

# Emergent Constraints on Regional Cloud Feedbacks

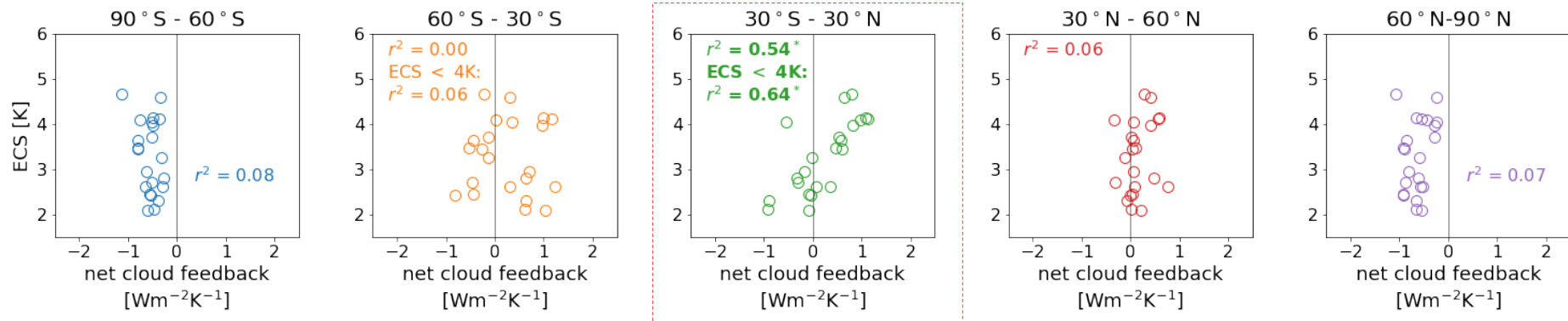
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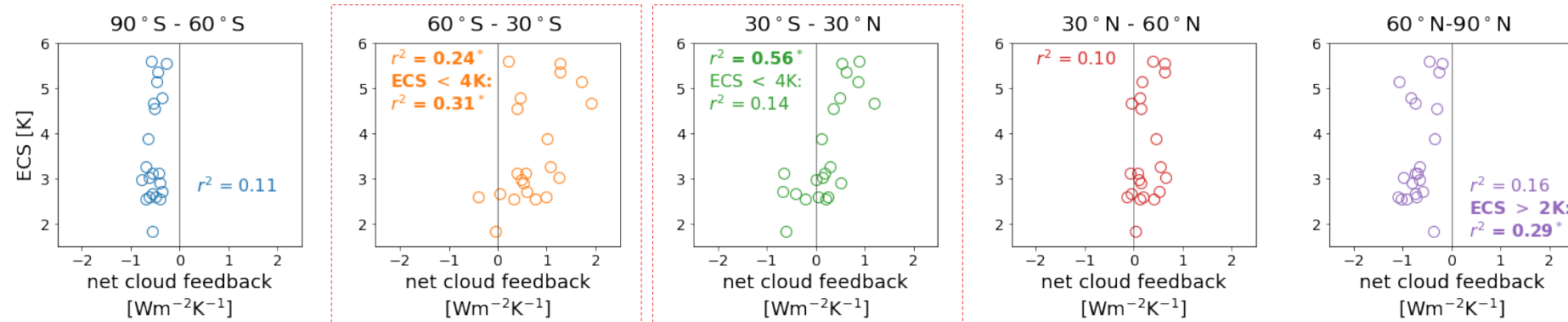
*with:* Max Popp (LMD), Anna Lea Albright (LMD), Robert Nazarian (Fairfield)

# Multiple cloud-types contribute to cloud feedback uncertainty in CMIP6

## CMIP5



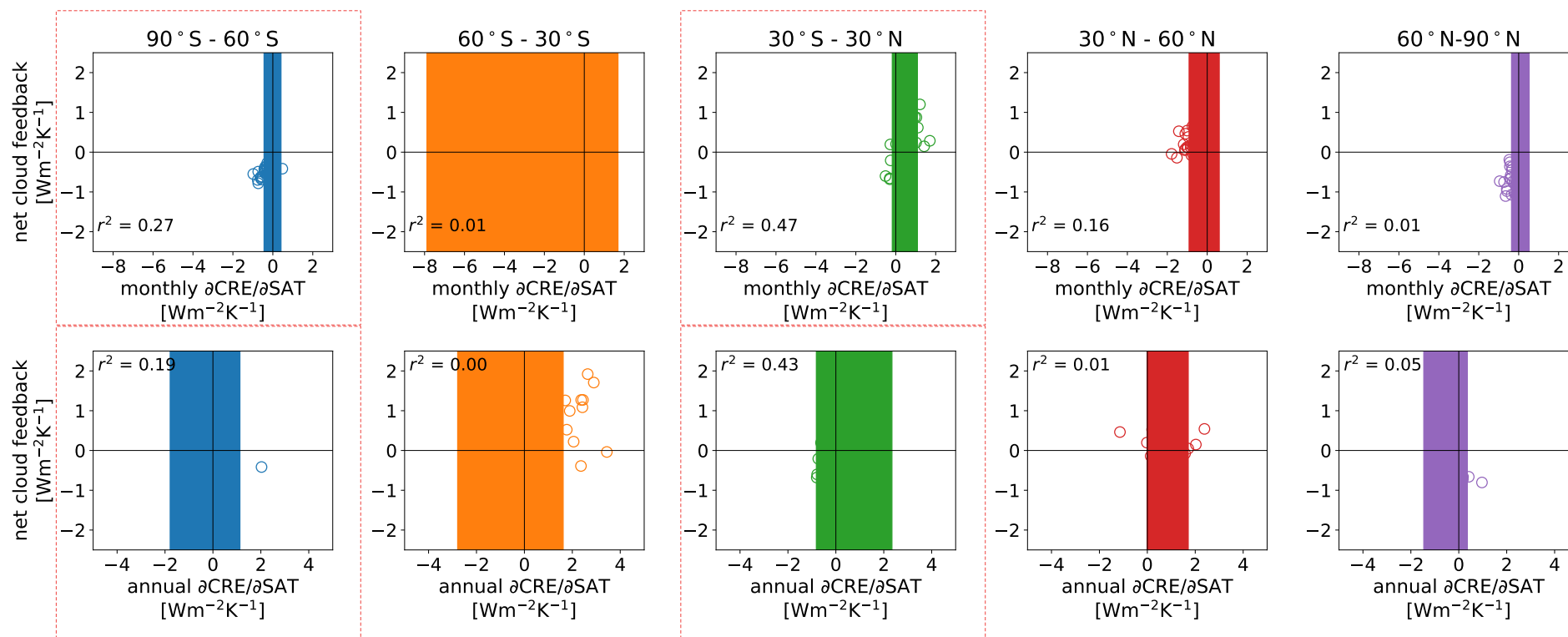
## CMIP6



→ Hard for single variable to explain spread in global cloud feedback/ECS

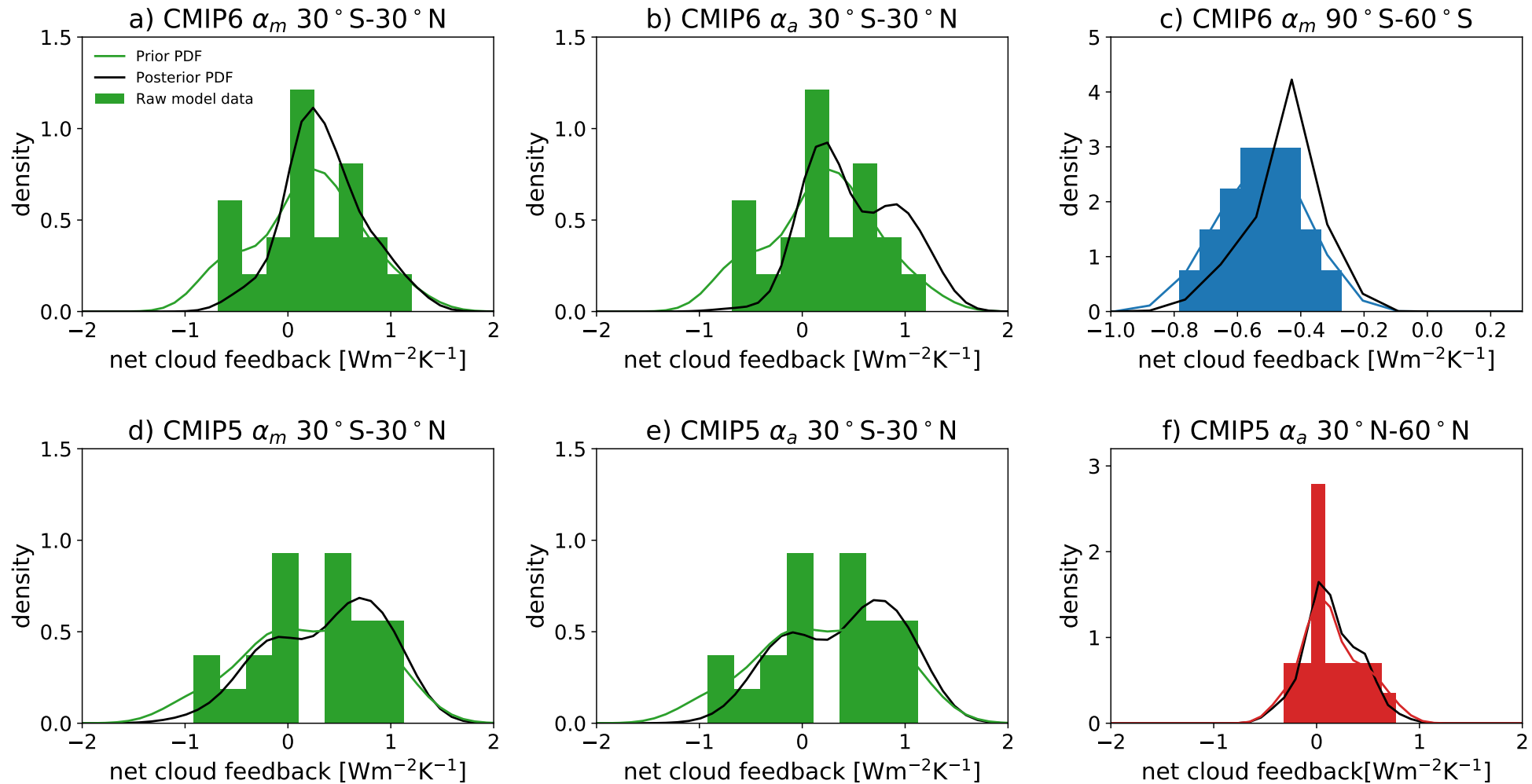
# Emergent constraints can still be used to constrain regional cloud feedbacks in CMIP6 (+ CMIP5)

## monthly variability vs long-term cloud feedback



## annual variability vs long-term cloud feedback

# Use observations to estimate posterior regional cloud feedback PDFs



(use information-theoretic method of Brient & Schneider, 2016)