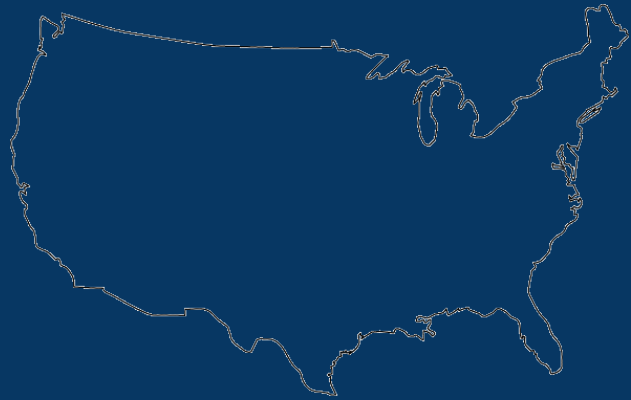# Progress Update 2/16
## Comparing 2018 CHIRPS 2.0 to 2018 PRISM Data
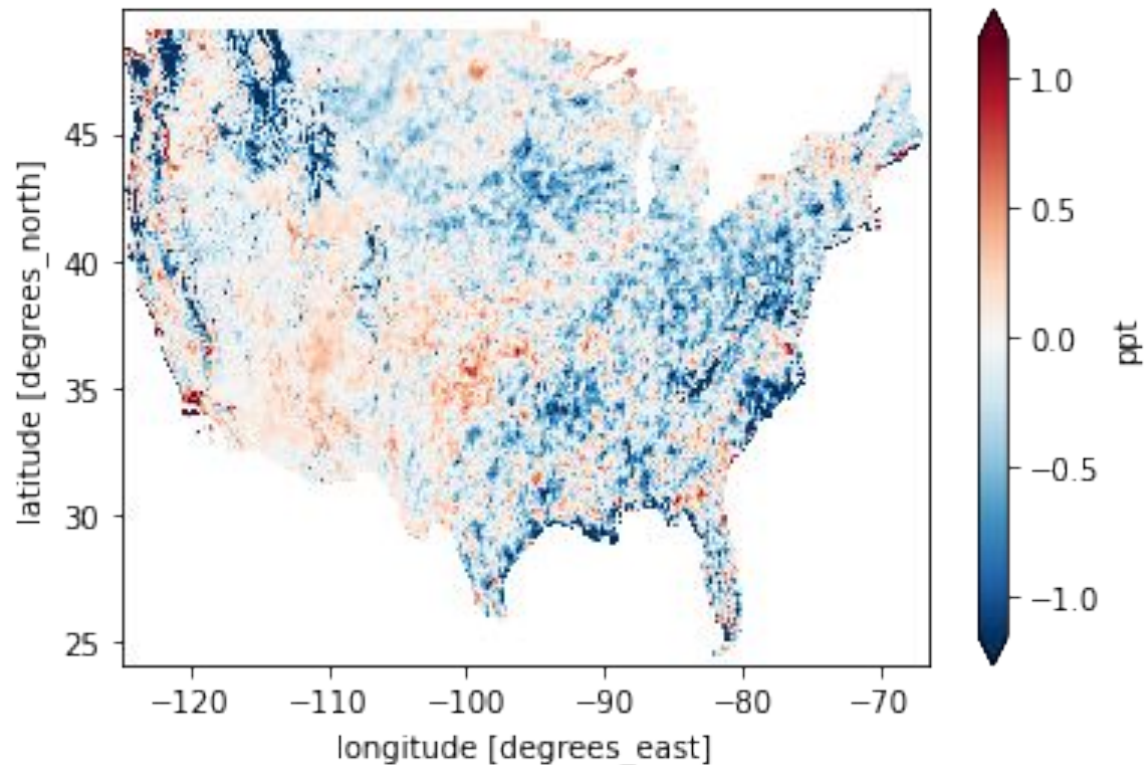
Fei Du, Hannah Li, Lily Li, Eric Yoon

# About the Data

- PRISM 4km interpolated into CHIRPS 5km
- Sliced CHIRPS time Jan to Sep to match time data in PRISM
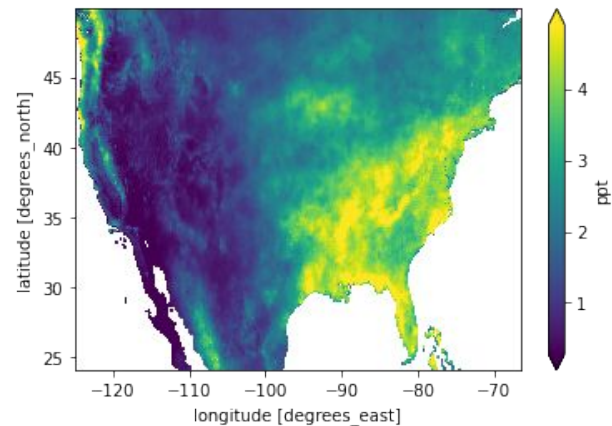  - 'Annual' daily averages and sums are for the 9 months

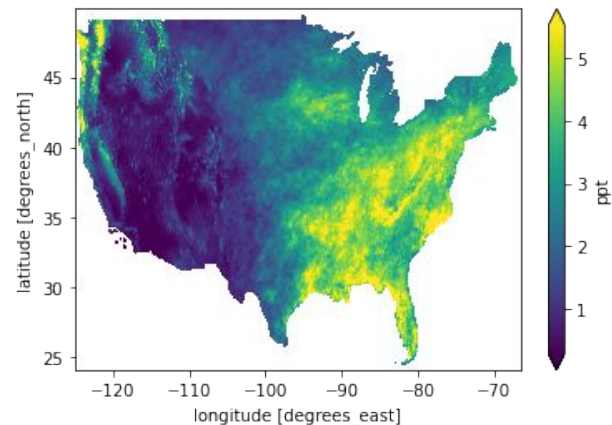# Differences in Averages

### CHIRPS Avg - PRISM Avg
Looking at 2th-98th percentile of daily averages Jan-Sept
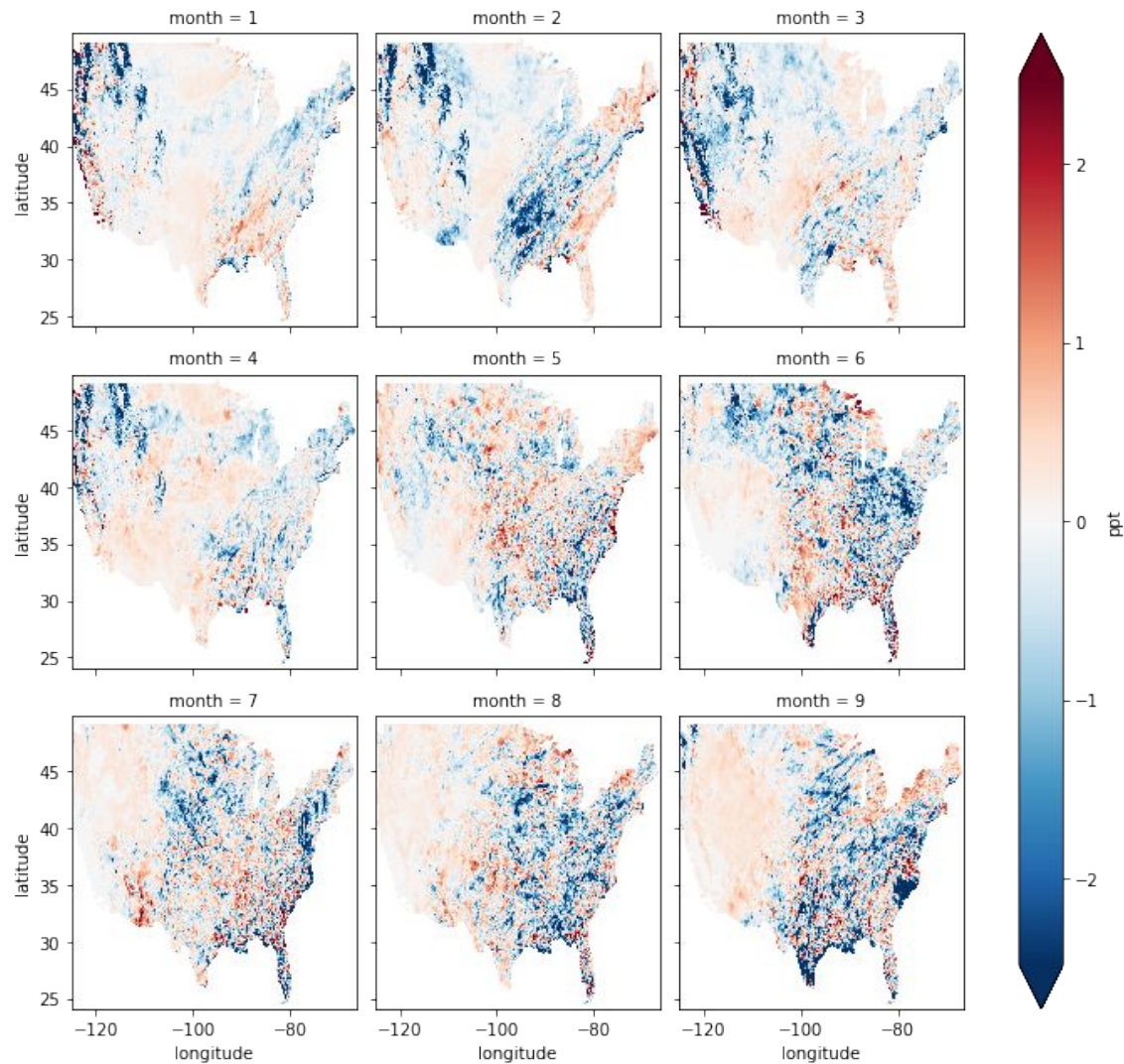


## CHIRPS Annual Averages



## PRISM Annual Averages
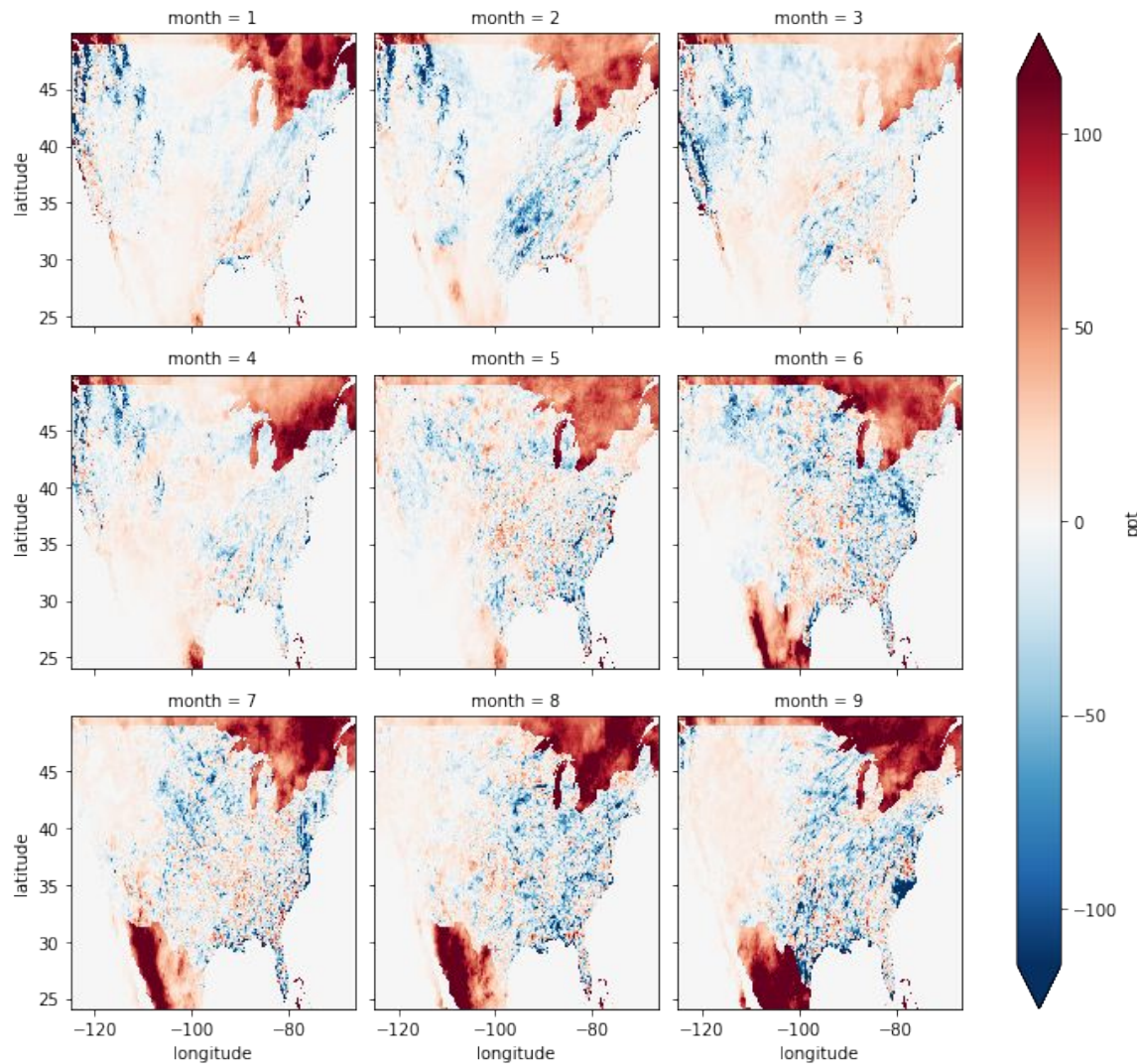
# Differences in Daily Averages by Month

CHIRPS Avg - PRISM Avg

# Differences in Total Monthly Precipitation

CHIRPS Avg - PRISM Avg

- Differences between sum of daily rainfall between the datasets
- Lots of white = minimal difference
- Ignore the red around the borders since no PRISM data exists there and nothing is being subtracted from CHIRPS outside the USA
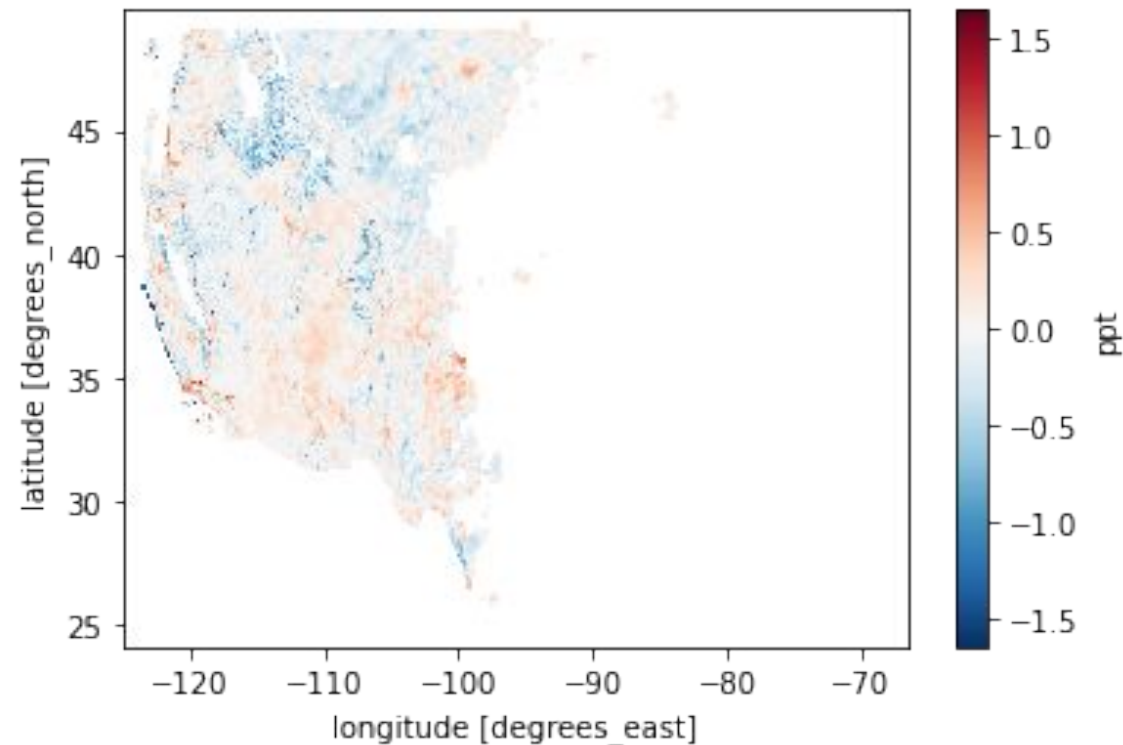
# Total Monthly Precipitation in CHIRPS

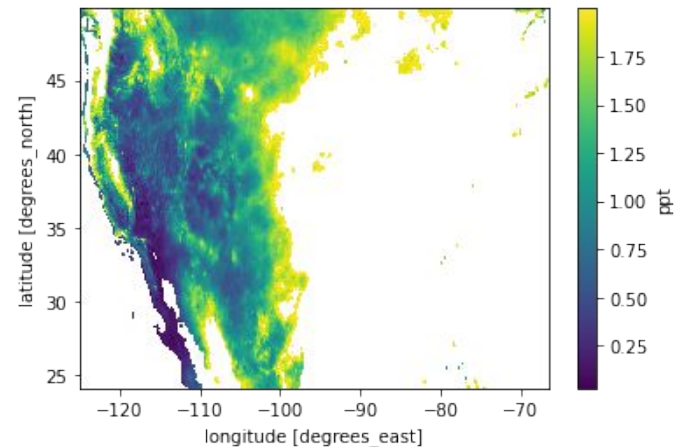## Summed CHIRPS Data by Month

### Jan - Sept Total
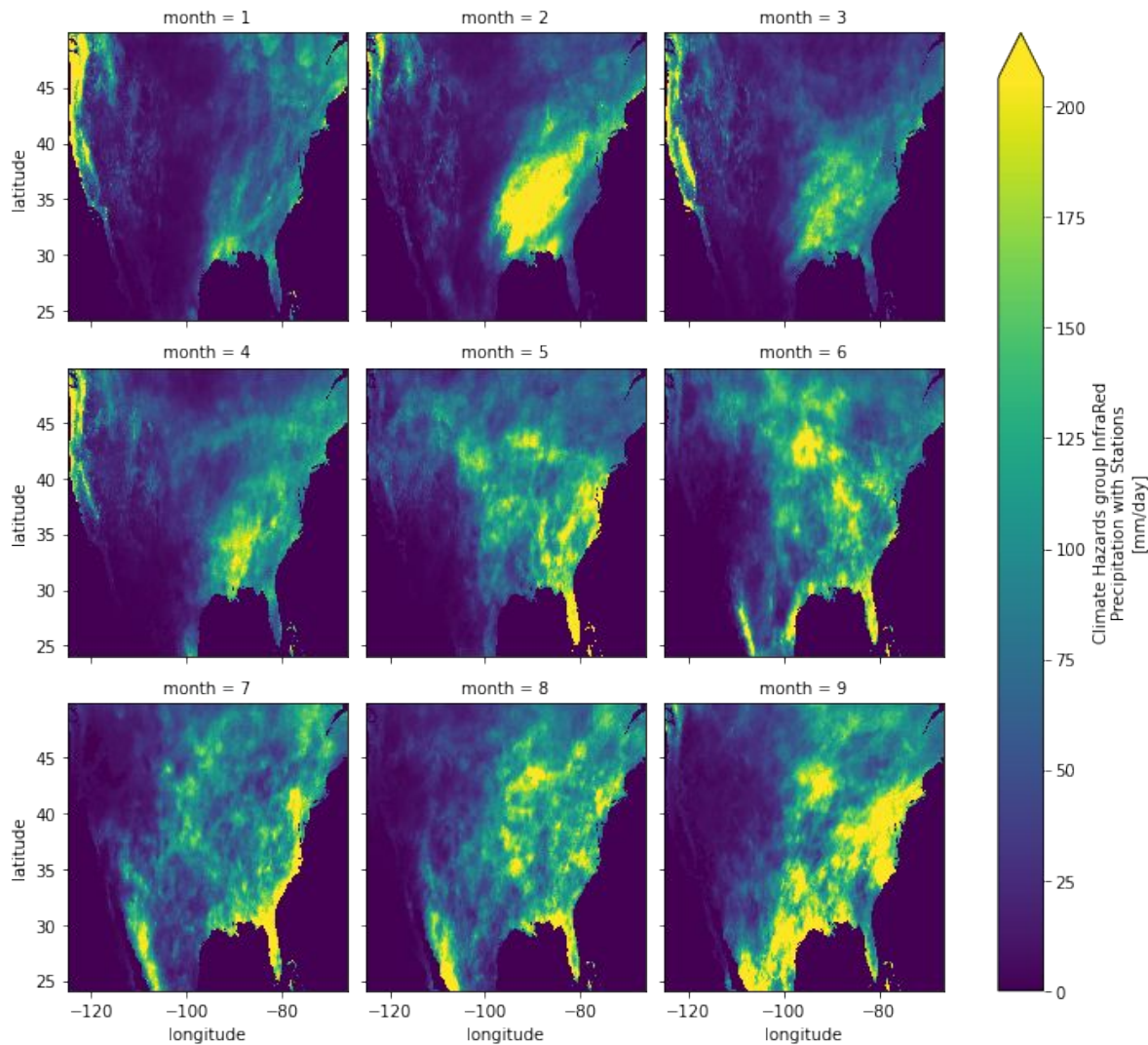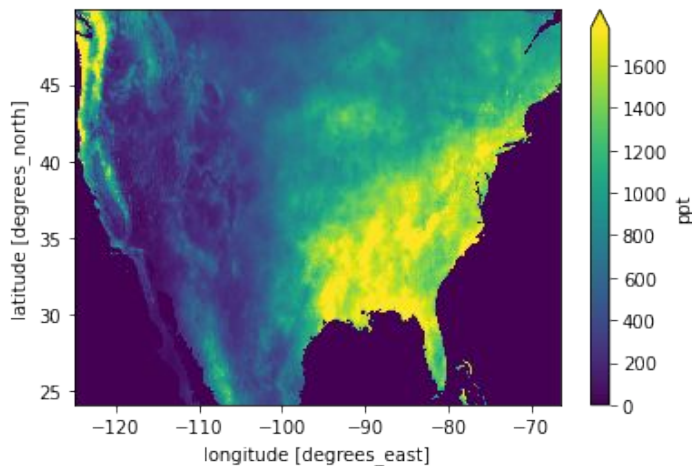
# Threshold of ppt <= 2mm

Difference between CHIRPS <= 2mm and PRISM ppt <= 2mm





CHIRPS ppt <= 2mm



PRISM ppt <= 2mm
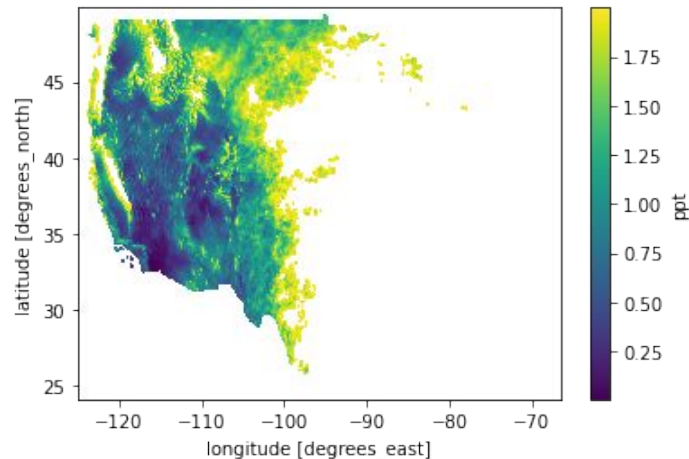
- Averaged daily precipitation -> set threshold 2mm - > get difference
- 2mm ≈ 48th percentile for CHIRPS average ppt
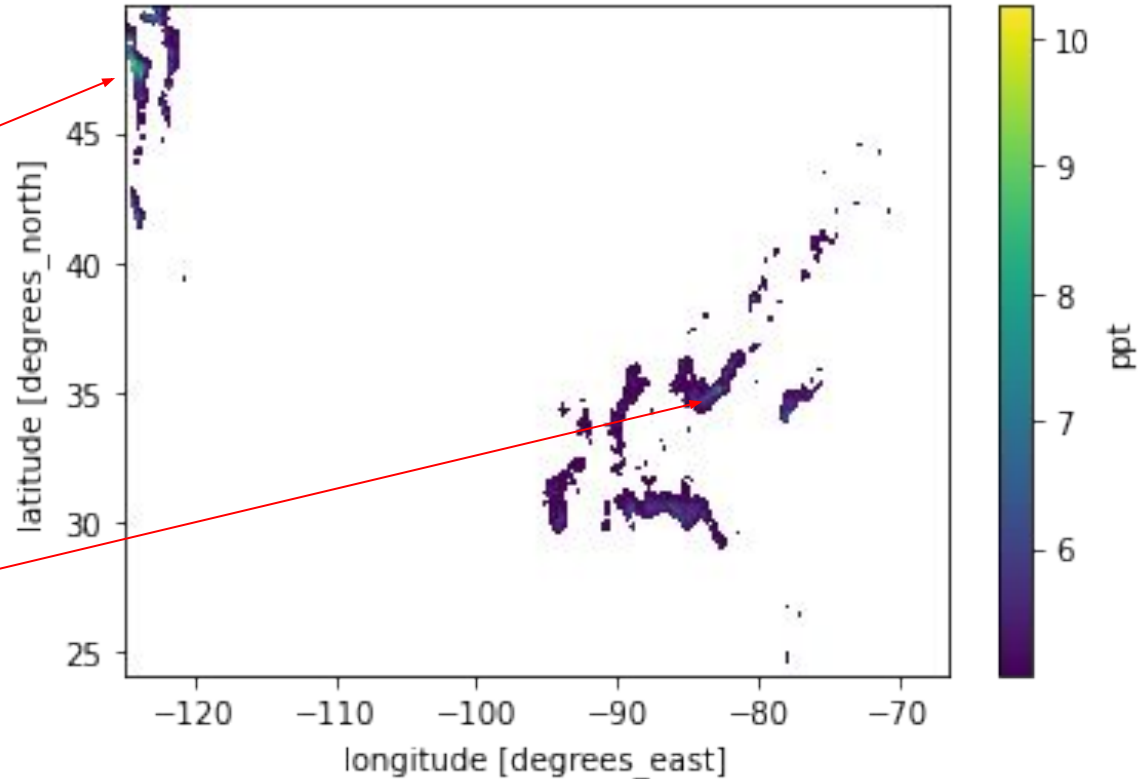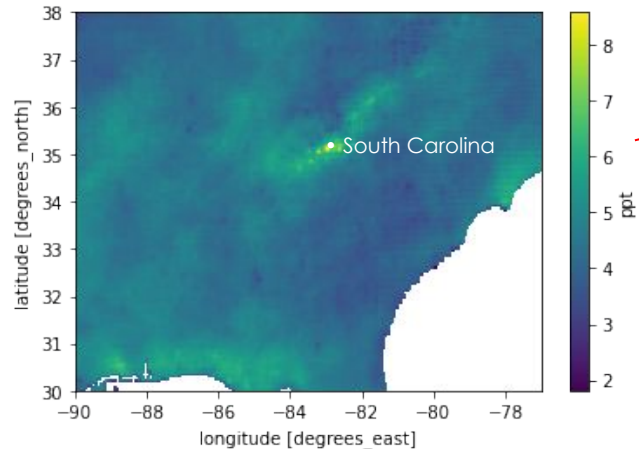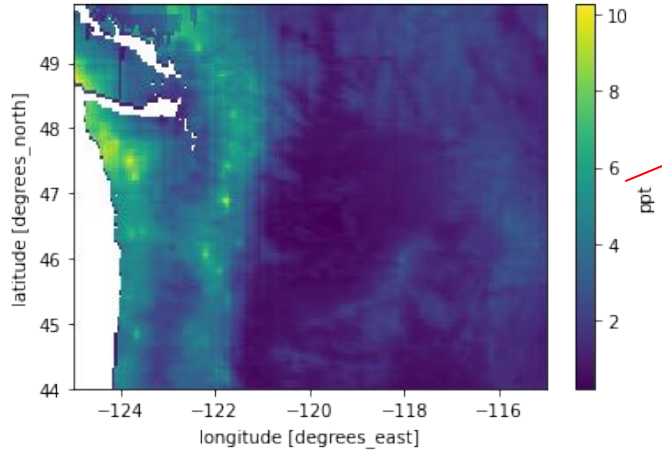- In Northwest, PRISM is more often reading higher ppt than CHIRPS

# CHIRPS Threshold of ppt >= 5mm

## Washington

South Carolina

5mm ≈ 98th percentile for CHIRPS annual average ppt

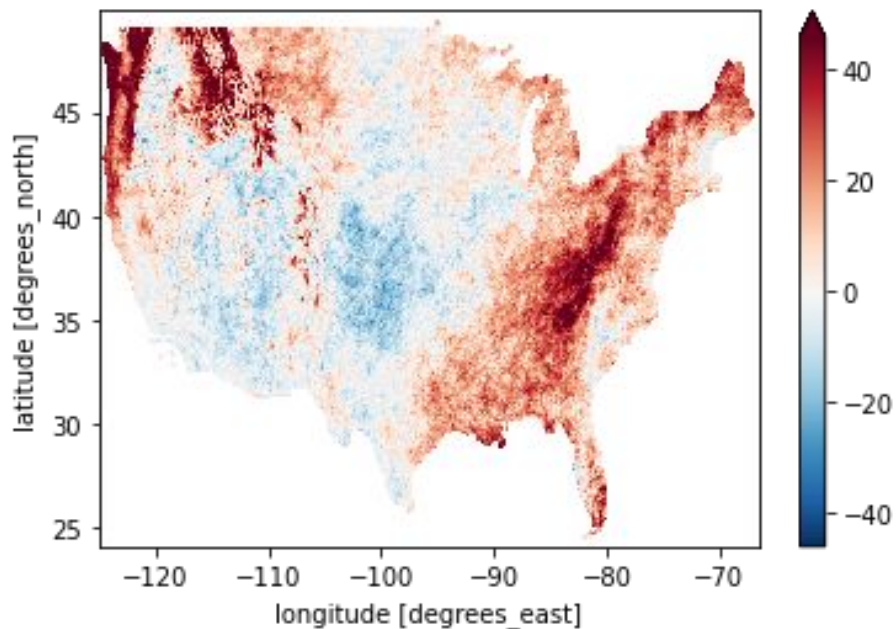# Histogram of the Frequency of Precipitation
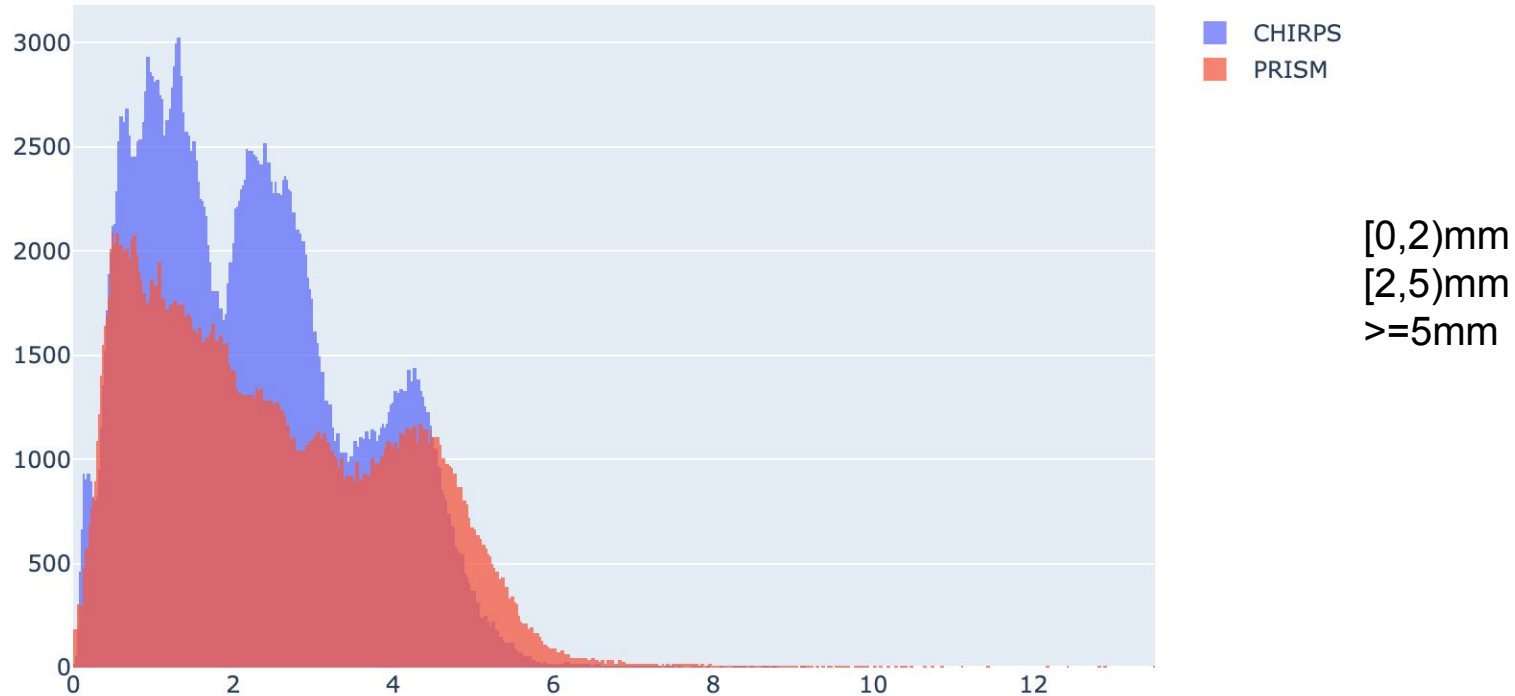


[0,2)mm
[2,5)mm
>=5mm

This graph does not really make sense, but we can categorize the precipitation to three levels using this graph.
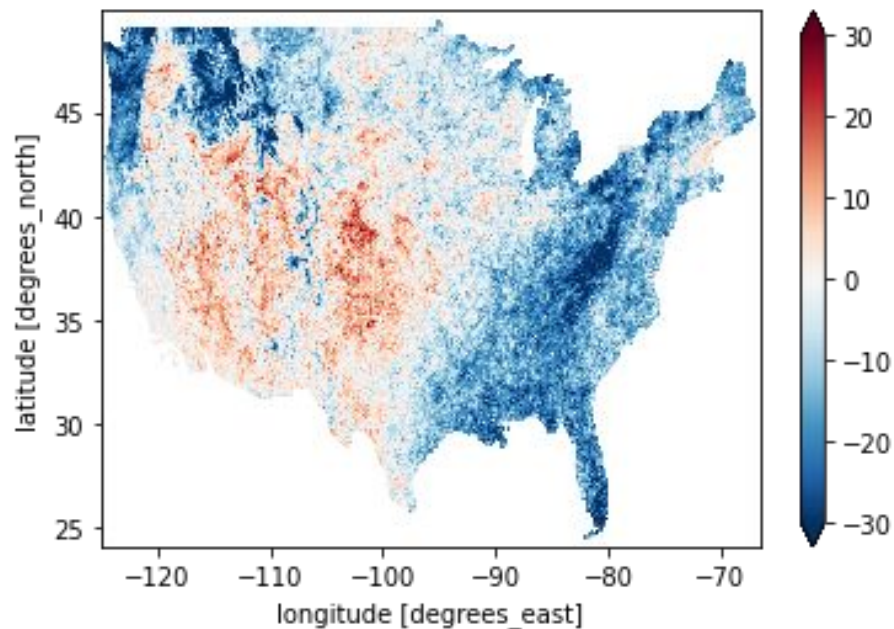
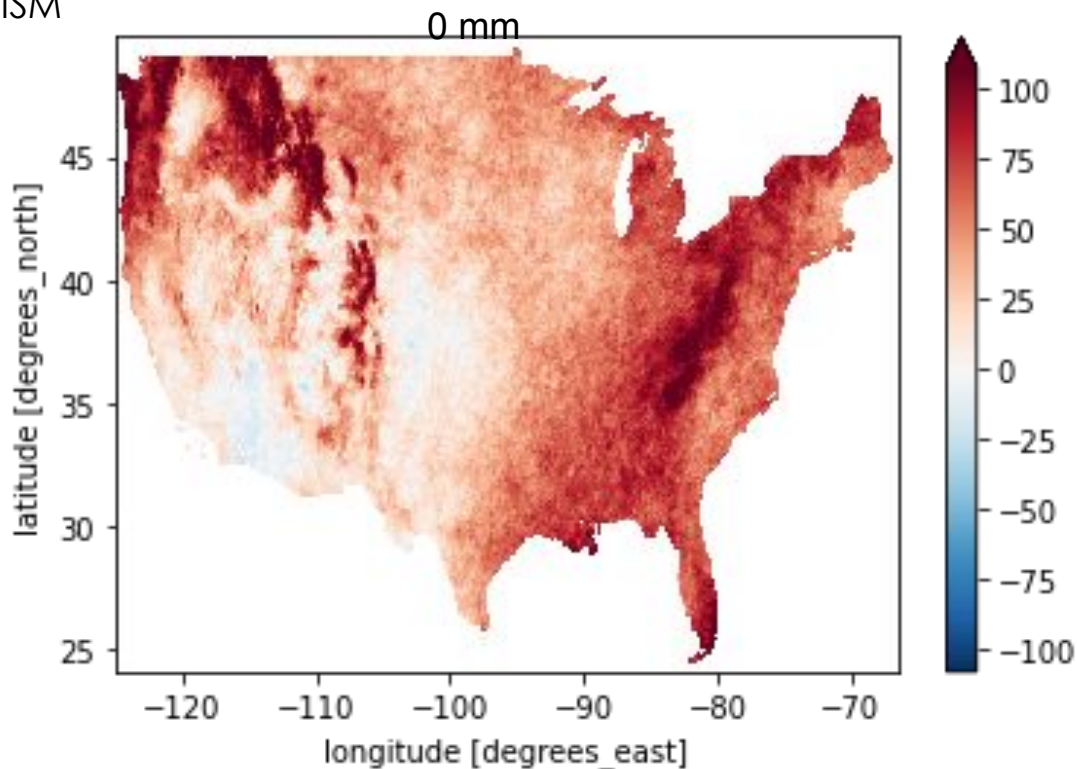# Number of Days with Threshold of ppt = 2mm and 4mm

CHIRPS - PRISM



[0,2) mm

[2, 5) mm

# Difference in Sum of Number of Days with 0mm

CHIRPS - PRISM



There are lots of zeros in the CHIRPS dataset

# Difference in Sum of Number of Days above 5mm