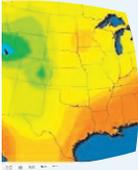




▶ READ ABOUT OUR DOPPLER RADAR'S LATEST TECHNOLOGICAL ADVANCEMENTS.....1



▶ EMPLOYEE SPOTLIGHT: MEET OUR INTERN, EMMA WESTON.....2



▶ CLIMATE RECAP FOR SUMMER OUTLOOK FOR AUTUMN4



Tallahassee topics

NEWS AND NOTES FROM YOUR LOCAL NATIONAL WEATHER SERVICE OFFICE.

The National Weather Service (NWS) office in Tallahassee, FL provides weather, hydrologic, and climate forecasts and warnings for Southeast Alabama, Southwest & South Central Georgia, the Florida Panhandle and Big Bend, and the adjacent Gulf of Mexico coastal waters. Our primary mission is the protection of life and property and the enhancement of the local economy.

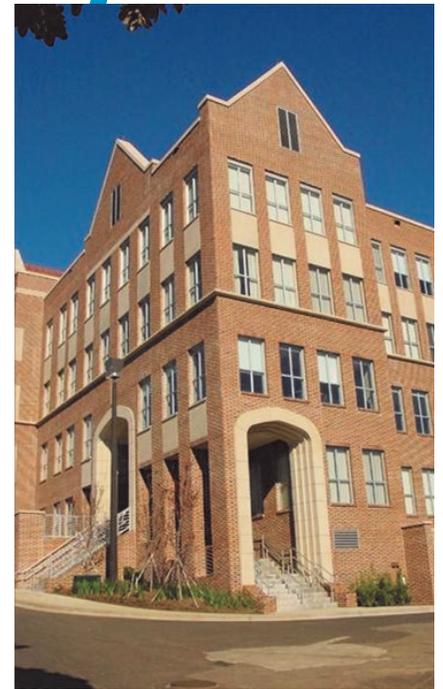
Tallahassee Radar Upgraded with Faster Scan Times

By Don Van Dyke

At the end of August, the Tallahassee Doppler radar was upgraded with the ability to scan the lowest levels of a storm at nearly twice the rate as previously possible. The technical name for this new ability is the Supplemental Adaptive Intra-Volume Low-Level Scan, but most people call it SAILS. Previously, it used to take about 5 minutes for the radar to complete a full scan of a storm and return to the lowest part of a storm to begin a new scan. With this new upgrade that is being deployed nationwide, meteorologists are now able to see how the thunderstorm structure is changing closer to the ground level every 2-3 minutes. The diagram (at right) shows how this is accomplished. This additional scan will help meteorologists better identify rapidly changing features within a thun-

derstorm and allow for the possibility of warnings to be issued a couple of minutes faster than would previously have been possible in some situations. In particular, this upgrade may help improve the detection of the brief tornadoes that tend to occur in our local area during the cool season, as well as the rapidly developing microbursts that occur during the summer months. Additionally, it may also help to reduce false alarms by providing meteorologists with increased confidence that low level rotation within a storm is not strong enough to produce a tornado, thus preventing a tornado warning from being issued on a storm that will not produce a tornado. Engineers at the Radar Operations Center (ROC) in Norman, Oklahoma, developed the technology. The ROC is tri-agency sup-

ported by NOAA, the Federal Aviation Administration, and the Department of Defense.



SAILS

Supplemental Adaptive Intra-Volume Low-Level Scan

A New Way Doppler Radar Scans the Sky

How Should This Help?

Weak, short-lived tornadoes are the most difficult to predict and detect

Additional low-level radar scans will be crucial in seeing tornado formation

- 1 The radar starts at the lowest elevation and scans up through the sky for about two minutes
- 2 After scanning the middle elevation, the radar goes back to scan the lowest elevation again
- 3 The radar then returns to the middle elevation to scan up to the highest elevation

Total Time to Complete Steps 1-3
About 5 Minutes

www.weather.gov



Employee Spotlight: Emma Weston

Intern since September 2013

By Katie Moore & Emma Weston

Q: What got you interested in weather?

A: I grew up sailing so we were always on the water and aware of the weather. You need to be able to read the wind, waves and plan enough time to get back to shore if there is a thunderstorm. I wasn't sure what I wanted to major in in college until my cousin mentioned she was interested in meteorology. Math and science were my stronger subjects and I enjoyed weather so the rest was history.

Q: How did you get your start with the NWS?

A: I participated in the Student Career Experience Program at the National Data Buoy Center in college. I spent two summers in Mississippi and was able to continue my work from Texas A&M during the school year. Upon graduation I was hired full time as a Physical Science Technician.

Q: What were your favorite and most challenging parts of your job at the National Data Buoy Center?

A: My favorite part was seeing how important the buoy data was. People all over the world use the data for everything from weather models to planning outdoor events and scouting out surfing conditions. It was also neat to see all the buoys built on site at NDBC.

The most challenging part was learning the satellite communication system.

Q: What are your favorite and most challenging parts of your job at NWS Tallahassee?

A: My favorite part is big events like squall lines, tropical storms and the sleet event this past winter. I also really enjoy outreach events and teaching the public about weather and safety. The most challenging part is waking up for 5 am shifts.

Q: Do you have any tips for students interested in pursuing operational meteorology?

A: I would encourage students to try to shadow several different types of meteorology jobs through volunteering or an internship. You never know what you will like until you try it.

Q: What do you like to do for fun?

A: I like to read, work out and spend time with my new puppy. I also like to travel and try to get to the beach as often as I can.

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NATIONAL WEATHER SERVICE

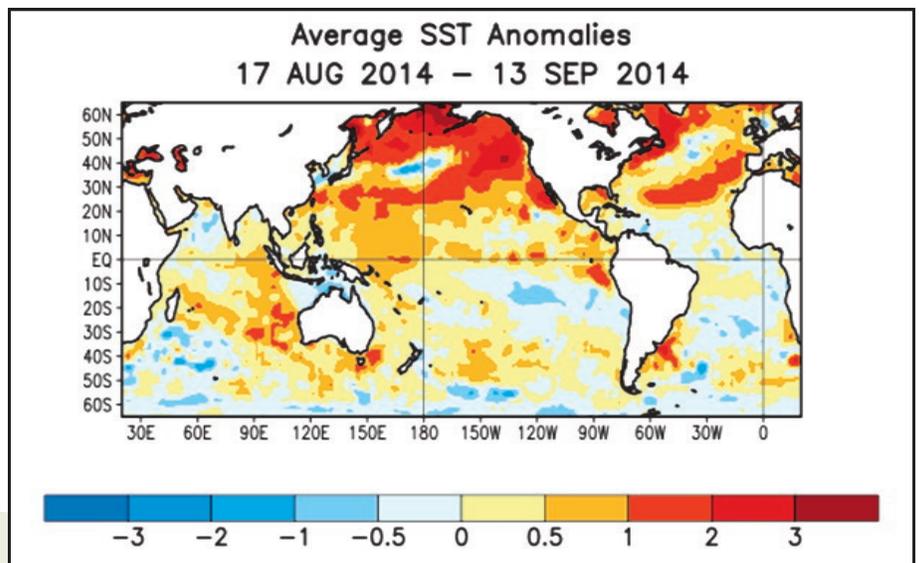
NOAA Weather Radio Frequencies

- ◆ KIH-24 Tallahassee (162.400 MHz)
- ◆ KGG-67 Panama City (162.550) MHz
- ◆ WWF-86 Eastpoint (162.500 MHz)
- ◆ WWF-88 Salem (162.425 MHz)
- ◆ WNG-63 Sneads (162.425 MHz)
- ◆ WWH-20 Homes Co. (162.450 MHz)
- ◆ WXM-79 Hahira (162.500 MHz)
- ◆ WXK-53 Pelham (162.55 MHz)
- ◆ KZZ-70 Blakely (162.525 MHz)
- ◆ KWN-50 Ashburn (162.450 MHz)

El Niño Update *By Mark Wool*

NOAA's Climate Prediction Center (CPC) continues the El Niño watch. As of mid September, ENSO-neutral conditions continued across the equatorial Pacific. However, there was still a 60-65% likelihood that El Niño would be present during the northern hemisphere's late fall and winter seasons. Small positive sea surface temperature anomalies already existed across the equatorial Pacific Ocean (pictured right).

As outlined in the previous issue of *Tallahassee Topics*, there are well-established historical trends for what tends to happen in our area during an El Niño. El Niño typically features a more active southern jet stream in the winter months that produces wetter-than-normal conditions across much of the southern United States, including our area. Often, the increased cloud cover and precipitation results in slightly cooler than average daytime temperatures as well. The latest seasonal outlook from the CPC for the period of December-February does indeed call for an enhanced chance for above normal rainfall this winter.



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This Quarter's Focus: SKYWARN Storm Spotters By Mark Wool

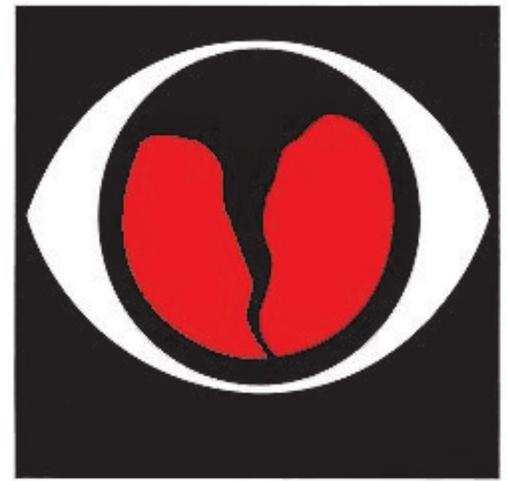
The effects of severe weather are felt every year by many Americans. To obtain critical weather information, the National Weather Service (NWS) established SKYWARN® with partner organizations. SKYWARN® is a volunteer program with nearly 290,000 trained severe weather spotters. These volunteers help keep their local communities safe by providing timely and accurate reports of severe weather to the National Weather Service.

Although SKYWARN® spotters provide essential information for all types of weather hazards, the main responsibility of a SKYWARN® spotter is to identify and describe severe local storms. In the average year, 10,000 severe thunderstorms, 5,000 floods and more than 1,000 tornadoes occur across the United States. These events threatened lives and property.

Since the program started in the 1970s, the information provided by SKYWARN® spotters, coupled with Doppler radar technology, improved satellite and other data, has enabled NWS to issue more timely and accurate warnings for tornadoes, severe thunderstorms and flash floods.

SKYWARN® storm spotters are part of the ranks of citizens who form the Nation's first line of defense against severe weather. There can be no finer reward than to know that their efforts have given communities the precious gift of time—seconds and minutes that can help save lives.

NWS encourages anyone with an interest in public service and access to communication to join the SKYWARN® program. Volunteers typically include police and fire personnel, dispatchers, EMS workers, public utility workers and other concerned citizens. Individuals affiliated with hospitals, schools, churches, and nursing homes, or those who have a responsibility for protecting others, are also encouraged to become spotters.



SKYWARN

NWS has 122 local Weather Forecast Offices, each with a Warning Coordination Meteorologist, who is responsible for administering the SKYWARN® program in their local area. Training is conducted at these local offices and covers:

- Basics of thunderstorm development
- Fundamentals of storm structure
- Identifying potential severe weather features
- Information to report
- How to report information
- Basic severe weather safety

Classes are free and typically are about two hours long. Some are even offered online. If you live in the NWS Tallahassee forecast and warning area and want to find out when a SKYWARN® class will be conducted near you, or online, please visit our SKYWARN® website at <http://www.srh.noaa.gov/tae/?n=severe> for contact information.

Recent Staffing Changes

By Katie Moore & Mark Wool

This summer, we gained a volunteer student and said good luck and farewell to several members of our office. In May, Wright Dobbs joined the office as our summer mentorship student and is continuing his work with us this fall. We will also welcome Molly Merrifield, an FSU senior in Meteorology that will begin volunteering for us this semester. In the spring semester, Coral Arroyo-Baez, also an FSU senior, will become our newest volunteer. In June, three of our former student volunteers officially started their careers in the National Weather Service. Ryan Walsh, Emily Heller, and Andy Lahr are now interns at the Jacksonville, FL; Topeka, KS; and Twin Cities, MN offices, respectively.

In July our Warning Coordination Meteorologist, Jeff Evans, also took the next step in his career. He is now the Meteorologist in Charge at the Houston/Galveston, TX office. We wish all of them the best of luck in their new offices! Finally, in late July, we said farewell to Ron Block (pictured right), one of our lead forecasters and former editors, who retired after 28 years of service with the NWS and 33 years in the federal government. Enjoy your retirement, Ron!





Management-Admin Team

Jane Hollingsworth, MIC
WCM (Vacant)
SOO (Vacant)
Doug Sherrick, ESA
Chris Duggan, ASA
Toan Tran, ITO
Hydrologist (Vacant)

Lead Forecasters

(Vacant)
Mark Wool
Ken Gould
Jeff Fournier
Parks Camp

Journeyman Forecasters

Tim Barry
Kelly Godsey
Don Van Dyke
Alex Lamers
Donal Harrigan

HMTs

Jim Bolden, OPL

Interns

Katie Moore
Claudia (Jeanie) McDermott
Emma Weston

Electronic Technicians

Ron Eimiller
Clifton Bennett

Outreach & Diversity Efforts

By Katie Moore

This issue marks the eighth publication of the *Tallahassee Topics*. Unfortunately, we lost one of our editors, Ron Block, to retirement at the end of July. This July, our WCM Jeff Evans attended the Rural County Summit in Gadsden county and forecaster Alex Lamers gave a spotter training session in Coffee County.

In August, the office started its weekly weather briefings for FSU students again. Every Wednesday at 4:15 PM, weather permitting, we give an overview of the current weather pattern and the forecast for the next

week, as well as answer questions from the students about meteorology. So far, we are getting over 30 students each week.

In September, forecaster Kelly Godsey helped work at a weather safety booth with students from the local chapter of the American Meteorological Society and the National Weather Association during the FSU Preparedness Fair. Emma Weston and Katie Moore worked a booth at the Tift County Emergency Preparedness Fair in Tifton, GA, on the first weekend of September.

Climate Recap for Summer

By Tim Barry

Summers in Tallahassee are typically hot and humid. Summer is also Tallahassee's rainy season receiving nearly 38 percent, or 22.25", of its average annual rainfall in the 3-month period of June through August. Most of this rain comes in the form of afternoon thunderstorms as a result of the sea-breeze circulation. However, this past summer was certainly not a typical summer. Far from it! In fact, the summer of 2014 will go down in the record books as the driest summer on record and one of the hottest (see chart below right). This summer, Tallahassee received only 8.99" of rain, 13.26" below normal. The two driest months were July and August which received only 2.33" and 2.26" respectively. They were Tallahassee's second driest July and August on record. The greatest rainfall amount in a 24-hour period for the summer was 1.14" which occurred on August 19th. That was the only day the Tallahassee Regional Airport recorded rainfall at or greater than one inch, 6 days below normal. The lack of rain across the local region can be partially blamed on drier than normal air in the mid-levels of the Troposphere. Without the deep layer moisture in place for most of the summer, afternoon thunderstorms weren't as numerous as we would typically see. Despite the very dry summer, the year-to-date rainfall deficit at the end of August was less than three inches below normal. The primary reason for this is because

Tallahassee had experienced its second wettest spring on record.

As one would expect, there is a correlation between very dry summers and hotter than normal temperatures. The main contributing factors for this is increasing insolation and decreasing cooling effects from rain and associated outflow boundaries. So it's not too surprising that the driest summer on record for Tallahassee was also one of the hottest, the 6th hottest. The average temperature for the 3-month period was 83.0 degrees, 1.4 degrees above normal.

August was the hottest month which saw the high temperature reach or exceed the 90 degree mark every day, 10 more than normal. Seven of those max temps ranging from 97 to 101 degrees either tied or broke a daily record and helped to contribute in making August 2014 the 3rd hottest August on record. Two additional daily temperature records were established this summer, both record lows occurring in July. A stretch of days with max temperatures of 90 degrees or higher began in mid-summer on July 22nd and continued into early fall through September 5th. This 46 day period was the 4th longest stretch of 90-plus degree temperatures in Tallahassee's history. The longest was 59 days in 1993.

Outlook for Fall

By Tim Barry

The latest outlook for fall (September through November) from the Climate Prediction Center calls for an enhanced chance of experiencing above normal temperatures and equal chances of experiencing above, normal and below normal rainfall. The average temperature for Tallahassee during fall is 69.3 degrees and the average rainfall is 11.42". Fall is on average our driest season. Early to mid-September is the climatological peak of the hurricane season which runs through the end of November. So far this season, there have been 4 named storms with 3 of them reaching hurricane status. The updated 2014 hurricane season forecast by NOAA calls for 7 to 12 named storms; including 3 to 6 hurricanes. Two storms could reach major hurricane status with sustained winds of 111 mph or more.

Summer 2014 Climate Summary

This summer was the *driest* and *6th hottest* summer on record.

Top 10 Driest Summers: June-Aug
Rainfall Totals



Top 10 Hottest Summers: June-Aug
Average Temperatures



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