



# NOAA

OFFICE OF SATELLITE  
AND PRODUCT OPERATIONS

NATIONAL ENVIRONMENTAL SATELLITE, DATA, AND INFORMATION SERVICE

# COPC

## NDE / PDA Operations

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NESDIS/OSPO



# Product Distribution and Access (PDA) Overview

- Represents NESDIS’s enterprise distribution for real-time users.
- Provides NESDIS with a scalable Service Orientated Architecture (SOA) based architecture that functions as both a high availability and high performance distribution system.
- Enables users to tailor products in order to meet their unique mission requirements, including latency.
- Enhances IT security posture by utilizing in-depth defenses against evolving threats.
- PDA at NSOF (Suitland, MD) will support many missions; however, PDA at CBU (Fairmont, WV backup site) will only support the JPSS missions.

### Data Volume Capacity:

Ingress: 14.25 TB/day

Egress: 35.92 TB/day

TB – Terabyte (1 TB = 10<sup>12</sup>) bytes

Gbps – Gigabit per second (1 Gigabit = 10<sup>9</sup> bits per second)

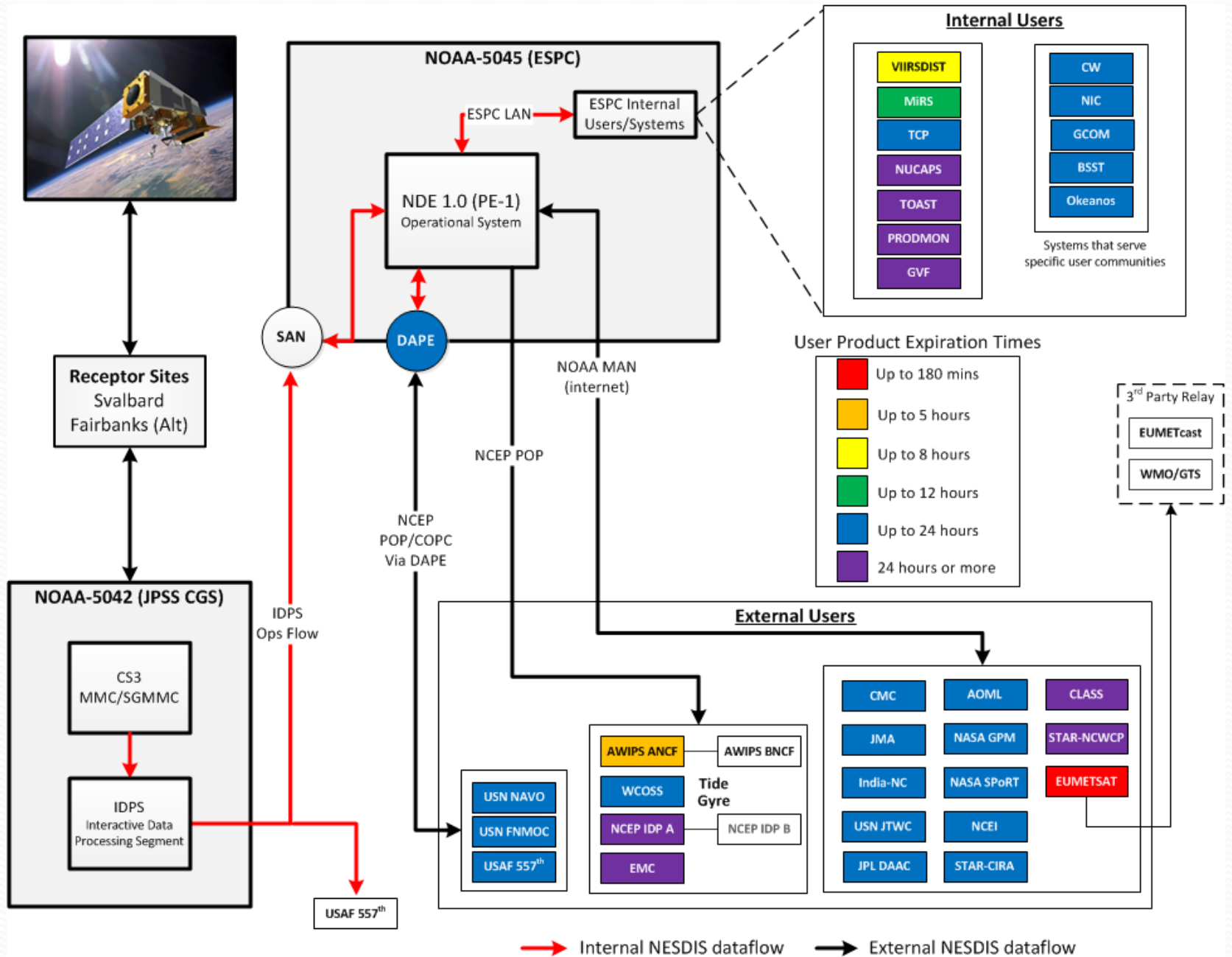
### Peak Throughput:

From Externals to PDA: 7.23 Gbps

From PDA to Externals: 57.5 Gbps

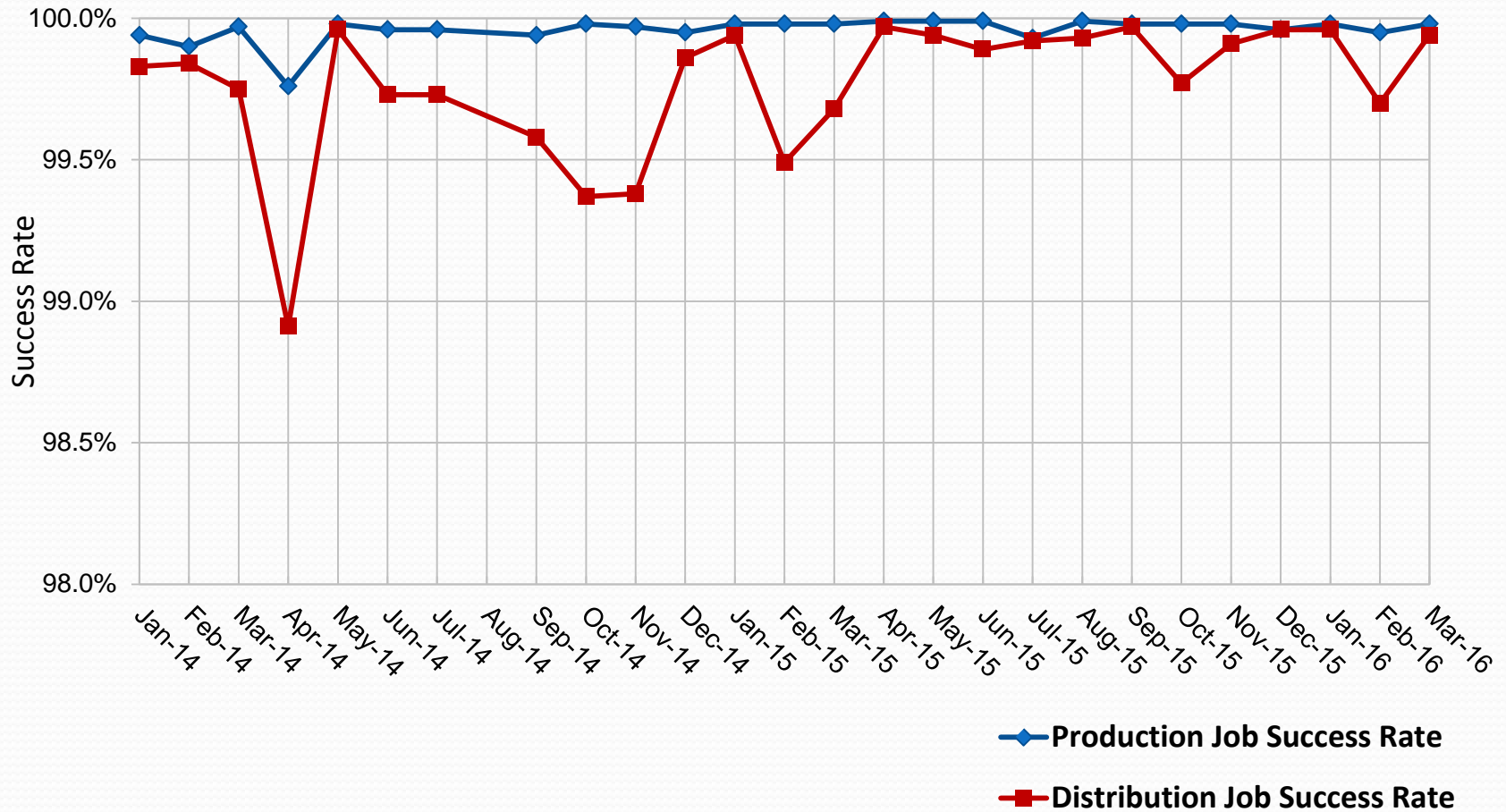
Network to Edge – scalable to 120 Gbps

# Current S-NPP Near Real-time Data Flow from ESPC



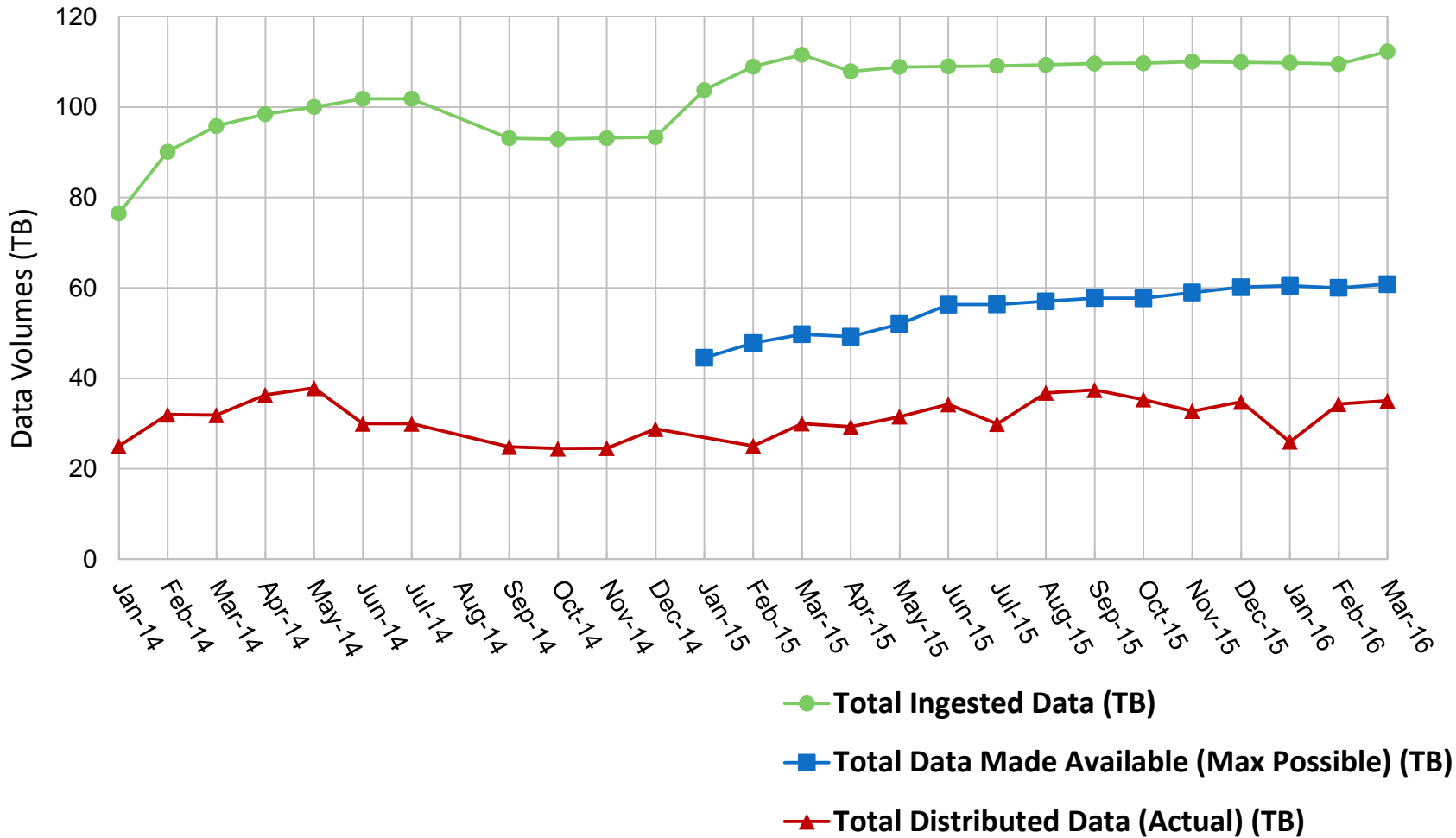


# Product Generation/Distribution Success Rate





### Monthly Data Volumes





### NDE Operational Summary

- NDE Operational System (PE1) is performing as expected (> 99.9%).
- NDE Operational System (PE1) is the largest single distribution system within ESPC (legacy network) – utilizes ~35-40% of the internal network resources.
- NDE 1.0 Systems are entering system freeze state in preparation for upcoming JPSS Block 2.0 transition.

	Sep 2013 (Initial operations)	Today
<b>Number of users (subscriptions)</b>	3 (12)	33 (405)
<b>Average Data Ingest*</b>	~70 TB	~112 TB
<b>Production Success*</b>	99.90%	99.98%
<b>Distribution Success*</b>	99.50%	99.94%
<b>Total Distributed Data Size*</b>	~10 TB	~35 TB

Statistics are based on a 30-day period.





# NESDIS Ground Systems Development Status

Programs, Engineering, and Technology Division Chief:  
ESPDS Project Manager:

Linda Stathoplos  
Rick Vizbulis



# ESPDS



## Recent Events and Accomplishments

### Development

- Completed Qualification System Testing (QST) Part 2 verification. Audit pending. Initial results:

Location	QST-2 Lvl 5 Reqts Tested	Passed	Failed
NSOF	1466	1398 (95%)	68 (5%)
CBU	1435	1352 (94%)	83 (6%)
Total	2901	2750 (95%)	151 (5%)

- Deployed ESPDS Build to support GOES R Validation testing at NSOF and CBU
- Decoupled ESPDS ORR in support of GOES R from ESPDS ORR for JPSS
- Supported JPSS Test Readiness Review planning and preparation (currently L3/GPAT/GSAT execution start date is April 4, 2016)

### Contracts

- Completed contract extension to cover period until follow-on is in place.





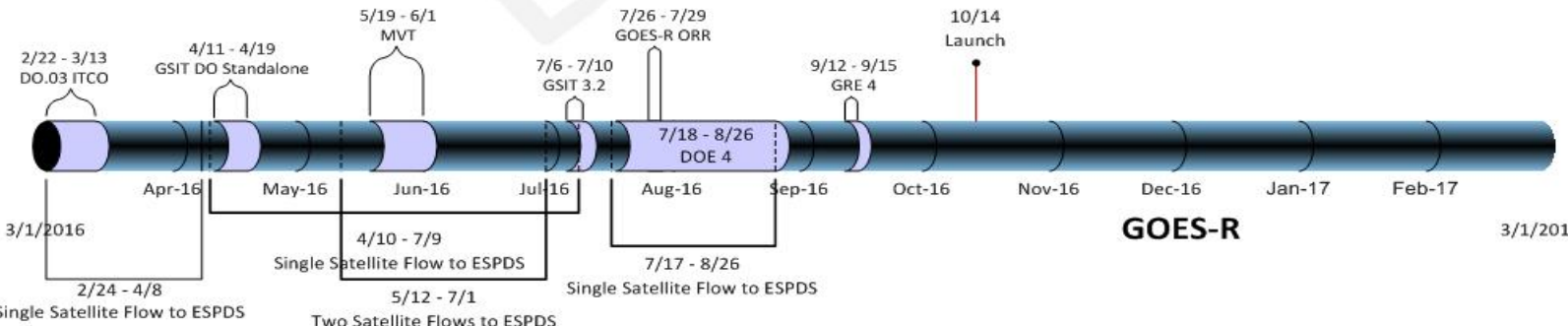
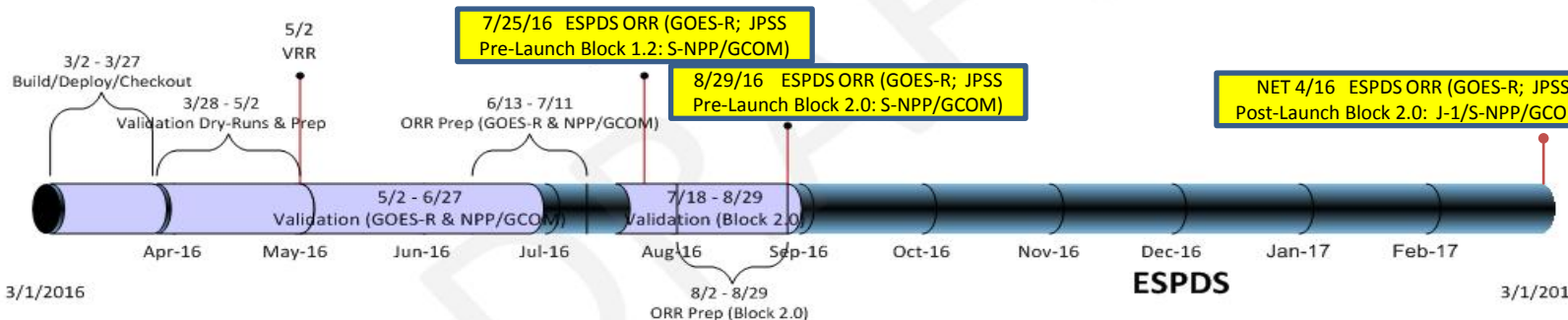
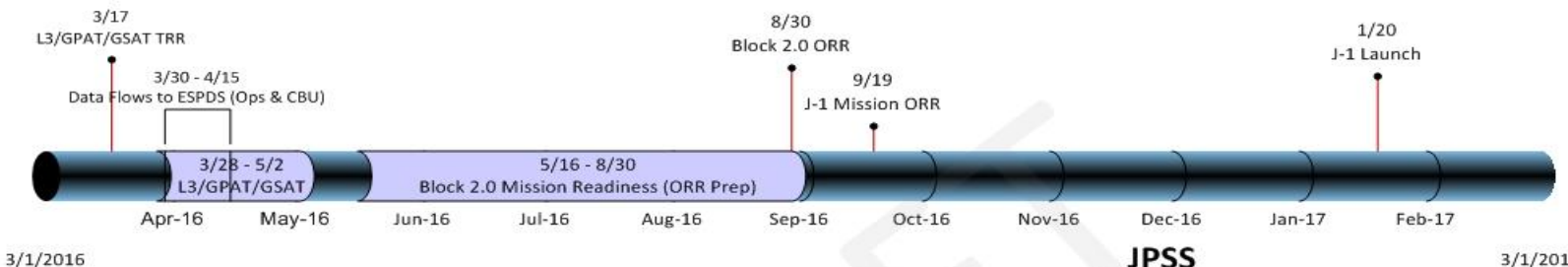
# ESPDS Intent, based on current understanding of JPSS/GOES-R schedules (As of 3/11/2016)



DATES as of: 11 Mar 2016

PROGRAM PLANNING DATES ONLY – NOT FOR OFFICIAL USE  
ALL DATES ARE SUBJECT TO CHANGE

Brackets show estimated ranges, purple fills show planned dates, square brackets show external support needed or provided





## Upcoming Operational Reviews

- **JPSS**

- 8/30/16 Block 2.0 ORR
- 9/19/16 JPSS-1 ORR

- **ESPDS**

- 7/25/16 GOES-R & JPSS Pre-Launch Block 1.2: S-NPP/GCOM ORR
- 8/29/16 GOES-R & JPSS Pre-Launch Block 2.0: S-NPP/GCOM ORR
- 2/01/17 GOES-R & JPSS Post-Launch Block 2.0: J-1/S-NPP/GCOM ORR

- **GOES-R**

- 7/26/16 GOES-R ORR

