

# The Influence of ENSO Cold and Warm Event Cycles on South Carolina Winter Weather

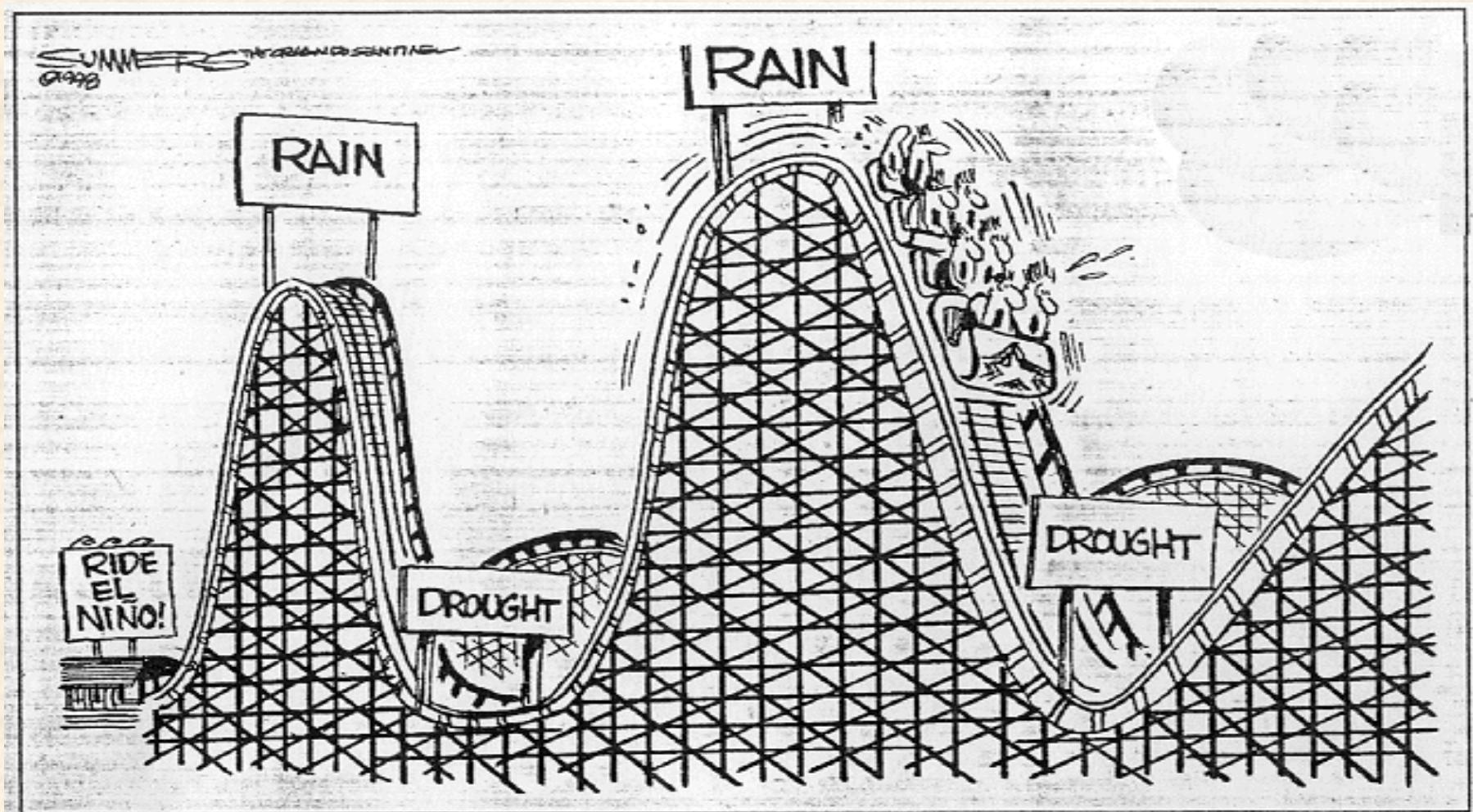


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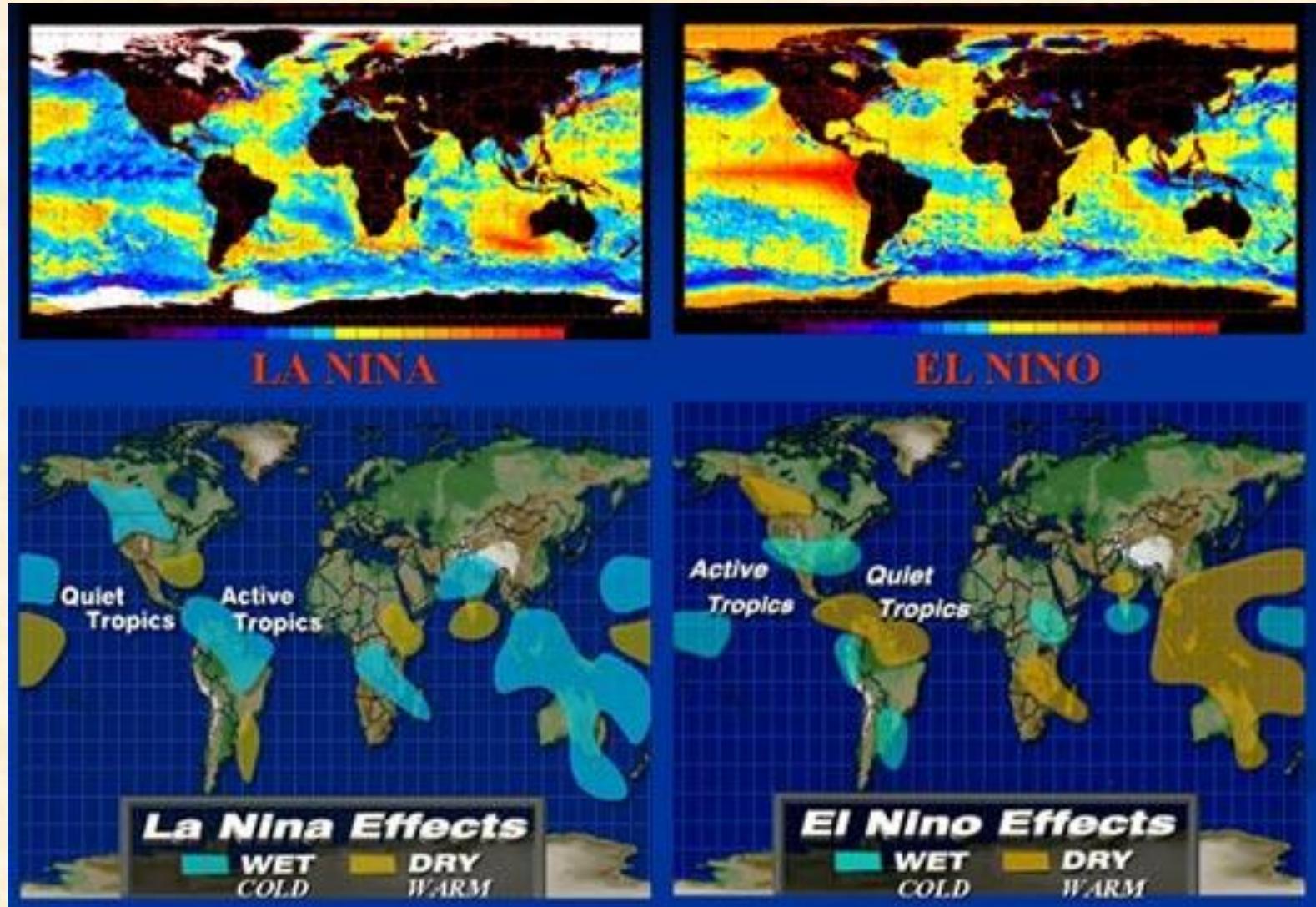
Hope Mizzell, Ph.D.  
SC State Climatology Office

# The ENSO Ride



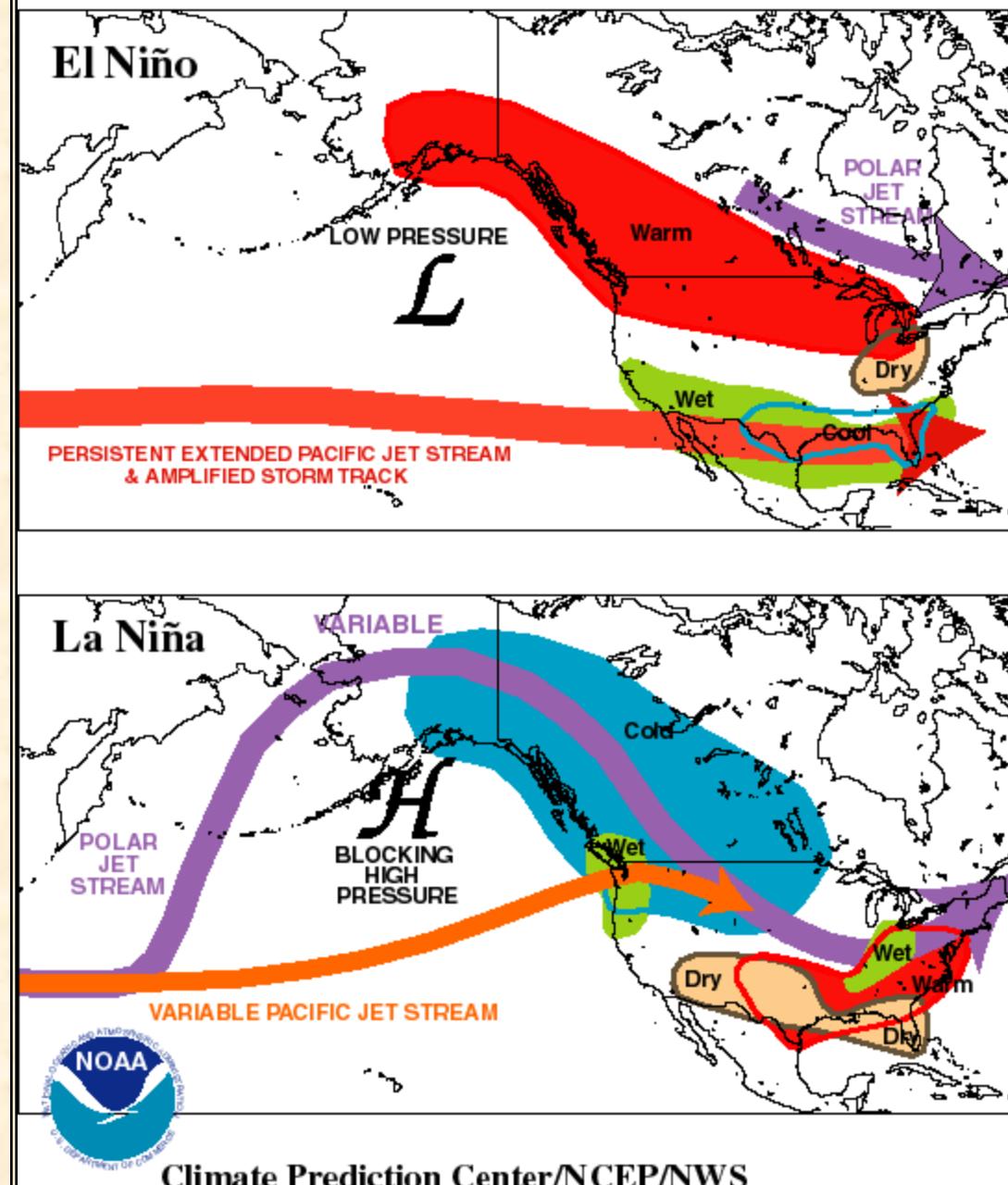
By Dana Summers, The Orlando (Fla.) Sentinel, Tribune Media Services

# Global ENSO Effects

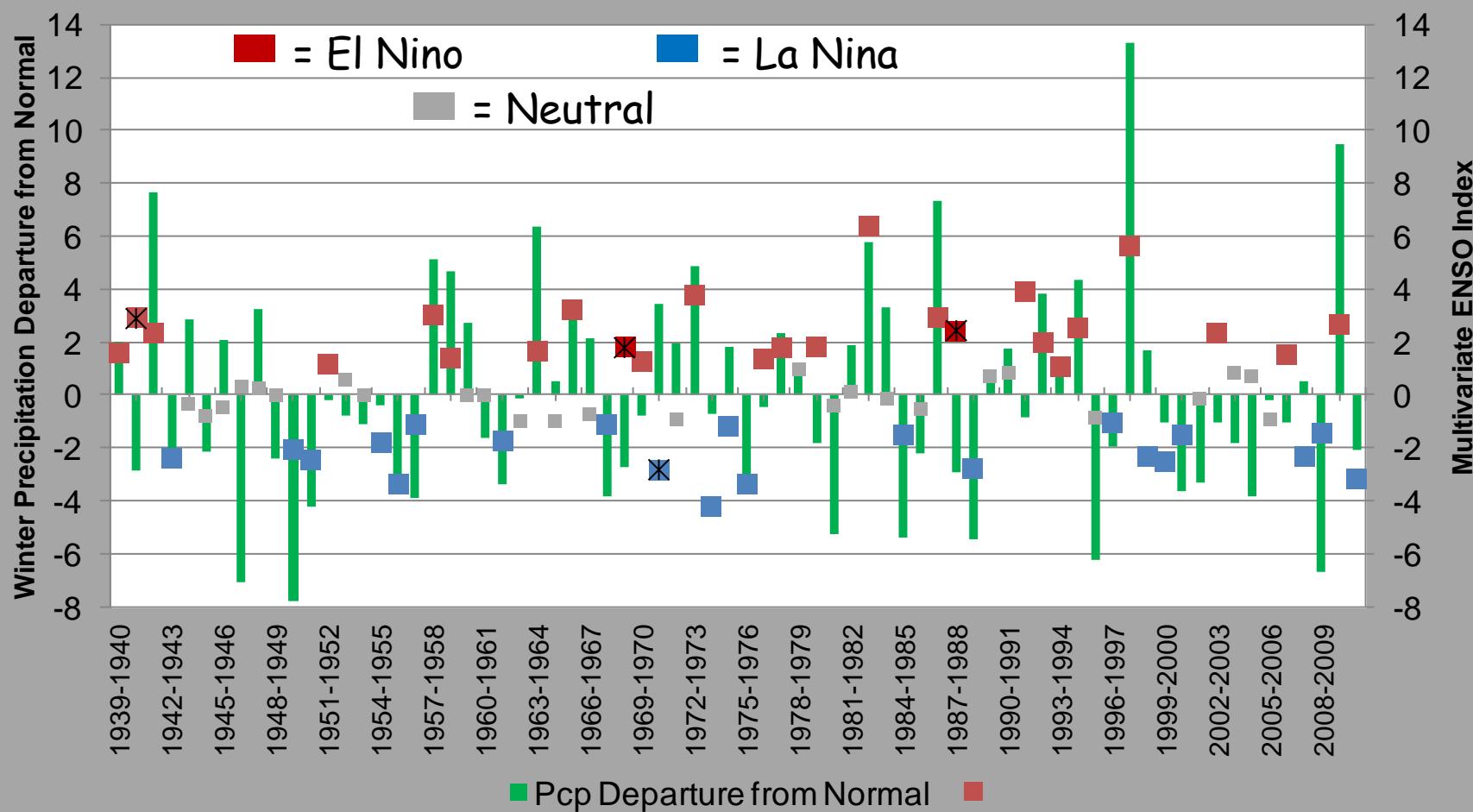


Source: <http://www.intellicast.com/Community/Content.aspx?ref=rss&a=139>

TYPICAL JANUARY-MARCH WEATHER ANOMALIES  
AND ATMOSPHERIC CIRCULATION  
DURING MODERATE TO STRONG  
EL NIÑO & LA NIÑA



# ENSO's Impact on Charleston's Winter Precipitation (inches)



## Score Card (72 winters):

**24 Homeruns (86%)**

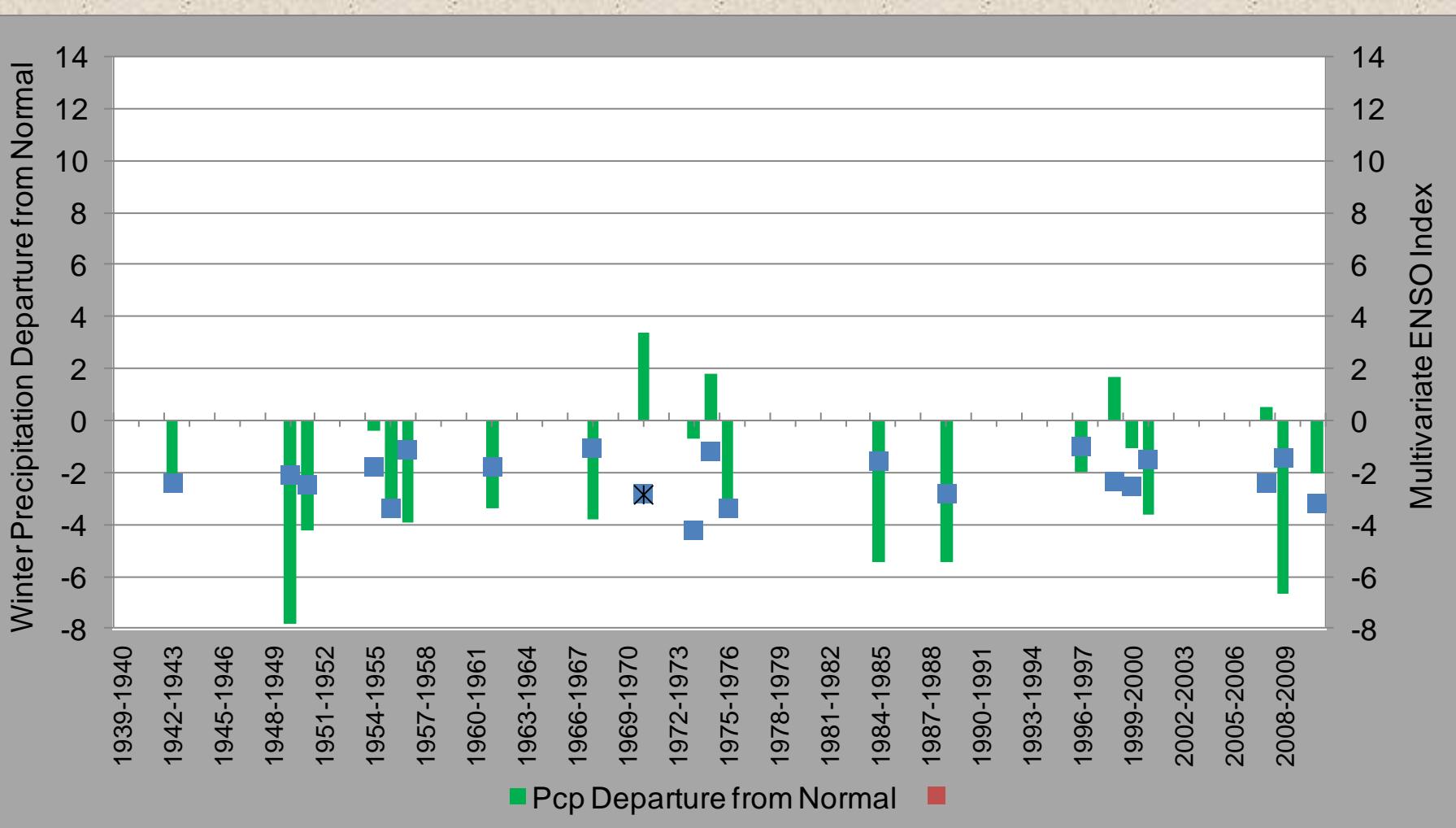
**4 Strikeouts (14%)**

**18 Foul Balls**

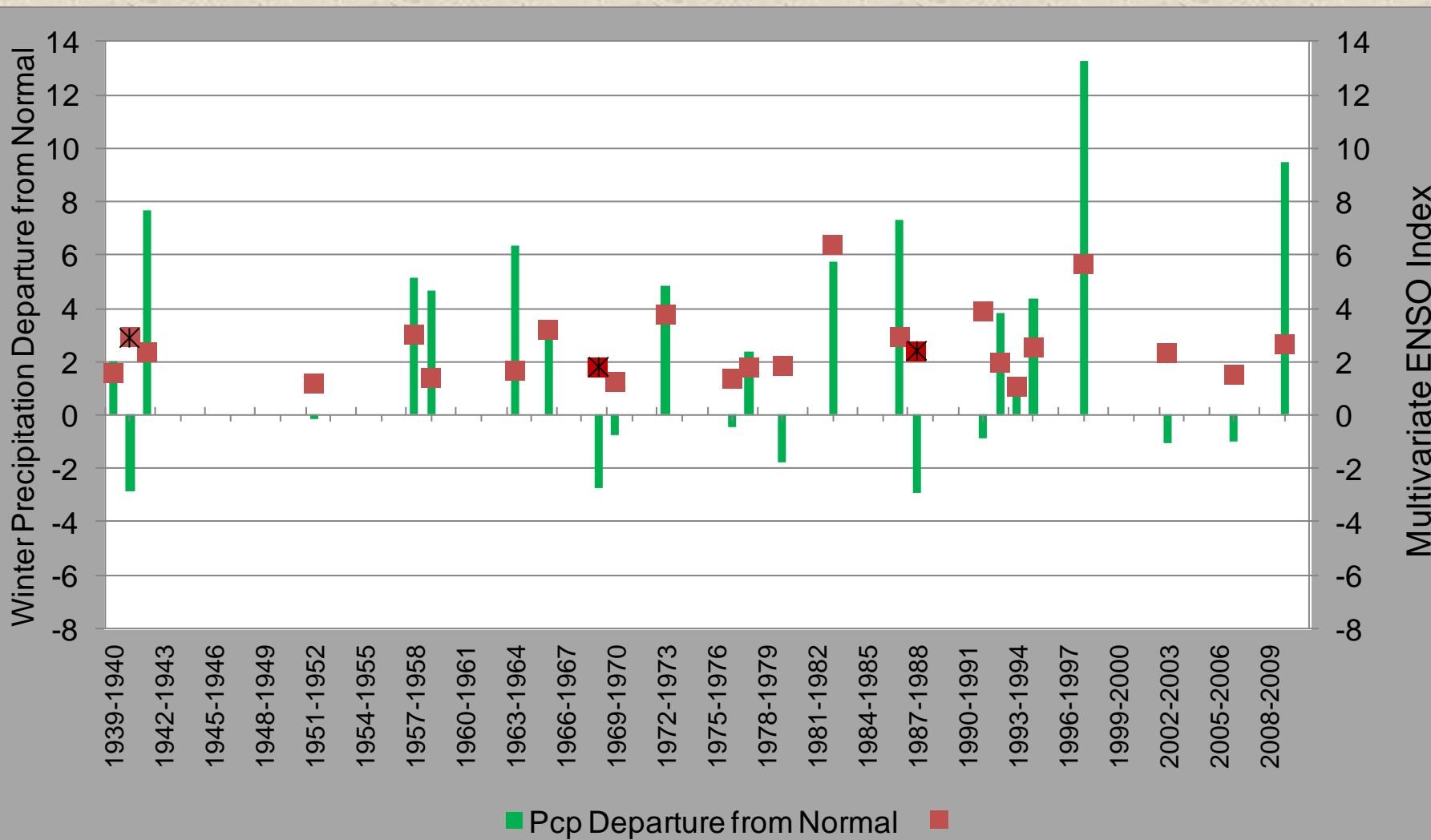
**26 Seasons Didn't Play (Neutral)**



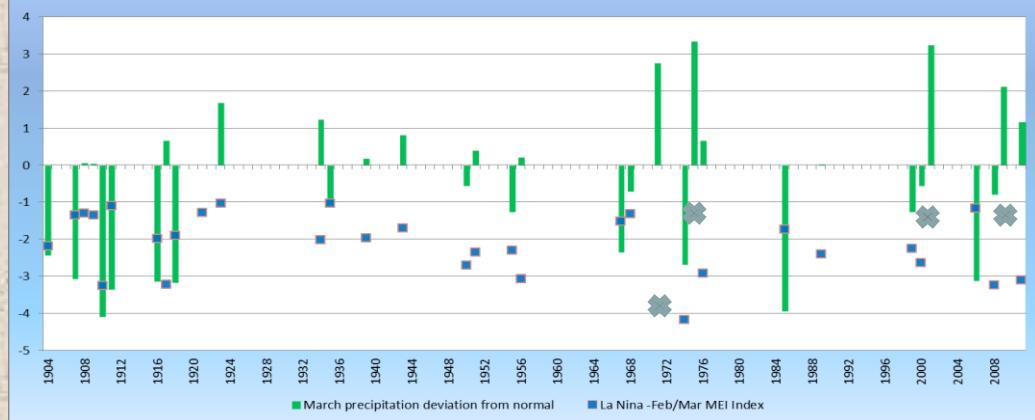
# La Nina and Charleston's Winter Precipitation (inches)



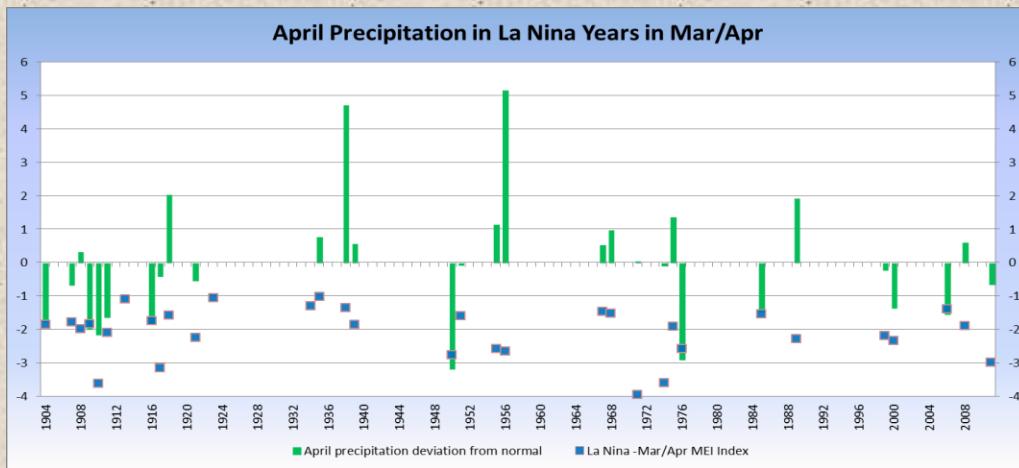
# El Nino and Charleston's Winter Precipitation (inches)



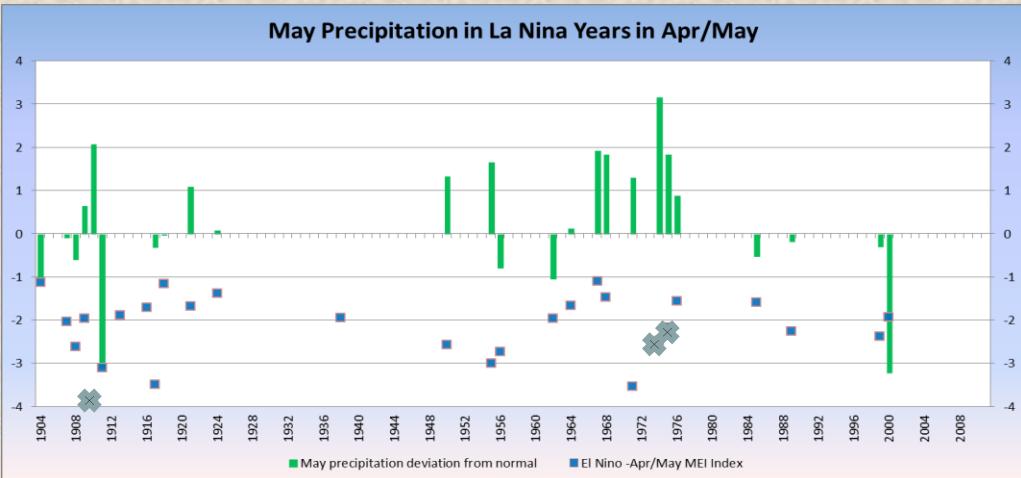
### March Precipitation in La Niña Years in Feb/Mar



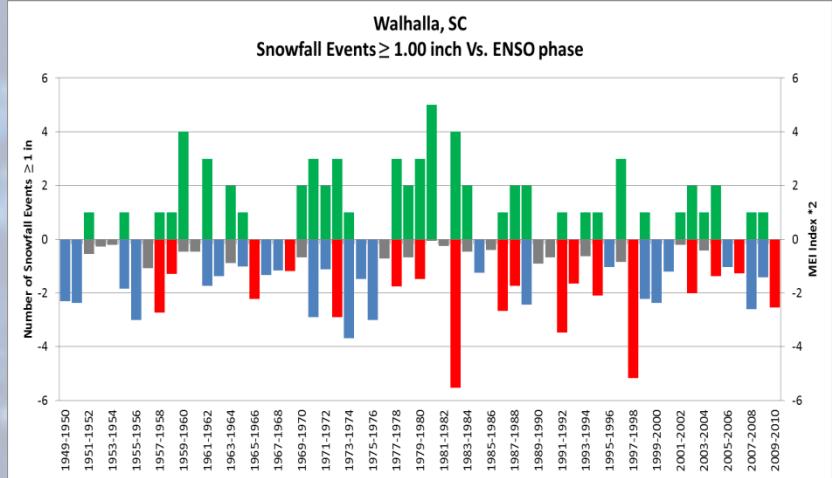
### April Precipitation in La Niña Years in Mar/Apr



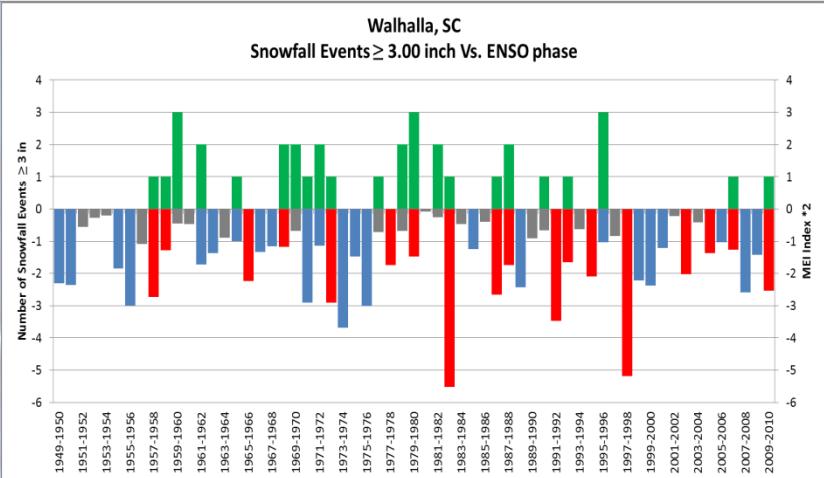
### May Precipitation in La Niña Years in Apr/May



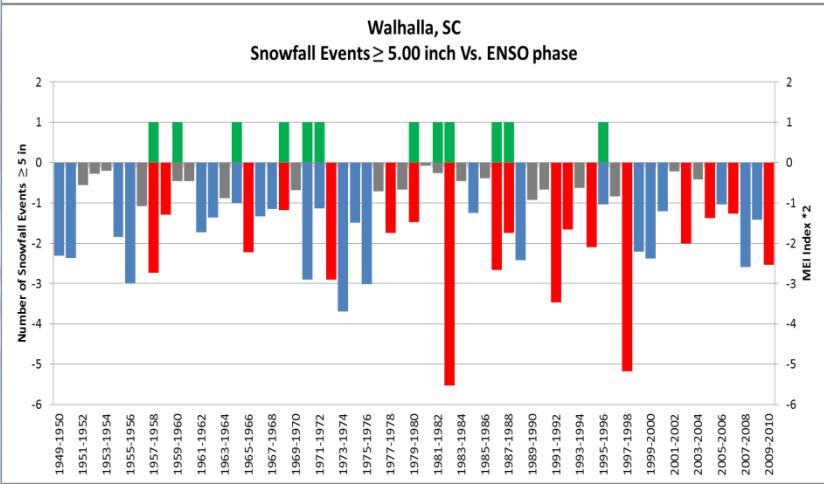
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El Nino - 12/33 - 36%  
La Nina - 10/33 - 30%  
Neutral - 11/33 - 33%



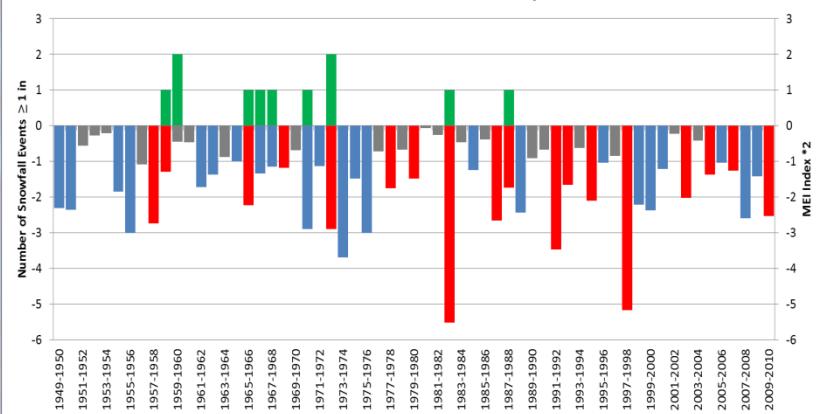
El Nino - 11/22 - 50%  
La Nina - 5/22 - 23%  
Neutral - 6/22 - 27%



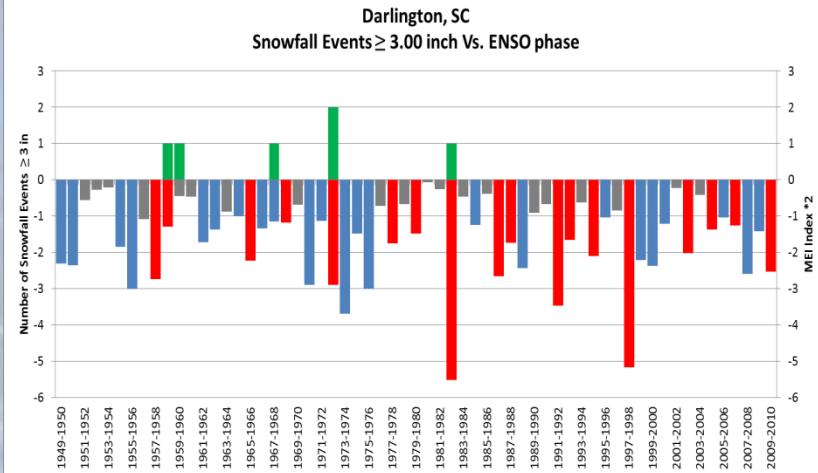
El Nino - 6/12 - 50%  
La Nina - 4/12 - 33%  
Neutral - 2/12 - 17%

# DARLINGTON, SC

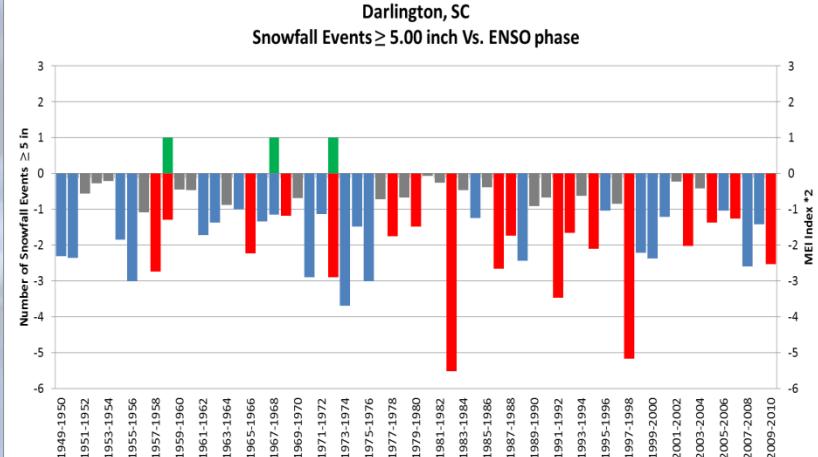
Darlington, SC  
Snowfall Events  $\geq$  1.00 inch Vs. ENSO phase



El Nino - 5/9 - 56%  
La Niña - 3/9 - 33%  
Neutral - 1/9 - 11%



El Nino - 3/5 - 60%  
La Niña - 1/5 - 20%  
Neutral - 1/5 - 20%



El Nino - 2/3 - 67%  
La Niña - 1/3 - 33%  
Neutral - 0/3 - 0%

Events  $\geq 1$  in

ENSO Phase	Charleston	Columbia
El Nino	$4/8 = 50\%$	$8/22 = 36\%$
La Nina	$1/8 = 13\%$	$7/22 = 32\%$
Neutral	$3/8 = 38\%$	$7/22 = 32\%$

Events  $\geq 3$  in

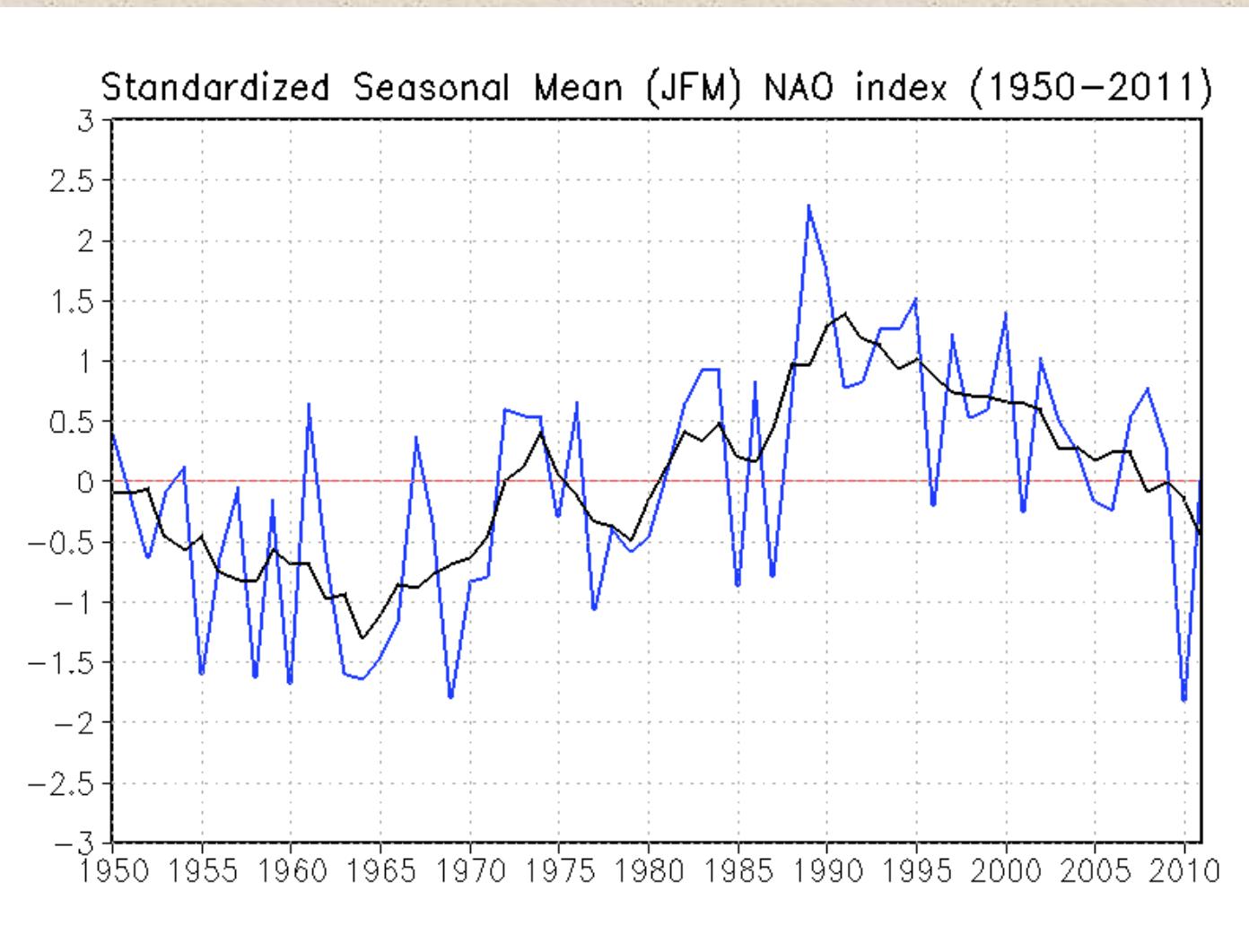
ENSO Phase	Charleston	Columbia
El Nino	$2/4 = 50\%$	$6/12 = 50\%$
La Nina	$0/8 = 0\%$	$3/12 = 25\%$
Neutral	$2/4 = 50\%$	$3/12 = 25\%$

Events  $\geq 5$  in

ENSO Phase	Charleston	Columbia
El Nino	$1/2 = 50\%$	$3/4 = 75\%$
La Nina	$0/2 = 0\%$	$0/4 = 0\%$
Neutral	$1/2 = 50\%$	$1/4 = 25\%$



# North Atlantic Oscillation



# Thank you



<http://www.dnr.sc.gov/climate/sco>

# ENSO and Charleston's Mean Winter Temperature ( $^{\circ}\text{F}$ )

