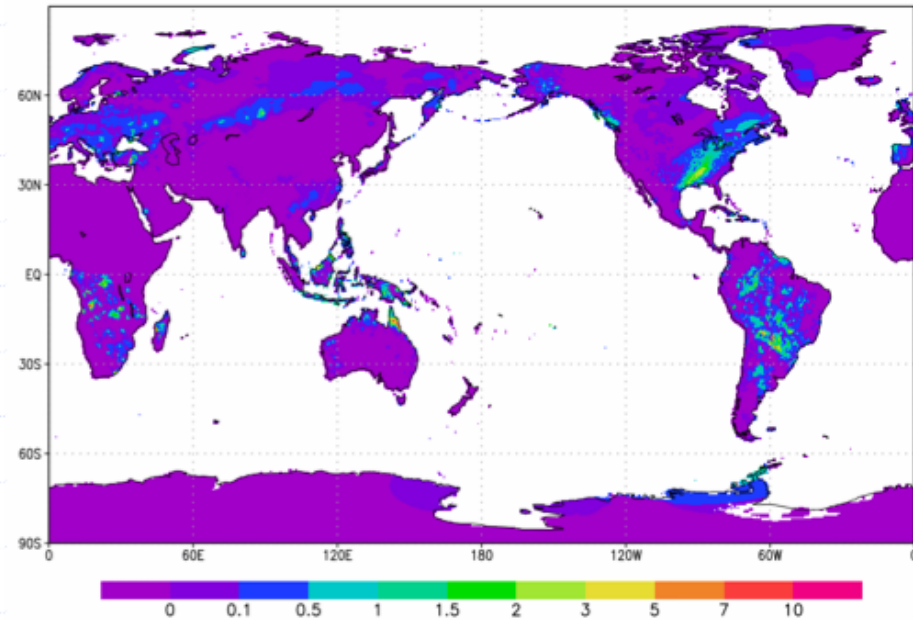


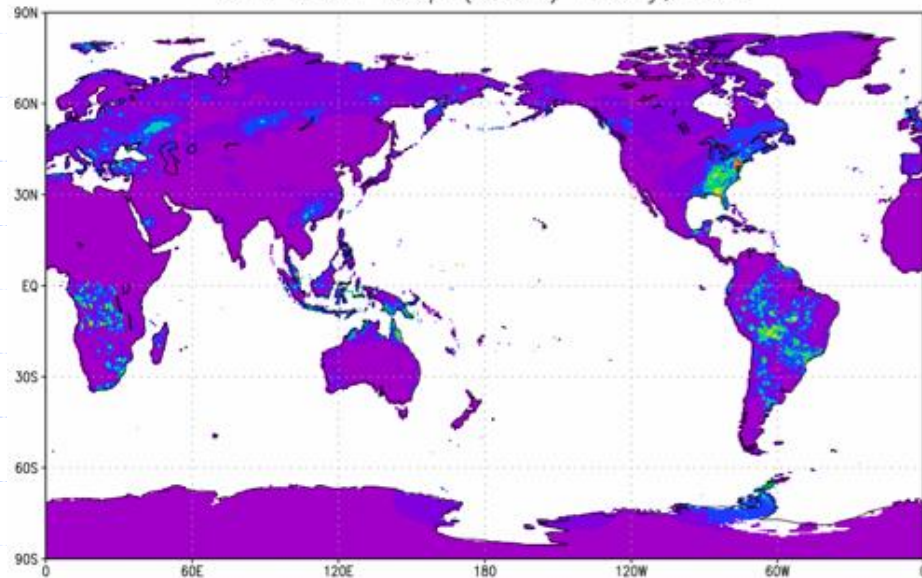
3-day test simulation

- CPC OLR precipitation
- From daily to hourly

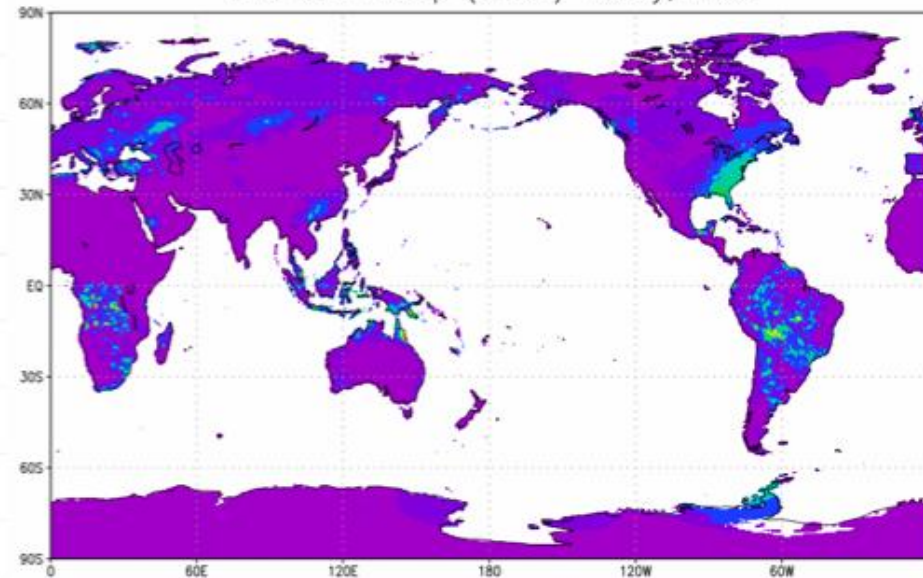
CPC OLR Precip (25km) Daily, day 1



CPC OLR Precip (25km) Hourly, hr22

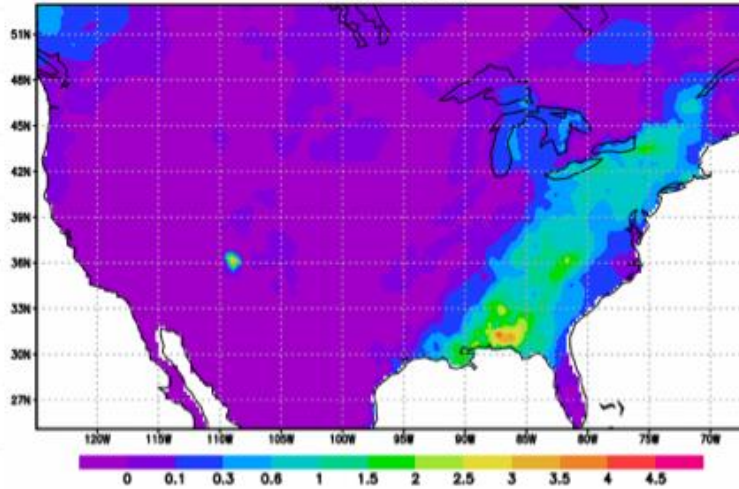


CPC OLR Precip (25km) Hourly, hr22

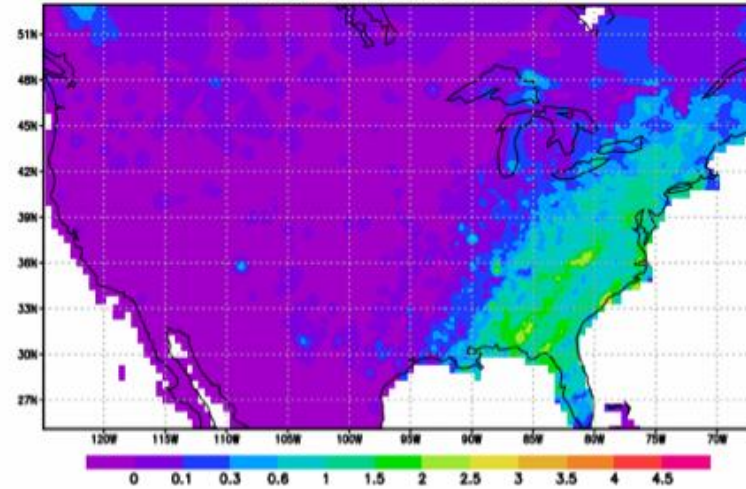


Comparison with NLDAS (1979)

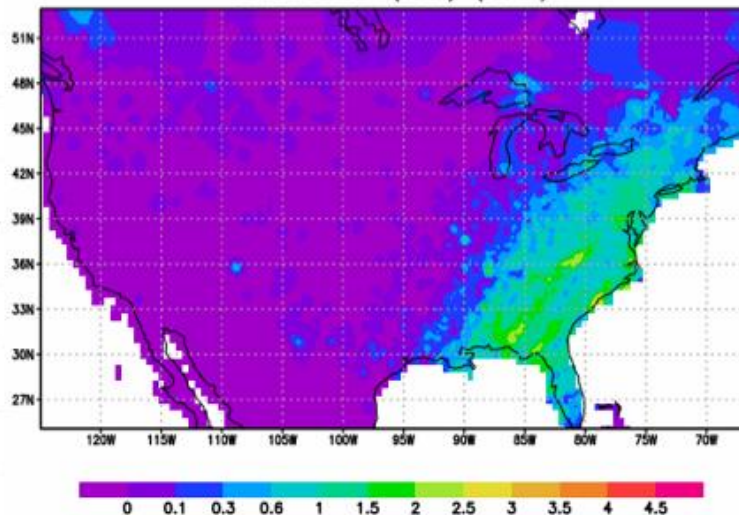
NLDAS (0.25)



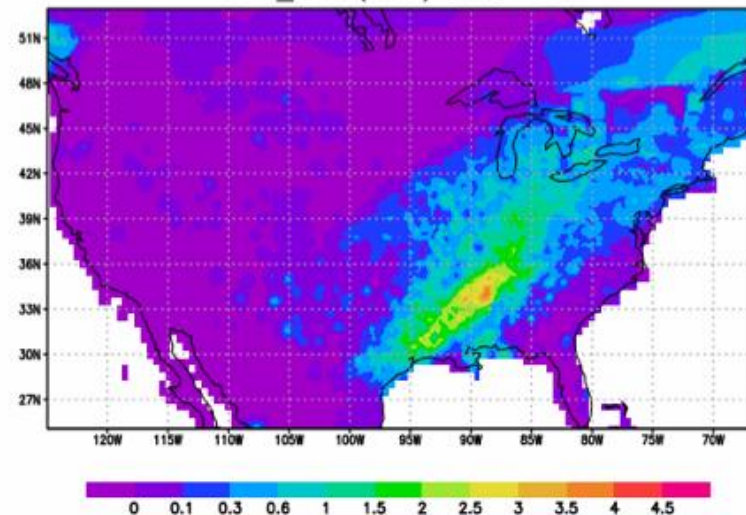
Downscaled (simple) (0.25)



Downscaled (new) (0.25)



CPC_OLR (0.25) time= 24



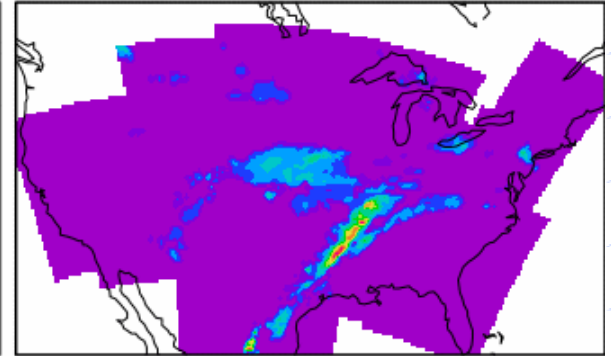
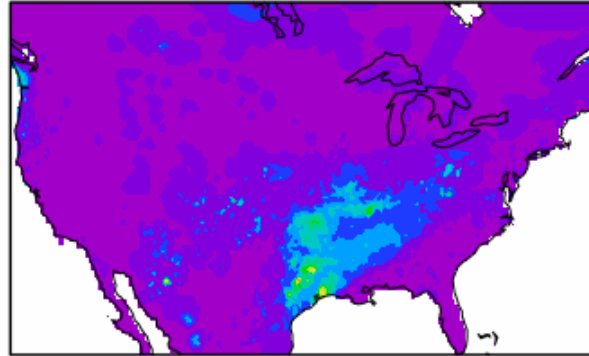
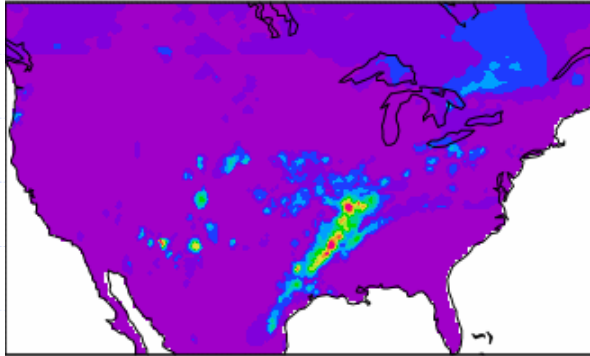
Comparison with NLDAS and StIV (2013)



NLDAS - Hourly (0.25) Hour= 1

Downscaled CPC OLR (Hourly) (0.25)

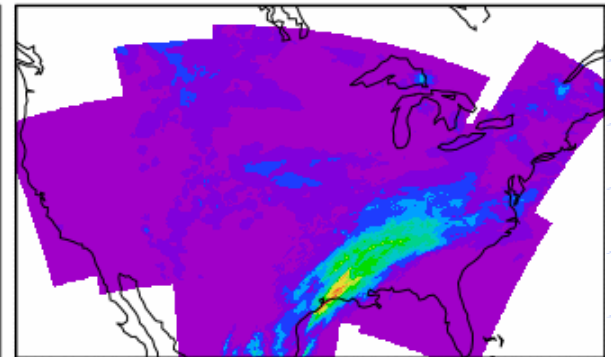
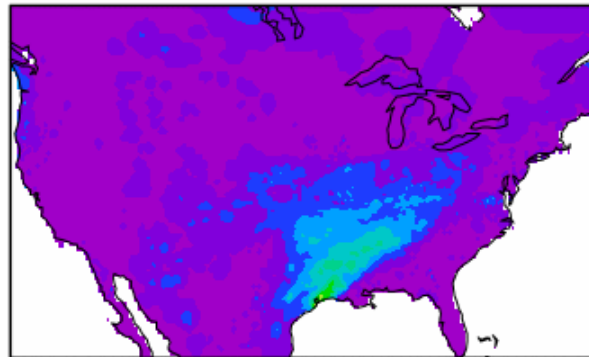
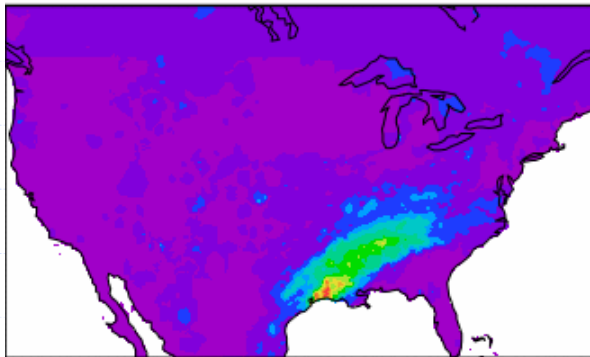
StIV Precip hourly (~25km)



NLDAS - Daily (0.25)

CPC_OLR - Daily (0.25) day = 1

StIV Precip daily (~25km)



Conclusion

- Space-time downscaling of precipitation is an important research issue
- While stochastic and physical downscaling methods have their shortcomings, a combination of them can be applied for improving downscaled precipitation
- A combination of best-fit interpolation, random cascade disaggregation, and translation model is used to demonstrate the downscaling of precipitation across a range of scales.

Thank you for your kind attention

