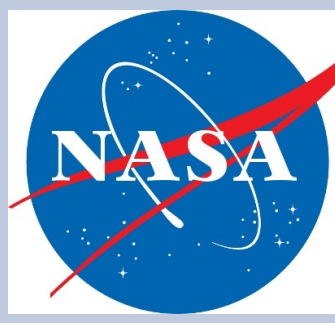


# Differences in seasonal hindcasts produced by GEOS-S2S and GEOS-Fortuna

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## Brief overview of GEOS-S2S forecast system

- Atmospheric initial conditions are produced by a 3 hour (21z to 00z) replay of MERRA2
- Ocean initial conditions are from ODAS production
- Sea ice initial conditions are generated using NSIDC and MERRA2
- Resolution: 1/2 degree atmosphere, 1/2 degree ocean
- Initialized every 5 days, forecast length is 9 months

## Data analyzed in this study

- November hindcasts initialized on oct08, oct13, oct18, oct23, oct28
- Ensemble mean monthly precipitation and surface air temperature from 1981 to 2015
- Observation data are MERRA2 precipitation and near surface temperature
- bias, skills and variance are compared between two systems

(1) Fortuna

(2) GEOS-S2S

abs(2)-abs(1)

Bias

Tref

Precip

AC

Tref

Precip

Std<sub>m</sub>-Std<sub>o</sub>

Tref

Precip

