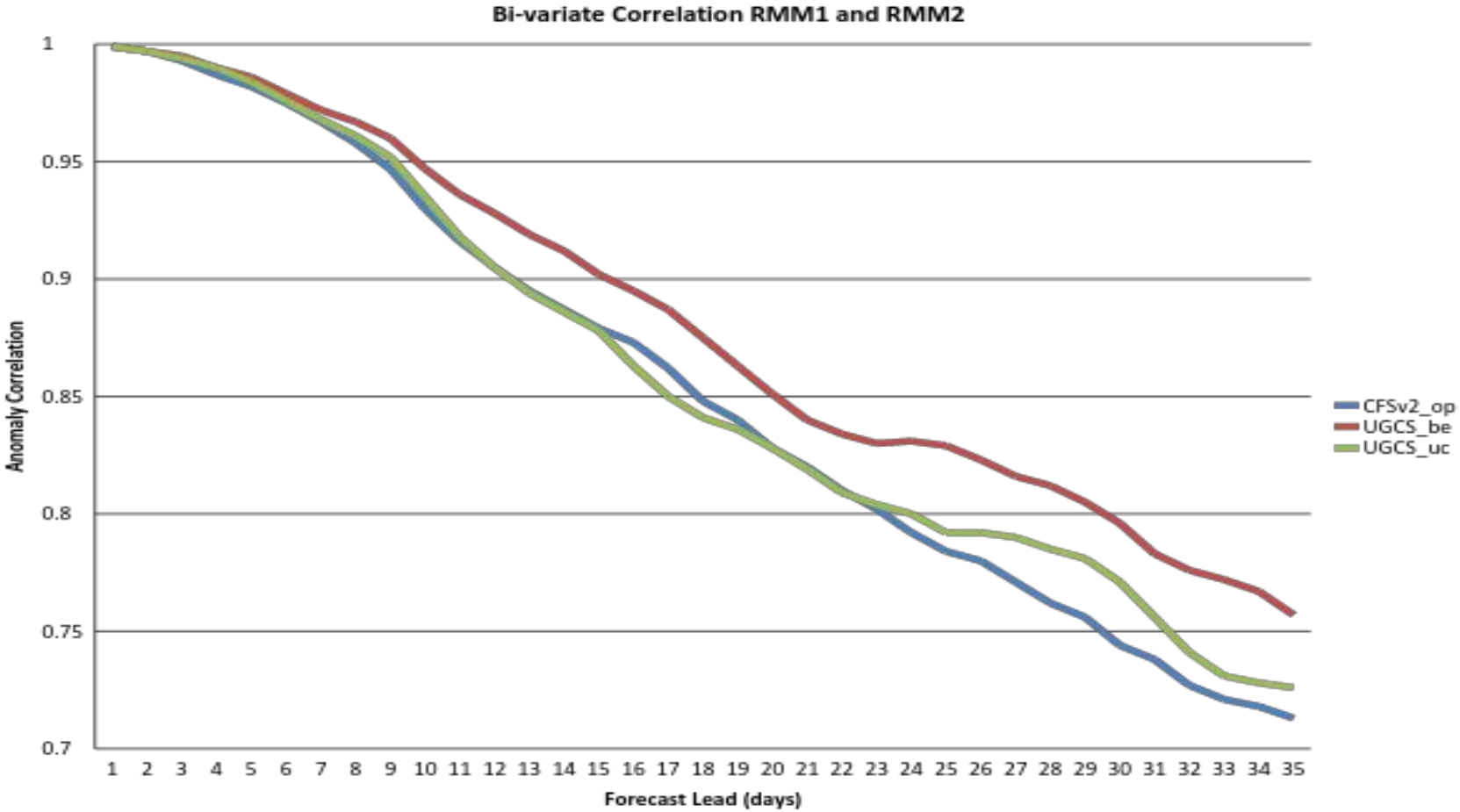
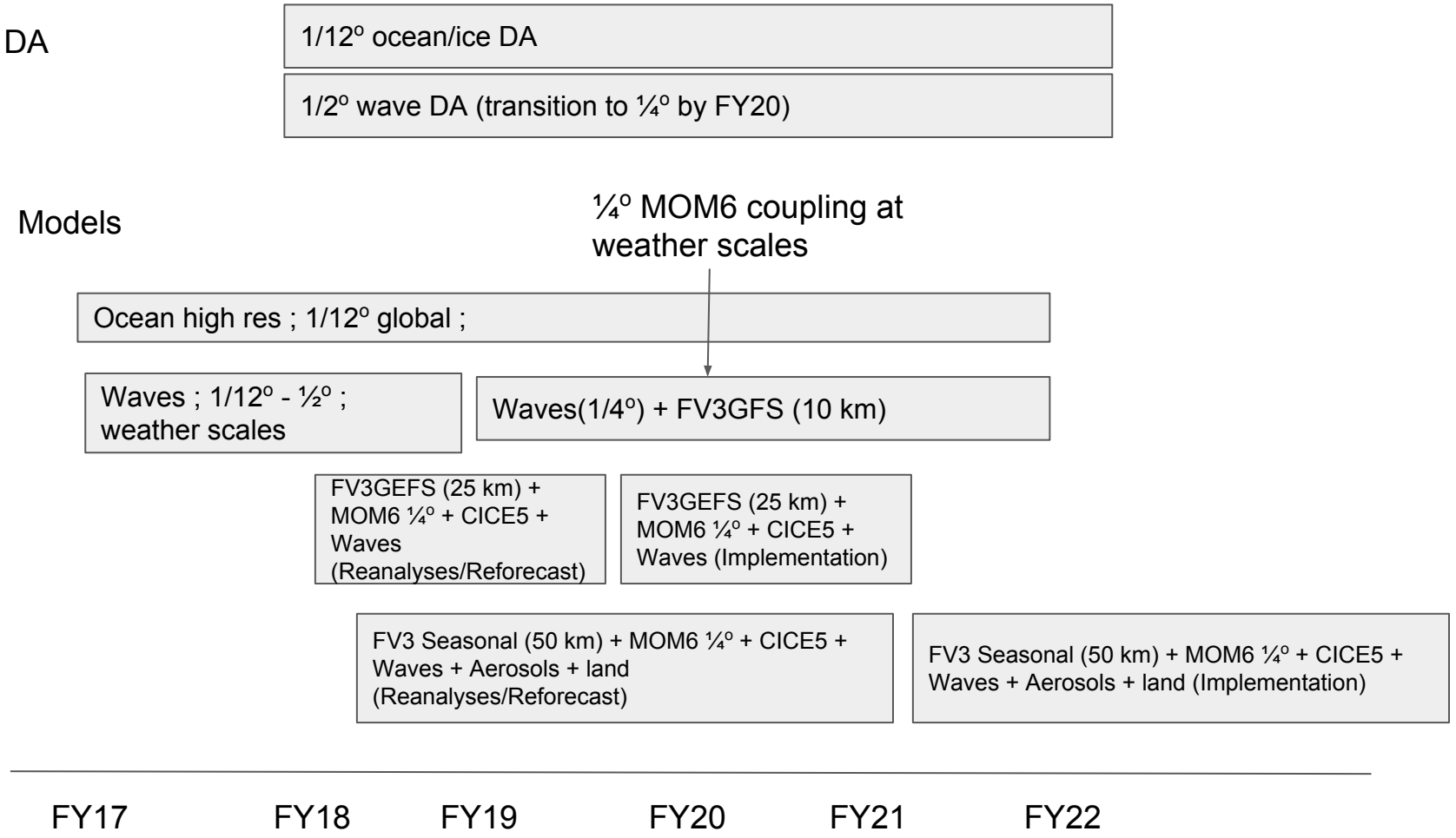
NCEP Plans for Sub seasonal to Seasonal Forecasting

- NCEP is building a coupled system using the NEMS/NUOPC framework
- Coupled system will consist of following components
  - FV3 based atmospheric model; MOM6 ocean model; WAVEWATCH-III wave model; CICE5/SIS2/KISS ice model; NOAH/NOAH-MP land model
- NUOPC caps for most of the components are either ready or in advanced stages of development
- Prototype system (using GSM-MOM5-CICE5) primarily to test infrastructure and physics is beating current operational CFSv2 in skill
- A prototype system with the above components is expected to be ready for testing by September 2017
- DA for each of the components is actively under development and prototype is expected by January 2018



All-seasons MJO's two leading modes (RMM1 and RMM2) of the combined timeseries of OLR, U850 and U200 equatorial anomalies. RMM1 series has the largest amplitude in the Maritime Continent and (negative) in the West. Hem. and Africa; RMM2 has largest amplitude in the Western Pacific and (negative) in the Indian Ocean


DA
1/12° ocean/ice DA
1/2° wave DA (transition to ¼° by FY20)
Models
¼° MOM6 coupling at weather scales
Ocean high res ; 1/12° global ;
Waves ; 1/12° - ½° ; weather scales
Waves(1/4°) + FV3GFS (10 km)
FV3GEFS (25 km) + MOM6 ¼° + CICE5 + Waves (Reanalyses/Reforecast)
FV3GEFS (25 km) + MOM6 ¼° + CICE5 + Waves (Implementation)
FV3 Seasonal (50 km) + MOM6 ¼° + CICE5 + Waves + Aerosols + land (Reanalyses/Reforecast)
FV3 Seasonal (50 km) + MOM6 ¼° + CICE5 + Waves + Aerosols + land (Implementation)
FY17
FY18
FY19
FY20
FY21
FY22