

The Beneficial Impact of Satellite Sea Surface Salinity Observations on El Niño/Southern Oscillation Predictions



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What is the Science Question?

Can observing salinity from space improve our seasonal predictions of the El Niño phenomenon?

What are the findings?

Including satellite salinity measurements into the initialization of the ocean state significantly improves our ability to predict the coupled ocean/ atmosphere system. Satellite salinity helps to better define the structure and behavior of the upper layer of the ocean and how it interacts with the atmosphere (winds, precipitation, etc.)

What was the impact?

This inclusion allows us to extend useful predictions of El Niño/Southern Oscillation (ENSO) from 4 months to 7 months. This is very significant!

Why does it matter?

Being able to extend ENSO forecasts allows stakeholders to adequately prepare for environmental extremes like excessive rainfall over the southern U.S. or drought over Australia, Indonesia, and northeast Brazil. For example, having a confident El Niño forecast and given enough warning, planting drought resistant corn seeds in subsistence farming regions could save many lives.

