CDAAC Status (a)

• CDAAC is generating ~2000 profiles / day
• Supporting operations
• Continuing to refine analysis
  – real-time for weather
  – post-processing for climate
  – looking for a space weather scientist to replace Stig
• Supporting science / operational users
• Firmware upgrade work with JPL has slowed down - currently looking at L2C processing
• No effort invested presently in TIP / TBB
• Work on McMurdo ground station to reduce latency, add capacity for a follow-on mission
CDAAC Status (b)

- CDAAC funding for outyears has been approved
  - Continue tasks from previous slide
  - Add processing for additional missions (GRACE was just added now COSMIC / CHAMP / GRACE)
  - Process data for other missions free of charge - if data can be made available without restrictions
  - Distribute software to other groups
  - Improve ionospheric processing / work with users of ionospheric products
  - Solve bias issues (iono bias, lower troposphere “N-bias” & “superrefraction”, stratospheric bias)
  - Periodic reprocessing of “everything”
TACC Issues

• CDAAC & TACC are in sync
• TACC does not yet receive ECMWF HR fields which are used at CDAAC
• TACC does not yet receive EUMETSAT fiducial data, which are used at CDAAC
Future RO Processing Center (a)

• General
  – Enable / Support other centers
    • Repository for interfaces and 'best practices'
  – Needs to retain lead in inversion methods/algorithms
  – Scalable & Multimission - capable

• New Technical Capabilities
  – Galileo / Glonass / Compass / Use of New Signals
  – Reduce processing latency
  – Improve POD quality - for Geodesy (orbiting fiducial network)
    • POD with ambiguity resolution?
  – Generate in-House GNSS orbits & clocks?
Future RO Processing Center (b)

- Serve as (or interface with) reliable data center for multiple missions
  - includes all data and exhaustive meta-data ('climate' processing)
- Reprocessing of many missions from many years
- Optimize processing for weather & climate
- New Science
  - Reflection?
  - Higher order Ionospheric effects
  - Optimal use of new signals and frequency
  - Data assimilation / impact / storm studies
  - Tomography?