**ENSO Diversity Working Group**

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Several warm events over the last decade have been characterized by maximum sea surface temperature (SST) anomalies over the Central/western equatorial Pacific, a pattern of warming different from that of the "canonical" El Niño. The location of maximum warming appears to be associated with different atmospheric teleconnections, and different remote impacts.

While a large body of research has been devoted to the identification of the distinctive characteristics of the "two types" of El Niño, as they have been referred to in the literature, many questions remain about this El Niño bimodality, and the adequacy of the observational data sets to assess whether El Niño diversity can be viewed as distinct flavors or rather a continuum. The primary objective of the WG is to address this issue in the context of observational, reanalysis, and paleoclimate data sets, as well as long climate model simulations. Since February, when the WG was approved, we have discussed ideas through teleconferences. Short presentations during the teleconferences have provided material for discussion and possible synthesis directions.

Another major objective of the WG is to assess the ability of the CMIP5 archive to provide a "realistic" characterization of ENSO diversity. Ideally, suitable metrics can be devised to assess the models. However, it needs to be recognized that simple indices may be unable to capture the complexity of ENSO diversity, including patterns, evolution, and relative frequency of different flavors. While some of the CMIP5 models now show evidence of distinct patterns of warming, which was true for only few of the CMIP3 models, the agreement among models on other aspects of ENSO diversity needs to be examined. In particular, the relationship between the El Niño flavors with the mean background conditions, and possible atmospheric or oceanic precursors, needs to be clarified and compared in different models.