Weather, Climate, and Climate Change…
What the Data Say
Class and Instructor Introduction

Bob Endlich

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13 September 2017

http://casf.diskstation.me/wordpress/

Instructor Introduction:

- Grew up in New Jersey; Life-long interest Earth Sciences
- Bachelor's: Geology, Rutgers, '62
- Basic Meteorology: Texas A&M, '63-64
- Master's: Meteorology, Penn State, '69
- 21 Years USAF Weather Officer

- 14 Years ABQ =>WSMR Atmospheric Team Leader, High Energy Lasers
- 15 Years: Military Instructor, Weather Effects on Military Systems, Software Test Engineer
- Sailplane Pilot: 500 Hours

Hurricane Harvey in Texas: interesting introduction to this class.

Harvey and flooding rainfall in Louisiana: focus to start discussions.

Claims: Harvey & 2016 Baton Rouge floods enhanced by human activities

Las Cruces Climate Study group—
Cruces Atmospheric Sciences Forum, our nascent web site:

http://casf.diskstation.me/wordpress/

Plan: page on this web site for this class.

CASF

Cruces Atmospheric Sciences Forum – In science, the debate is never over!

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@NPR Bungles Sea Level Rise Story

Robert Endlich

May 11, 2017

Sea-level Rise

carbon dioxide, climate

[This is a reprint of an article that originally appeared in the wattsupwiththat.com blog and was authored by CASF member, Bob Endlich. We have added it to the May 2017 Archive directory.]

Guest Blogger / May 11, 2017

Search ...

CRUCES ATMOSPHERIC SCIENCES FORUM MEETING

Class Web Page: resources for class members:

http://casf.diskstation.me/wordpress/

URLs for Operational Weather Products I use

URLs for Geophysicial data in climate studies I use.

Class presentations, in PDF format…all will be in PDF format.

Email contact: bendlich@msn.com

Interested in what I've written; what others have written about me?

Google search <Robert W. Endlich> same in Las Cruces Sun-News.

I welcome brief discussions from class members:

class is about facts, measurements, observations and data:

on weather, climate, and climate change.

Class is about what the data say.

Disagree? phrase your comments with specific data source .

Journal article or web reference

Much is said about “peer review”

Peer review is no substitute for the scientific method.

Don’t want to get into emotional discussions or arguments in class.

Emotion: potent force that has its place in certain life areas…

…physical, chemical, meteorological or mathematical subjects… not so much

Some subjects: amenable to after-class discussions or email?

Subjects I hope to cover:

Hurricane Harvey and 2016 flooding rains in Baton Rouge, LA, area

Types of weather and atmospheric measurements and their data

Climate data, sources / resources for climate information

The North American monsoon: how it controls our rainfall / climate.

El Nino, also called El Nino Southern Oscillation

La Nina, not quite opposite of El Nino

The Pacific Decadal Oscillation and long-term wetness / drought here.

Is the US Surface Temperature Record Reliable?

Proxy Temperature/<CO2> data: past 10,000 years:

Ice Core and Tree Ring Temperature data and <CO2> from the geologic record -- past 600 MILLION years.

More Subjects I hope to cover:

Sea Level, Sea Level History: non-occurrence of anthropogenic sea level rise.

Climate forecasts, Climate forecast failures.

Atmospheric CO2: data from NASA's Orbiting Carbon Observatory-2

Source of "97% of Climate Scientists Agree on Climate Catastrophe"

Promises of Biofuels and Green Energy: 21st Century Snake Oil

The Deliberate Corruption of Climate Science

Sure looks like Temperature Adjustment Fraud to me:
NASA, Wikipedia, and the American Meteorological Society.

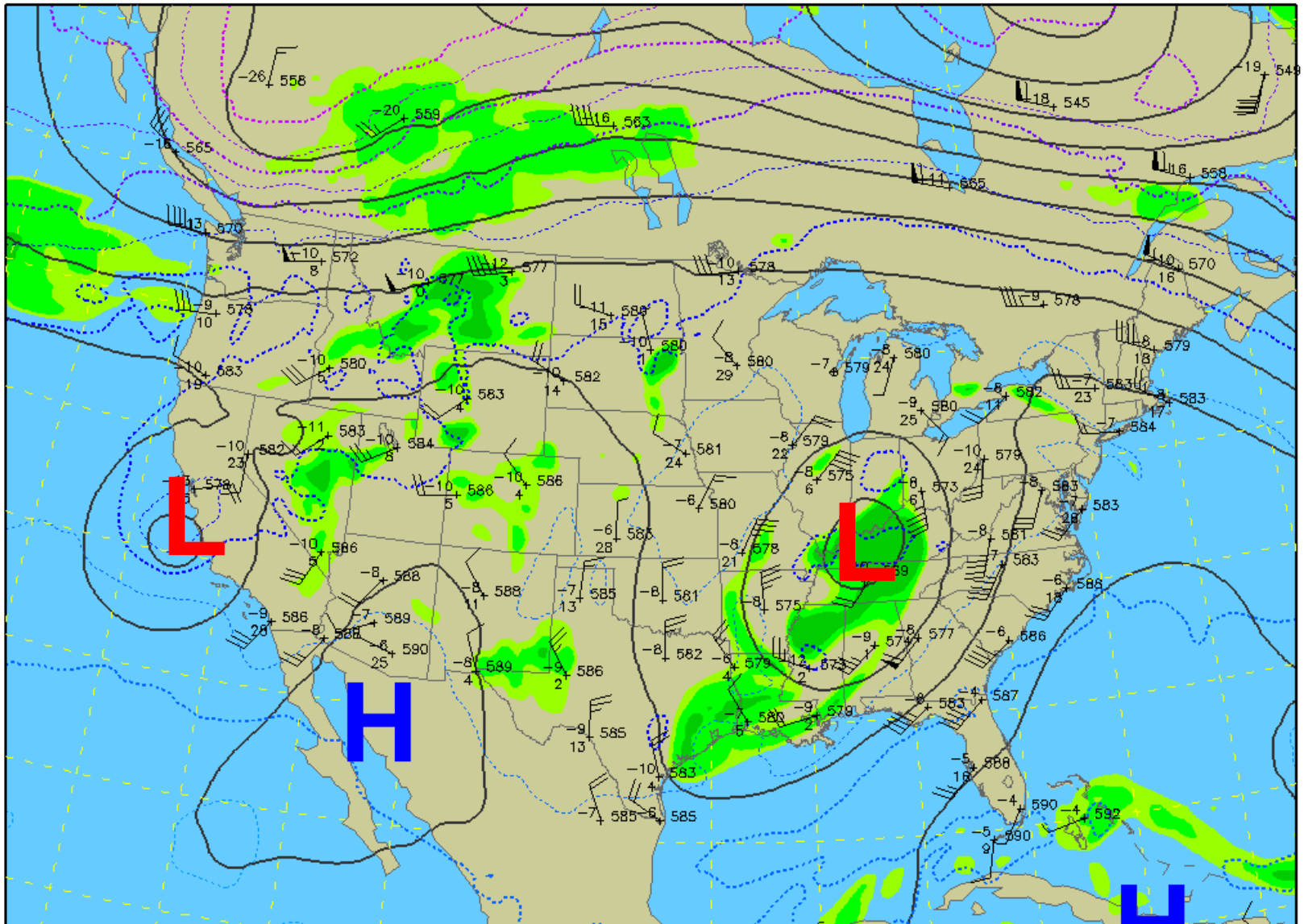
Each class I hope to get into a current weather briefing so class gets a feel for the operational vs. the research side of this science.

Here is today's:

http://weather.rap.ucar.edu/upper/upaCNTR_500.gif

500 mb rawinsonde data 12z Wed 13 Sep 2017

500 mb Heights (dm) / Temperature (°C) / Humidity (%)



http://weather.rap.ucar.edu/upper/epz.gif

Skew-T Log P diagram

"Graph paper" for Meteorologists

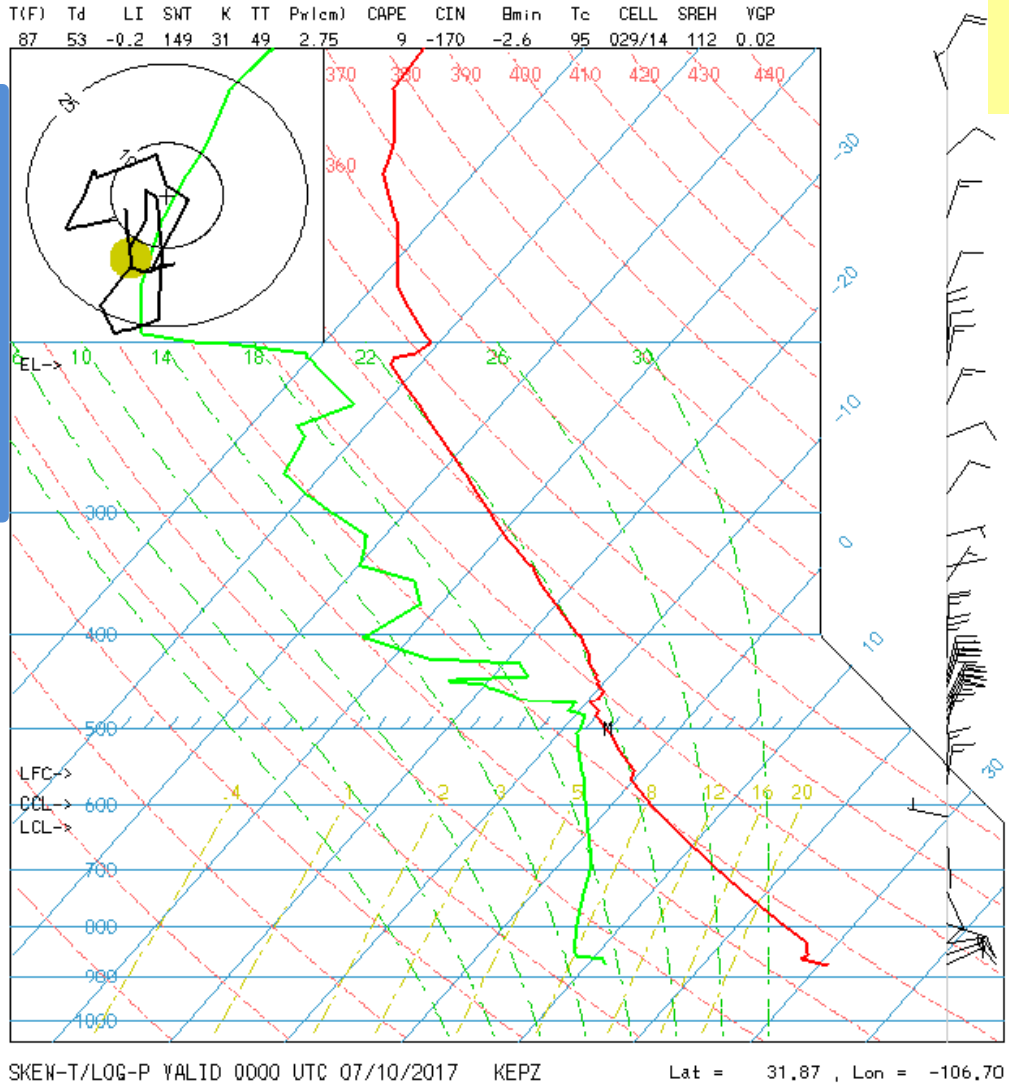
Also in Blue

in the Vertical

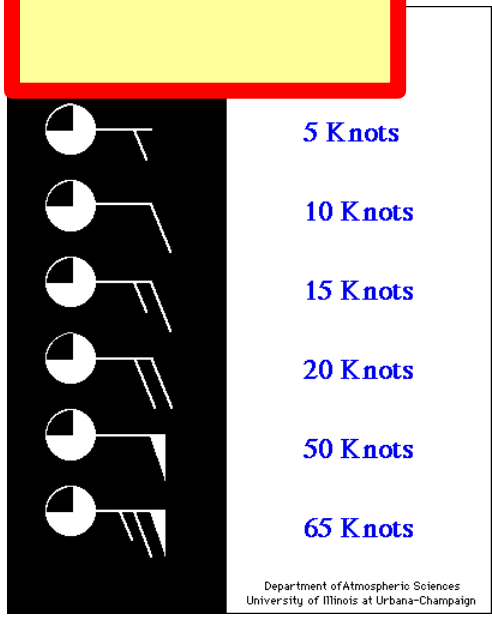
Pressures decrease

logarithmically

The GREEN LINE is the Dew Point temperature from the same sounding.



The RED line is the temperature from the weather balloon sounding



Skewed Temperatures in Blue

The Skew-T allows easy calculation of dozens of thermodynamic variables

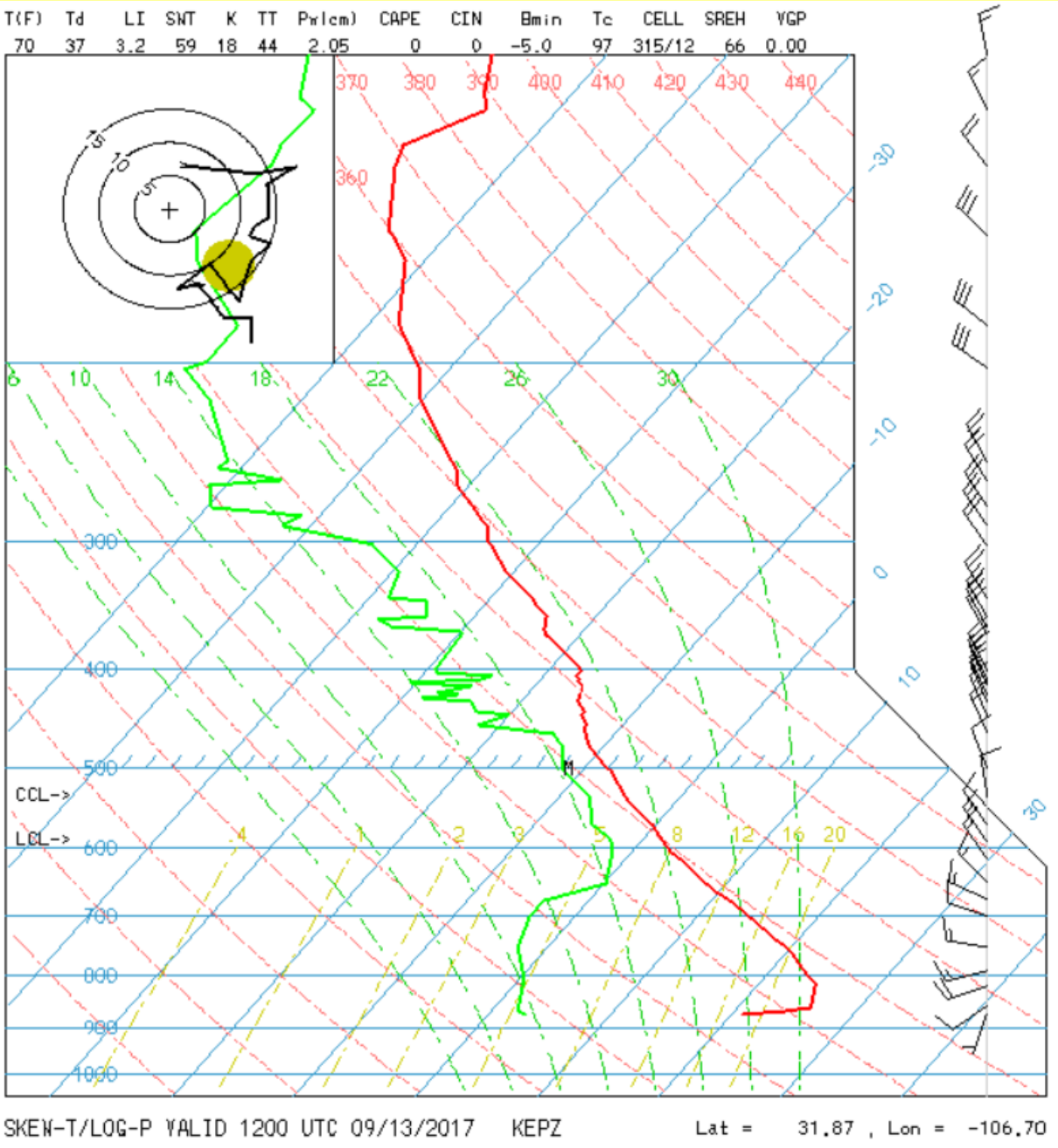
http://weather.rap.ucar.edu/upper/epz.gif

Morning Sounding for El Paso

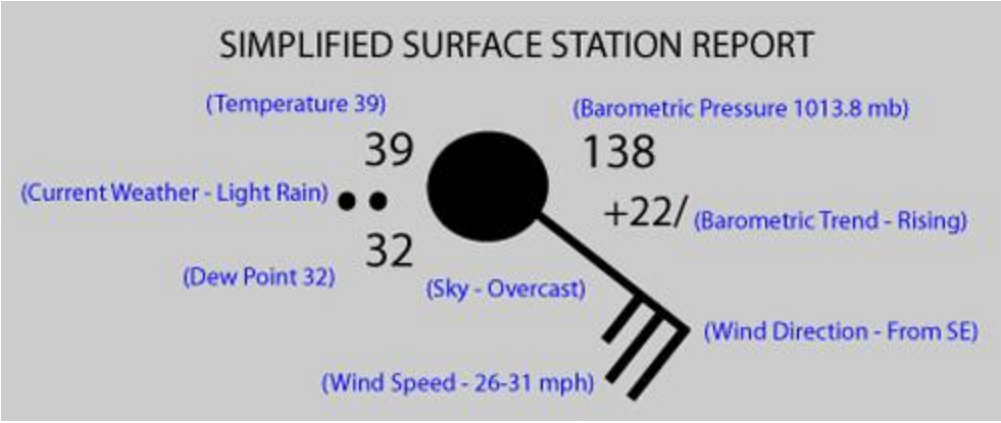
(EPZ=from Santa Teresa Airport)

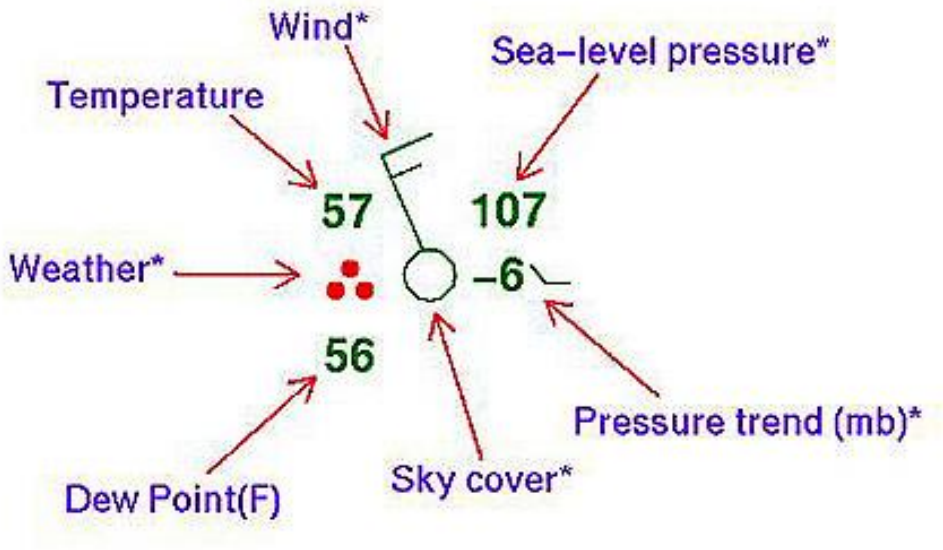
All Westerlies!

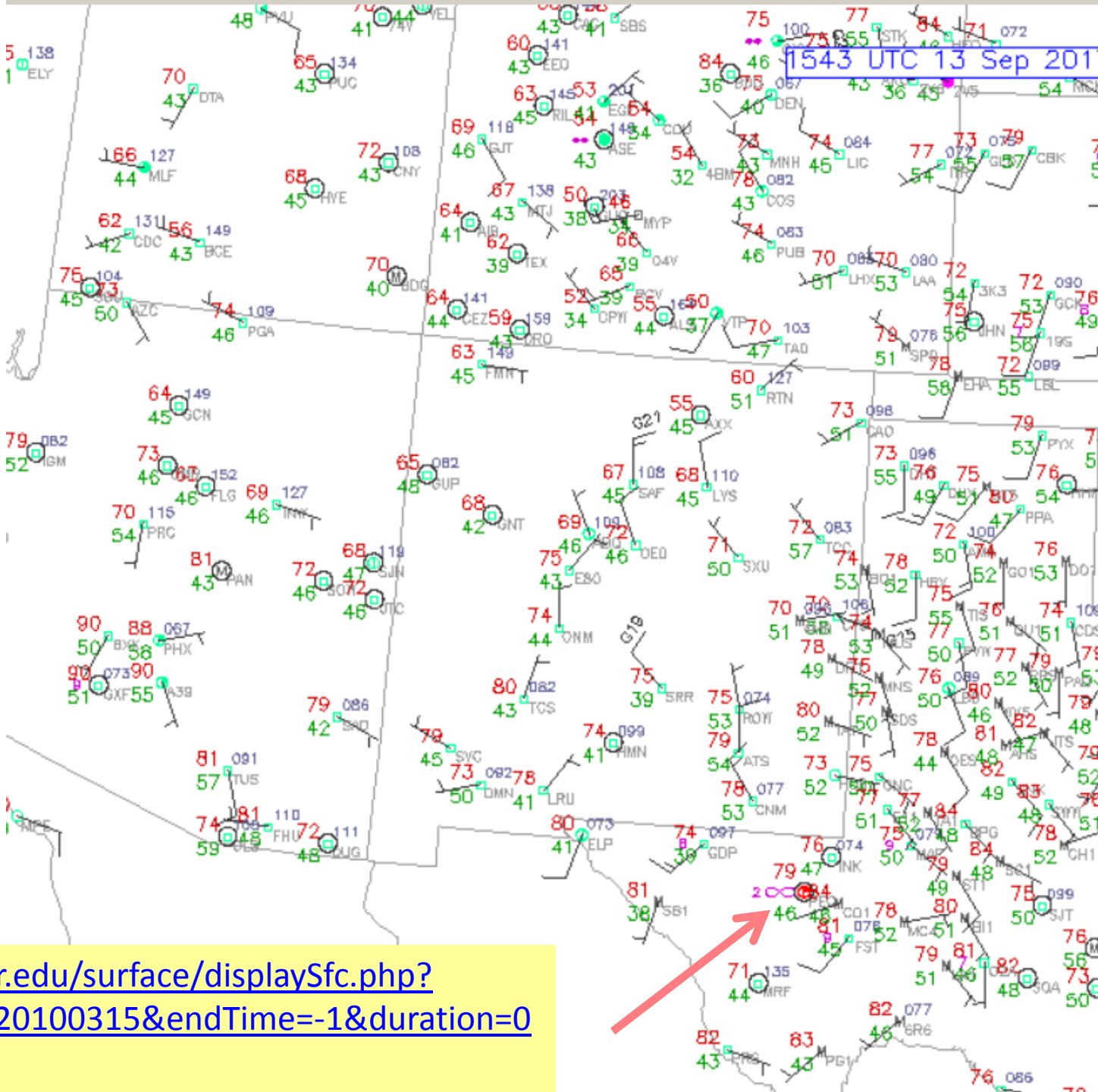
Looks like the Fall Transition.



Surface weather observations are plotted on a map in this stylistic manner:







http://weather.rap.ucar.edu/surface/displaySfc.php?region=abq&endDate=20100315&endTime=-1&duration=0

http://aviationweather.gov/adds/metars/index?submit=1&station_ids=KPEQ&chk_metars=on&hoursStr=2&std_trans=translated&chk_tafs=on

Pecos TX METAR Observation.

Output produced by METARs form (1605 UTC 13 September 2017)
found at http://aviationweather.gov/adds/metars/

METAR text: **KPEQ 131555Z AUTO 00000KT 10SM CLR 28/07 A2990 RMK AO2 T02760072**
Conditions at: KPEQ (PECOS CITY , TX, US) observed 1555 UTC 13 September 2017
Temperature: 27.6°C (82°F)
Dewpoint: 7.2°C (45°F) [RH = 28%]
Pressure (altimeter): 29.90 inches Hg (1012.6 mb)
Winds: calm
Visibility: 10 or more miles (16+ km)
Ceiling: at least 12,000 feet AGL
Clouds: sky clear below 12,000 feet AGL
Weather: automated observation with no human augmentation;
there may or may not be significant weather present at this time

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METAR text: **KPEQ 131535Z AUTO 00000KT 2 1/2SM HZ SCT070 SCT085 26/08 A2990 RMK AO2 VIS 1 1/4V5 T02620077**
Conditions at: KPEQ (PECOS CITY , TX, US) observed 1535 UTC 13 September 2017
Temperature: 26.2°C (79°F)
Dewpoint: 7.7°C (46°F) [RH = 31%]
Pressure (altimeter): 29.90 inches Hg (1012.6 mb)
Winds: calm
Visibility: 2.50 miles (4.02 km)
Ceiling: at least 12,000 feet AGL
Clouds: scattered clouds at 7000 feet AGL
scattered clouds at 8500 feet AGL
Weather: HZ (haze)

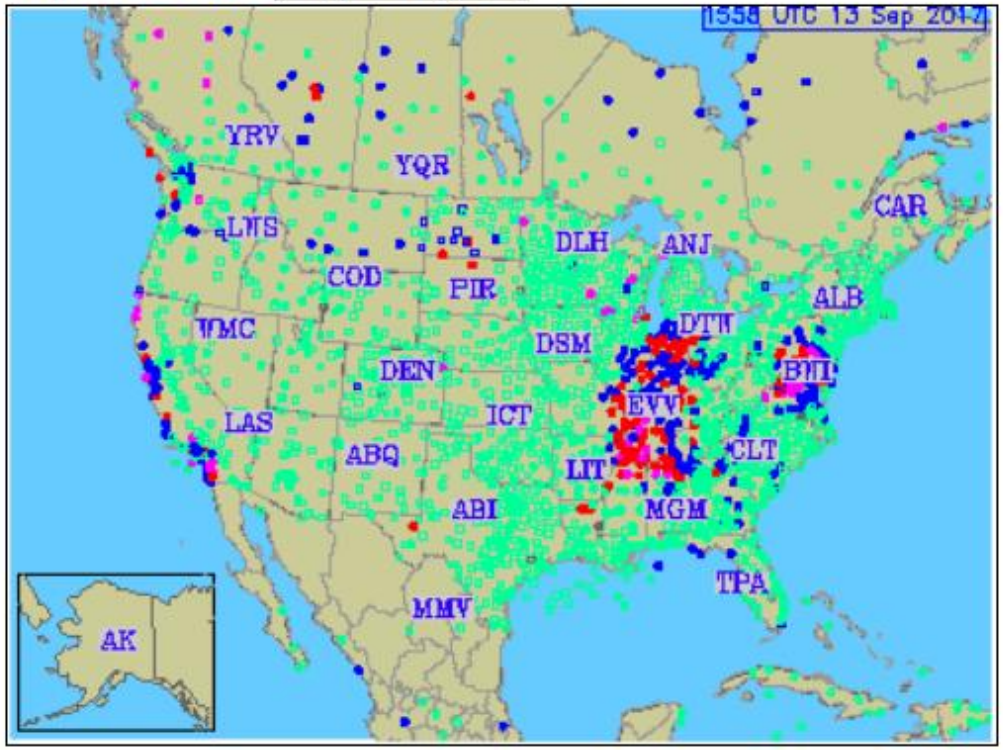
The National Center for Atmospheric Research
Operated by the University Corporation for Atmospheric Research

NCAR RAL Real-Time Weather Data

Home / RAL : Weather Home | Satellite | Radar | Surface | Upper-Air | Forecast

Help

End date: Today
End time: Most recent
Loop duration: Single image

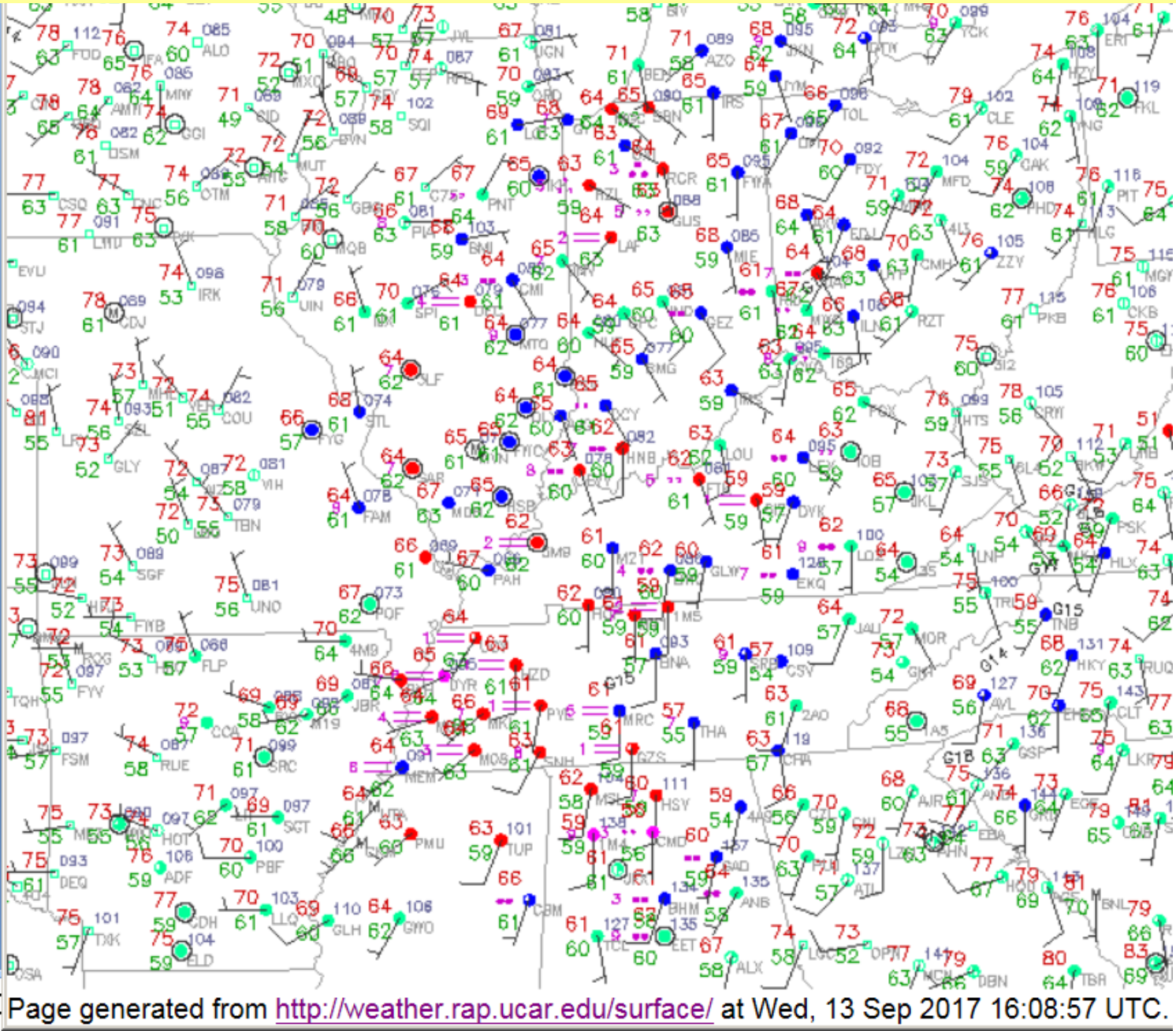


http://weather.rap.ucar.edu/surface/

Interactive METARs Java applet or large version.

Tornado alley overlay at DEN Go

http://weather.rap.ucar.edu/surface/displaySfc.php?region=evv&endDate=20170913&endTime=-1&duration=0



http://www.nhc.noaa.gov/?epac

Eastern North Pacific | Atlantic

Current Disturbances and Two-Day Cyclone Formation Chance: < 40% 40-60% > 60%

Tropical or Sub-Tropical Cyclone: Depression Storm Hurricane

Post-Tropical Cyclone Remnants

SEARCH

Eastern North Pacific 2-Day Graphical Tropical Weather Outlook

http://www.nhc.noaa.gov/gtwo.php?basin=epac&fdays=2

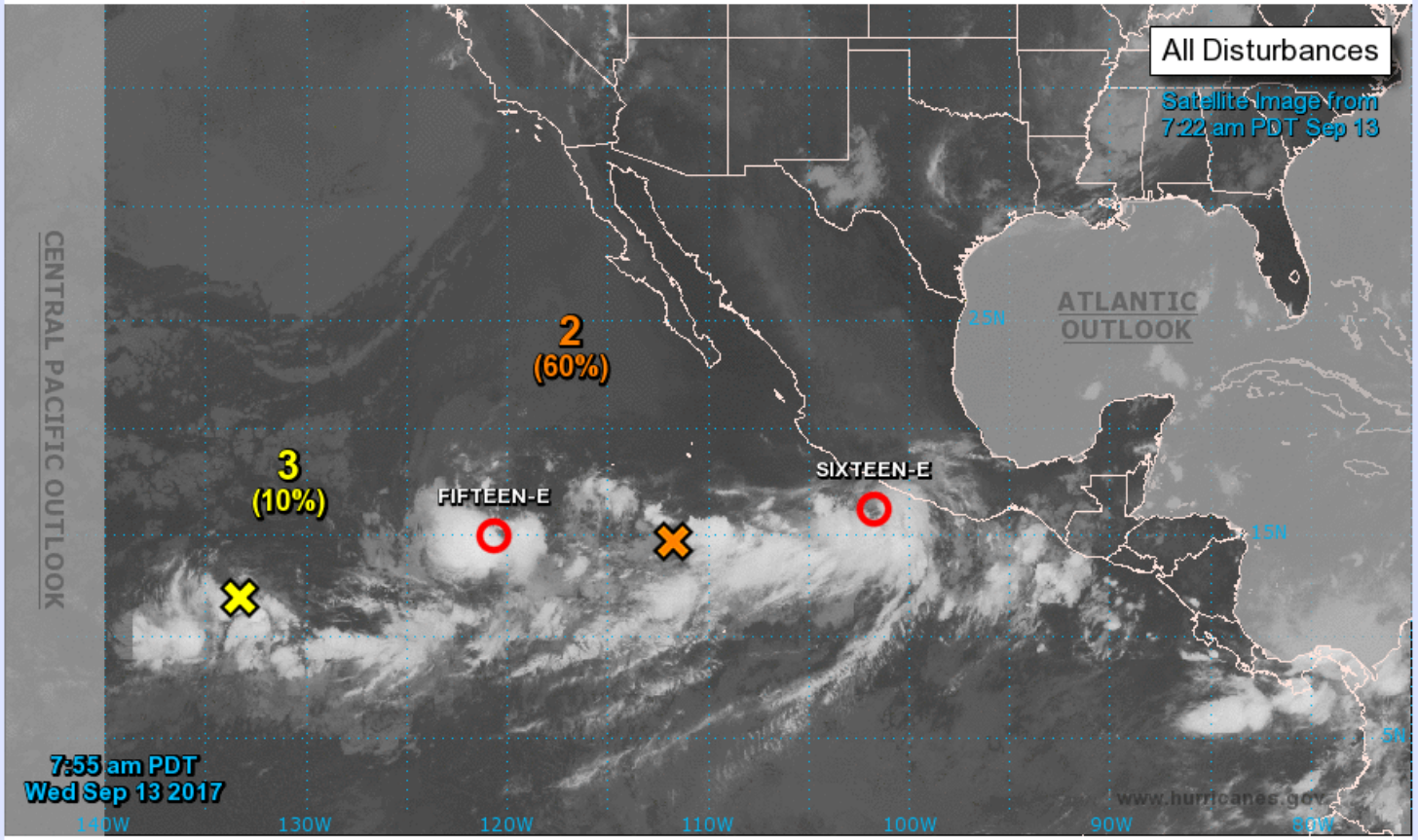
Archived Outlooks

Eastern North Pacific | Atlantic

Disturbances: ALL [2] [3]

Two-Day Graphical Tropical Weather Outlook

National Hurricane Center Miami, Florida



Current Disturbances and Two-Day Cyclone Formation Chance: < 40% 40-60% > 60%
Tropical or Sub-Tropical Cyclone: Depression Storm Hurricane
Post-Tropical Cyclone Remnants

View 5-Day Graphical Tropical Weather Outlook

This product is updated at approximately 5 AM, 11 AM, 5 PM, and 11 PM PDT from May 15 to November 30, with special outlooks

http://forecast.weather.gov/product.php?site=NWS&issuedby=EPZ&product=AFD&format=CI&version=1&glossary=1

.DISCUSSION... A tricky forecast coming up for the CWA as we will be dealing with narrow tropical plumes and, later, possible interaction with remains of a tropical storm.

In the near term, remains of former Hurricane Irma have about reached their maximum westward position and should start lifting northeast. This will allow our persistent ridge to begin sliding east as a Pacific trough moves onshore of the west coast.

For today, the ridge will be overhead, limiting convection somewhat, but both main models and hi res models showing some convection over the Gila this afternoon spreading downstream some tonight. Hence will put low POPS in most of the lowlands excepting the far east and far west.

Temperatures today will be quite warm, with near record highs many areas.
Thursday through Saturday...short wave ejects out of the Pacific trough and across New Mexico. Earlier GFS runs were more bullish on precip chances but have backed off some with the latest couple of runs.

Will limit POPs mostly to the Gila, although GFS continues to show narrow tropical tap across the eastern CWA, so have included far west Texas and Otero County in the low POPs. Tropical tap eases off on Saturday so lowered POPs in the east.

Sunday and beyond...this is where the GFS/ECMWF begin diverging as east Pacific tropical storm possible approaches the area.

GFS continues to be quite bullish on the system moving northeast over El Paso by Monday evening, dropping significant rainfall over much of the area Monday into Tuesday morning, with rapid clearing after.

ECMWF keeps the tropical storm out to sea west of the Baja, leaving Monday and Tuesday mostly dry.

However it does show moisture surge on Wed/Thur not directly related to the tropical feature. No significant QPF with this, but it does show some rain for most areas.

Will continue to watch this situation closely.

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EPZ WATCHES/WARNINGS/ADVISORIES...
NM...None.
TX...None. && $$

17 Hefner