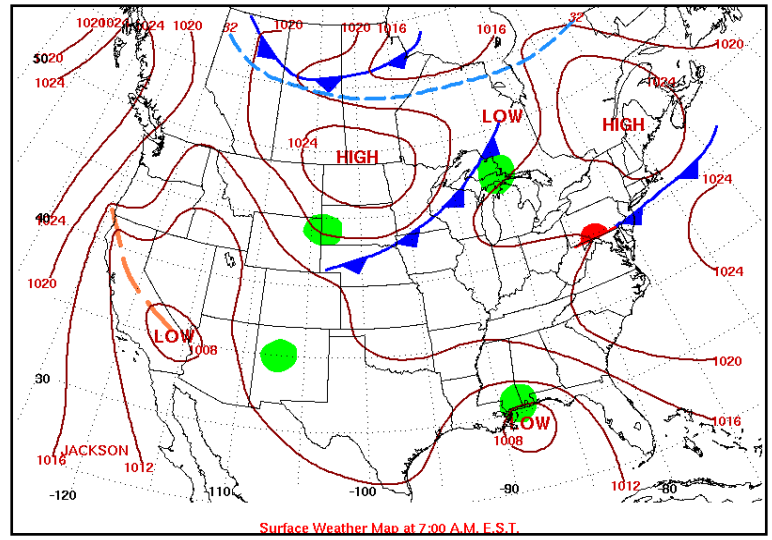
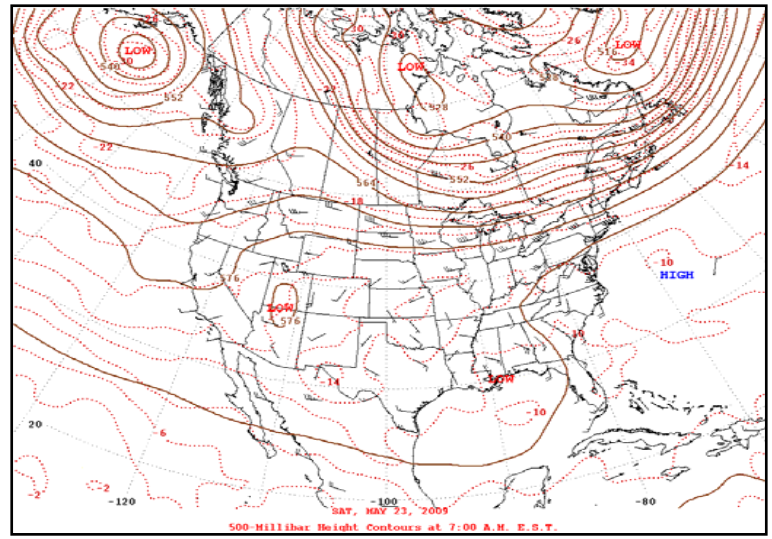
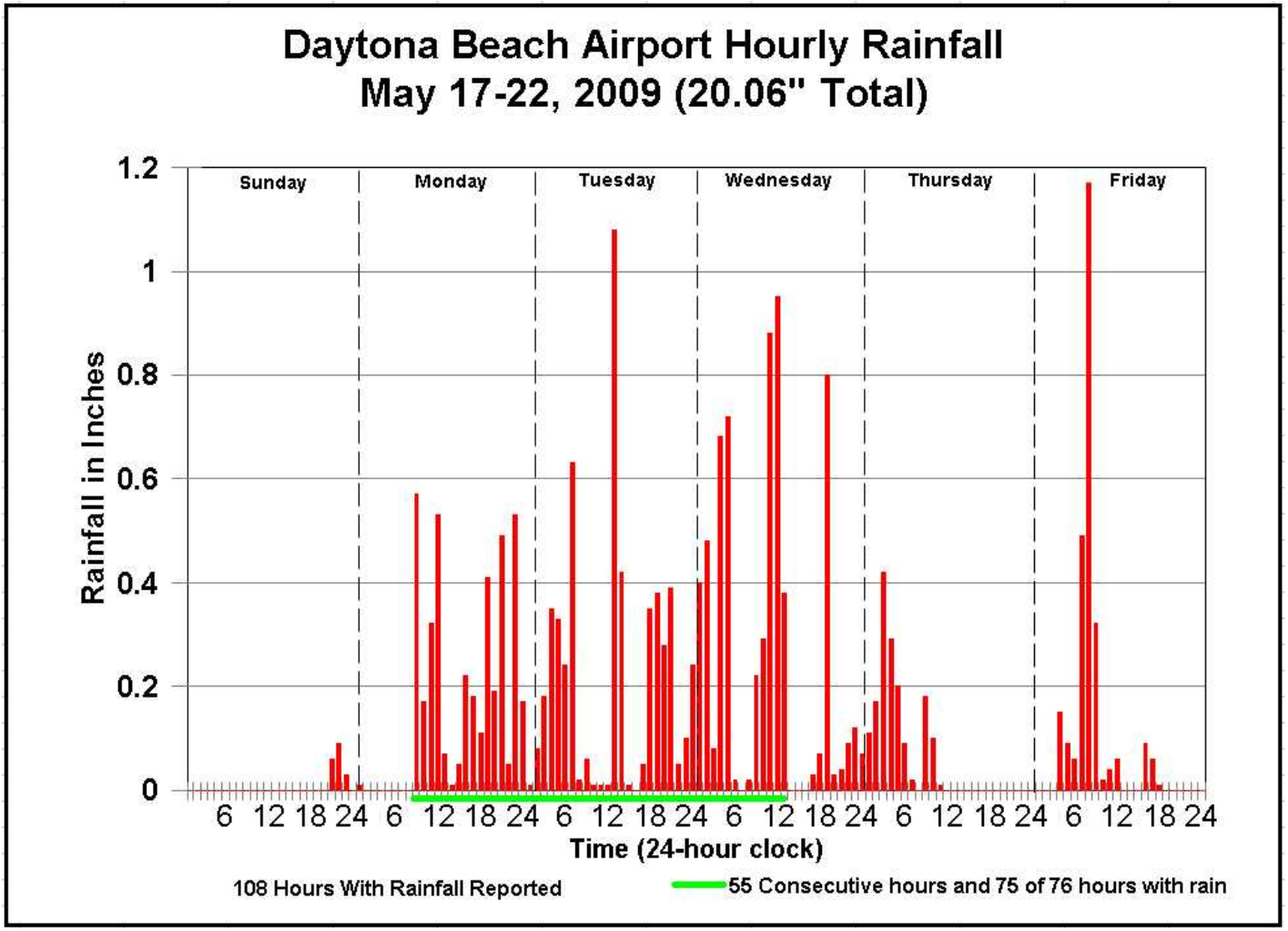
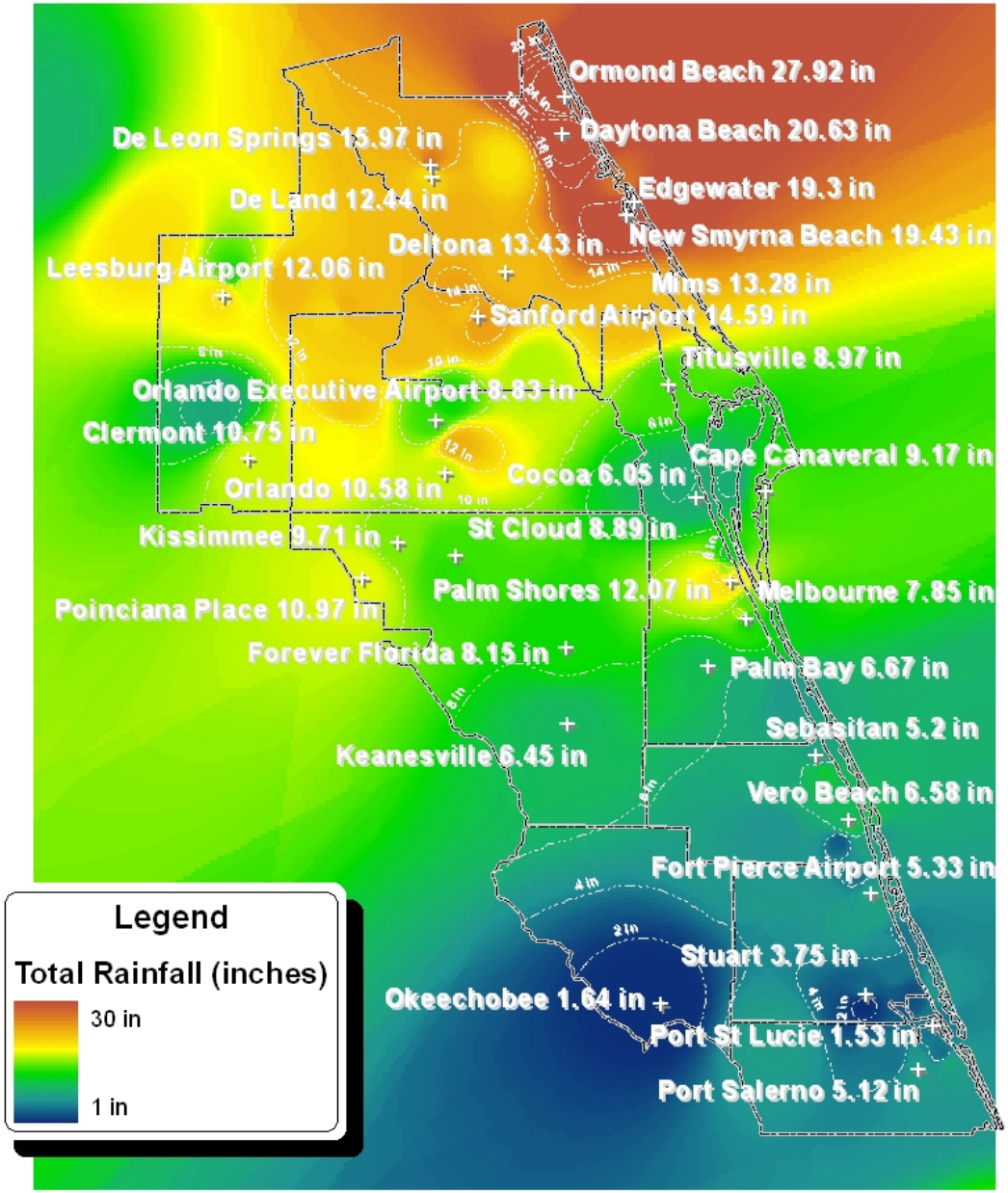




Relatively low rain rates… but for a long duration



Precipitation Totals
17-23 May 2009



Rain Gage Data

Data from official NWS observation sites, Cooperative observers and volunteer Community Collaborative Rain, Hail & Snow Network.

PUBLIC INFORMATION STATEMENT
NATIONAL WEATHER SERVICE MELBOURNE FL
1030 AM EDT SUN MAY 24 2009

RECORD RAINFALL AND FLOODING OCCURRED ACROSS THE CENTRAL FLORIDA PENINSULA OVER THE PAST WEEK. MOST INTENSE RAINFALL FELL OVER NORTHERN SECTIONS OF EAST CENTRAL FLORIDA, MAINLY OVER VOLUSIA, SEMINOLE AND PARTS OF ORANGE COUNTIES. OVER THE PAST WEEK, A COCORAHS REPORT FROM ORMOND BEACH SHOWED AN ACCUMULATED RAINFALL TOTAL OF 27.92 INCHES. AT DAYTONA BEACH, THE MONTH OF MAY 2009 IS BY FAR THE WETTEST MAY ON RECORD SINCE 1923. AS OF TODAY THE ASOS REPORTING SITE AT DAYTONA INTERNATIONAL AIRPORT SHOWS 21.67 INCHES, WITH 20.63 INCHES RECEIVED OVER THE PAST 7 DAYS. THE PREVIOUS RECORD WAS 12.33 INCHES SET IN MAY OF 1976. MAY 2009 IS ALSO SECOND WETTEST MONTH ON RECORD AT DAYTONA BEACH. THE WETTEST ALL TIME WAS 24.82 INCHES WHICH WAS SET IN THE MONTH OF OCTOBER IN 1924.

AIRPORT LOCATIONS	TOTAL 5/17 - 5/23
DAYTONA BEACH ASOS	20.63
LEESBURG ASOS	12.06
SANFORD ASOS	14.59
MELBOURNE ASOS	7.85
ORLANDO INTERNATIONAL	10.58
ORLANDO EXCECUTIVE	8.83
VERO BEACH ASOS	6.58
FORT PIERCE ASOS	5.33

COOP REPORTS	TOTAL 5/17 - 5/24
CLERMONT	10.75
DELAND	13.72
FOREVER FLORIDA	8.15
FT PIERCE ARC	5.11
FT PIERCE WP	5.35
KENANSVILLE	6.45
KISSIMMEE	9.71
LISBON	8.41
MELBOURNE WFO	10.39
NETTLES ISLAND	4.80
ORLANDO EAST	13.75
WINDERMERE	12.69
OKEECHOBEE	1.64
PALM BAY	6.67
PLYMOUTH	12.42
PONCE INLET	15.77
PORT SALERNO	5.12
SANFORD	14.36
SCOTTSMOOR	13.28
STUART	3.75
TITUSVILLE	8.97
VERO BEACH	6.74

COCORAHS REPORTS	TOTAL 5/17 - 5/24
VOLUSIA	
NEW SMYRNA BEACH 1.5 E FLVL1	19.43
EDGEWATER 3.3 SE FLVL2	8.32
DELAND 4.5 NW FLVL3	12.44
DELEON SPRINGS 0.4 SE FLVL4	15.97
ORMOND BEACH 3.5 SE FLVL5	27.92
EDGEWATER 2.4 N FLVL6	19.30
DELTONA 2.9 SE FLVL7	13.43
DELAND 5.7 NW FLVL9	12.29
DAYTONA BEACH 9.1WSW FLVL12	12.11
LAKE	
EUSTIS 1.2 SE FLLK2	13.44
GROVELAND 1.7 E FLLK3	5.67
BASSVILLE PARK 1.0 NE FLLK4	10.96
MOUNT PLYMOUTH 0.2 WSW FLLK5	13.64
LADY LAKE 1.2 W FLLK6	12.19
SEMINOLE	
SANFORD 0.4 ENEFLSM4	13.11
LONGWOOD 2.3 WNW FLSM5	13.32
CHULUOTA 0.9 N FLSM8	10.33
ORANGE	
WINDERMERE 1.3 NW FLOR2	9.79
WINTER PARK 2.3 ESE FLOR4	8.22
OCOEE 0.5 SSW FLOR6	12.95
WINTER PARK 2.1 ESE FLOR9	3.12
BREVARD	
PALM BAY 2.6 SSE FLBV1	5.80
PALM SHORES 1.4 W FLBV2	12.07
MIMS 7.5 NNW FLBV3	13.28
MELBOURNE 1.1 N FLBV6	9.24
MICCO 4.5 NW FLBV7	5.06
MALABAR 2.9 NNW FLBV9	4.28
MELBOURNE BEACH 3.9 SSEFLBV11	1.51
CAPE CANAVERAL 0.6 ESE FLBV12	9.17
PALM SHORES 2.9 NW FLBV16	10.12
PALM SHORES 4.3 NNW FLBV20	7.68
MELBOURNE 7.0 NW FLBV22	12.16
COCOA 2.6 WNW FLBV23	5.95
INDIALANTIC 0.8 N FLBV24	7.66
MELBOURNE 8.2 NW FLBV25	12.19
COCOA 0.6 WSW FLBV26	6.05
MICCO 1.3 NW FLBV28	1.30
MERRITT ISLAND 4.1 NE FLBV32	5.92

OSCEOLA

POINCIANA PLACE 2.6 NNWFLOS1	10.97
ST. CLOUD 1.7 SSW FLOS15	8.59
ST. CLOUD 0.1 WNW FL016	8.89

INDIAN RIVER

VERO BEACH S 10.0 W FLIR2	4.65
SEBASTIAN 1.1 NE FLIR4	5.47
VERO BEACH 2.4 W FLIR6	6.18
VERO BEACH 3.1 ESE FLIR7	4.91
VERO BEACH 11.4 NW FLIR8	5.69
VERO BEACH 4.3 SE FLIR9	5.37
VERO BEACH 3.5 SW FLIR11	2.95
VERO BEACH 2.1 ENE FLIR13	6.81
VERO BEACH 1.5 WSW FLIR15	7.09
SEBASTIAN 1.0 NW FLIR18	5.20
SEBASTIAN 2.0 SSW FLIR19	6.67
SEBASTIAN 1.7 SSE FLIR22	7.27

SAINT LUCIE

PORT ST. LUCIE 1.7 WSW FLSL3	3.41
LAKEWOOD PARK 0.5 SW FLSL4	3.75
FORT PIERCE 2.8 SSE FLSL5	3.71
PORT ST. LUCIE 2.5 SW FLSL9	1.64
PORT ST. LUCIE 1.6 WSW FLSL10	1.53
FORT PIERCE 2.8 SSE FLSL11	4.35
PORT ST. LUCIE 5.6 W FLSL17	0.02
PORT ST. LUCIE 4.0 NE FLSL19	3.69
PORT ST. LUCIE 5.0 ESE FLSL20	2.65

MARTIN

PALM CITY 4.0 SW FLMT1	3.73
STUART 3.7 SW FLMT7	3.46
STUART 5.0 SE FLMT11	5.55
OKEECHOBEE 16.4 ESE FLMT13	5.18

NOTE: COCORAHS PRECIPITATION REPORTS ARE CONSIDERED SUPPLEMENTAL AND UNOFFICIAL AND SOME DAYS MAY BE MISSING IN EVENT TOTALS. COCORAHS AND COOP REPORTS ARE THROUGH 7 AM.