STAR JPSS Annual Science Team Meeting: Welcome & Introduction

May 12-16, 2014

Alfred M. Powell Jr – Director
Center for Satellite Applications and Research (STAR)

WE ARE:

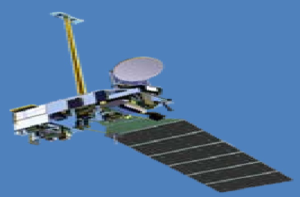
CHANGING THE WAY THINGS WORK

POES | GOES | Aqua | METEOSAT | MTSAT | DMSP

POES Algorithm Processing | GOES Algorithm Processing | Aqua Algorithm Processing | Meteosat … Processing | … Algorithm Processing | DMSP Algorithm Processing

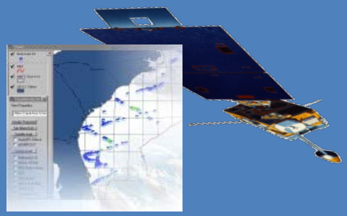
POES products | G… products | … products | METEOSAT products | MTSAT products | DMSP products

OLD ERA: Software and algorithms tailored to specific satellite data streams

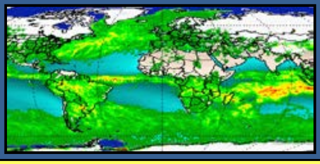


NEW ERA:

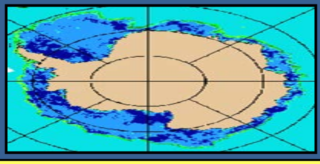
Satellites and Measurements from GEOSS

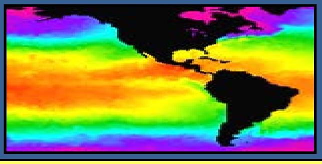


Integrated Algorithm and Product Processing System



Best earth observations & products





Software and algorithms support a variety of satellite and in-situ data streams

Center for Satellite Applications and Research (STAR)

Goals

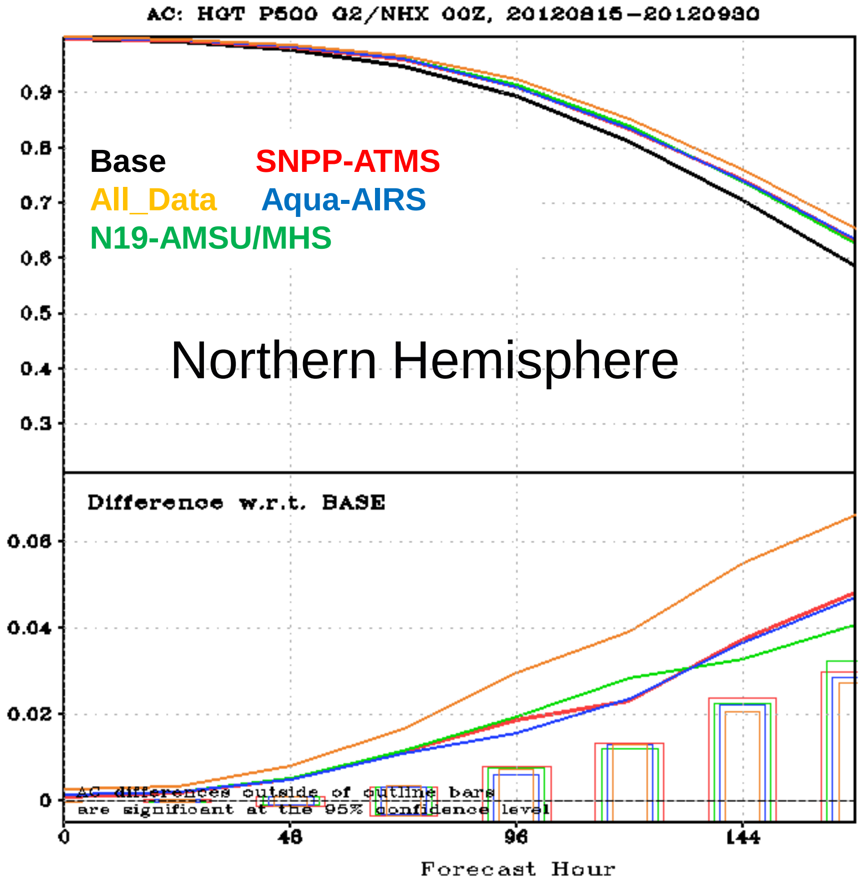
- Promote new sensor and applications research
- Ensure high quality satellite data
- Advance algorithm refinement and technology infusion
- Transition research products into operational use
- Build and sustain partnerships

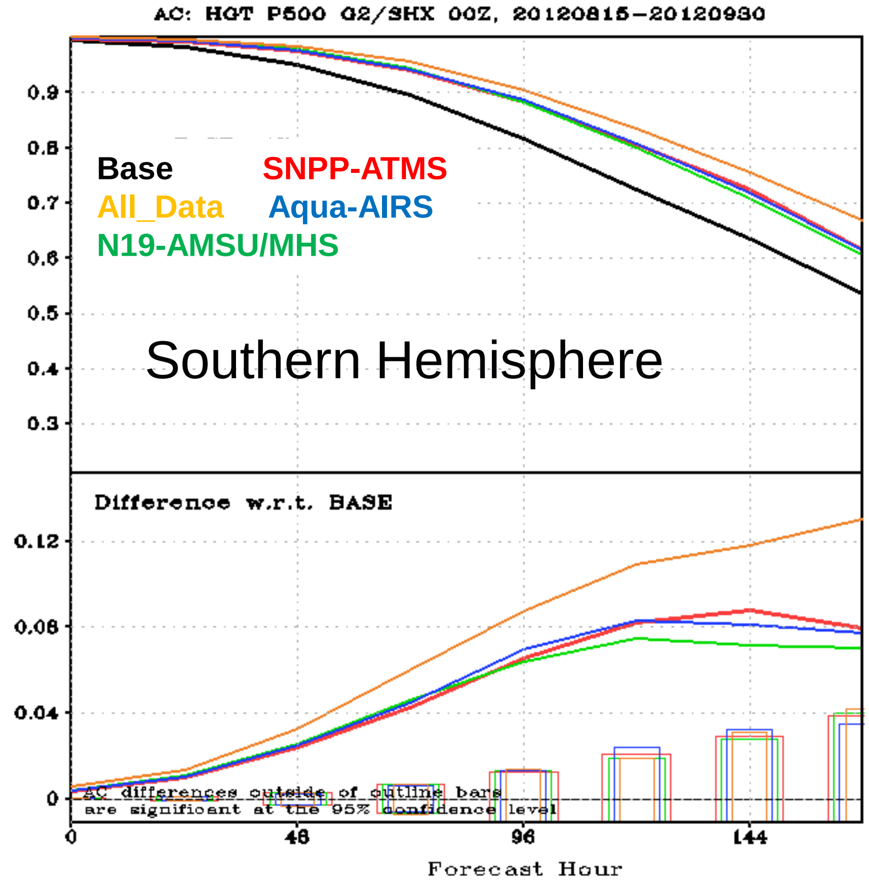
Science, Service, Stewardship

STAR Provides World Class Satellite Scientific Research and Applications

- To understand and predict changes in climate, weather, oceans, and coasts
- To share that knowledge and information with others
- To conserve and manage coastal and marine ecosystems and resources
- **To maximize the impact of NOAA's satellite program for the benefit of society, our communities and Nation's economy**

We Are Making a Difference: Single Sensor Impacts: 500 hPa AC scores for 00Z 20120815-20120930 (Jim Jung)





Base includes GPSRO constellation as it existed

Strengthening NESDIS: Reorganization

Strengthening NESDIS Reorganization:

- Adding advanced ground services and systems engineering capabilities
  - Common Ground Services and standardizing product distribution, access and archiving
  - Systems engineering approach at the enterprise level and advanced system and technology planning for future programs
- Consolidation of world-class NOAA data centers
- Reorganization authority as part of FY2015 budget process

New Organizational Structure:

- National Climatic Data Center
- National Geophysical Data Center
- National Oceanographic Data Center
- Office of Systems Development
- Office of Satellite Products and Operations
- Center for Satellite Applications and Research
- GOES-R Program Office
- JPSS Program Office

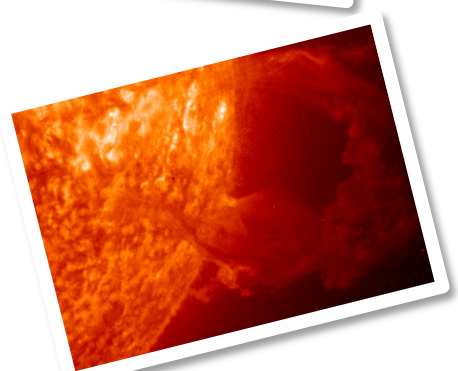
- **Systems Architecture and Advanced Planning** New
- **Office of Satellite Ground Services** New
- **National Environmental Information Office**
- **Office of Projects, Partnerships and Analysis**
- Office of Satellite Products and Operations
- Center for Satellite Applications and Research
- GOES-R Program Office
- JPSS Program Office

Preparing Our Users for Next Generation Satellites, Products and Services



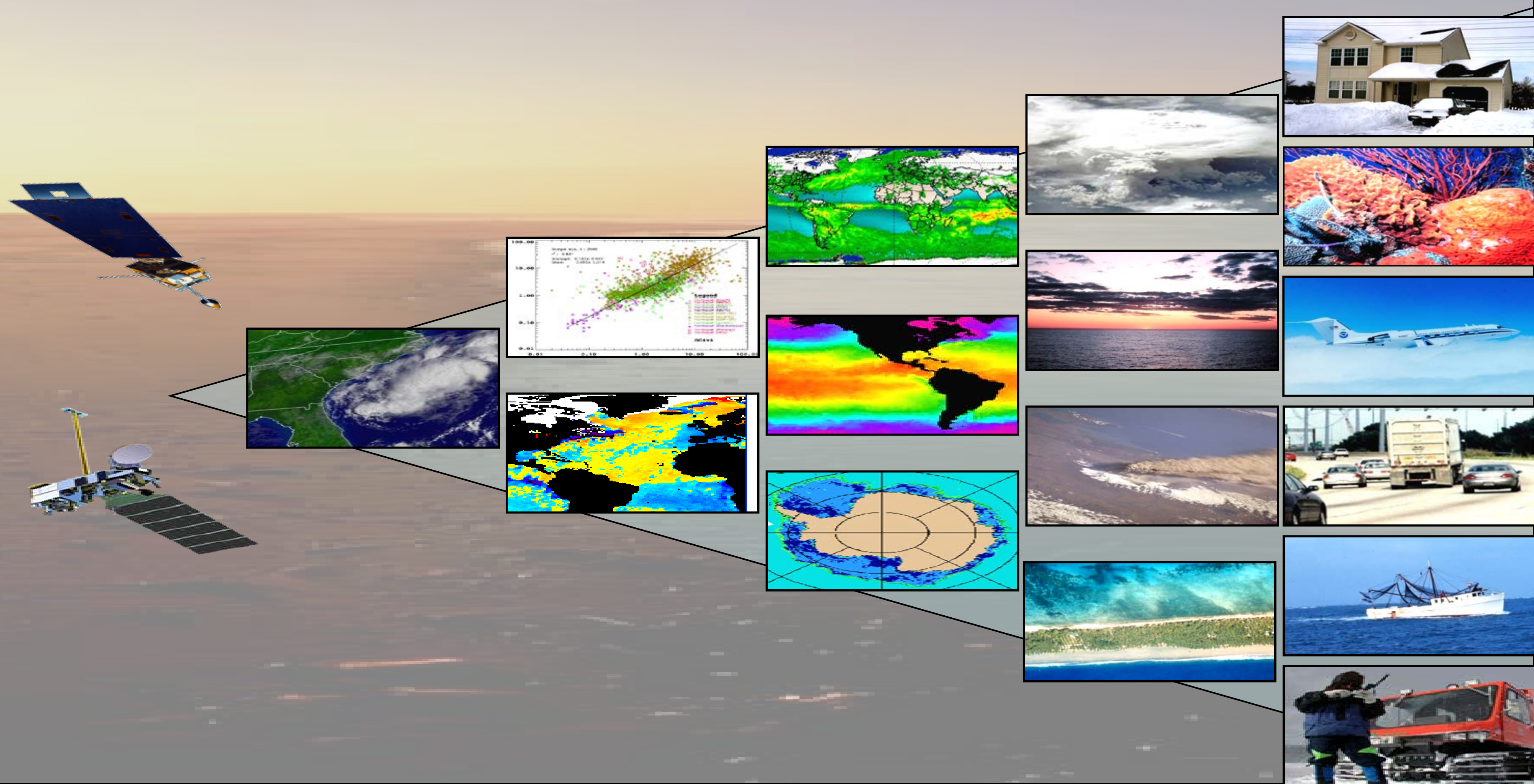


- **Support a “Weather Ready Nation”**
- **Protect life and property**
- **Support transportation and commerce**
- **Facilitate sustainable agriculture, fisheries and aquaculture**
- **Assist communities and provide recreational opportunities**
- **Inform renewable energy business decisions**
- **Safeguard communication**
- **Create business opportunities**

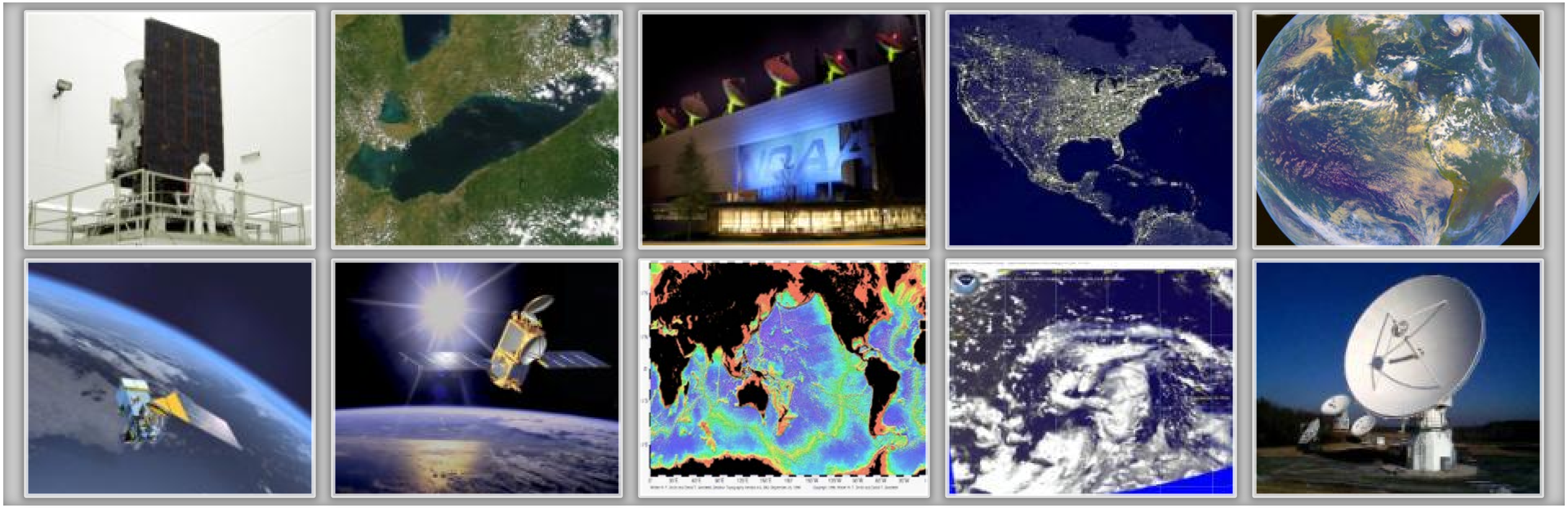


Center for Satellite Applications and Research

NOAA is where science earns value



NESDIS and STAR
A Partnership



Center for Satellite Applications and Research (STAR)

Mission

To research, maintain and transfer to operations new or improved products and services enabling NOAA to offer state-of-the-art capabilities to decision makers and the public

Vision

To advance remote sensing science and technology to better inform the American public and safeguard the environment

Office of Satellite Ground Services (OSGS) Status

Robin Krause

STAR-JPSS Science Team Annual Meeting

May 12, 2014

NESDIS Identified Need for a Ground Enterprise

Today's Ground

- Stand-alone ground systems with limited interoperability and parts commonality
  - High sustainment and O&M costs
  - Inefficient use of government & contractor personnel
- Lack of an enterprise approach to future capability development.
  - Limited use of similar capabilities across missions
  - Limited ability to leverage existing systems for new products and services
  - Difficult and costly to integrate future missions

Ground Enterprise

- Enterprise approach with flexible, agile concepts of operation that reduce costs and speed product / service deployment
- Integrating current infrastructure with common services for interoperability and improved utilization
- Improved parts commonality for more efficient use of resources
- Separate hardware and software sustainment activities, enabling hardware refresh and new capability insertions as opportunities and budgets permit
- Establishing well-defined, common business processes & procedures, and roles & responsibilities across all ground projects

Vision and Mission Guide the Transition to Ground Enterprise ARchitecture (GEAR)

OSGS Vision

One integrated, cross-program, cross-NESDIS team creating and sustaining the Ground Enterprise ARchitecture (GEAR) System (GEARS)

OSGS Mission

- Sustain Current Ops (GOES, POES, S-NPP, …)
- Enable Future Ops (GOES-R, JPSS, …)
- Create GEARS (NDE, PDA, CLASS, …)

OSGS FY15 Mission Objectives Begin the Transition to the NESDIS GEAR System

Sustain

- Conduct sustainment on legacy (POEs/GOES/etc.) and NDE/PDA/CLASS infrastructure
  - Initiate cost-avoidance activities as funding and timelines allow
  - Existing staff with augmentation

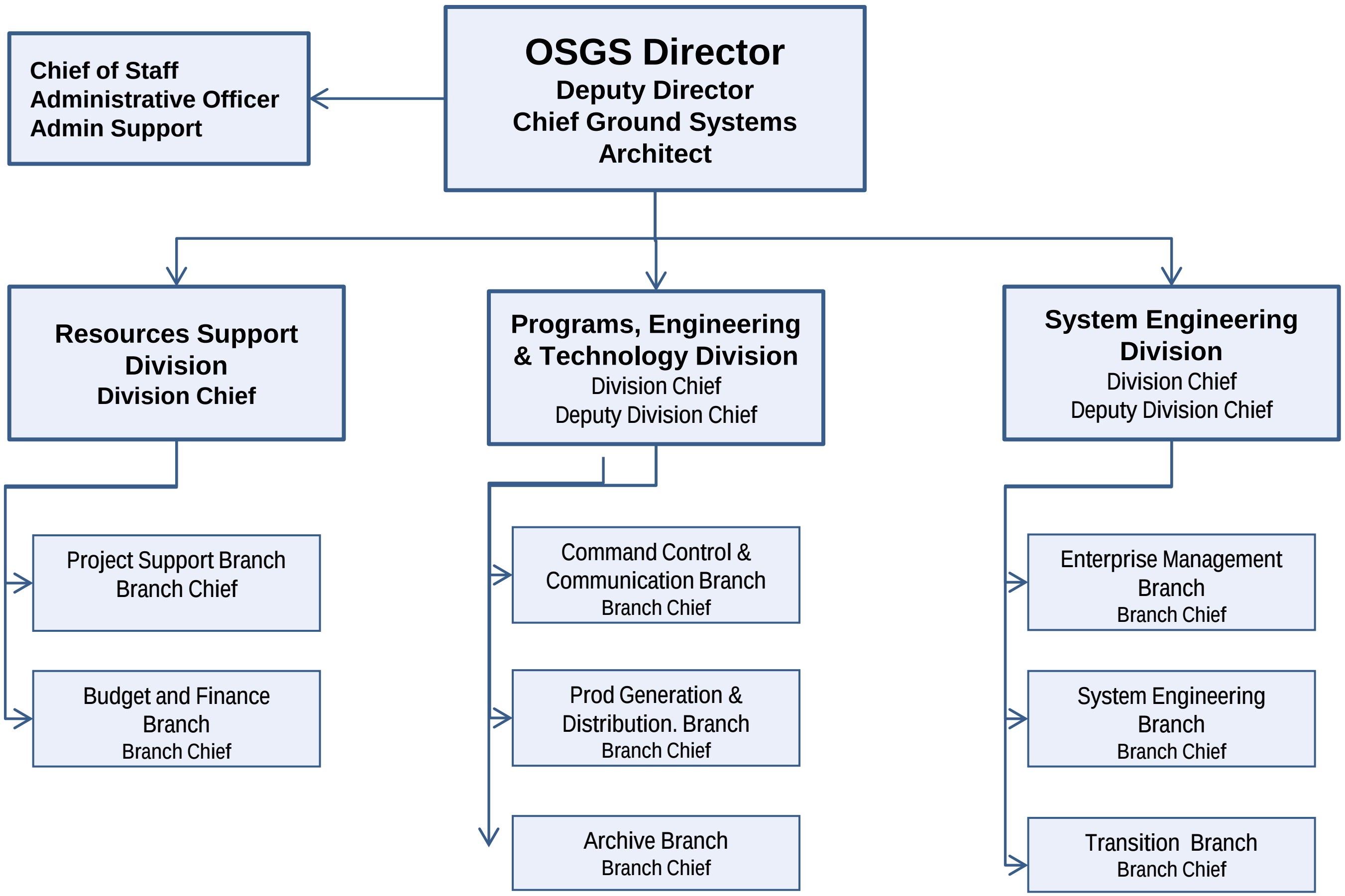
Enable

- Provide matrixed support to GOES-R and JPSS-1 programs
  - Complete the ground segments
  - Watch for further opportunities to migrate to enterprise operations
  - Prepare to lead sustainment after transition
  - Existing staff

Create

- Finish transition plan and draft acquisition plan for FY17 GEAR System initiative
  - Prototype three types of services (security, algorithms, C3)
  - Primarily new FY15 hires

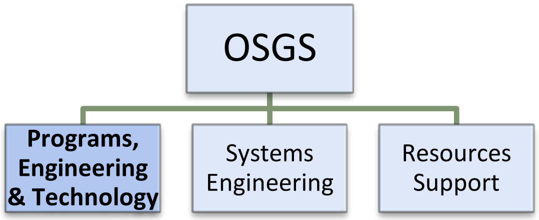
Delivering the Ground Enterprise and Strengthening Systems Engineering



Technical and Programmatic Leadership in Close Coordination with Stakeholders

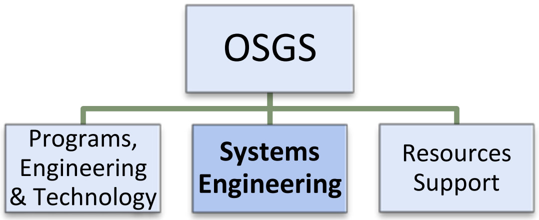
OSGS	Plan, acquire, develop, transition to operations, and sustain the enterprise ground system for NOAA's environmental satellite systems
Programs, Engineering & Technology	▪ Lead for capability implementation ▪ Project management for acquisition & sustainment ▪ Coordination with programs, projects, & customer/user communities ▪ Interface with flight projects for product generation, distribution and archival systems
Systems Engineering	▪ Coordination with users & customers for transition to ops ▪ Coordination for sustainment of operational ground systems ▪ Architectural and systems engineering standards ▪ NESDIS-wide enterprise ground mission assurance ▪ System and IT security architecture analyses & studies
Resources Support	▪ Establishment of SLA and partner agreements ▪ Budgetary and financial coordination ▪ Acquisition services ▪ Project management services

Functional Responsibilities: OSGS Programs, Engineering and Technology



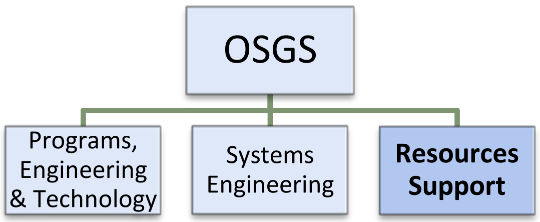
- Engineering and technical expertise
- Lead organization for implementing capabilities
- Project management for acquisition and sustainment
- Project baseline of all documentation
- Capability for development of ground system functional areas
- Coordination with programs and projects, customer and user communities, and OSGS System Engineering Division on lower level satellite data needs requirements
- Development-level integration and test
- Trade studies, technical analyses, technology assessment, and proof-of-concept development for risk reduction and technology exploitation
- Re-use or make-buy decisions
- Interfaces with flight projects for command and control and data acquisition systems and user/customer organizations, providing science development and testing for product generation, distribution and archival systems
- Establishes standards and centers of excellence for engineering/technology disciplines

Functional Responsibilities: OSGS Systems Engineering



- Primary systems engineering organization in OSGS
- Requirements flow down and tracking
- System and IT security architecture analyses and studies
- Architectural & system interface standards
- System-wide verification and validation activities
- Oversight of system integration & testing into the operational environment
- Configuration and document management functions for system assets
- Coordination with user/customer organizations in transitioning systems into operations and associated training
- Systems engineering services and operations coordination for the sustainment of operational ground systems
- Implements NESDIS-wide Mission Assurance (safety, reliability, maintainability, and quality assurance policies and procedures)

Functional Responsibilities: OSGS Resources Support



- Resources, processes, and methodologies for planning and execution
- Establishment of SLAs and partner agreements
- Development of project management policies and management practice
- Budgetary and financial coordination with major programs, projects, offices, and centers
- Acquisition services including coordination of legal services with the Department of Commerce, contract management and interface to NOAA Acquisition and Grants Office
- Project control including scope, schedule and cost control
- Project support to initiation, planning (e.g., cost estimation), execution, and performance monitoring (e.g., EVM and Exhibit 300s)
- Risk management services

Delivering the Benefits of an Enterprise Approach

Mission Success

- Accelerated deployment of new ground system capabilities
  - Elimination of redundant acquisitions of common ground system functionality
  - Common hardware and software environment for deployment of new functionality
  - Implementation of business process changes to streamline deployment

Cost Effectiveness Success

- Avoidance of mission ground system costs
  - Elimination of redundant development of common ground system functionality
  - Sharing of common but underutilized infrastructure resources across satellite programs
  - Simplification of ground operations to require fewer support staff

Fostering Active Engagement with Ground Enterprise Stakeholders

Ground Enterprise Stakeholders

- Stakeholders
  - Customer & user communities
  - NOAA
  - Oversight groups
- Mission partners
  - OSAAP
  - GOES-R
  - JPSS
  - OPPA
  - NEIO
  - OSPO
  - STAR
  - CIO
  - Facilities
  - NASA Goddard

Stakeholder Engagement Methods

- Quarterly ground enterprise leadership forums or steering committee meetings
- Participation in establishing ground enterprise strategy and evolution
- Engagement in Cross-NESDIS working groups (or IPTs)
- Tailored communication materials
- And so forth…

Illustration of NESDIS Organizations and Their Functions

OSAAP *Policy and Governance*

Flight Programs
- **GOES-R Program**
- **JPSS Program**
- **OPPA** *Flight Projects*

Enterprise Orchestration
- **OSGS** *Ground Systems Development & Sustainment*

Infrastructure
- **CIO** *Network Infrastructure*
- **Facilities** *Facilities Infrastructure*

Science & Operations
- **NEIO** *Data Synthesis & Stewardship*
- **OSPO** *Satellite Ops. & Products*
- **STAR** *Science & Algorithms*

OSGS Transition Teams

Team	Lead
Staff Planning & Hiring	George Serafino
Facility Planning and Office Moves	George Serafino & Debra Rodgers
Resources	Stan Stanczyk
Contracts	Greg James
Architecture Alignment Strategic & Transition Planning (STP)	Robin Krause
NESDIS Ground Integration	Michelle Detommaso
Organizational Change	Diane Schulte
Sustainment	Ron Smilek

New NESDIS GEAR System Will Serve the NESDIS Ground Enterprise

GEAR System Vision

To provide a suite of common ground services enabling accelerated deployment of capabilities and avoidance of mission ground systems costs

GEAR System Drivers

- Transition without harm to launch of GOES-R and JPSS 1 & 2
- Define enterprise ground services
- Enable the evolution of the ground architecture as NESDIS needs change
- Promote interoperability between observing systems, common ground, and diverse partners
- Maximize acquisition flexibility

Look to the Future

Meet Mission Needs

GEAR System Concept Of Operations Guides Its Development

Architectural Principles

- Avoid cost while maintaining value
- Develop common services
- Share information
- Be technology independent
- Control technical diversity
- Be interoperability

General Attributes

- Enterprise management
  Shared infrastructure
  Mission isolation
- Hardware agnostic
  Location agnostic
  Acquisition approach agnostic
- Service oriented architecture
  Common services reuse
  Standards-based
- Automation capable
- Highly secure

Service-Oriented Approach to Enterprise Avoids Costs and Accelerates Delivery of New Capabilities

Common Services

- Available to any Enterprise application
- Registered in the enterprise service registry
- Negotiated SLA with each user of the service
- Maintained by Enterprise
- Changes require approval by the GEAR System Governance Board

Private Services

- Specific to a particular Enterprise-hosted application
- Not visible or usable outside that application
- Not approved or funded by Enterprise
- Maintained by the application provider

Status of GEAR

- Current focus on high priority services
  - Overarching target architecture
  - Transition plan that embraces ongoing activities and maximizes on what can be done to avoid costs in the near term
  - Product Management (Algorithm Framework, Product Generation, Product Distribution and Archive) and Infrastructure
- Early Prototyping
  - Common algorithm framework, Blended Products, IT Security
  - Will be integrated into a lab in Suitland when it's available
- Concept of Operations under NESDIS directorate-level review
- Independent Reviews:
  - IIRT #3 was held on 27 March 2014
  - Focused on approach to capture target architecture and performance goals
  - IIRT #4 is scheduled for 4 September 2014
  - Focus will be on transition roadmap and supporting documentation

Summary

- Vision and Mission Established
- Organization Structure and Staffing Plan completed
- Interactions with peer organizations underway
- GEAR System Concept of Operation in coordination

Questions?

Algorithm and User Assessments

Mitch Goldberg
JPSS Program Scientist

General Comments Form

2914 STAR JPSS Science Teams Annual Meeting
May 12– 16, 2014
NCWCP, College Park, MD

Originator Name: **Phone #:** **Org**

Title:

Comment/ Recommendation (include presentation section and page #)

Rationale:

Clarification:

Assigned To: **Assignee Phone #**

Date Closed:

JPSS EDRs

VIIRS (25)

ACTIVE FIRES
AEROSOL OPTICAL THICKNESS
AEROSOL PARTICLE SIZE
ALBEDO (SURFACE)
CLOUD BASE HEIGHT
CLOUD COVER/LAYERS
CLOUD EFFECTIVE PART SIZE
CLOUD OPTICAL THICKNESS
CLOUD TOP HEIGHT
CLOUD TOP PRESSURE
CLOUD TOP TEMPERATURE
GREEN VEGETATION FRACTION
ICE SURFACE TEMPERATURE
IMAGERY
LAND SURFACE TEMPERATURE
OCEAN COLOR/CHLOROPHYLL
POLAR WINDS
QUARTERLY SURFACE TYPE
SEA ICE CHARACTERIZATION
(AGE &CONCENTRATION, proposed)
SEA SURFACE TEMPERATURE
SNOW COVER
SURFACE REFLECTANCE (proposed)
SURFACE TYPE
SUSPENDED MATTER
VEGETATION HEALTH PRODUCT SUITE
VEGETATION INDICES

GCOM AMSR-2 (11)

CLOUD LIQUID WATER
IMAGERY
PRECIPITATION TYPE/RATE
SEA ICE CHARACTERIZATION
SEA SURFACE TEMPERATURE
SEA SURFACE WIND SPEED
SNOW COVER/DEPTH
SNOW WATER EQUIVALENT
SOIL MOISTURE
SURFACE TYPE
TOTAL PRECIPITABLE WATER

OMPS (2)

OZONE TOTAL COLUMN
NADIR PROFILE OZONE
AEROSOLS (proposed)
SO2 (proposed)

ATMS (11)

CLOUD LIQUID WATER
IMAGERY
LAND SURFACE EMISSIVITY
LAND SURFACE TEMPERATURE
MOISTURE PROFILE
RAINFALL RATE
SEA ICE CONCENTRATION
SNOW COVER
SNOW WATER EQUIVALENT
TEMPERATURE PROFILE
TOTAL PRECIPITABLE WATER

CrIS (5)

INFRARED OZONE PROFILE
OUTGOING LW RADIATION
TRACE GASES (CO_2, CH_4, CO)

CrIS/ATMS (2)

ATMOSPHERIC VERT MOISTURE PROFILE
ATMOSPHERIC VERT TEMPERATURE PROFILE

(GREEN - NOAA-LEGACY PRODUCTS)

Algorithm Assessments

- **IDPS algorithms we need the following assessment:**

  1. NPOESS algorithm has evolved into the NOAA-endorsed JPSS algorithm.
  2. NPOESS algorithm will not meet requirements or effort is too large, replace with NOAA-endorsed JPSS algorithm
  3. NOAA-endorsed algorithm should be used even if NPOESS algorithm meets performance because of legacy, enterprise, blended products, and other considerations.

- **All algorithms**

  1. Are the algorithms meeting the specifications?
  2. Are the validation plans sound and include user feedback?
  3. What is the long-term strategy for enhancements including data fusion>

Users Assessments

- Describe how SNPP/JPSS products provide continuity from legacy POES, METOP, DMSP, EOS?
- For new capabilities from SNPP/JPSS describe the benefits
- Provide Details on:
  - when do you plan to use the SNPP/JPSS Product?
    - Is there an actionable plan?
    - Is it funded?
    - What is the priority?
    - How have you documented the decisions for the use of SNPP/JPSS data?
    - Have you thought about how you will get the data and have you identified the issues with your operational use of SNPP/JPSS ?
  - What improvements do you expect from SNPP/JPSS?
  - Are the current legacy products well utilized?
  - Is the SNPP/JPSS product part of a blended product?
  - What additional work needs to be done to ensure that the SNPP/JPSS product is/will be well utilized?

Are enhancements needed for:

- Accessibility (data flow, latency, format)
- Product performance (accuracy, precision)
- User applications (modifications to modeling , decision tools, visualization to use the new products)

For breakout meetings Thursday 10:30 -2:30

- Answer the questions on slides 3 and 4
- Report back at 1:30

Breakout groups

- Land data assimilation (Mike Ek, Ivan Csiszar) – Gary McWilliams
- Cryosphere (Sean Helfrich, Jeff Key) – Ray Godin
- Imagery /cloud applications (Michael Folmer, Don Hillger, Heidinger, Bill Ward) – Victoria Ozokwelu and Bill Sjoberg
- CrIS atmospheric chemistry (CO, CH4…) (Monika Kopacz, Chris Barnet) – Laura Ellen Dafoe
- CriS OLR (Pingping Xie, Mark Liu) – Murty Divakarla
- Microwave precipitation (Ralph Ferraro, Limin Zhao, Dave Kitzmiller) – Lance Williams
- Ozone monitoring (Craig Long, Larry Flynn) – Wayne Feltz
- VIIRS aerosol assimilation (Shobha Kondragunta, Sarah Lu) Julie Price
- Ocean color (Menghua Wang, Rick Stumpf, Cara Wilson, EMC?) – Arron Layns
- SST (Alexander Ignatov, Ken Casey, Bob Grumbine) – John Furgerson

JPSS Annual Science Meeting S-NPP to JPSS-1 Making the Transition

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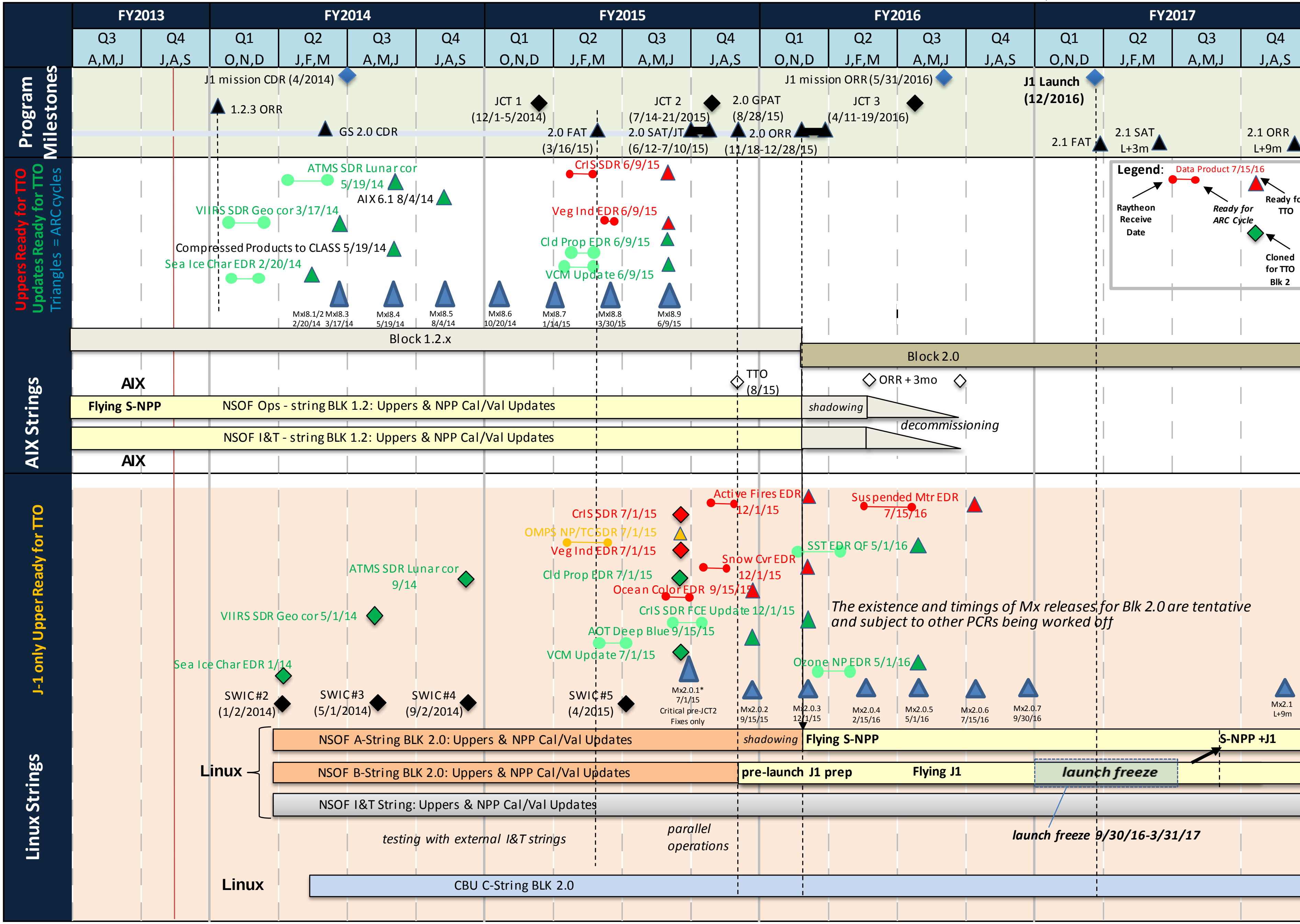
What’s the Same?

- Suomi-NPP in Routine Operations
  - From the NOAA/NASA Management Plan:
    - The primary objectives of this mission, in equal priority, are
      - 1) to provide quality data to meet scientific requirements for continuity of a group of NASA Earth Observing System (EOS) observations,
      - 2) to provide a pre-operational demonstration and validation risk reduction for the Joint Polar Satellite System (JPSS), and
      - 3) to provide Suomi NPP sensor data and data products to support NOAA’s operational missions.

What's Changing?

- JPSS-1 Launch Readiness becomes the priority
  - Greater end-user interaction
  - Limited Algorithm Change Activity
    - Maintain S-NPP Sensor Data Record Calibration
    - Implement code to meet JPSS-1 requirements
    - Develop and Mature Environmental Data Record algorithms off-line
    - Transition to ops after IDPS 2.0 is stable
- NASA moves from ROSES 2010 S-NPP activities to ROSES 2013 S-NPP activities
  - Impacts TBD

updated: 2/21/14



How do we make ourselves “Brilliant at the Basics”? (1/3)

Message From the Under Secretary

- What are our Basics?
  - Who are we?
    - NOAA/NASA – JPSS/STAR “Partnerships”
  - What are we doing?
    - JPSS Program – A Big “System”

How do we make ourselves "Brilliant at the Basics"? (2/3)

Message From the Under Secretary

- Two Government Agencies, NOAA and NASA and Two Line offices, JPSS and STAR, working together is a Partnership
  - Partnership Essentials:
    - Open and honest communication
    - Compromise
      - there are no winners or losers
      - results won't always be fair or equitable

How do we make ourselves “Brilliant at the Basics”? (3/3)

Message From the Under Secretary

- Building and operating a big system (JPSS) within a big system (The US Government) requires system thinking basics
  - Teamwork and cooperation
  - There is no outside, no us and them, and no blame

Center for Satellite Applications and Research*

JPSS STAR Science Teams Annual Meeting: Objectives & Logistics

Lihang Zhou

JPSS STAR Program Manager

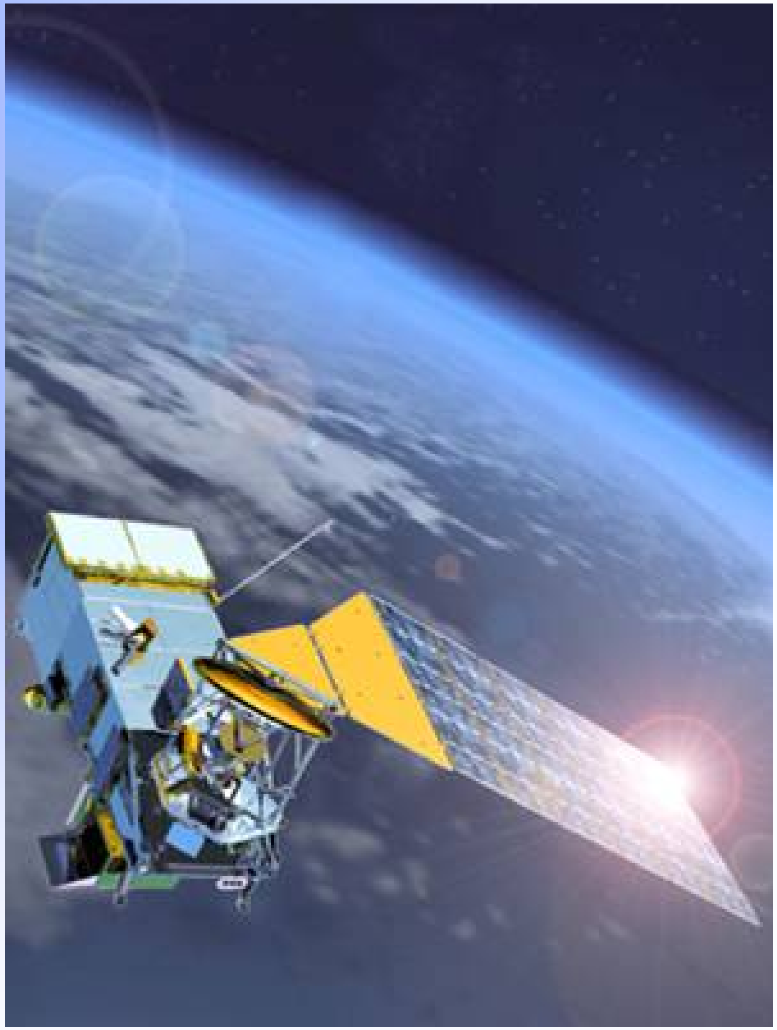
JPSS STAR (JSTAR) Mission

- To develop, implement, and maintain science algorithms for the production of the Sensor Data Records (SDRs) and Environmental Data Records (EDRs) data products as well as their sustainment in the operational phase of the program, calibration, validation, long term monitoring, and product enhancements

JSTAR Vision

- Develop consistent approaches for algorithm development and Cal Val

- Empower the user community with highly accurate products and associated error characteristics from the next generation of polar satellites, in a timely, cost effectively, and efficient manner



Meeting Objectives

- Review the progress of the JPSS STAR program over the past year and review objectives of the coming year.
- Present results/issues/science from the JPSS STAR science teams including: algorithm validation and maturity status, SNPP science results, plans for the coming year, and progress in preparing for JPSS-1.
- Hold individual meetings with the science teams and management to review the work plan, budget, and other management matters for the upcoming Fiscal Year.
- Hold user splinter meetings to develop plans for improved utilization of selected JPSS products.
- Inform the JPSS Program Office and NESDIS management on the status of the program

Science Team Assessment

- Overview
  - Brief Project Overview and Objectives
- SNPP Algorithms Evaluation:
  - Algorithm Description, Validation Approach and Datasets, Performance *vs.* Requirements, Quality Monitoring
  - Alternate Algorithms and Evaluation
  - Risks/Issues/Challenges, Recommendations
- Future Plans
  - Plan for JPSS-1 Algorithm Updates and Validation Strategies, Schedule and Milestones

Algorithm Maturity

DEFINITIONS	ARTIFACTS (DELIVERABLES)

1. <u>Beta</u>
o Product is minimally validated, and may still contain significant identified and unidentified errors.
o Information/data from validation efforts can be used to make initial qualitative or very limited quantitative assessments regarding product fitness-for-purpose.
o Documentation of product performance and identified product performance anomalies, including recommended remediation strategies, exists.
	1. <u>Beta</u>
	o Beta PowerPoint Presentation:
	    o Performance Evaluation
	    o Products Status and Error Matrix
	    o Considerations/Know Risks
	    o Summary of Findings and Recommendations
	o Readme Document for Data Users (goes to CLASS)

2. <u>Provisional</u>
o Product performance has been demonstrated through analysis of a large, but still limited (i.e., not necessarily globally or seasonally representative) number of independent measurements obtained from selected locations, time periods, or field campaign efforts.
o Product analyses are sufficient for qualitative, and limited quantitative, determination of product fitness-for-purpose.
o Documentation of product performance, testing involving product fixes, identified product performance anomalies, including recommended remediation strategies, exists.
o Product is recommended for operational use (user decision) and in scientific publications.
	2. <u>Provisional</u>
	o Provisional PowerPoint Presentation
	    o Performance Evaluation
	    o Product status and accuracy assessment including error budget
	    o Considerations/Know Risks (Closed DRs, and Assessment of any Open DRs)
	    o Feedback from key users
	    o Summary of Findings and Recommendations
	o Readme Document for Data Users (goes to CLASS)
	o ATBD
	o Users Manuals

3. <u>Validated</u>
o Product performance has been demonstrated over a large and wide range of representative conditions (i.e., global, seasonal).
o Comprehensive documentation of product performance exists that includes all known product anomalies and their recommended remediation strategies for a full range of retrieval conditions and severity level.
o Product analyses are sufficient for full qualitative and quantitative determination of product fitness-for-purpose.
o Product is ready for operational use based on documented validation findings and user feedback.
o Product validation, quality assurance, and algorithm stewardship continue through the lifetime of the instrument.
	3. <u>Validated</u>
	o Validated PowerPoint Presentation
	    o Product Evaluation including Quality Flags analysis/validation
	    o Product status and accuracy assessment including error budget
	    o Identify know issues and assessment (Closed DRs, and Assessment of any Open DRs)
	    o Feedback from key users
	    o Summary of Findings and Recommendations
	o Readme Document for Data Users (goes to CLASS)
	o ATBD
	o Users Manuals

National Environmental Satellite, Data, and Information Service

Meeting Sessions: May 12-16, 2014

STAR/JPSS Annual Science Meeting (5/12-5/16)				
5/12/2014	5/13/2014	5/14/2014	5/15/2014	5/16/2014
	Session 3: Plenary 8:30 – 12:00 Noon EDR Team Leads Reports/Overview Aerosols Clouds Soundings Ozone (20 Minutes Each)	Session 4: SDR Science Break-out Sessions 8:30 – 12:00 PM (Contd..) VIIRS 4a ATMS/ CrIS 4b OMPS 4c	Session 6: Plenary Non-NOAA Satellite Data 8:30 – 12:00 GCOM Presentation Moderator-led Discussion on: Non-NOAA data Generation of Blended Products Reprocessing Climate Applications	Session 9: Plenary SDR/EDR Team Leads Report Back 8:30 – 12:00 Innovative Science Talks Short Presentations by SDR Team Leads (10 Minutes Each)
	Coffee Break: 9:50 – 10:20 AM	Coffee Break: 10:00 – 10:30 AM	Coffee Break: 10:00 – 10:30 AM	Coffee Break: 10:00 – 10:30 AM
	EDR Team Leads Reports/Overview contd.. Imagery Land Cryosphere SST Ocean Color (20 Minutes Each)	Session 4: SDR Science Break-out Sessions Continued ... VIIRS 4a ATMS/ CrIS 4b OMPS 4c	Session 7: User Breakouts 10:30 – 12:00 Land/Cryo Data Assimilation Imagery /Cloud Applications CrIS Atm. Chem. (CO); OLR Microwave Precip; Ozone; VIIRS aerosol Assimilation Ocean color; SST	Session 9: Plenary SDR/EDR Team Leads Report Back -- Continued... Short Presentations by EDR Team Leads (10 Minutes Each) Open Discussion Wrap-up
Meeting Begins 1:30 PM	Lunch Break 12:00 – 1:30 PM	Lunch Break 12:00 – 1:30 PM	Lunch Break 12:00 – 1:30 PM	Meeting Adjourns at Noon
Session 1: Plenary 1:30-2:45 PM Welcome Opening Remarks Meeting Objectives	Session 4: SDR Science Break-out Sessions 1:30 – 5:00 PM VIIRS 4a ATMS/ CrIS 4b OMPS 4c	Session 5 EDR Science Break-out Sessions 1:30 – 5:00 PM 5a 5b 5c 5d 5e (5a) VIIRS Land/Cryo;(5b) VIIRS Atm. (5c) VIIRS Ocean; (5d) Soundings (5e) Ozone	Session 7: Plenary ALL User Feedback 13:30 -14:30 Session 8: Plenary Transition to Operations 14:30 – 17:00 JPSS Algorithm Change Process NESDIS Unique Products (NUP)	
Coffe Break 2:45 – 3:00 PM	Coffe Break 3:00-3:30 PM	Coffe Break 3:00-3:30 PM	Coffe Break 3:00-3:30 PM	
Session 2: Plenary 3:00 – 5:00 PM SDR Team Leads Reports/Overview ATMS CrIS VIIRS OMPS ICVS (20 Minutes Each)	Session 4: SDR Science Break-out Sessions Continued ... VIIRS 4a ATMS/ CrIS 4b OMPS 4c	Session 5 EDR Science Break-out Sessions Continued ... 5a 5b 5c 5d 5e (5a) VIIRS Land/Cryo;(5b) VIIRS Atm (5c) VIIRS Ocean; (5d) Soundings (5e) Ozone	Session 8: Plenary Transition to Operations Continued ... JPSS & SPSRB Change Process AIT Capabilities AIT/NDE Integration SNPP/JPSS ESPC Operations	

Logistics

EVACUATION ROUTING AND ASSEMBLY AREA

Attention: The no food and drink in the auditorium

STAR JPSS Scientists Honored with 2014 Dept. of Commerce Bronze Medals

Congratulations to: **Ivan Csiszar, Larry Flynn, Andrew Heidinger, Don Hillger, Alexander Ignatov, Jeff Key, Shobha Kondragunta, Istvan Laszlo, Tony Reale, Marco Vargas, Menghua Wang, Yunyue Yu, and Xiwu Zhan**

"For timely creation and leadership of the team whose work increased the scientific value of Suomi NPP environmental data products to meet NOAA users' needs"

Thank You!