

NASA's Carbon Sleuth Tracks the Influence of El Niño on Atmospheric CO₂

NASA's OCO-2 mission monitored changes in global CO₂ concentrations during the 2015-2016 El Niño event.

Inset shows the time-series of column-averaged CO₂ concentration anomalies derived from OCO-2 observations over the tropical Pacific Ocean – the center of action during an El Niño.

During neutral conditions, the anomalies hover around zero but during the El Niño event, two distinct phases are visible – a negative phase during the El Niño onset (March – July 2015) and a positive phase during the latter stages (October 2015 and later).

Negative anomalies are due to the reduction in outgassing of CO₂ fluxes from the tropical Pacific Ocean while the positive anomalies occur due to increased emissions from fires and droughts.

