



GDAS/GFS Version 16

Status as of September 13, 2019



Schedule

Project Information & Highlights

Project Manager: Vijay Tallapragada

Leads: Fanglin Yang and Russ Treadon (EMC), Steven Earle (NCO)

Scope: Develop and incorporate new capabilities into the NCEP GFS with 13 km resolution and 127 levels, including advanced physics and DA system, including GLDAS in DA cycle, and coupling to a wave model. Additional capabilities from the NGGPS community will also be incorporated.

Expected benefits: higher model vertical resolution, extended model domain up to the mesopause, improved model physics, advanced data assimilation, improved model forecast skills.

Dependencies: testing of NOAA MP, gravity-wave drag parameterization; wave coupling, and DA upgrade; Satisfactory evaluation by stakeholders and downstream products

Milestones & Deliverables	Date	Status
EMC/NCO EE2 kick off meeting	Q1FY20	planned
Freeze model code and data assimilation system	Q4FY19	planned
Complete full retrospective/real time runs and evaluation	Q3FY20	planned
Complete Field evaluation & conduct CCB	Q1FY21	planned
OD Brief and deliver final system code to NCO	Q1FY21	planned
Deliver Service Change Notice to NCO	Q1FY21	planned
Start 30-day evaluation and IT testing	Q2FY21	planned
Operational Implementation	Q2FY21	planned



Issues/Risks

Risk: **Insufficient computing resources and disk space for conducting adequate testing and evaluation** of newly added physics schemes and data assimilation techniques; Insufficient resources for carrying out 3 years of retrospective parallel runs mandated by NHC; **Projects delayed to start: in-line UPP, workflow for wave coupling, inline GLDAS. In sufficient community support for UGWP and GFDL MP.**

Mitigation: reduce the scope of updates; Reduce the length of retrospective parallels; accelerate inline UPP development to run UPP inside the model.

EMC NCO **Red text indicates change from previous quarter**



Resources

Staff: 3 Fed FTEs + 10 contractor FTEs; including Dev (FV3, physics, DA, post processing, V&V, and infrastructure)

Funding Source: STI/NGGPS

Compute: EMC Dev: (+100%); **Parallels:** (+100%); **Ops:** 700 nodes HWM

Archive: **Parallels:** 14 PB HPSS for 3-year retros; **Ops:** 21TB online and 3 TB HPSS per cycle



Management Attention Required



Potential Management Attention Needed



On Target