Session: C25 Poster: W04A

Verification of decadal forecasts: Assessment of changes in regional precipitation and temperature regimes associated with decadal variability and the ability of climate models to reproduce them

Paula Gonzalez[†]; Lisa Goddard; Arthur Greene; Doug Smith
[†] IRI/ Earth Institute, Columbia University, USA
Leading author: gonzalez@iri.columbia.edu

The need for climate information for the next few decades creates a requirement for adequate representations of both natural and anthropogenic factors. For that reason, it is essential to understand the significant surface expressions of ocean-induced decadal variability and their predictability. The existence of precipitation and temperature decadal-scale regime shifts due to oceanic variability in regions like the US, Sahel and Northeast Brazil has been previously documented. The purpose of this work is to explore the dynamical features in these regions and on a global context linked to such regime changes. The ability of state-of-the-art CGCMs, such as those used in the IPCC assessments, to represent such regional temperature and precipitation changes is explored. Additionally, we evaluate the contribution of ocean initialization in some of these CGCMs to the prediction of the oceanic decadal variability and associated regional climate during the latter part of the 20th Century.