

# START08-HIPPO

# Forecasting & Flight Planning

START08-HIPPO Forecast Team

# Forecast Team

- Bowman - online data archive and basic interactive planning tools (<http://start.tamu.edu>)
- Pan/Hall/Bresch - forecasting and diagnostics
- Ray - interactive flight planning tools
- Zhang - experimental ensemble data assimilation and forecasts
- Weisman - experimental high-resolution forecasts
- Dean/Craig/Gille - HIRDLS near-real-time products
- Olsen - MLS/OMI near-real-time products
- Wei/Gambacorta - AIRS/IASI near-real-time products
- Williams - START08-HIPPO field catalog (permanent archive)

# Operational & Experimental Products

Maps, satellite imagery, and data files are archived at <http://start.tamu.edu/> and in Field Catalog

Near-real-time observations

Hourly GOES imagery and national radar mosaics

NCEP operational GFS forecast products

High-resolution ( $0.3^\circ \times 0.3^\circ$ ) global fields

Standard forecast maps

Tropopause products

3-D visualizations (tropopause, PV, jet)

Standard vertical sections ( $\theta$ , PV,  $|\mathbf{v}|$ ,  $z_{\text{trop}}$ )

# Experimental Forecast Products

TAMU/WRF EnKF analysis/forecast (F. Zhang)

00Z 30-member ensemble run to 48 hrs w/ 45 km grid

a single 15 km deterministic run

particularly useful for gravity wave forecasting

output on <http://start.tamu.edu/> and in the Field Catalog

NCAR/WRF (Weisman) -- *not available in June*

00Z nested run to 36 hrs w/ 3 km inner grid

available daily between 06:00 and 08:00 MDT

possibly increased vertical resolution near the tropopause

particularly useful for convective flight forecasting

# Special NRT Satellite Products

HIRDLS: Vince Dean, Cheryl Craig, John Gille

Near-real-time processing will create data files and curtain plots for the region of interest in time for daily flight planning meetings, delivered via the Field Catalog.

MLS/OMI: Mark Olsen

Use forward trajectories of previous MLS measurements to increase horizontal resolution to  $1^\circ \times 1.25^\circ$ . Vertical levels at 215, 147, 100 hPa and higher.

AIRS/IASI: Jennifer Wei, Antonia Gambacorta

Water vapor, ozone, carbon monoxide, methane maps.

# Forecast Operations Plan (*draft*)

Deployment schedule

Period 1: <April 20 - May 16

Period 2: June 16 - 28

Must average two or three 8-hour flights per week

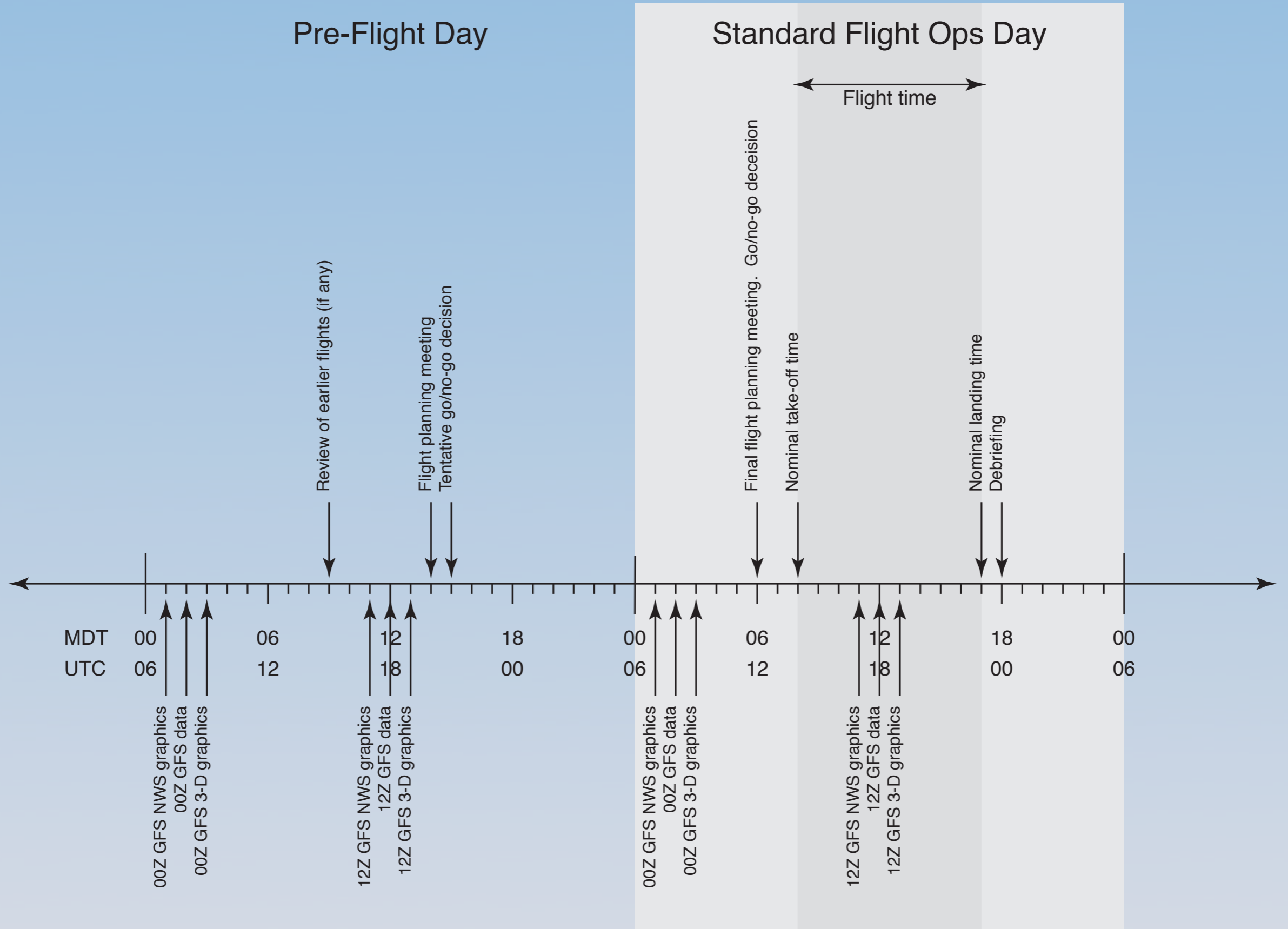
Flights may happen on successive days

Two to three primary forecasters during each two-week period, alternating days

Lead forecaster for day prior to flight will provide support to aircraft during flight (condition updates, respond to queries from the aircraft, vector to convection)

On a flight day, the alternate forecaster will be the lead forecaster for following day

# Schedule (standard flight)



# Schedule (convective flight)

