

Figure 1: Arctic Ocean domain with monthly mean North Pole Drifting Station locations

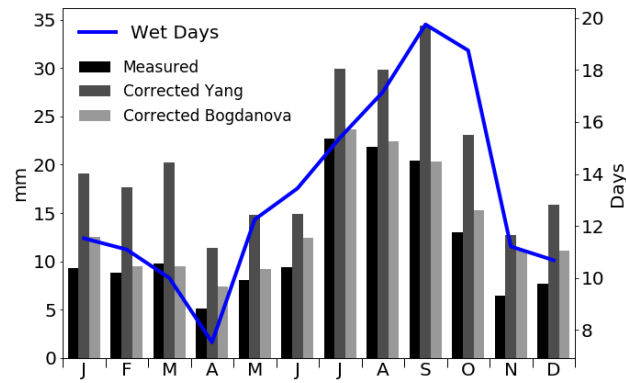


Figure 2: Arctic Ocean mean monthly climatologies of measured and corrected precipitation from North Pole Drifting Stations. Corrected precipitation is shown for Yang (1990) and Bogdanova et al (2002) correction methods. Average number of wet days in each month are also shown.

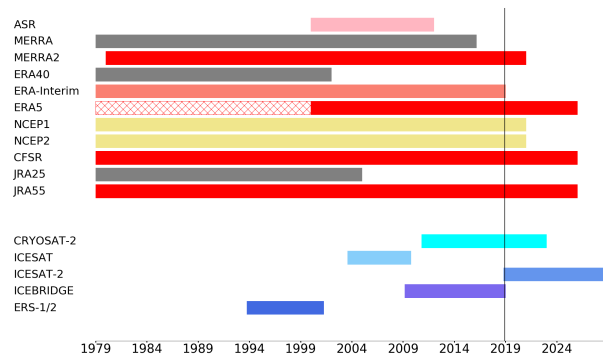


Figure 3: Data availability and operational lifespans for global and Arctic regional reanalyses, and for satellite and airborne radar and laser altimetry missions.

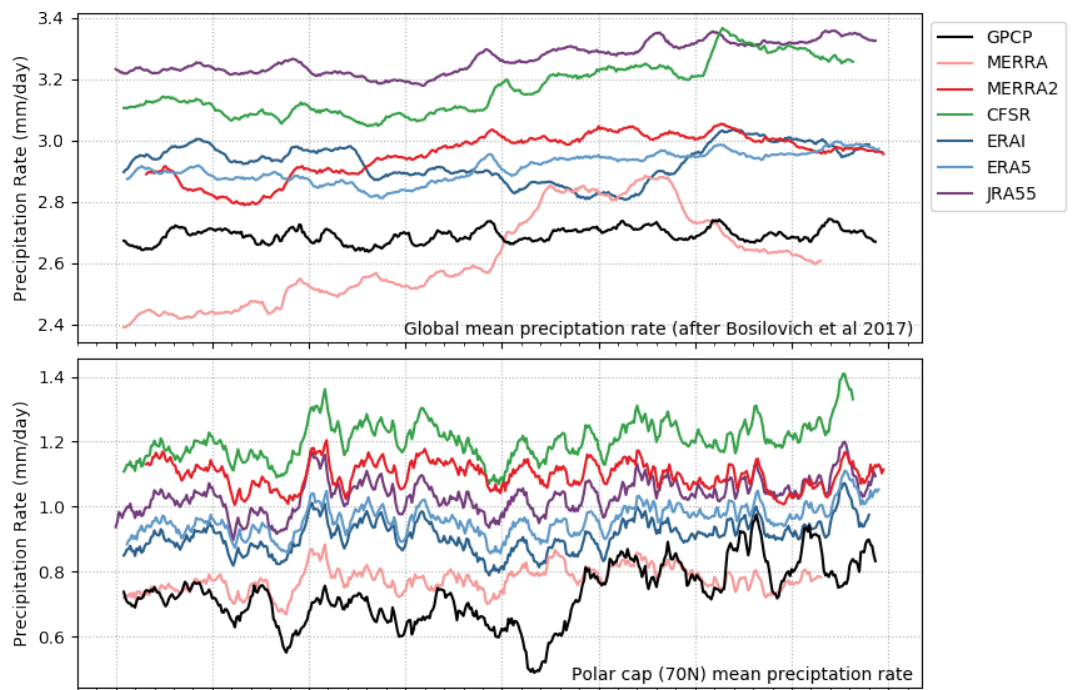


Figure 4: Global and Polar cap mean precipitation rates for global reanalyses included in this study.

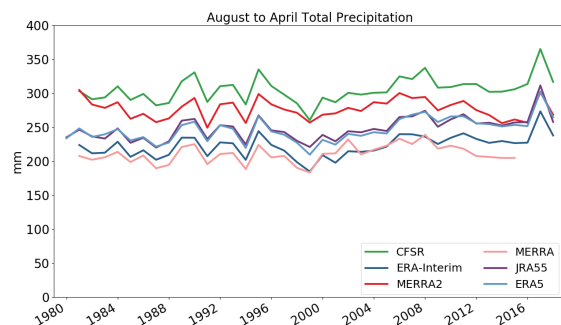


Figure 5: Arctic Ocean mean total precipitation for August to April accumulation period.

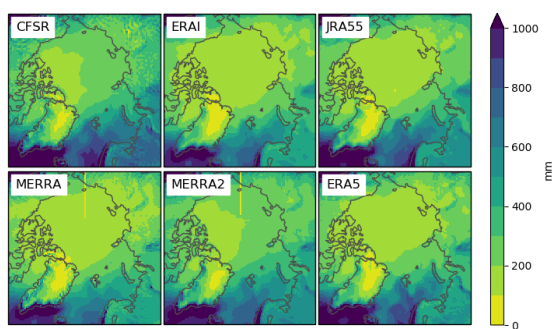


Figure 6: August to April total precipitation

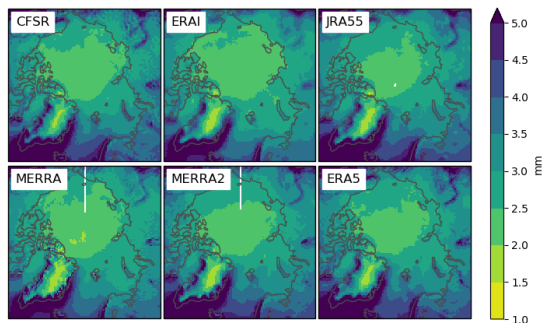


Figure 7: August to April mean wetday precipitation show very similar patterns for all reanalyses

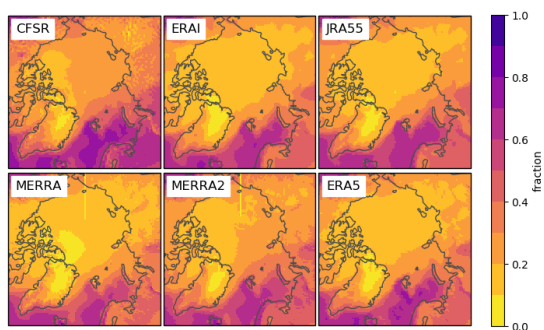


Figure 8: Patterns of August to April frequency of wet days for MERRA, ERA-Interim, JRA55 and ERA5, contrast with CFSR and MERRA2, which show higher frequency of wet days in the eastern Arctic.

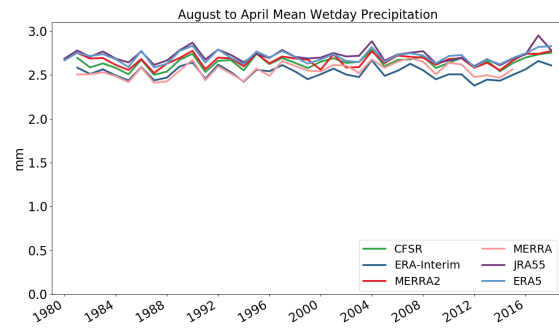


Figure 9: Differences between Arctic ocean mean wetday precipitation are small.

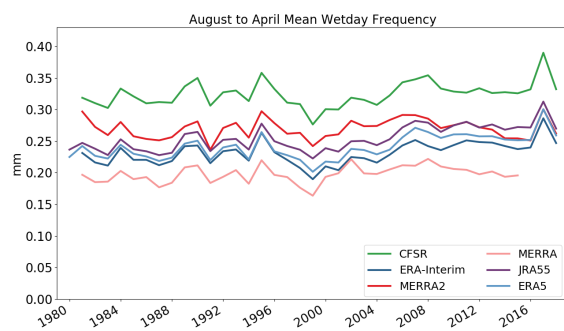


Figure 10: Large differences between reanalyses can be seen for Arctic ocean mean wetday frequency.