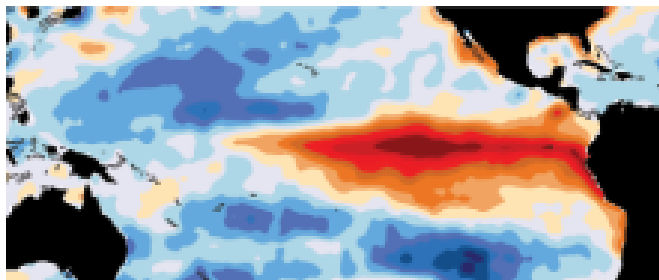




What are La Niña and El Niño and why do they matter?

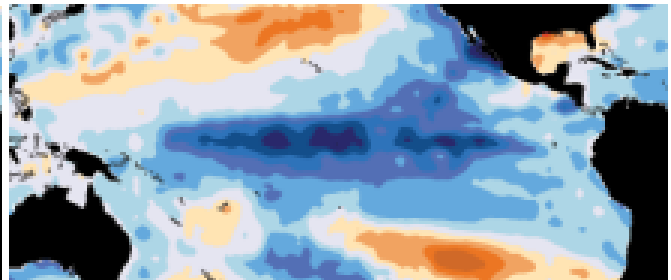
El Niño and La Niña represent opposite extremes in the El Niño/Southern Oscillation (ENSO). The ENSO cycle refers to the coherent and sometimes very strong year-to-year variations in sea-surface temperatures, rainfall, surface air pressure, and atmospheric circulation that occur across the equatorial Pacific Ocean. El Niño refers to the above-average sea-surface temperatures that periodically develop across the east-central equatorial Pacific. It represents the warm phase of the ENSO cycle. La Niña refers to the periodic cooling of sea-surface temperatures across the east-central equatorial Pacific. It represents the cold phase of the ENSO cycle.

El Niño



Warmer than normal tropical Pacific sea surface temperatures

La Niña

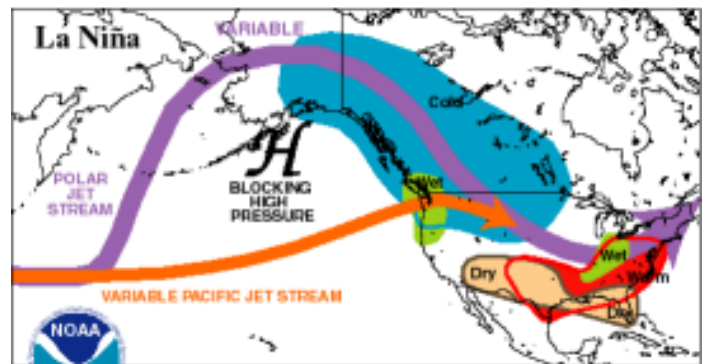
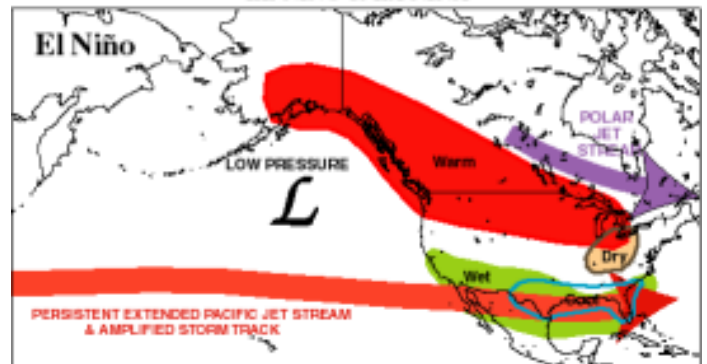


Cooler than normal tropical Pacific sea surface temperatures

Why do El Niño and La Niña Occur?

El Niño and La Niña are naturally occurring phenomena that result from interactions between the ocean surface and the atmosphere over the tropical Pacific. Changes in the ocean surface temperatures affect tropical rainfall patterns and atmospheric winds over the Pacific ocean, which in turn impact the ocean temperatures and currents. The El Niño and La Niña related patterns of tropical rainfall causes changes in the weather patterns around the globe as seen on the diagram to the right. El Niño and La Niña episodes typically occur every 3-5 years. El Niño typically lasts 9-12 months while La Niña typically lasts 1-3 years.

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



Climate Prediction Center/NCEP/NWS

General Weather Patterns

Winter El Niño episodes (right top map) features a strong jet stream and storm track across the southern part of the United States, and **less storminess and milder-than-average conditions across the North**. La Niña episodes (bottom map) feature a very wave-like jet stream flow over the United States and Canada, with colder and stormier than average conditions across the North CONUS, and warmer and less stormy conditions across the South.