Geophysical Research Abstracts
Vol. 17, EGU2015-2564, 2015
EGU General Assembly 2015

Who Killed the Big 2014-15 El Niño?

Michael McPhaden
NOAA/PMEL, Seattle, United States (michael.j.mcphaden@noaa.gov)

Calendar year 2014 started out with a bang when a series of westerly wind bursts occurred west of the date line between January and April. These wind bursts generated a series of powerful downwelling Kelvin waves that led to anomalous warming in the equatorial cold tongue of the eastern Pacific, apparently signaling the onset of an El Niño event. The Kelvin waves observed in February through April 2014 were as large as those seen at the onset of the 1997-98 El Niño, the strongest on record, leading to speculation that a major warm event was underway. Moreover, there was broad consensus among forecast models for development of an El Niño during the second half of 2014. Thus, the scientific community and the popular press were abuzz with the prospect of climate fireworks reminiscent of 1997-98. However, the atmosphere did not respond to the initial oceanic warming and the positive ocean-atmosphere feedbacks that characterize El Niño evolution did not materialize. It is debatable now whether the weak warming observed in the tropical Pacific during 2014-15 should even be classified as an El Niño. This presentation will describe the evolution of conditions in the tropical Pacific over the past year and address possible reasons for why warming there was far less intense that originally anticipated.