

# Mediterranean precipitation is regime-controlled

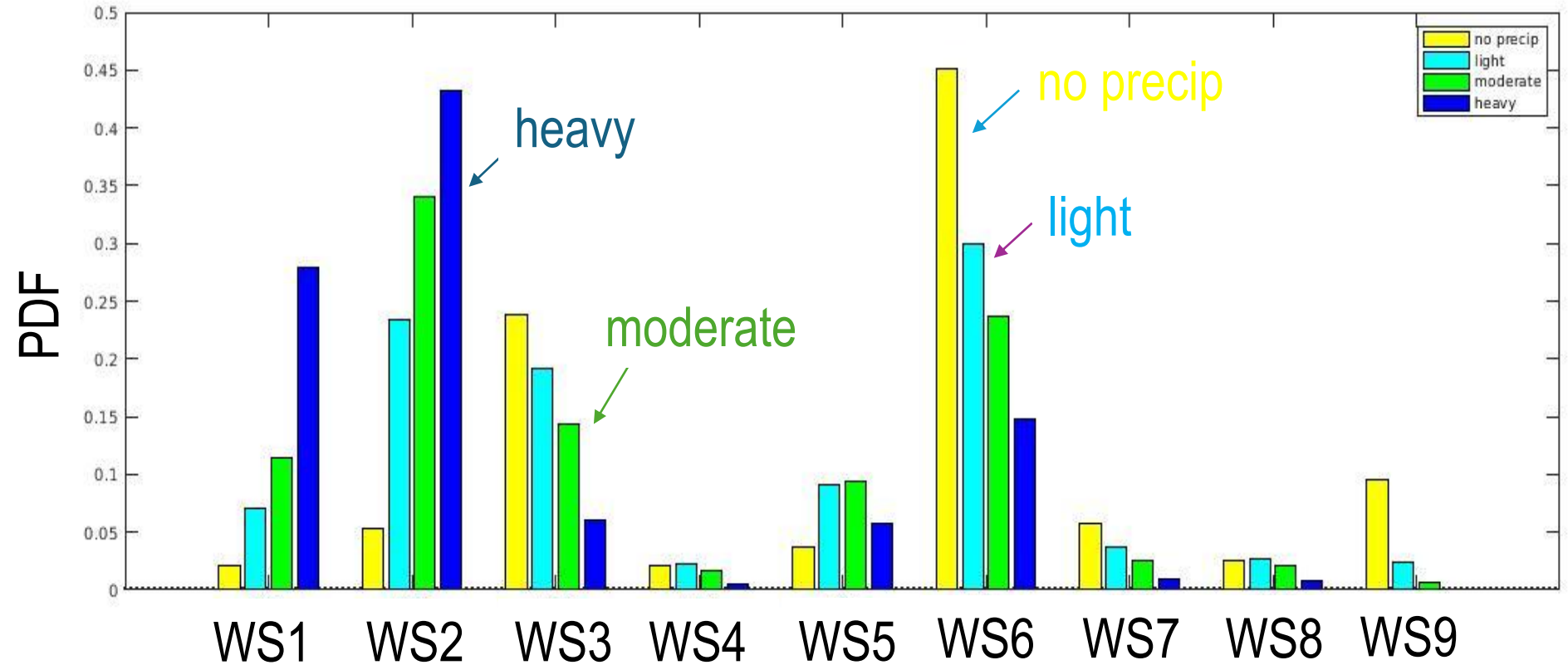
D. Konsta et al.  
NOA & NASA GISS

## Data

- ISCCP-H Weather States
- TRMM precipitation (1998 - 2014)
- CMIP6 AMIP simulations (10 models)

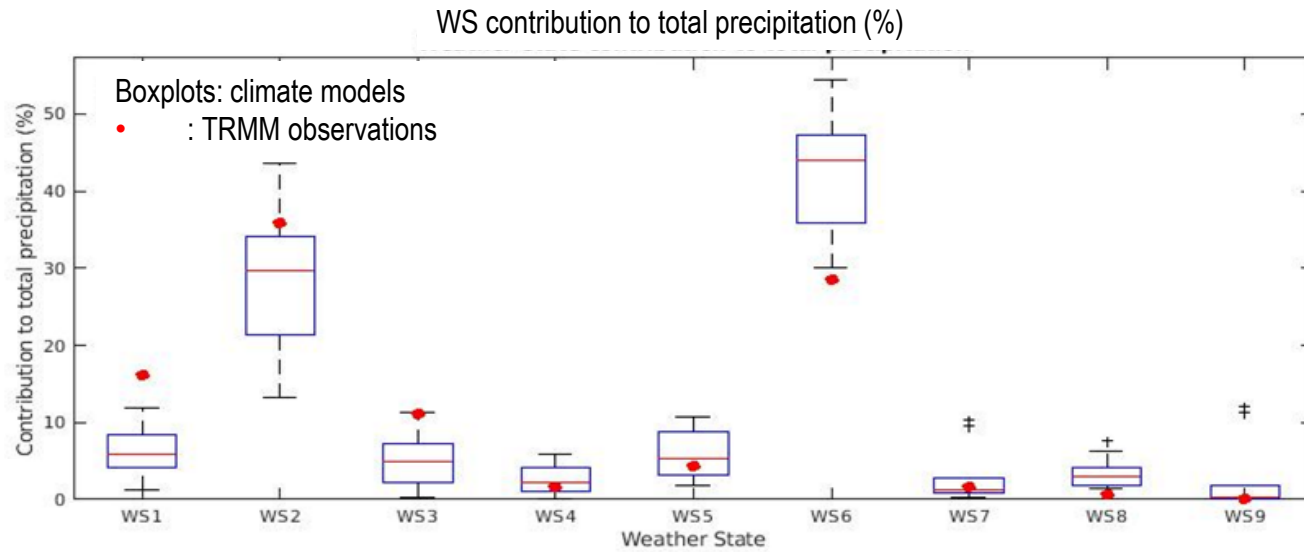
## Method

- Classify daily conditions into Weather States
- Compute WS contribution to total precipitation

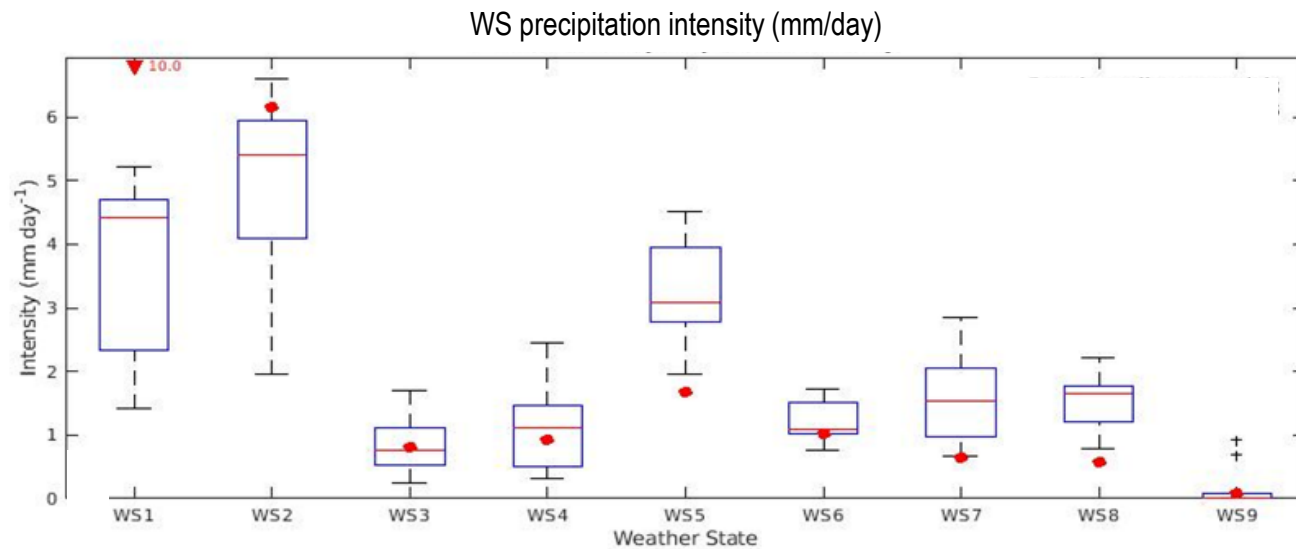


→ > 60 % of rainfall occurs in storm regimes (WS1 – WS3)

# CMIP6 redistributes rainfall across regimes

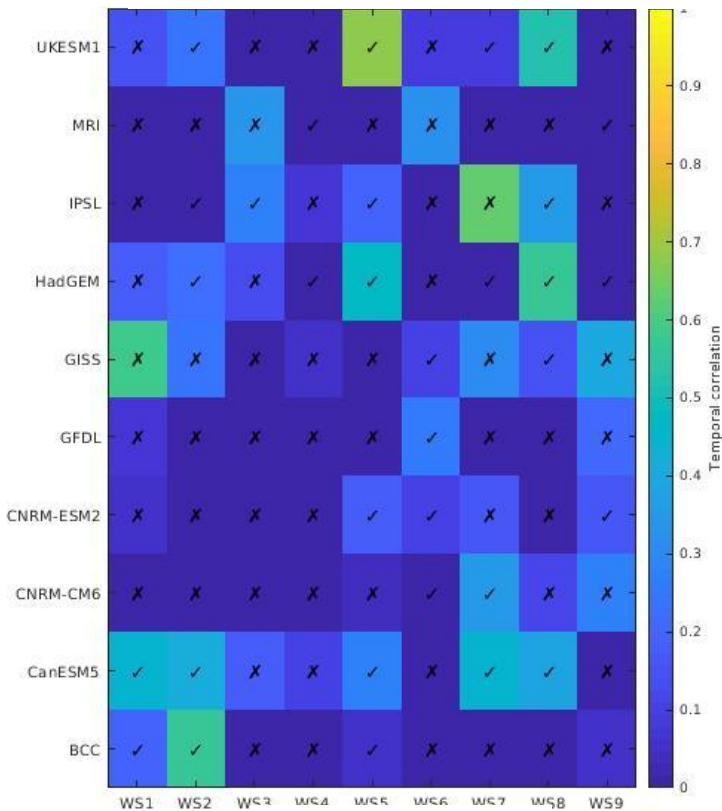


→ Rainfall is redistributed from storm to fair-weather regimes

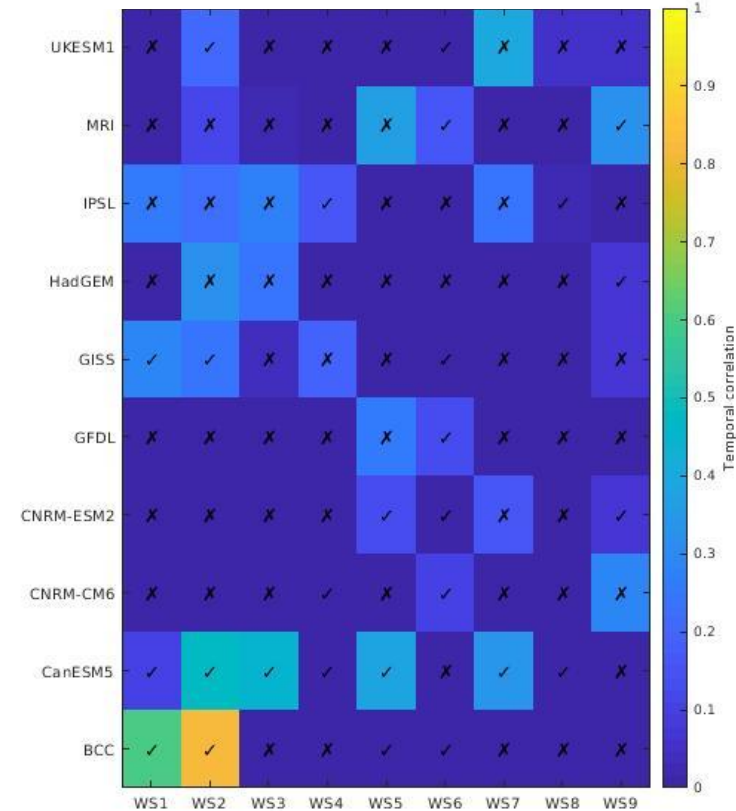


# Implications for future Mediterranean precipitation projections

## WS-based model skill vs OBS (Temporal correlation of annual time series)



Frequency



Intensity

- Rainfall may occur under **incorrect circulation regimes**
- Mean precipitation can appear realistic
- **But underlying dynamics are misrepresented**

→ Implications for the reliability of future Mediterranean precipitation projections