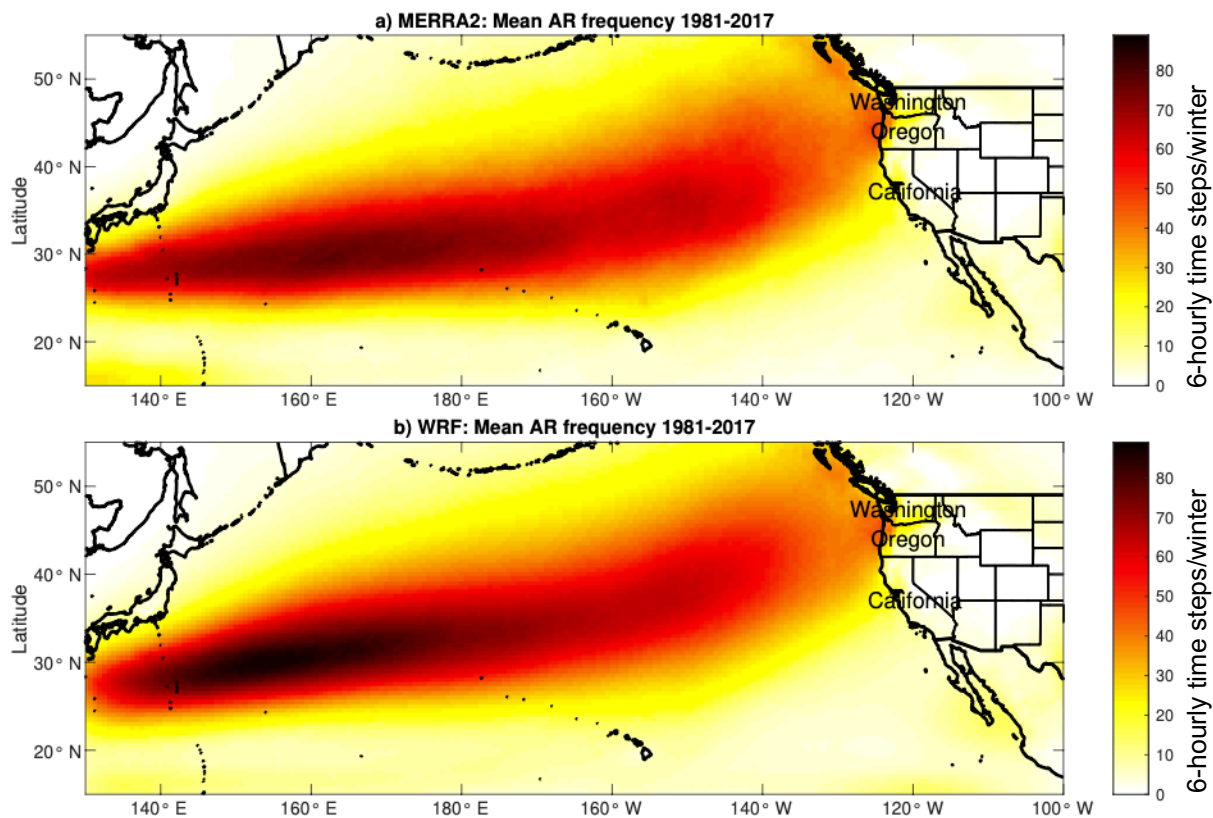


Sources of subseasonal-to-seasonal predictability of atmospheric rivers and precipitation in the western U.S.

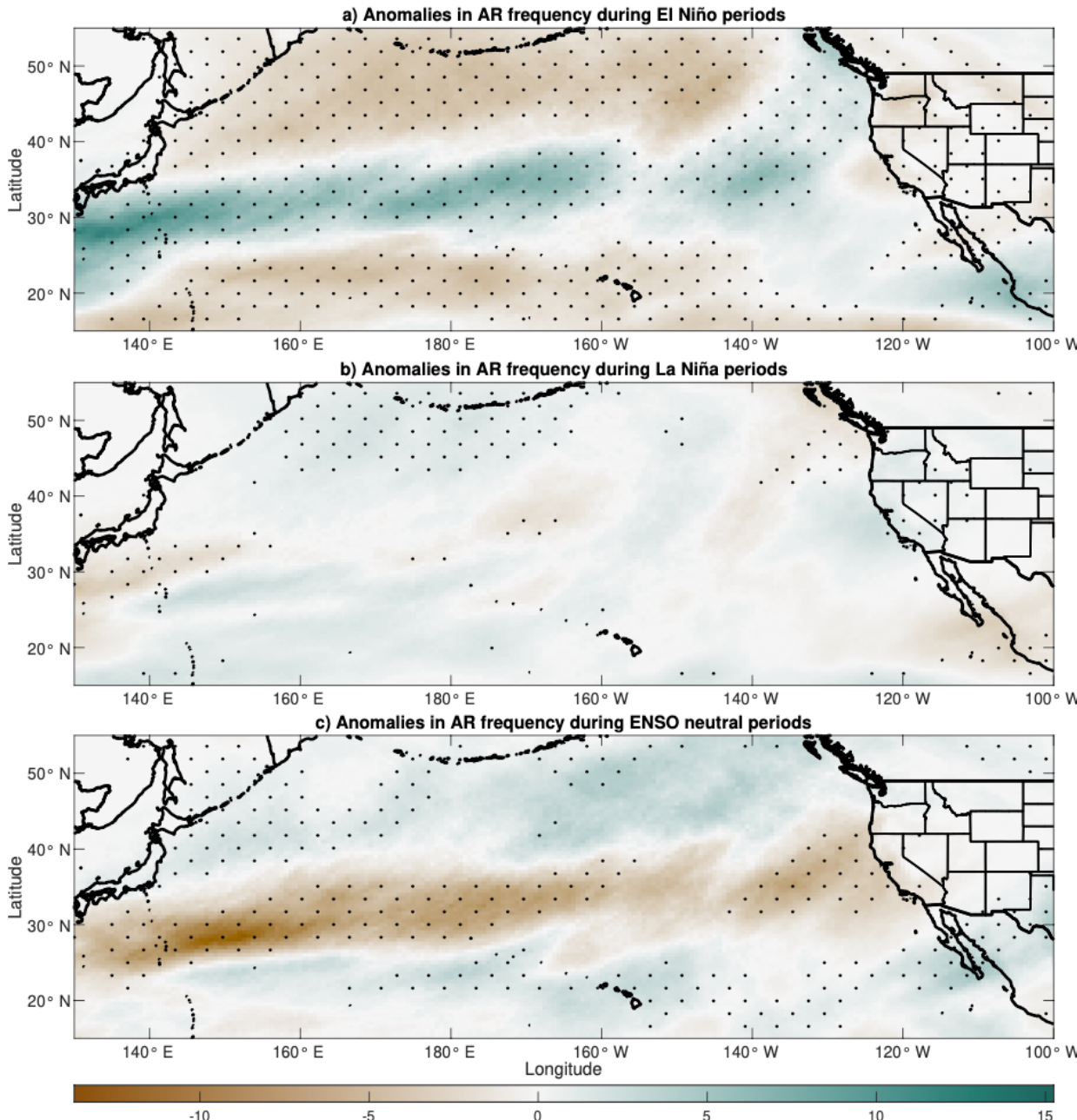
Huanping Huang (Lawrence Berkeley National Laboratory)

Collaborators: Christina M. Patricola, Emily Bercos-Hickey, Yang Zhou, Alan Rhoades, Mark Risser, William D. Collins



The Regional and Global Model Analysis (RGMA) program area Principle Investigator (PI) meeting – October 13, 2020
 CALibrated and Systematic Characterization, Attribution, and Detection of Extremes (CASCADE) SFA

AR frequency by ENSO type (ENSO Longitude Index-based)



North Pacific:

- El Niño: Strengthened AR activity in **midlatitudes**
- La Niña and ENSO neutral: Strengthened AR activity in **high latitudes**

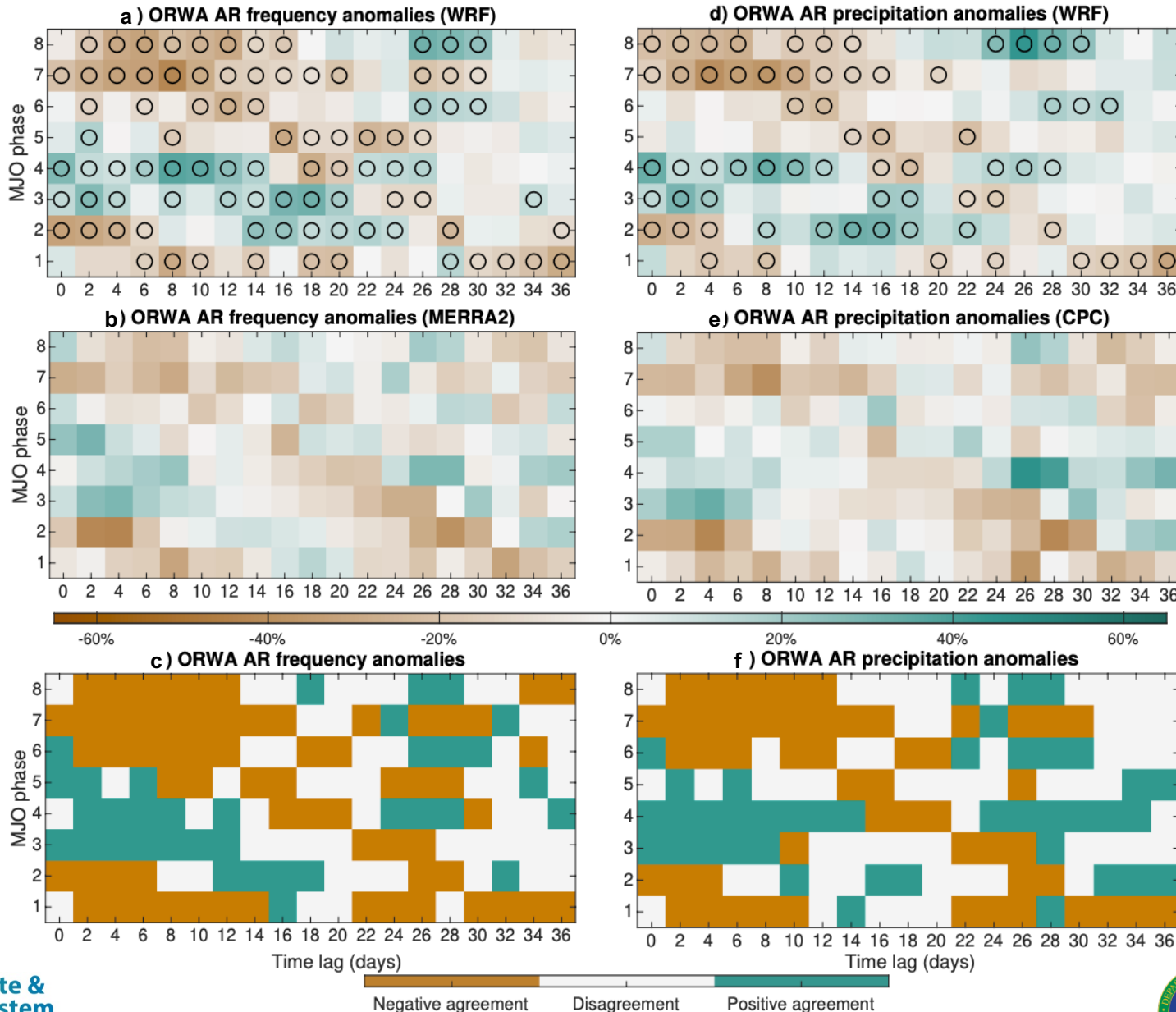
Western US:

- Below-average (above-average) AR frequency with El Niño (La Niña)
- A contrast to the Niño 3.4 index-based ENSO–AR relationship

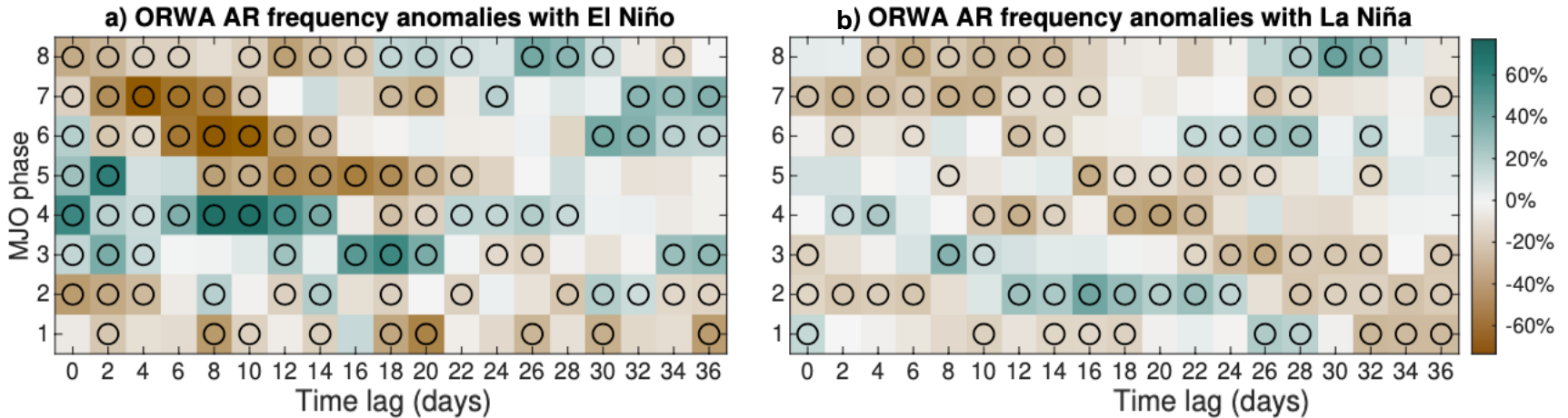
Huang et al. submitted



AR frequency (left) and precipitation (right) by MJO phase and time lag



ENSO substantially modulates the MJO–AR relationship



- Agreement between El Niño–MJO and La Niña–MJO periods: **61%**
- Increased agreement with shorter time lags

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