

Homework II

Date: February 7

Due: February 26 (in HARD COPIES)

Provide methodology description. Methodology includes formula used, the meaning of each variable in the formula, and how you will be computing.

The data is available in netcdf form from:

<ftp://ftp.coaps.fsu.edu/pub/abhardwaj/CCSM4/RSM/CPCFL/>

This is daily data of gridded rainfall in $0.5^\circ \times 0.5^\circ$ grid from 1 January 1979 through 22 March 2018 over Peninsular Florida (only over land) in netcdf. This data is from NCEP CPC (Xie et al. 2007 and Chen et al. 2008).

Chen M, Shi W, Xie P, Silva V, Kousky VE, Wayne Higgins R, Janowiak JE (2008) Assessing objective techniques for gauge-based analyses of global daily precipitation. J Geophys Res Atmos 113(D4)

Xie P, Yatagai A, Chen M, Hayasaka T, Fukushima Y, Liu C, Yang S (2007) A gauge based analysis of daily precipitation over East Asia. J Hydrometeorol 8:607–626

1. Recompute and display seasonal mean climatology and its standard deviation, skewness, kurtosis, of rainfall for DJF, MAM, JJA and SON after you remove rainfall days that is below or equal to the 5th percentile and above or equal to 95th percentile **separately**.
2. Compute the differences of the plots above from the corresponding figures from homework I and plot them
3. Bonus points: Conduct significance test using boot strapping method.

Further instructions:

- a) Make sure you choose color scales in such a way that panels are comparable to each other.
- b) Start making your analysis of the figures you generate from the homework; but don't submit your analysis with the homework---that will be part of the final project.
- c) Use any software you like that is easily available/accessible to you.