EGU-NP2.3: Extremes in Geophysical Sciences

Cross-timescale interference and predictability of extremes: a chimera?

Á.G. Muñoz

agmunoz@iri.columbia.edu

International Research Institute for Climate and Society
Earth Institute | Columbia University

Abstract

Cross-timescale interference involves linear and non-linear interactions between climate modesacting at multiple timescales (Muñoz et al., 2015, 2016, 2017; Robertson et al., 2015; Moron et al.,2015), and that are related to windows of opportunity for enhanced predictive skill (Mariotti et al.,2020), with relevant societal impacts (e.g., Doss-Gollin et al., 2018; Anderson et al., 2020). Here we analyze plausible mechanisms for cross-timescale interference, describing conditions for coupling of oscillating modes and its impact on extreme rainfall occurrence and predictive skill. Concrete examples for northeast North America and southern South America are discussed, as well as implications for climate model diagnostics.

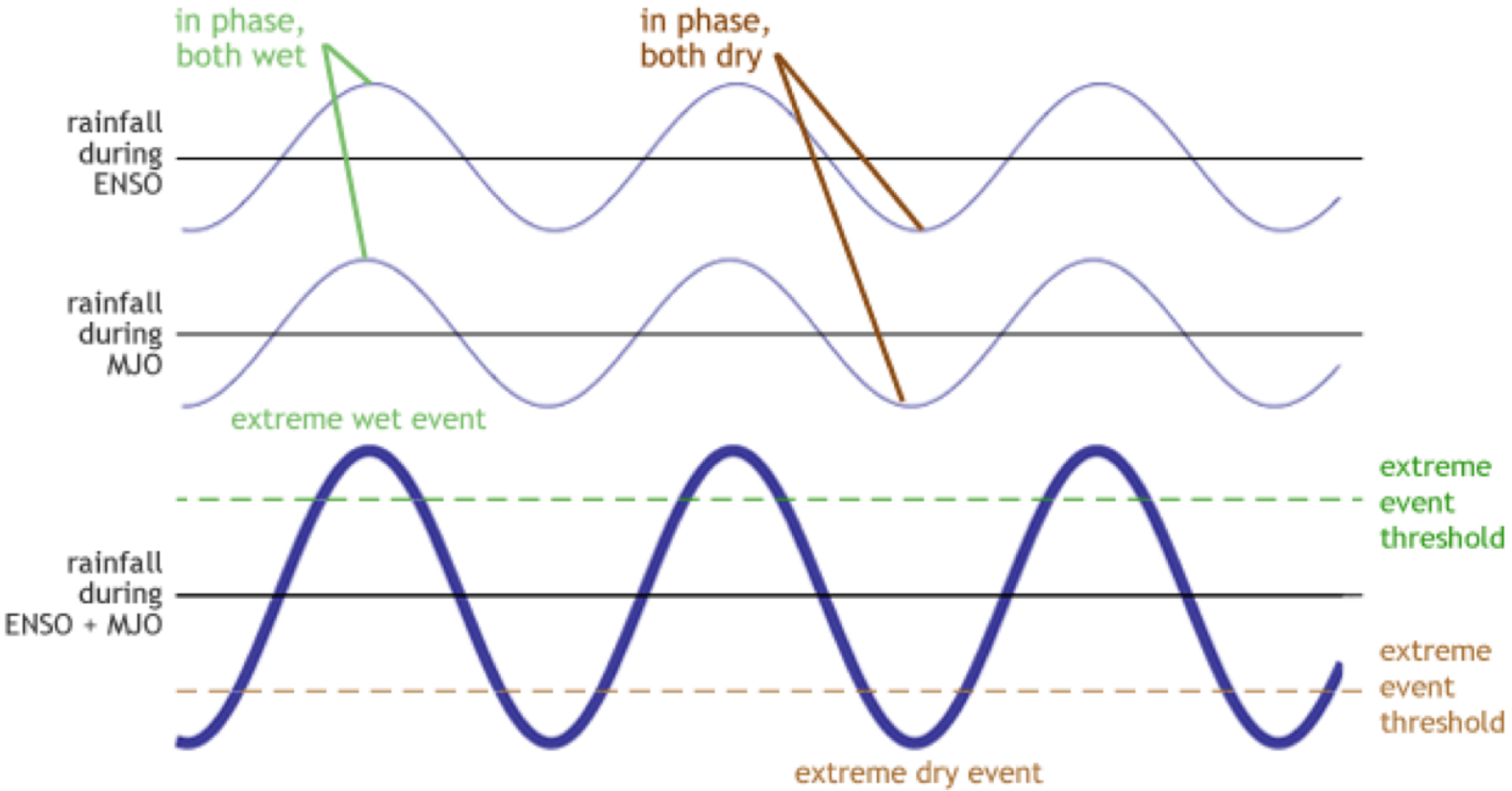
Want to know more?

These few slides are just an appetizer! :)
The conveners of EGU2020 NP2.3 session - Extremes in Geophysical Sciences - will hold a webinar on Wed, May 13, 2020 3:30 PM - 5:30 PM (CEST) via the gotomeeting platform with the presentations of our two invited speakers, Theodore Shepherd and Ángel G. Muñoz.

Outline

- Cross-timescale Interference
- Predictability of Extremes
- A *Chimaera*?
- Concluding remarks

Cross-timescale Interference & extremes



Muñoz, Á.G. 2017. NOAA Blog.