



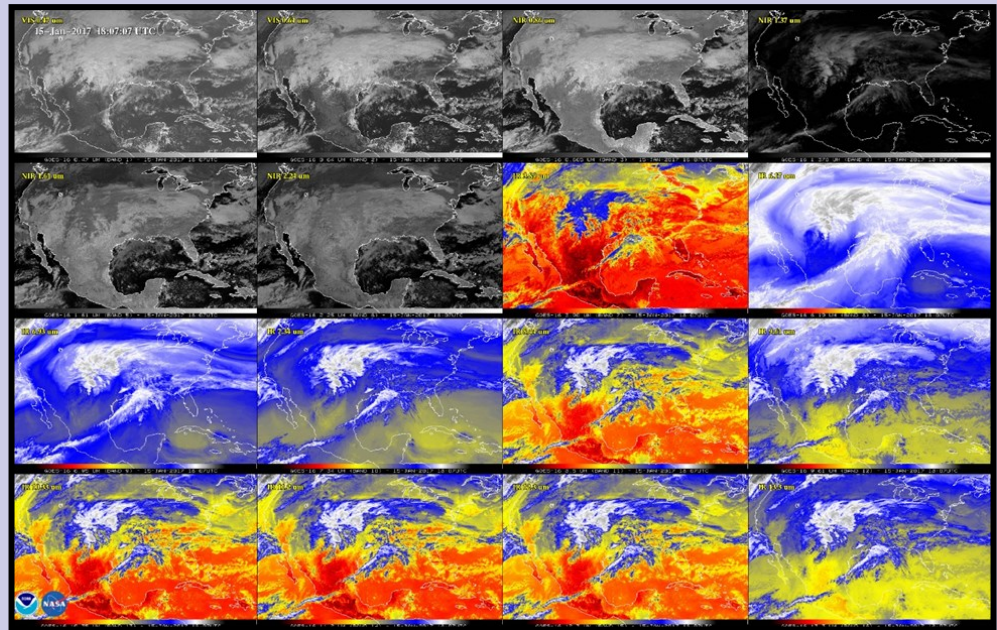
# Texas Weather Wire



## GOES- 16: A New Era of High Resolution Imagery

By Orlando Bermúdez

A new weather ally is now helping NOAA National Weather Service forecasters to view and detect weather phenomena in a high definition way; NOAA’s GOES-16 satellite. Although GOES-16 images are considered preliminary and are undergoing validation testing at this time, the resolution of the images arriving from GOES-16 are breathtaking. In approximately 6-12 months after launch, which occurred in November 2016, it is expected that GOES-16 data will be declared operational.



*The above 16-panel image depicts two visible, four near-infrared and 10 infrared channels of the continental United States utilizing the Advance Baseline Imager (ABI). These channels will assist forecasters to distinguish between clouds, water vapor, smoke, ice, volcanic ash and other atmospheric anomalies.*

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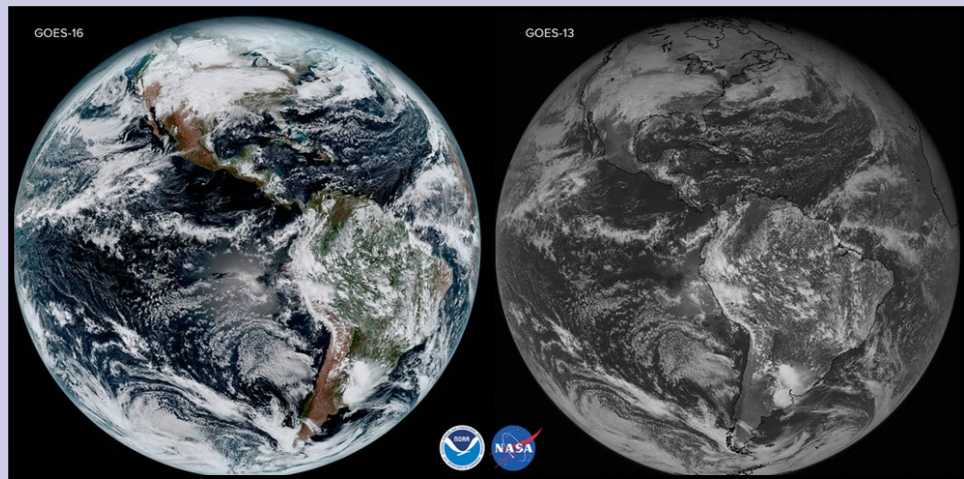
GOES-16 continues...

## GOES-16

Continues...

It is exciting to see finer and faster images from GOES-16 with as little as one-minute data updates. These one-minute images will allow forecasters to track individual systems such as frontal and outflow boundaries, cumulus cloud formation and quick developing severe storms as lightning increases within the storm and much more.

From now until the data is officially declared operational, there are a lot of things to learn about GOES-16 and its capabilities. However, once everything is set and done, we all can benefit from the high-quality products GOES-16 offers including better national, regional and local weather forecast and lead times on watches and warnings for the protection of life and property.



*GOES-16 has five-times greater coverage, four-times the spatial resolution, and three-times the spectral channels than earlier generations. Left image is from GOES-16 and the one in the left is from GOES-13.*

For additional information on GOES-16, go to the following website: <http://www.goes-r.gov/>. You will find excellent information about the mission of this new tool. Check out the outreach pull-down menu for incredible material for students, teachers and the general public on GOES-16 in addition to other weather related topics.

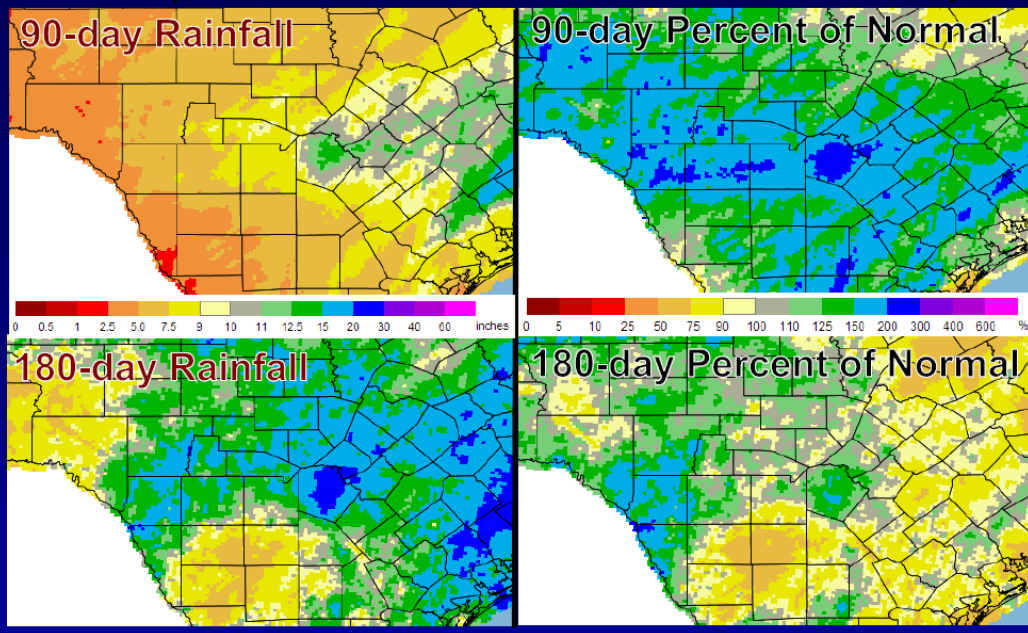
## South Central Texas Climate Outlook

By Larry Hopper

Weak La Niña conditions continuing from the fall and relatively few Arctic air intrusions helped cause the warmest winter on record in South Central Texas with an average temperature of 60.2°F, 1.7°F above the second warmest winter in 1906-07! Austin and San Antonio both had 19 days with highs above 80°F that contributed to Austin's warmest (58.7°F) and San Antonio's second warmest (59.1°F) winter on record. Although fire weather was a bit more active than usual, the region fortunately had wetter than normal conditions that occur less than a third of the time during La Niña due to two wet periods during the first week of December and the middle of January combined with near normal rainfall in February. San Antonio's 12.55 inches of rainfall more than doubled their average winter precipitation and was the fourth highest since the late 1800s. Considering most areas along and east of Interstate 35 were drier than normal during fall, this rainfall helped prevent drought conditions from redeveloping over the region. The warm temperatures also kept winter weather out of the region aside from patchy freezing drizzle on January 6th, but also contributed to an early severe weather outbreak on February 19-20 that spawned nine tornadoes from San Antonio to Thrall.

### 90 and 180-Day Rainfall as of March 1

- Most areas above normal this winter (over double in San Antonio), but most east of I-35 below normal since Sept. 1



Climate continues...

## Climate Outlook...

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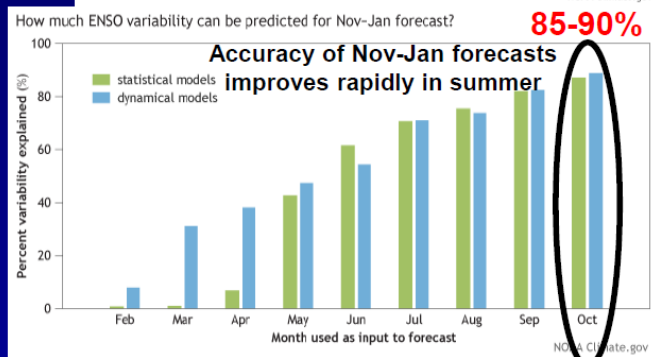
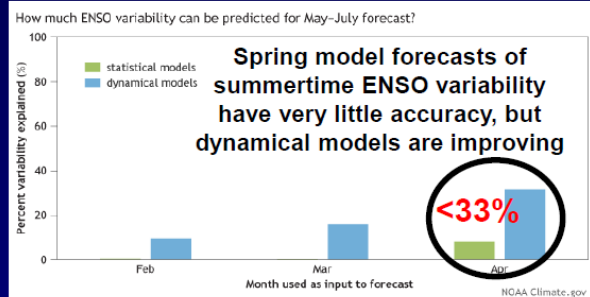
Sea surface temperatures (SSTs) in the East Pacific have warmed back up above the threshold for La Niña which officially ended in February. Most statistical and dynamical models both indicate that SSTs will continue to slowly increase this spring, but remain below the El Niño threshold to result in ENSO-neutral conditions. Statistical models predict that ENSO-neutral conditions will continue through the end of the year, whereas dynamical models favor the development of a weak El Niño later this summer or fall. Spring forecasts of ENSO are typically not very accurate because of springtime variability in weather, SST gradients, and weak associated coupling of oceanic and atmospheric processes. However, increasing SSTs off the coast of Peru coupled with improvements in dynamical models make the development of El Niño somewhat believable. Therefore, the Climate Prediction Center (CPC) is predicting a slight tilt (just above a 50% chance) towards a weak El Niño episode for late summer and fall.

### Spring Barrier for ENSO Predictability

➤ Spring forecasts of ENSO not very accurate because of:

- Weak SST gradients
- Weak coupling of ocean-atmosphere
- Variable weather in transition season (low signal, high noise)

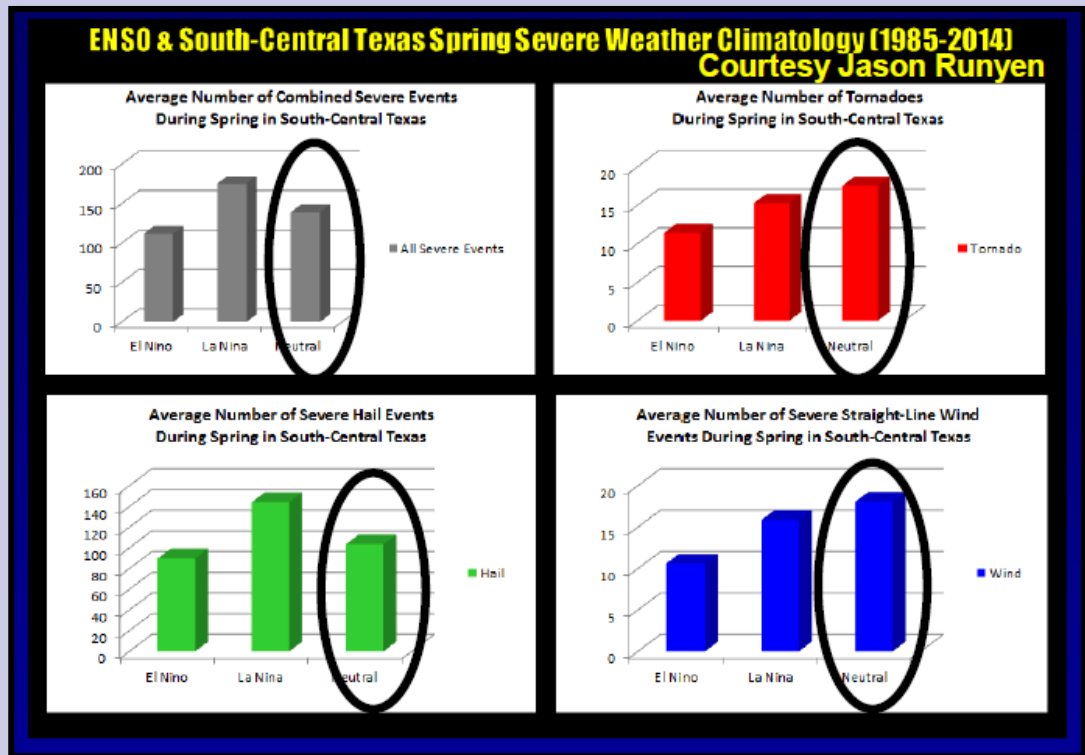
➤ El Niño forecasts for summer/fall plausible because of increasing SSTs in East Pacific and improving skill for dynamical models



Climate continues...

## More on Climate...

Given a weak ENSO signal for this spring and our much warmer than normal winter, CPC is predicting that our odds are strongly tilted towards having a warmer than normal spring with an equal chance of above or below normal rainfall. Local research supports the temperature forecast as spring temperatures following the ten warmest winters since 1980-81 were above normal every spring except for 2013. Spring rainfall was below normal 70 percent of the time when following the ten warmest winters since 1980-81, but was evenly split between above and below normal rainfall when following the ten wettest winters. In addition, new research indicates that spring tornado outbreaks are more likely across most of the United States including Texas immediately following La Niña winters regardless of whether a resurgent La Niña or El Niño develops by fall. Local research also shows that South Central Texas has more tornadoes and severe straight-line wind reports during ENSO-neutral springs than when La Niña or El Niño is in place. Thus, severe weather may be a bit more active than normal this spring regardless of whether we end up having a relatively wet or dry spring.



Coop Observer Award is next...

## Coop Observer Awards

By Steve Smart

Gilbert Philippus of National Weather Service (NWS) Cooperative Observing station Gonzales 10SW is presented with his 20 year length of service award by Steve Smart, NWS Observing Program Leader. Gilbert has been measuring, recording and reporting daily precipitation amounts to the NWS for his location near Gonzales, Texas since January 1, 1997. As the situation warrants, Gilbert also reports severe weather phenomenon, flooding or flash flooding rain, or weather related damage in the area to the NWS.



*Photo by Cory Van Pelt, NWS Hydrometeorological Technician*

## The #SafePlaceSelfie Campaign

By Trevor Boucher

It's time for your close up, selfie style! The #SafePlaceSelfie campaign is back again this year after such a successful first year in 2016 and NWS Austin/San Antonio wants your help!

The #SafePlaceSelfie campaign is a fun and simple way to refresh your safety plan and show off your severe weather preparedness at home, work, school, or wherever you happen to be! When it comes to severe weather preparedness, knowing where your "safe place" is located and having a plan to get there is the most important action you can take. Now that Spring is here, it's time to dust off the cobwebs, change those batteries, smile, and take a selfie while you're at it!

Join thousands of people from all across the country the week of April 3rd-6th as they submit their selfies to the #SafePlaceSelfie hashtag. You can do this on Twitter, Facebook, Instagram, Snapchat, or all of the above! Our office, as well as weather offices across the country will be participating but it's not just us. Organizations such as the Weather-Ready Nation Ambassadors program, FEMA, the National Weather Association, the American Meteorological Society, local broadcasters, and more will all be participating and sharing your submissions!

The whole week will culminate with a tweetchat on April 6th from 12-1 PM CDT when all of these organizations share severe weather safety tips and information and answer your questions! So don't miss out on the fun! Join us this April and let's see your best #SafePlaceSelfie! Remember to follow us on: Twitter/Facebook/Instagram: @NWSSanAntonio



NWS San Antonio staff taking their #SafePlaceSelfie in 2016

NWS information next...

*National Weather Service  
Austin/San Antonio  
Weather Forecast Office (WFO)  
2090 Airport Road  
New Braunfels, Texas  
Phone: 830-606-3617*

### National Weather Service Mission Statement

“The National Weather Service (NWS) provides weather, hydrologic, and climate forecasts and warnings for the United States, its territories, adjacent waters and ocean areas, for the protection of life and property and the enhancement of the national economy. NWS data and products form a national information database and infrastructure which can be used by other governmental agencies, the private sector, the public, and the global community.”



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**Austin/San Antonio National Weather Service Home Page**

**<http://www.weather.gov/austin>**

*Thank you for reading our newsletter!*

*Have a happy spring season and enjoy  
South-Central Texas weather!*