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Space Administration

Jet Propulsion Laboratory
California Institute of Technology
Pasadena, California

Sounder PEATE Status

NPOESS Preparatory Project (NPP)

**California Institute of Technology
Jet Propulsion Laboratory**

April 28, 2011

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Topics

Sounder PEATE Staffing

Application Software and Processing System Status

Hardware Status

Plans for the Future



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But first...

**JPSS in the
age of austerity.
An experiment in saving money
through restructuring.
through restructuring.
An experiment in saving money**



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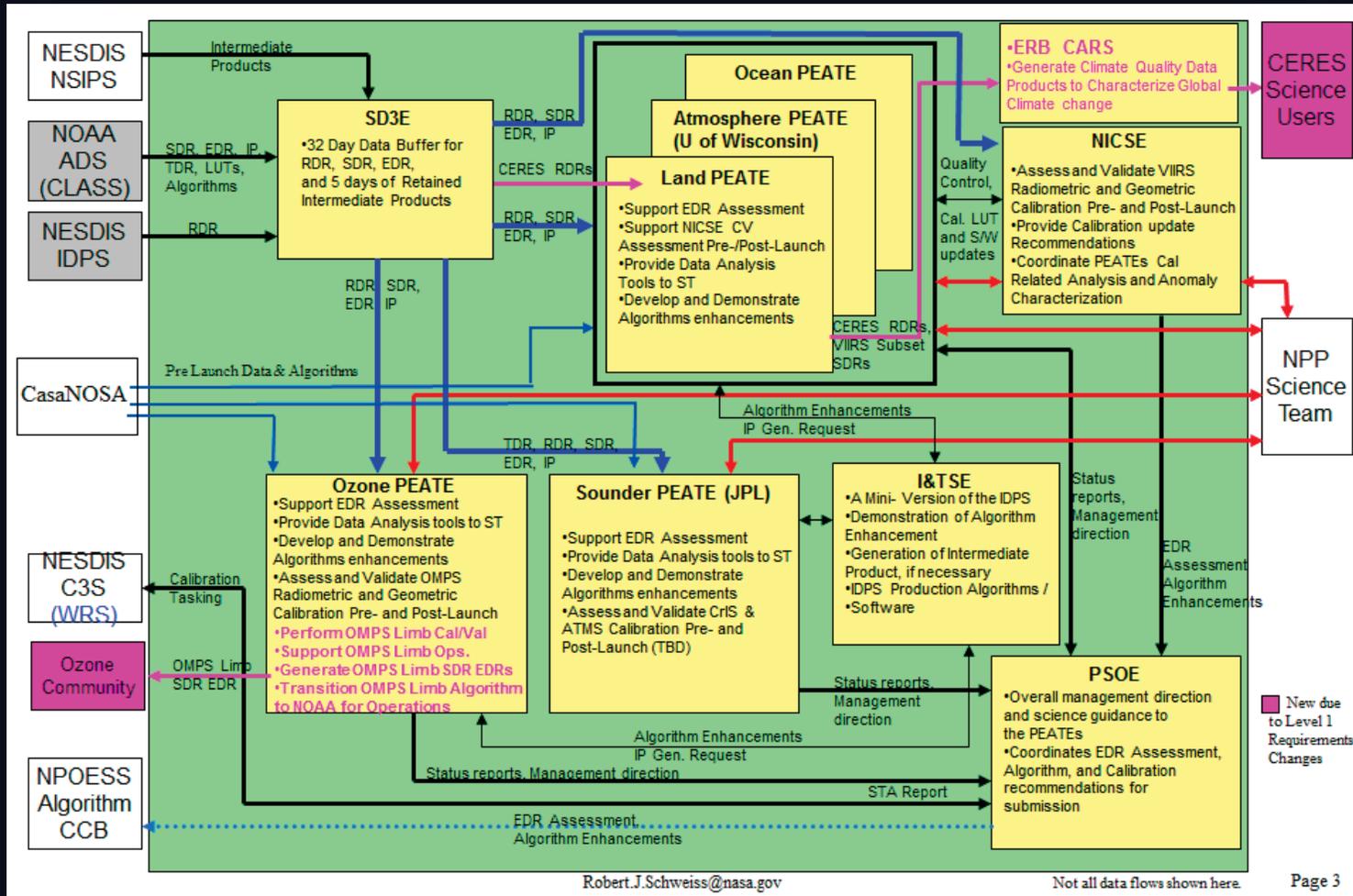
Application Software and Processing System Status **Sounder PEATE Match-Up Products**

... JPSS formed out of the ashes of NPOESS – February 2010

- Effects all aspects of NPP program
- IPO is out
- All IPs are retained!
- GRAVITE is out ... no it's in, and they will provide IPs
- The role of the PSOE as a functional intermediary between the SDS/PEATEs and the Science Teams is out.
... the connection is more direct!
- The role of the PEATES and Science Teams with the newly constituted JPSS Software Change Control Board is TBD!



SDS Interfaces as They Were

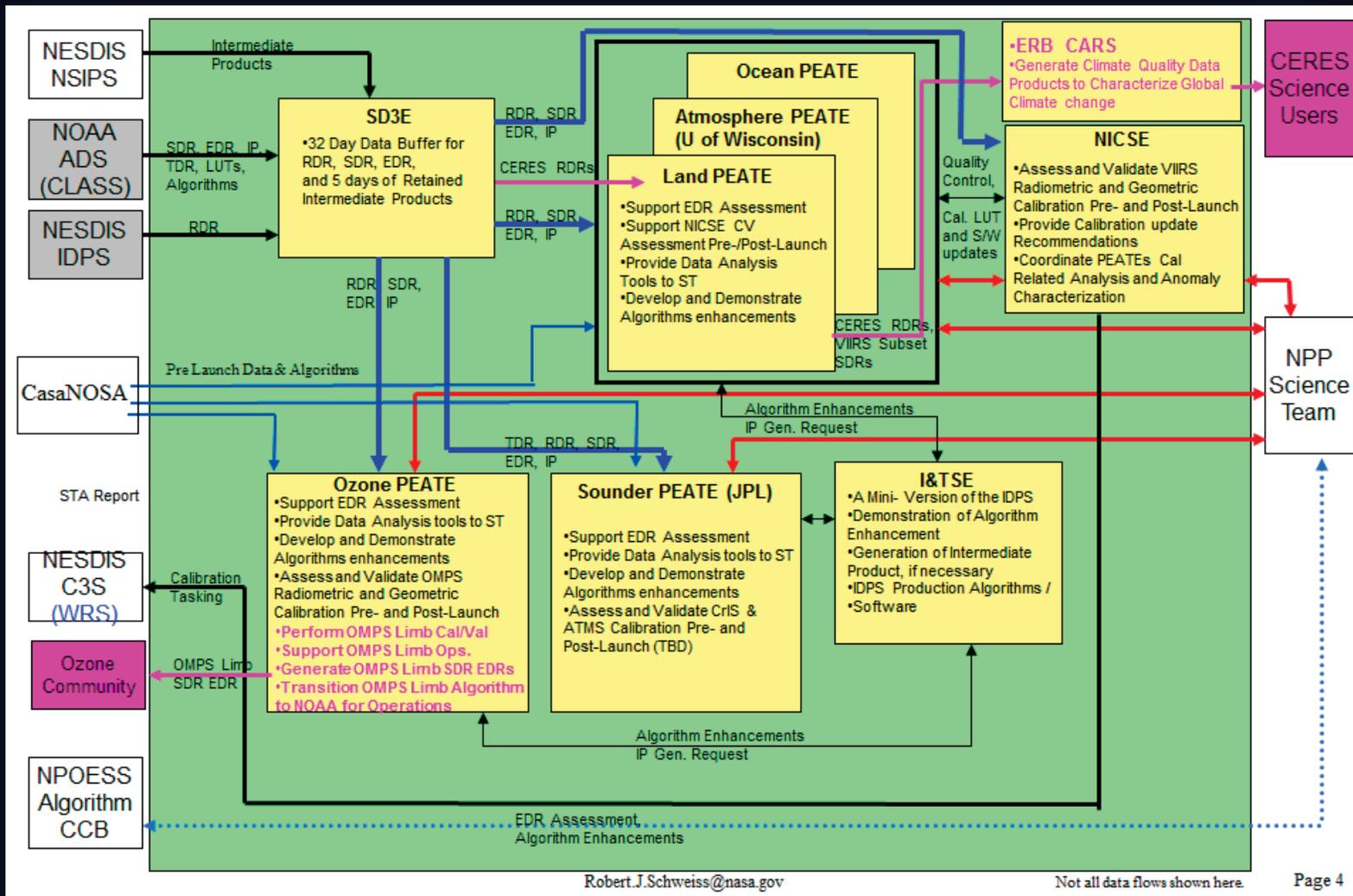




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SDS Interfaces as They Are





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Sounder PEATE and Science Team Collaboration

- **The potential and importance of cultivating a synergistic relationship between the Sounder PEATE and the Sounder Science Team is more important than ever.**
 - PSOE advocacy is gone
 - JPSS / NOAA relationships w/ respect to Science Teams, SDS and PEATEs is still forming
- **The relationship between NOAA and JPSS appeared tenuous at last UC-NCF**



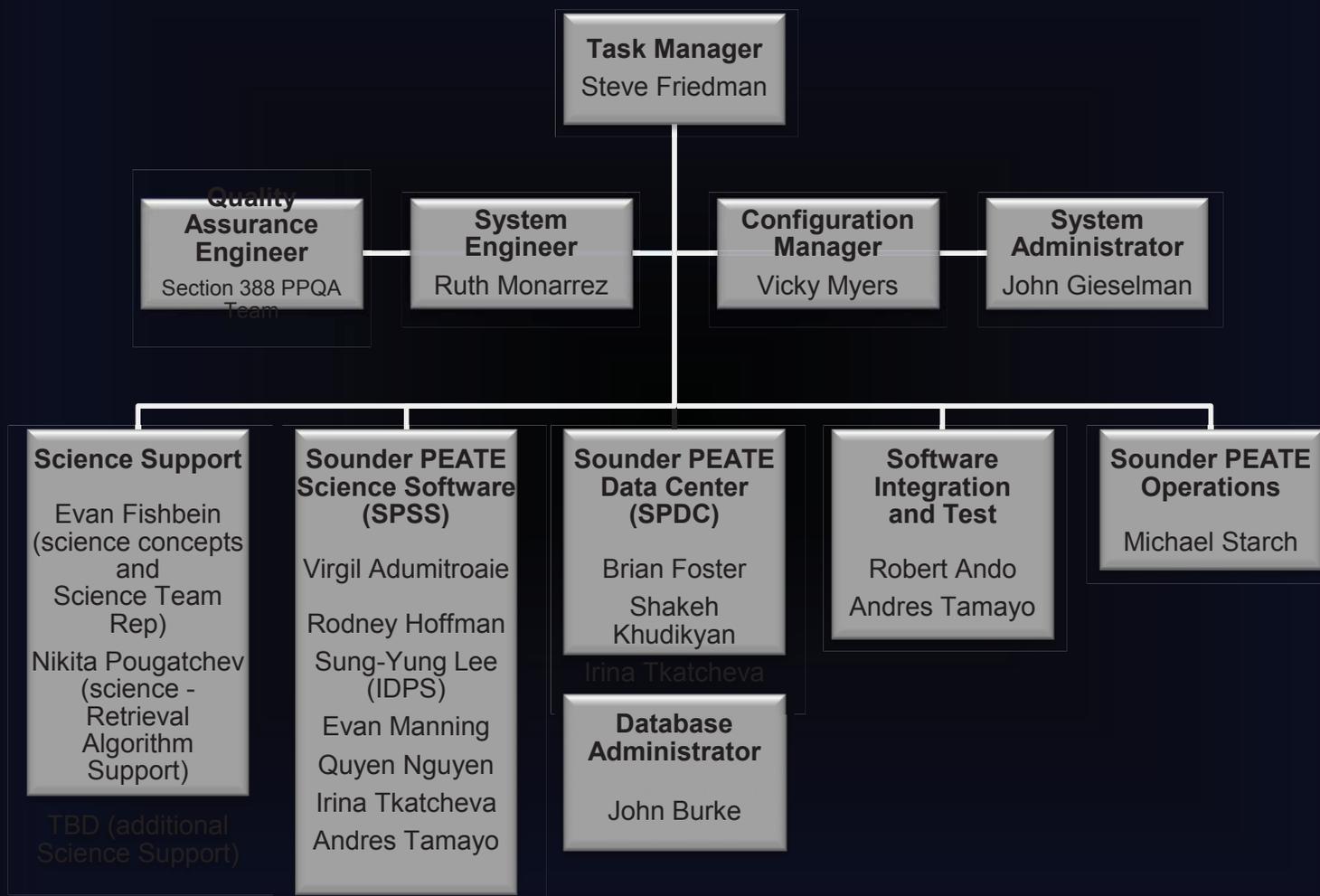
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**Now...
back to our
regularly scheduled
content
content**



Sounder PEATE Staffing





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Application Software and Processing System Status **Software System Status**

Current Sounder PEATE Operational Status

- Basic system features now available include:
 - Data ingest/archive
 - Granule maps (for MetOp-A: IASI, MHS, AMSU-A)
 - Calibration Subset (MetOp-A IASI)
 - Analysis PGE (IASI, CrIS)
 - Simultaneous Nadir Observation (SNO) – many platforms
 - SARTA and OSS as PGEs and stand-alone
 - Validation (RaObs) Match-up (basic)
- Supporting PGEs include
 - Augmentation
 - Concatenation



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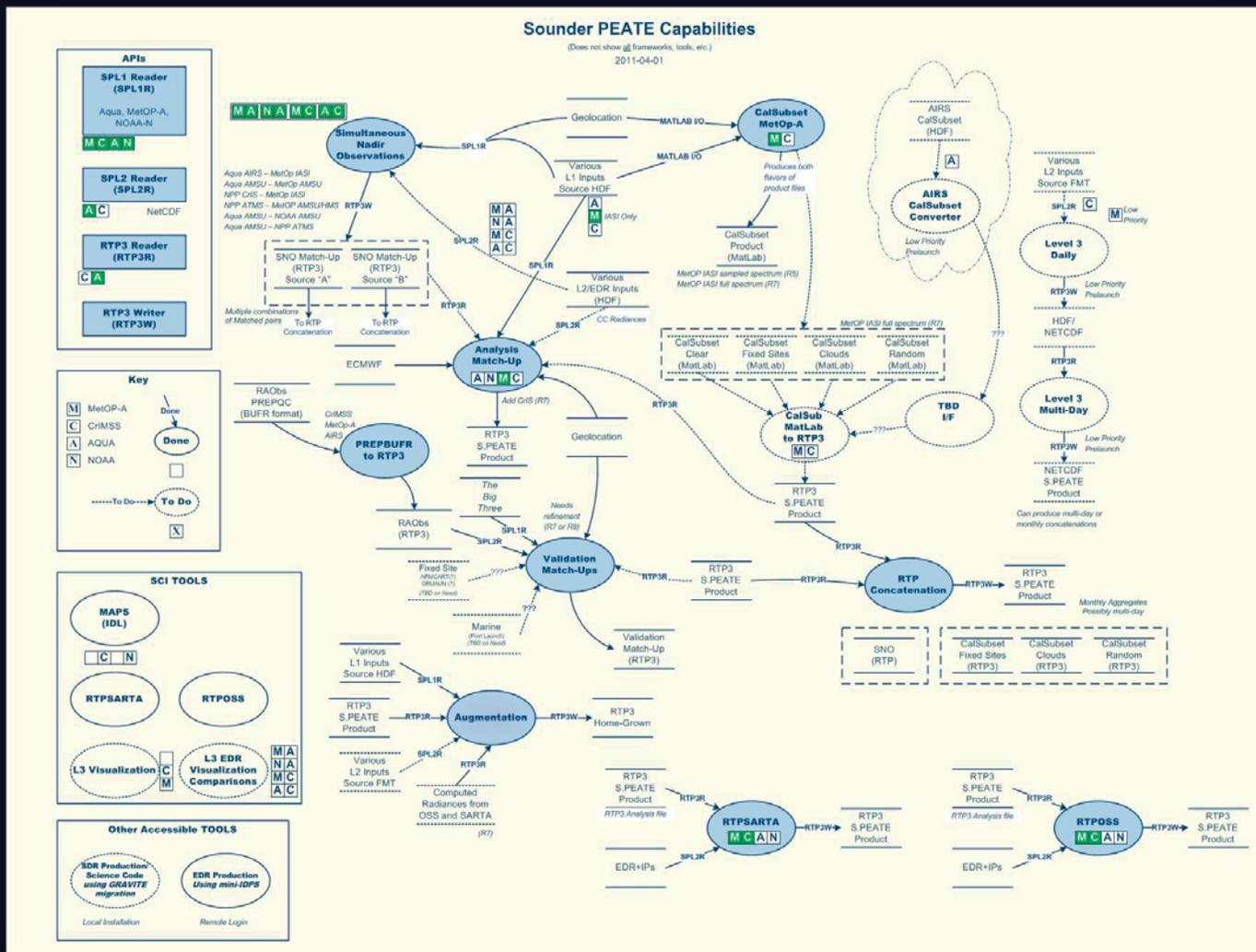
Application Software and Processing System Status **Software Development Status (cont'd.)**

- **Currently operating with Build 6.1**
 - Supports many processing threads
 - Capably supported NCT-3 Part 2 testing
 - Ingested and archived all products
 - Ran many PGEs in typical production threads
 - Previously ran SNOs for all IASI/AIRS (before IASI format change)
- **Current Development Areas:**
 - Wrapping-up Build 7
 - Full-spectrum IASI CalSubset
 - RaObs Match-up to IR (NPP, Aqua, MetOP-A)
 - Starting Build 8 Development
 - Analysis (Aqua)
 - CalSubset basics for (CrIS) – MatLab and RTP3



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Application Software and Processing System Status **Current Software Development Status**

SDR and EDR code support

- **Sourced codes ingested and archived**
 - IDPS production source code – Build 1.5.4 and earlier
 - Science software prototypes ingested and stored
 - IDPS code ported GRAVITE (Linux)
 - In the process of obtaining SDR code installation
 - Awaiting release of EDR code
- **Exercising the code:**
 - Science code modules run locally in stand-alone and as PGE
 - EDR IDPS code run on mini-IDPS

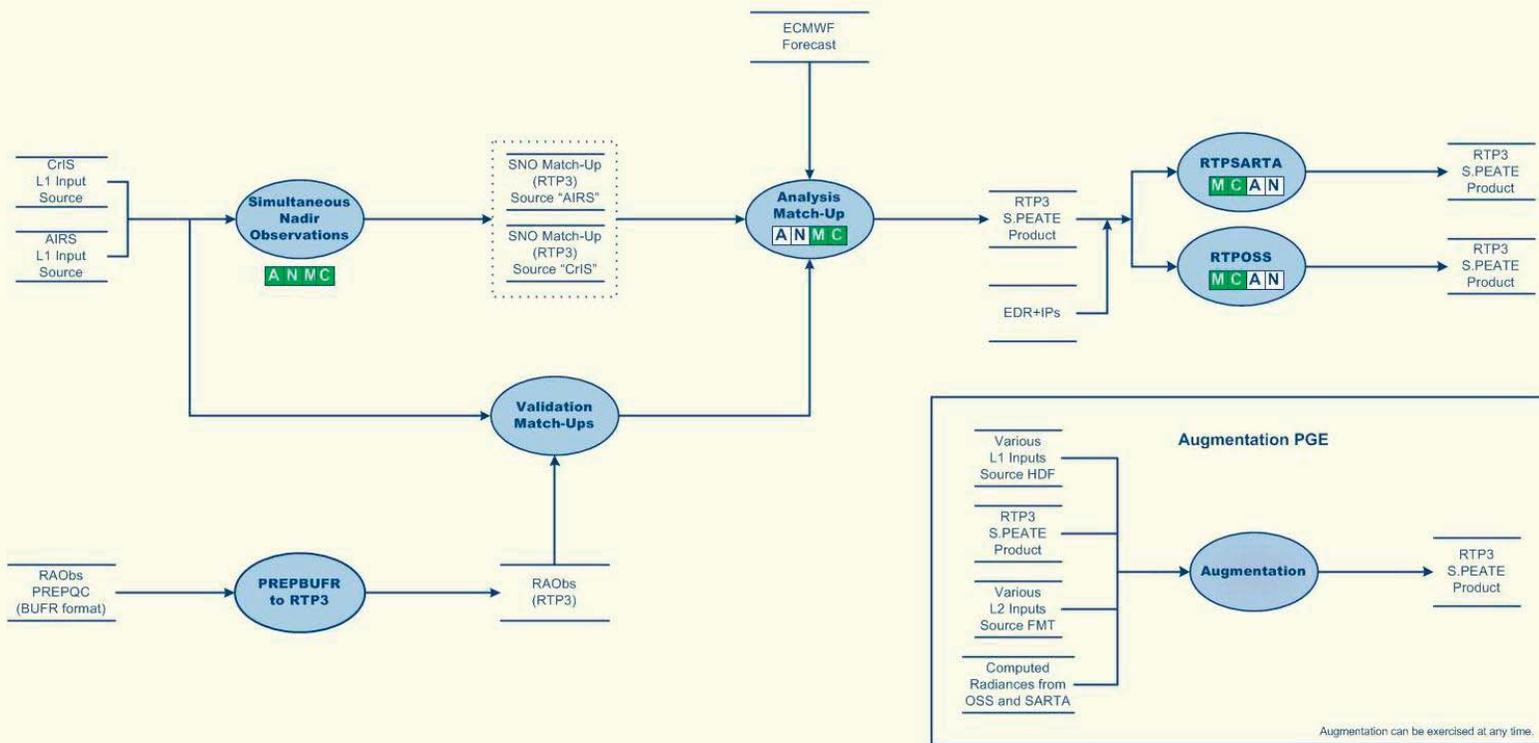


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Example Sounder PEATE Production Threads

2011-04-01





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Hardware Status Facility Upgrades

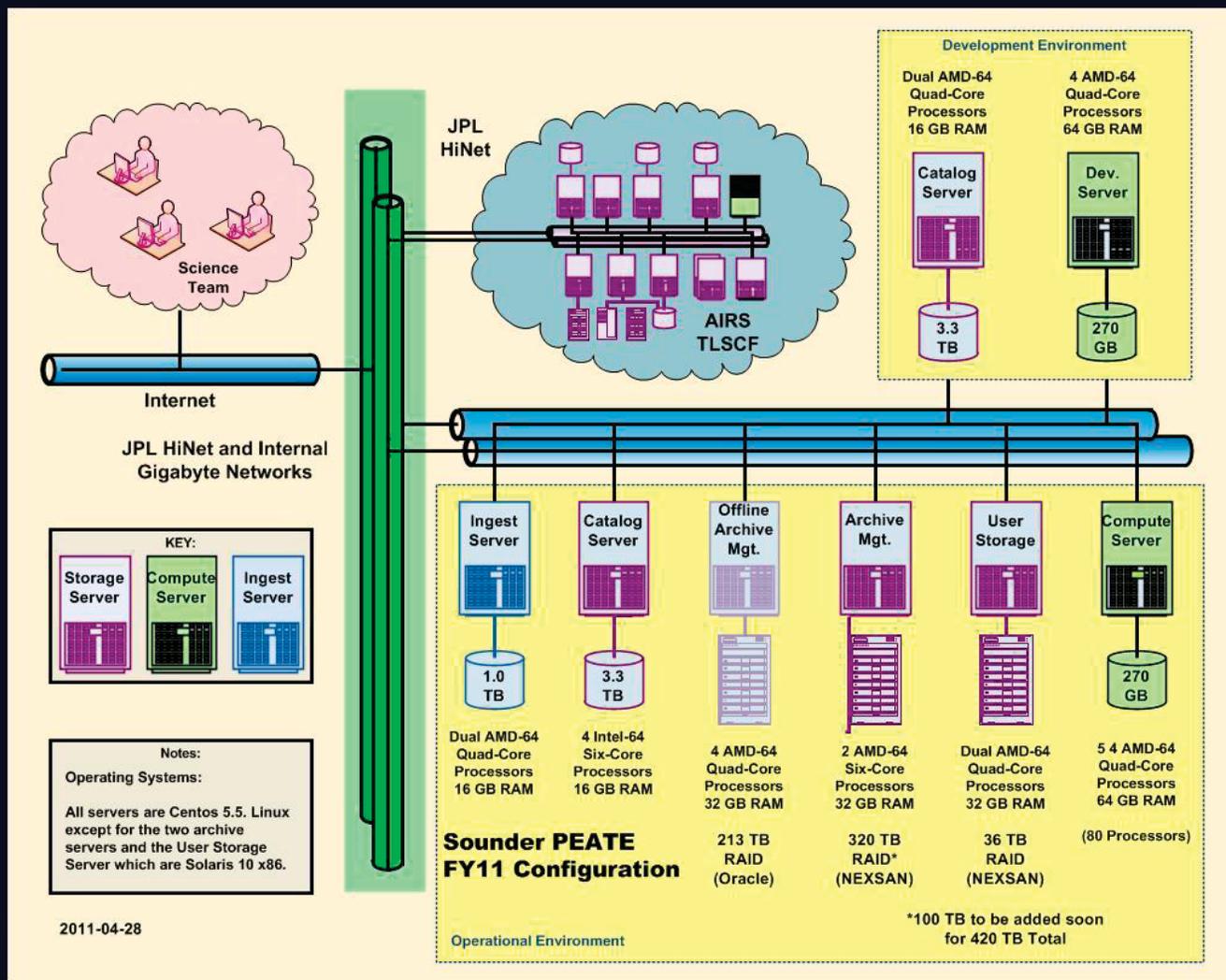
- **PEATE Processing System (partial list)**
 - Development Server (1 Sun Blade - 16 processors)
 - Compute Servers (5 Sun Blades – 80 total processors)
 - Data Archive – 420 TB RAID (320 TB active)
 - Additional Storage – 200 TB RAID
 - System Backup (a true backup system)
- **NPP Sounder Science Team may access the PEATE system to acquire data products in the archive or to utilize PEATE compute resources (when available)**
 - To do so, you must obtain valid JPL LDAP User ID!
– *Contact Steve Friedman for details*



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Hardware Status Current Configuration





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Plans for the Future **Planned Work Activities**

- **Code Development**
 - Finish code development for pre-launch
 - Planned code for post launch:
 - Calibration Subset (as soon as algorithm is refined)
 - Level 3 – goal w/in a year
- **Document features and capabilities (for Science Team)**
- **Support NCT4 (maybe NCT5) testing**



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Plans for the Future

Life After Launch - Beyond the Baseline

- **Software Development continues after launch:**
 - CrIMSS Calibration Subset (*first post-launch product*)
 - Gridded “L3-like” Products (Daily, Multi-Day, Monthly)
 - Specialized IPs, not included in standard EDR IP set
 - Other unique products/tools requested by Science Team
- **Enhancing the IDPS Code Base:**
 - Investigate upgrades to existing code
 - Upgrades (that improve EDR climate quality) submitted to the PSOE
 - Investigate alternate retrieval algorithms, as needed
- **NASA’s current plans for the PEATES:**
 - Minimal Operational Life: 2 years after launch
 - Compete follow-on via ROSES