

B24E-02 Photosynthesis and evapotranspiration along central Amazonia during an extreme drought event.

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The 2015-2016 El Niño, the second strongest since 1950s, caused a sharp decrease in precipitation and increase in temperature over tropical South America. However, spatial distribution of 2015-2016 drought was unusual and concentrated into a smaller region at northeastern Amazonia. In addition, sap flow measurements shown an increased transpiration during drought. Conversely, remote sensing data displayed a decrease in gross primary productivity. Observational data gathered by flux towers deployed in central Amazonia and near the equator are used to assess the spatial variation of photosynthesis and evapotranspiration during 2015-2016 drought. Atmospheric and soil drivers such as vapor pressure deficit, photosynthetically active radiation, surface temperature and soil moisture are investigated along with surface fluxes. The aim of this work is to analyse the severity of the 2015-2016 drought on the flux sites deployed at northeastern Amazonia and this presentation will highlight our current findings.