NASA Dryden Flight Research Center
Global Hawk Project

Global Hawk Pacific (GloPac) COA & Mission Coordination

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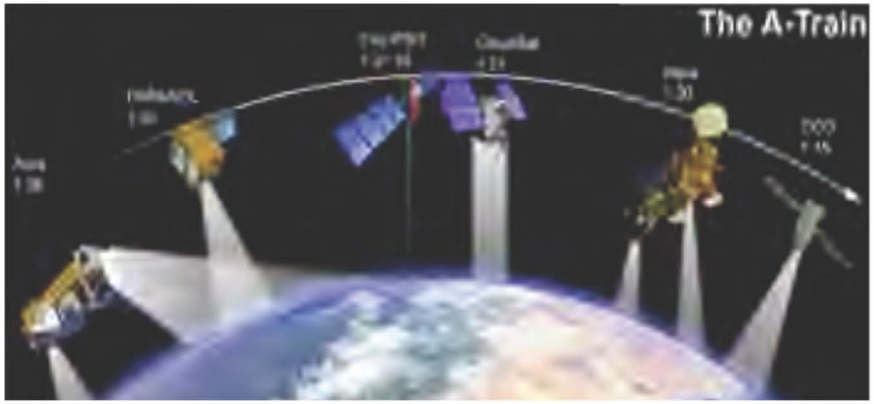
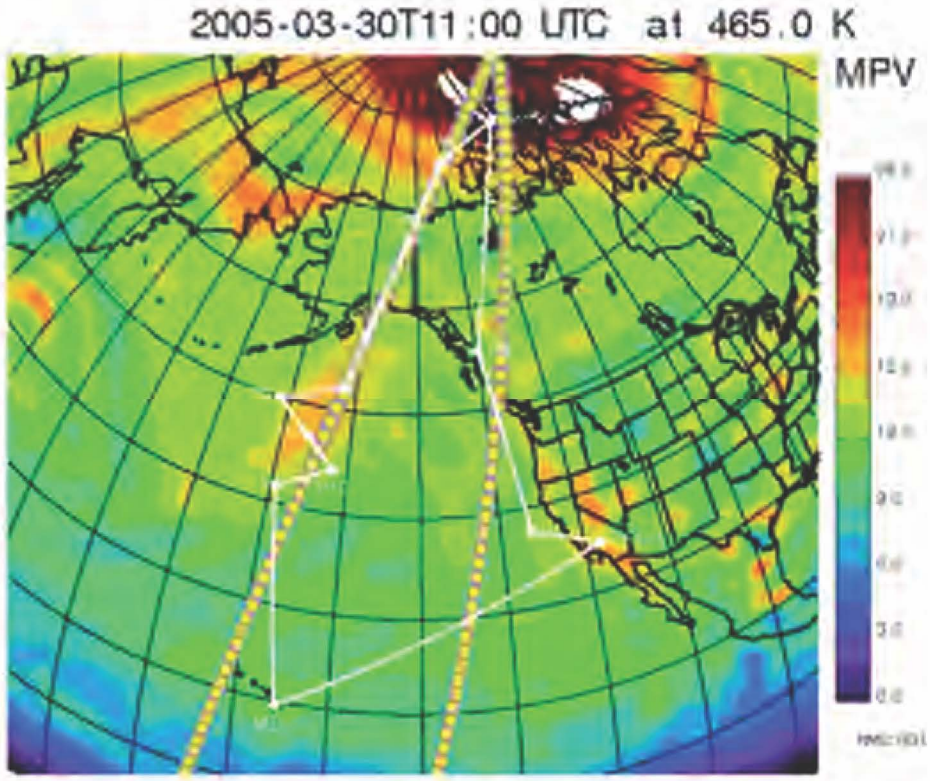
GloPac Science Objectives and Missions

- First demonstration of the Global Hawk unmanned aircraft system (UAS) for NASA and NOAA Earth science research and applications.
- Validation of instruments on-board the Aura satellite.
- Exploration of trace gases, aerosols, and dynamics of remote upper Troposphere / lower Stratosphere regions.
- Sample polar vortex fragments and atmospheric rivers.
- Risk reduction for future missions that will study hurricanes and atmospheric rivers.



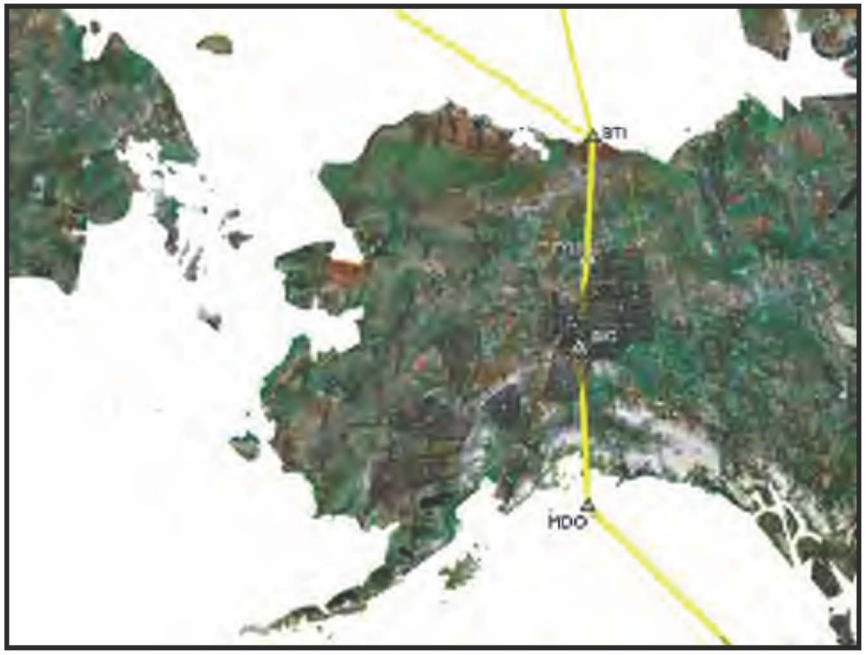


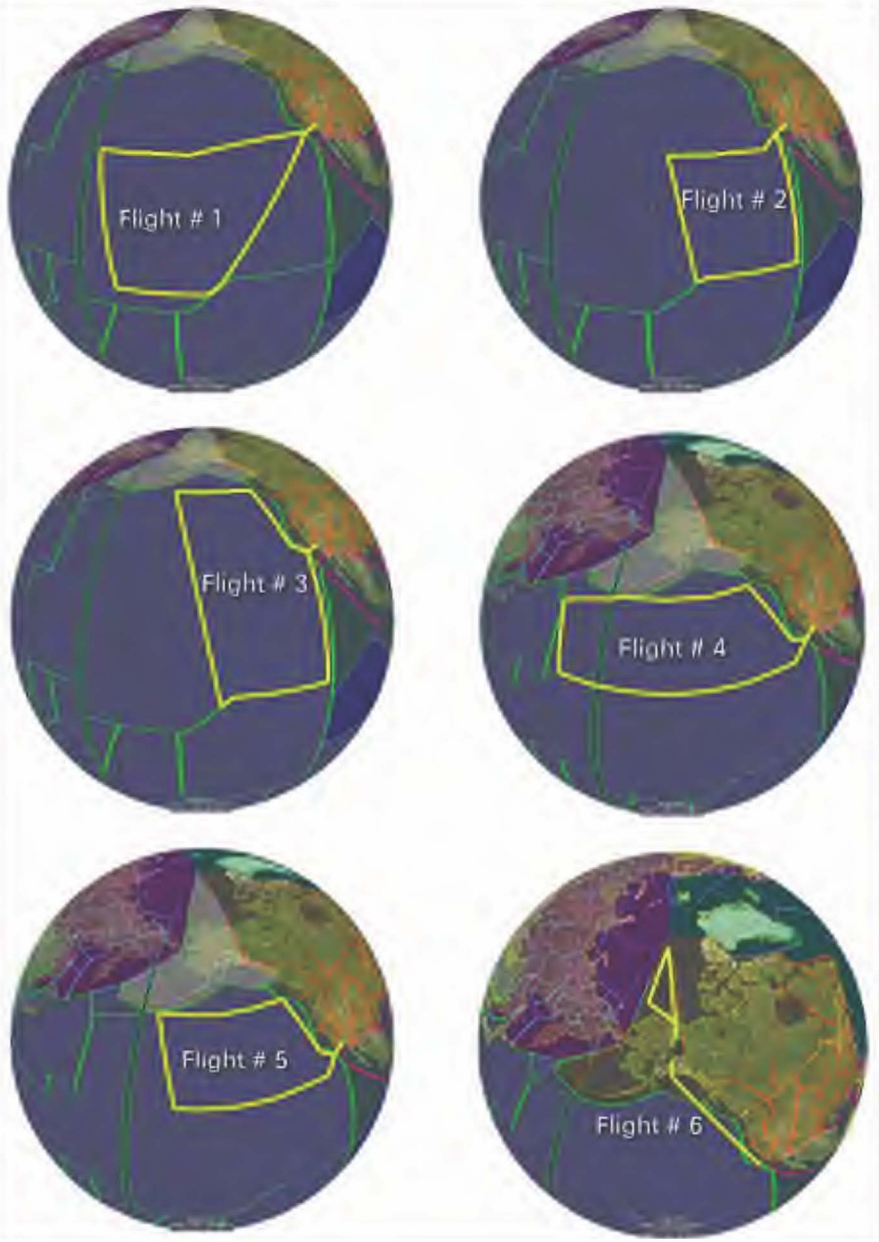
GloPac Example Flight Tracks

FAA Flight Areas Effected:

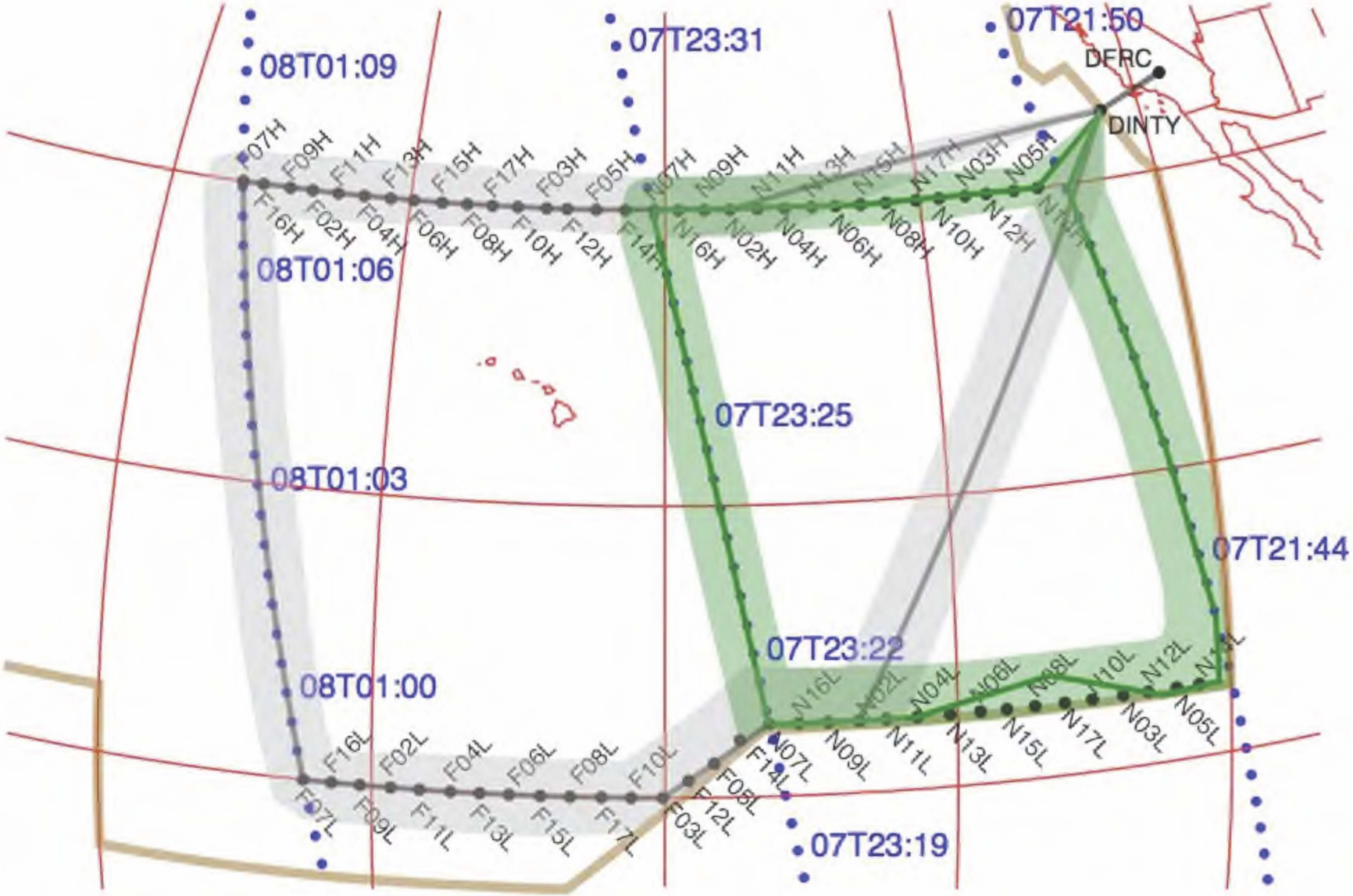
- High Desert Tracon,
  Los Angeles Center
- Oakland Oceanic
- Honolulu Center
- Anchorage Oceanic,

Continental, & Arctic

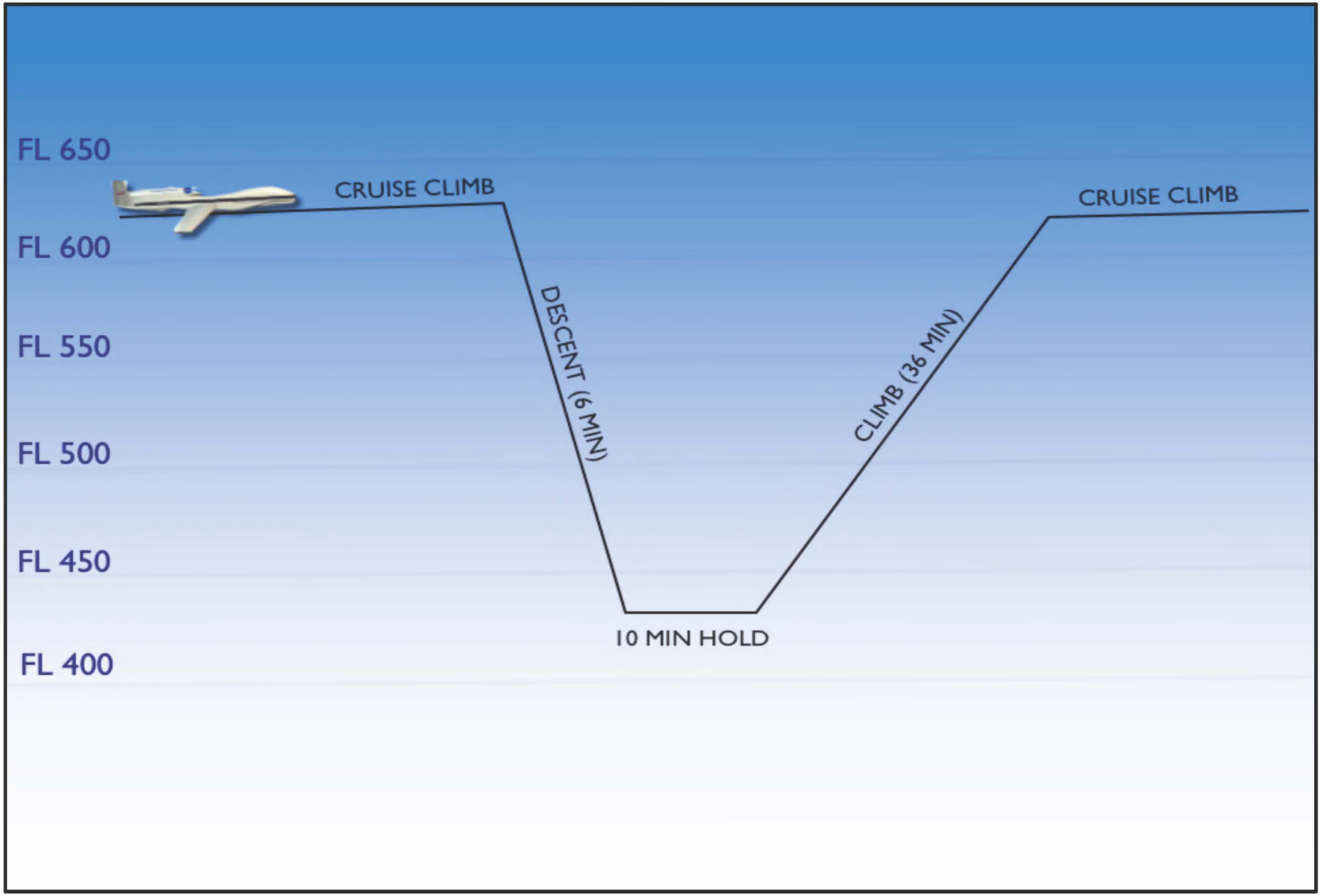




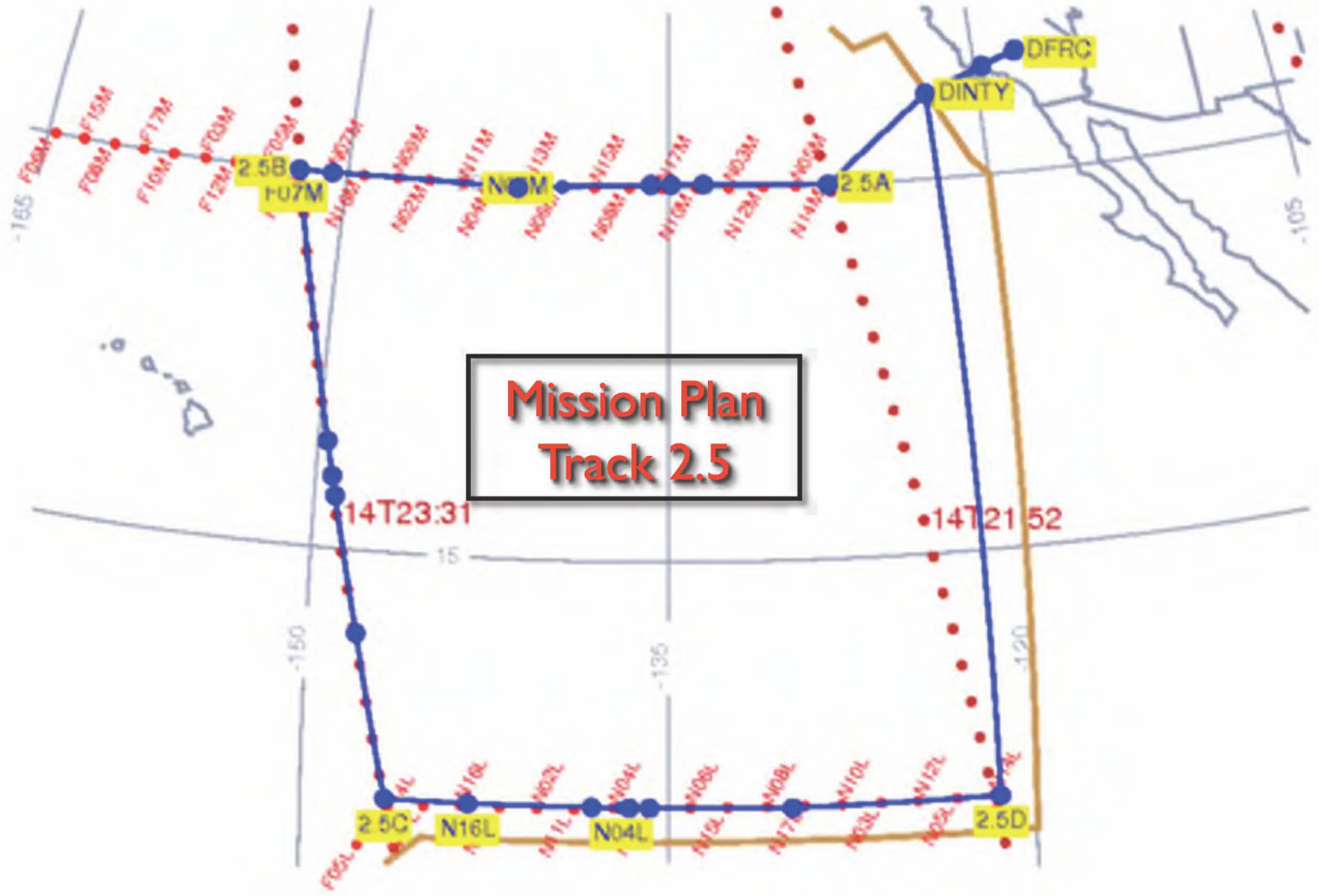
Satellite Under-Flight Requirement



Vertical Profiles
For Insitu Data Gathering at Lower Altitudes



GloPac Flight Planning Process



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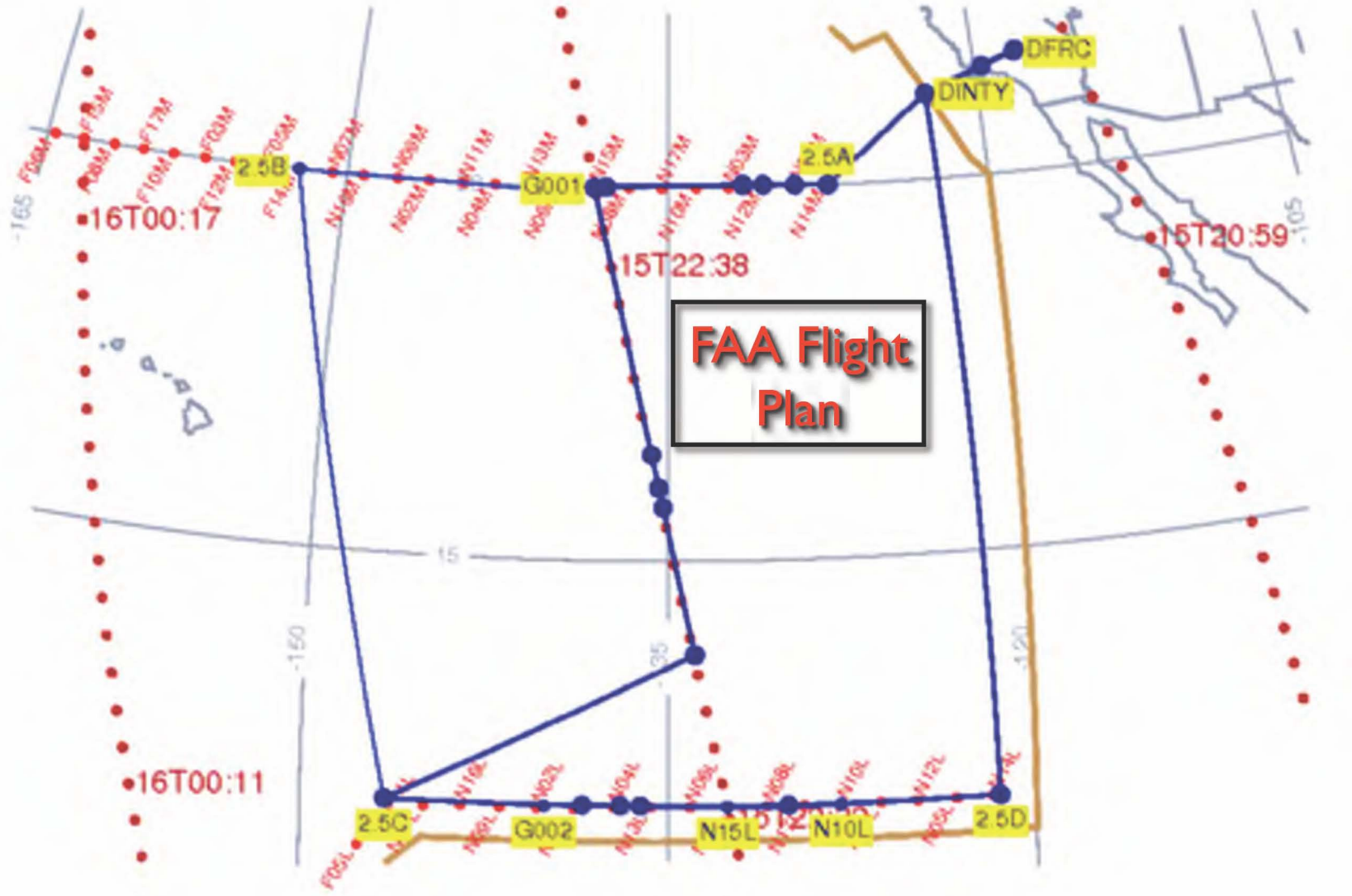
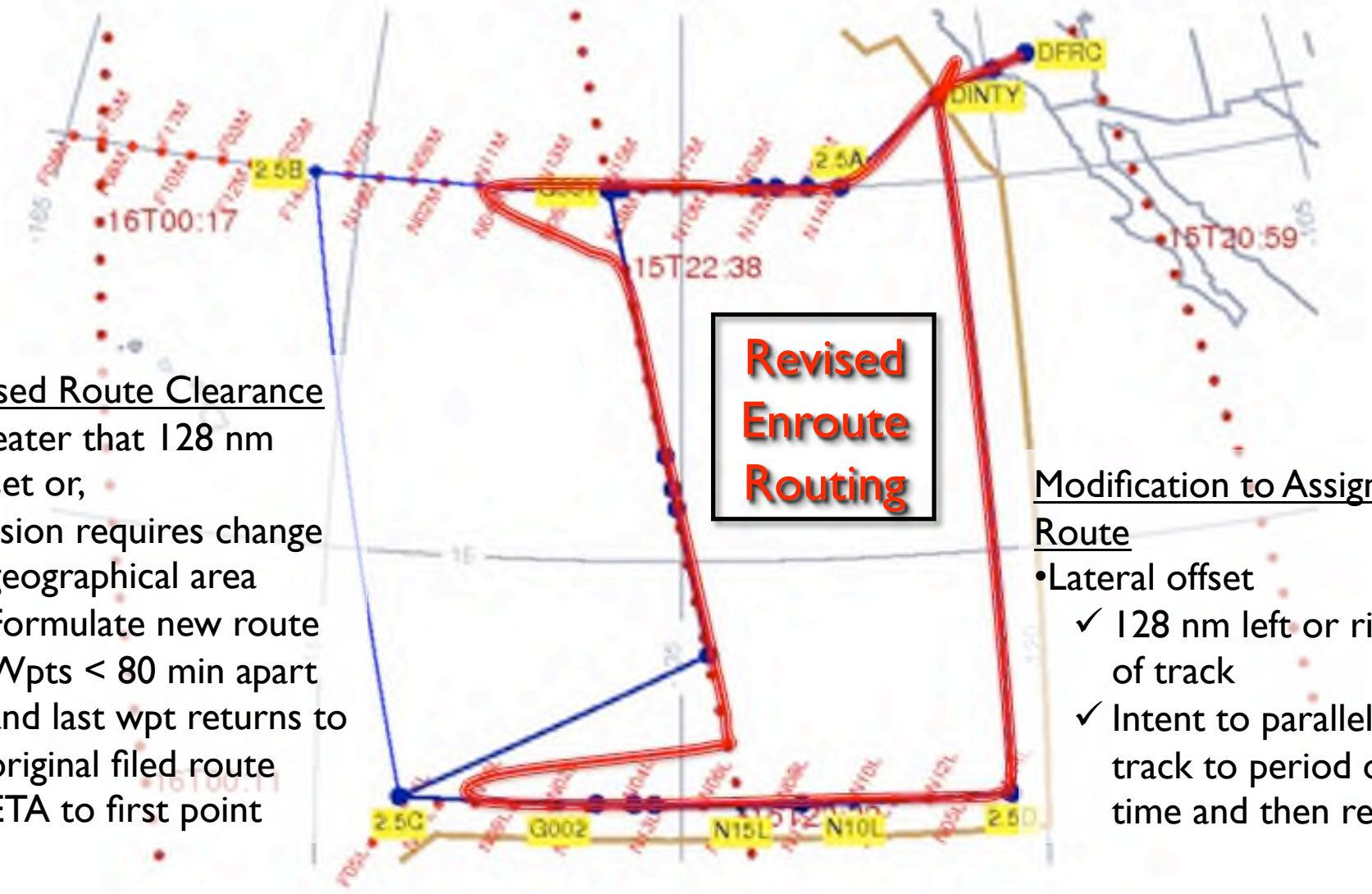


GloPac Flight Planning Process



Revised Route Clearance

- Greater that 128 nm offset or,
- Mission requires change in geographical area
  - ✓ Formulate new route
  - ✓ Wpts < 80 min apart and last wpt returns to original filed route
  - ✓ ETA to first point

Modification to Assigned Route

- Lateral offset
  - ✓ 128 nm left or right of track
  - ✓ Intent to parallel track to period of time and then return

Airspace Coordination Required by COA

	Oakland Oceanic FIR & ZLA/E10	Hawaii Center any planned flight in HI airspace	Arctic Flight GloPac 6.6 route
Initial Flight Coordination • Notification of possible flight • Notional flight route	N/A	7 business days	7 business days
Airspace Request • GloPac Region • ETD	1 business day	3 business days	1 business day
Submission of IFR Flight Plan • Include notional vert. profiles • Additional details for ATC	> 2 hours	3 business days	1 business day

Teamwork Makes It All Possible