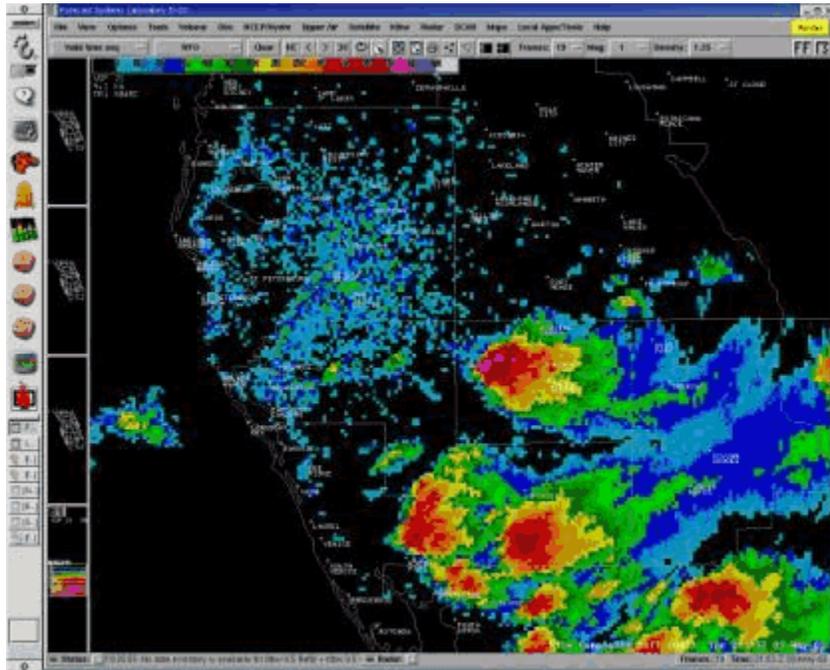


Hailstorms Rakes Portions of West Central Florida May 3rd and 4th



Animation of Composite Reflectivity,
252 PM to 415 PM EDT, May 3 2005.
Note the "storm cell mitosis"!

Events Occur in 18 hour Period May 3rd and 4th

A northward moving front, an upper level jet streak, and an increasingly unstable atmosphere contributed to the development of severe thunderstorms during the afternoon and evening of May 3rd, and again during the morning of May 4th. The unusual late season event, more typical in Oklahoma than in Florida in May, produced at least one bona-fide supercell thunderstorm (rotating through many layers) on the 3rd. As of this writing, the predominant event was large hail - up to baseball size in diameter!

Meteorology/May 3

In Florida, the typical Midwestern/Great Plains precursors needed for widespread severe weather are rarely seen. However, similar, smaller scale versions can develop. Such was the case on May 3rd and 4th. The 8 AM EDT May 3rd Ruskin sounding showed the potential, namely in the very dry layer and steepening lapse rate above 700 mb. The morning hodograph (lower left) was favorable for rotating and possibly right moving storms. One notable weak

As with all supercells, this storm was rotating at multiple layers, and a distinct hail spike was noted. The rotation continued for more than 30 minutes, despite a weakening trend. Toward 4 PM, though reflectivity had decreased, the storm nearly exhibited a Bounded Weak Echo Region. It was at this time that the hail core was rapidly descending, and moments later the golfball to baseball size hail was reported near Fort Ogden (western Desoto County).

Soon after, the supercell began to collapse. But the event had just begun. The once-weakening left moving storm re-intensified as it moved into Hardee County. Soon, it would dump golfball size hail on Fort Green; later, it would continue into southern and central Polk County and drop hail over 2 inches in

parameter was Convective Available Potential Energy (CAPE), a measure of the amount of energy available for convection. However, Ruskin was solidly north of the warm front at that time. A possible sounding, modified for location (along the approaching boundary) and time (mid afternoon) is shown here. Note the much higher CAPE value given afternoon temperature and dew point estimates of 80 and 68, respectively.

Primary Event/May 3

A little after 230 PM on the 3rd, a thunderstorm developed near the Sarasota/Manatee County line. In less than half an hour, the storm split into two, with a left-moving cell headed through southern Manatee and into Hardee County, and a slightly right-moving cell headed toward Desoto County.

At this time (shortly after 3 PM), the Sarasota County cell rapidly intensified, while the left-moving cell in Manatee County began to weaken. Just before 330 PM, the southeast Sarasota County cell reached its peak intensity in the mid levels of the atmosphere, shown by the high value of Vertically Integrated Liquid (Figure 1) and in the reflectivity cross section.

diameter near Fort Meade. Hailstorms continued and developed after 6 PM, and did not end until just after sunset.

May 4th: Wake-Up Call

The immediate Tampa Bay region shared in the activity the following morning, as the upper level energy impulse approached. Storms developed west of Tampa Bay before sunrise, and intensified as they approached the Pinellas County shoreline a little after 8 AM. Large hail developed in these storms as they moved across north Pinellas and south Pasco Counties before they began weakening toward Hernando County. Abundant cloud cover from the early morning storms held temperatures down across much of west central Florida, thankfully reducing the threat of additional widespread severe weather. The deep atmosphere was ready.

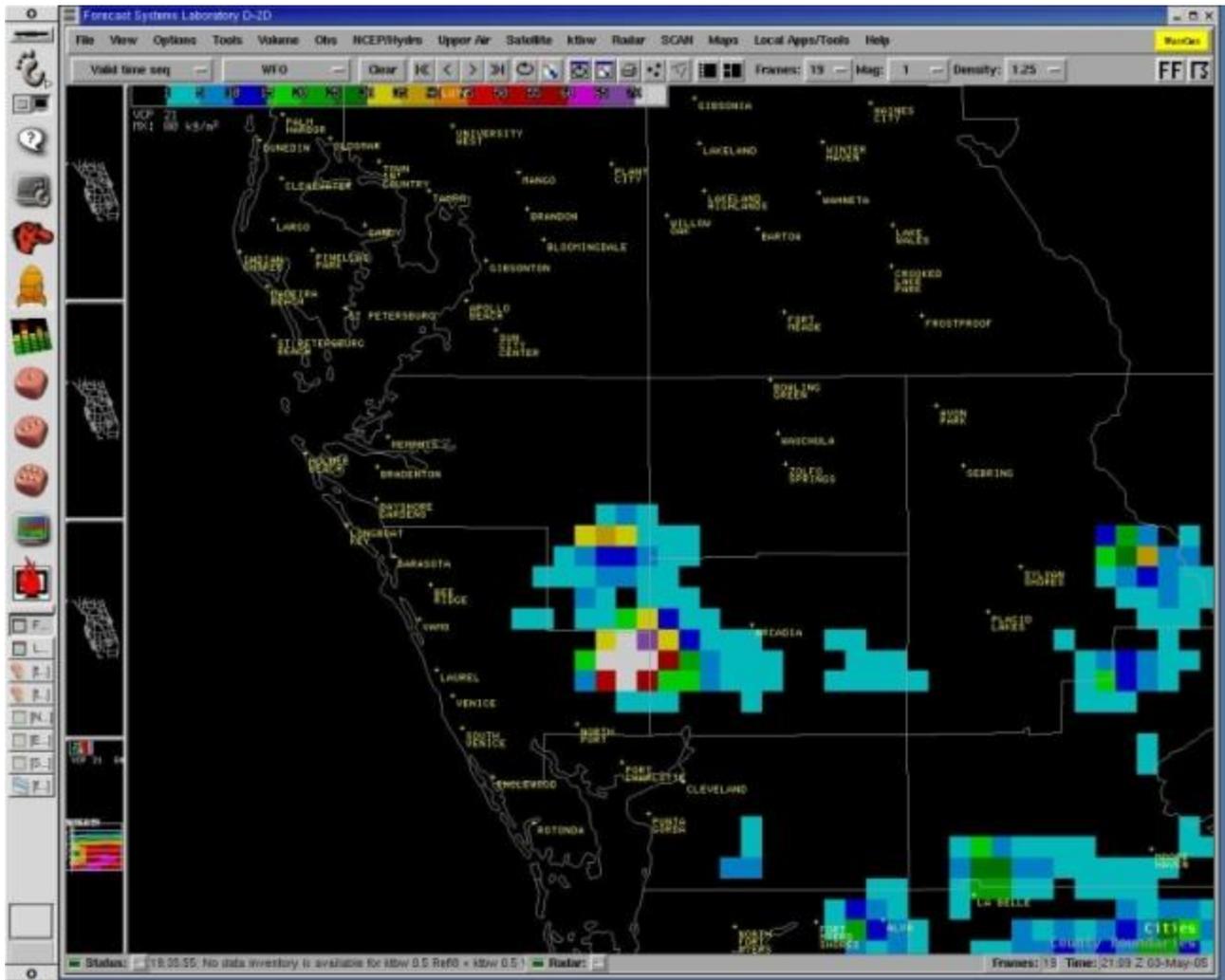


Figure 1: Maximum VIL, Sarasota/Desoto County hailstorm, at peak mid level intensity.

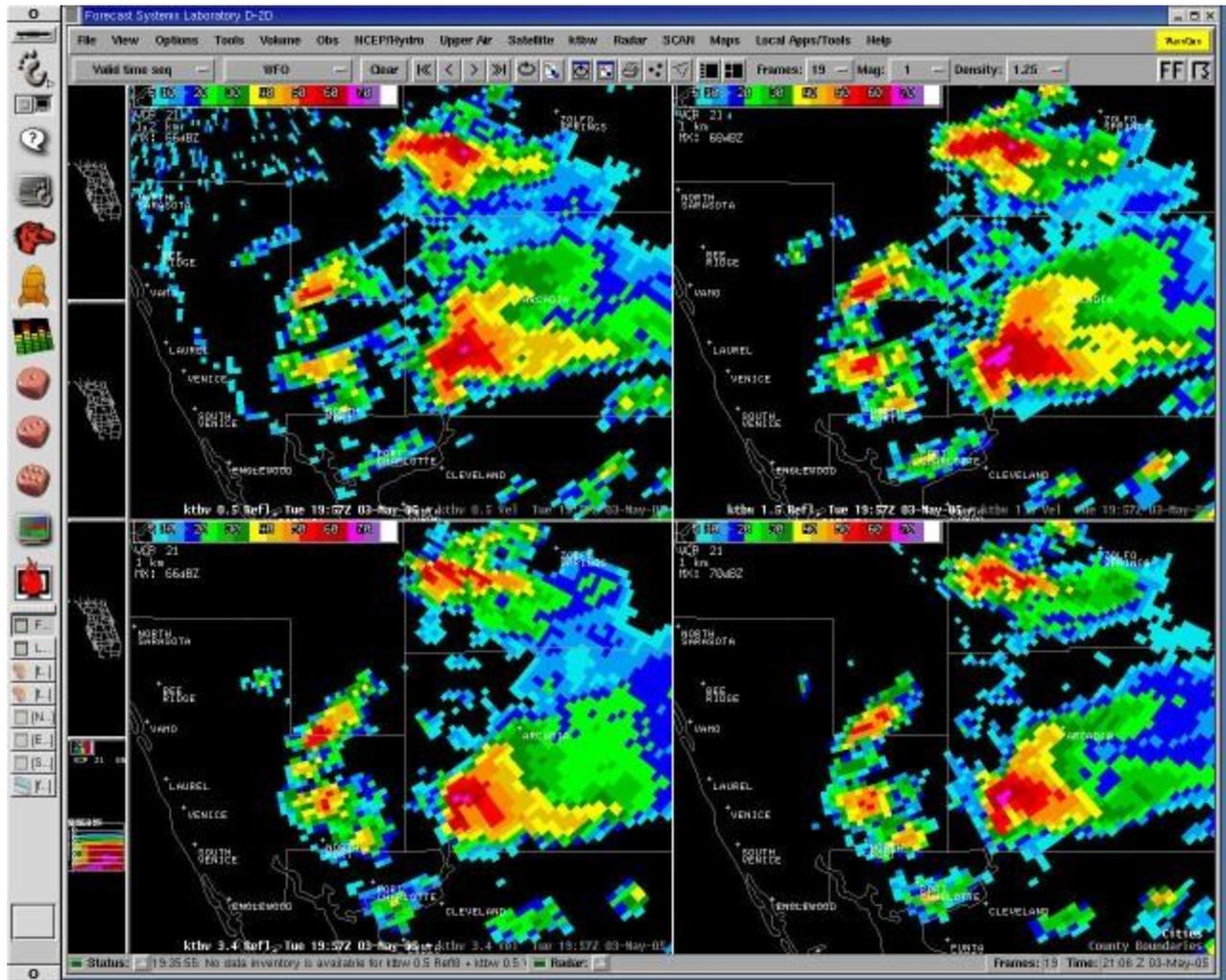


Figure 2: Four-panel base reflectivity, showing near-BWER conditions during beginning of largest hail occurrence.

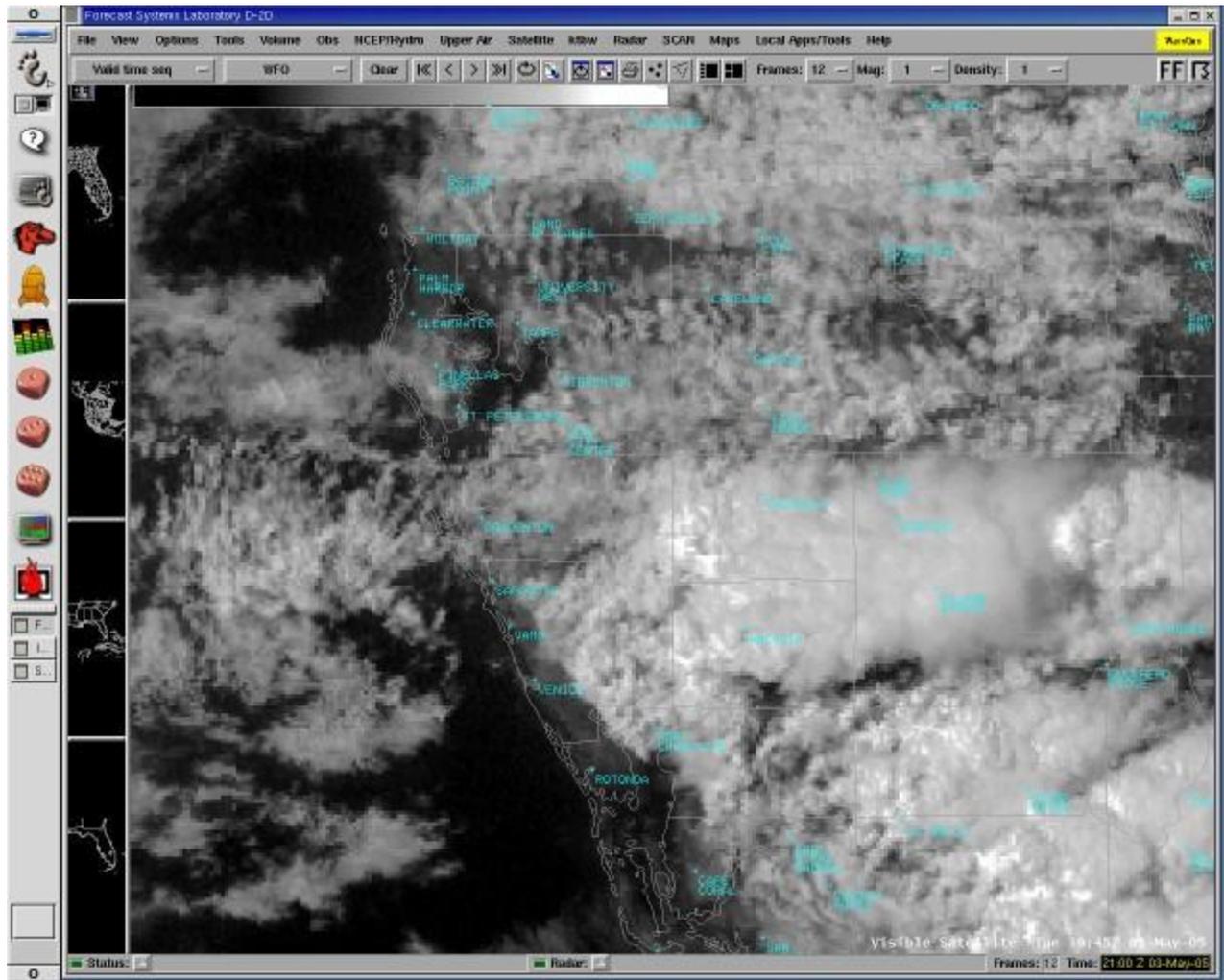


Figure 3: NOAA GOES visible satellite image over the supercell thunderstorm, 345 PM May 3rd.

Table of Hail Events for May 3rd. and May 4th.

Date	Event	City	County	Time
May 3	1.75 Inch Hail	5 miles WSW Arcadia	Desoto	349 PM
	2.75 Inch Hail	2 miles S Ft. Ogden	Desoto	400 PM
	0.88 Inch Hail	2 miles S Wauchula	Hardee	435 PM
	1.75 Inch Hail	Bowling Green	Hardee	435 PM
	2.50 Inch Hail	Fort Meade	Polk	505 PM
	1 Inch Hail	Lake Wales	Polk	540 PM
	1 Inch Hail	8 miles E Lake Hamilton	Polk	552 PM
	0.75 Inch Hail	Myakka Head	Manatee	610 PM

	1 Inch Hail	2 miles S Ona	Hardee	636 PM
	Tstm Wind Damage	2 miles N Gardner	Hardee	645 PM
	1 Inch Hail	Lake Placid	Highlands	805 PM
	1.75 Inch Hail	Lake Placid	Highlands	813 PM
May 4	0.75-1 Inch Hail	Tarpon Springs/Palm Harbor	Pinellas	845-850 AM
	1 Inch Hail	Port Richey	Pasco	850 AM
	0.88 Inch Hail	Holiday	Pasco	855 AM
	1 Inch Hail	New Port Richey	Pasco	859 AM