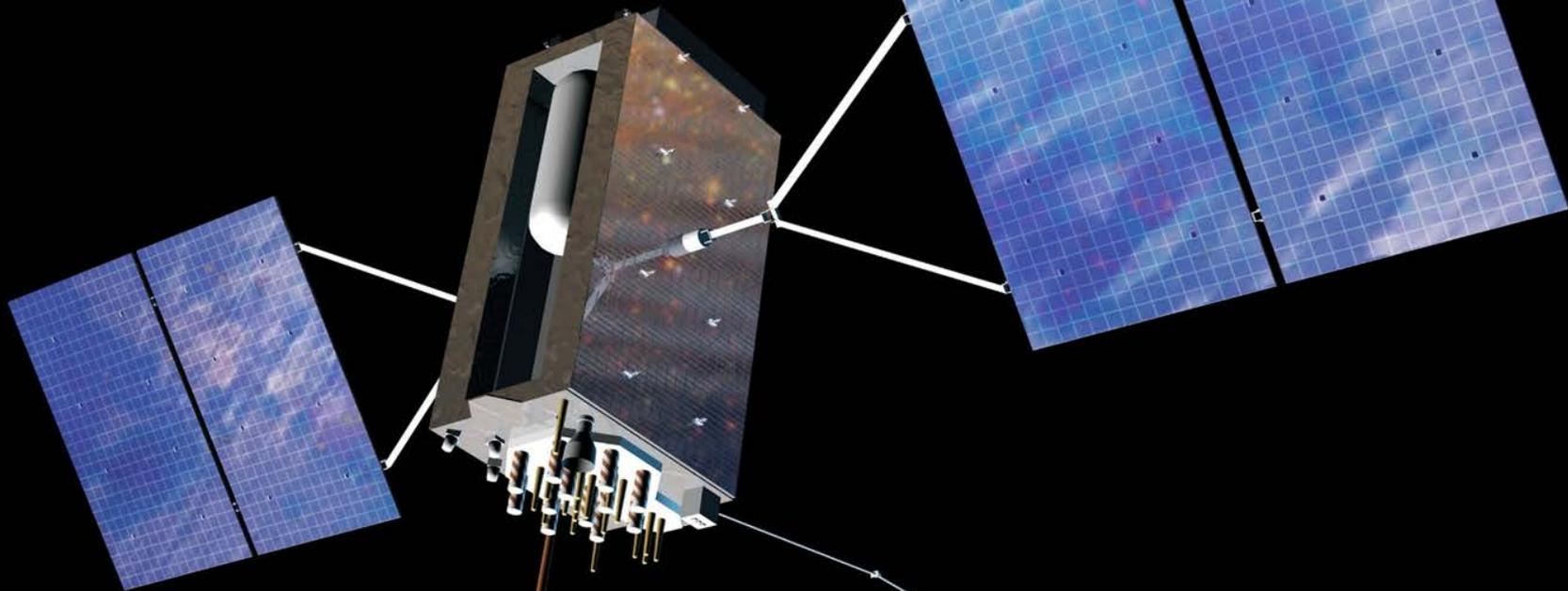


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2d Space Operations Squadron



Home
of the
Global Positioning System



U.S. AIR FORCE



2d Space Operations Squadron

Mission

Provide combat-ready space warfighters delivering position, navigation, and timing to optimize the full range of Joint Force and civilian operations, across all domains

Vision

The dominant Global Navigation System provider innovating and accelerating positioning, navigation, and timing through modernization and integration





U.S. AIR FORCE

- **Largest DoD satellite system**
 - 35 satellites, 31 operational
 - Robust satellite system – IIA, IIR/IIR-M, IIF

- **Total Force Integration**
 - 2nd Space Operations Squadron (Active Duty)
 - 19th Space Operations Squadron (Reserve)

- **Master Control Station (MCS) utilizing dedicated ground segment:**
 - Dedicated Ground Antennas and Monitoring sites
 - Air Force Satellite Control Network (AFSCN)
 - National Geospatial Intelligence Agency (NGA)

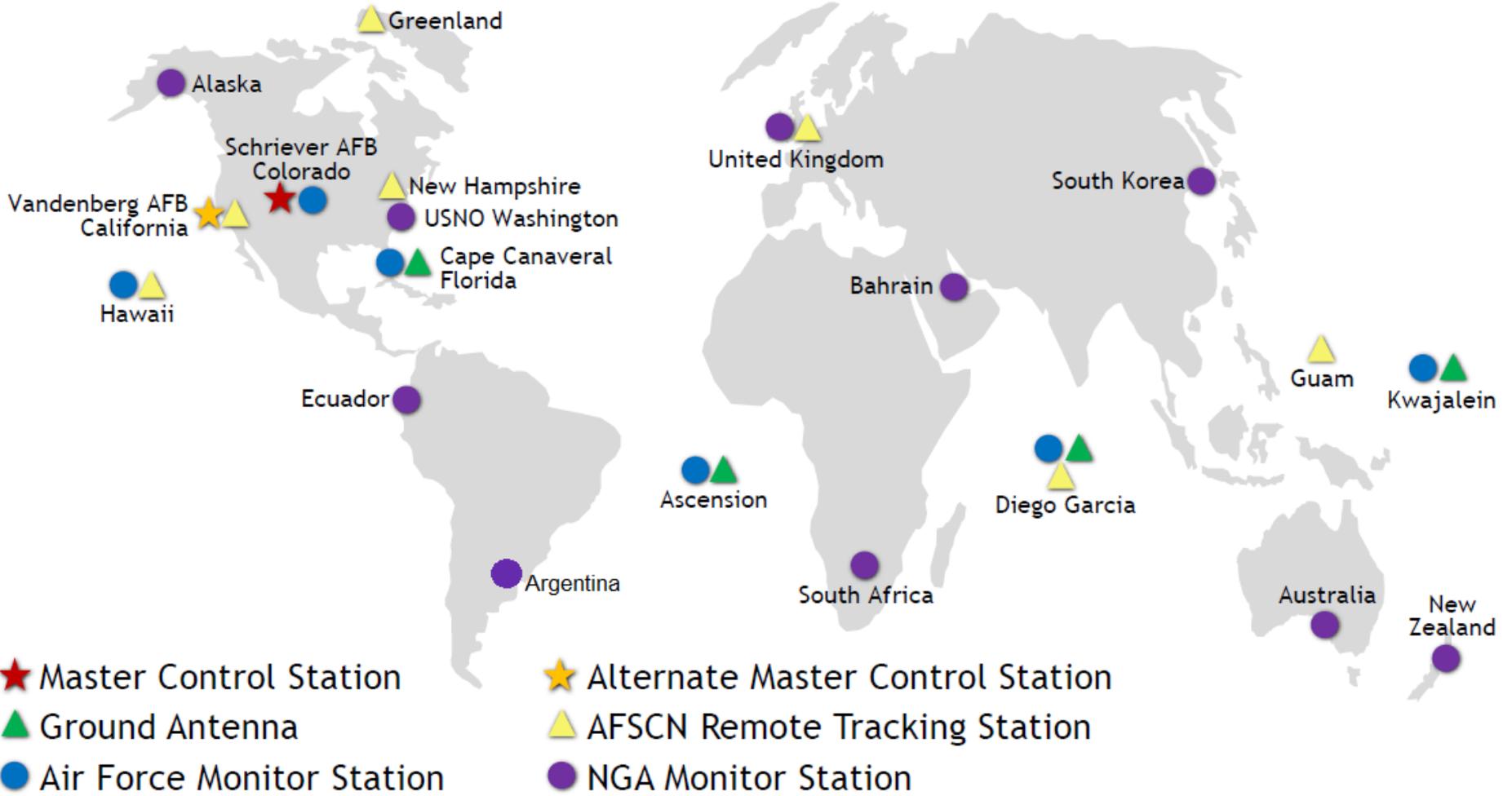
Who We Are





U.S. AIR FORCE

Ground Segment





U.S. AIR FORCE

Where We are Going

WARFIGHTER DEVELOPMENT

- Space Mission Force
- Culture
- Trust

WARFIGHTER COLLABORATION

- User Operations
- Global Exercises
- Integrated Warfighting

Innovation

- Navigation Uploads
- System Data Downloads
- Scheduling
- Vehicle Health Checks

- Mission Transfers
- New Generation Vehicles
- New Capabilities
- New C2 Architecture
- Cyber Security

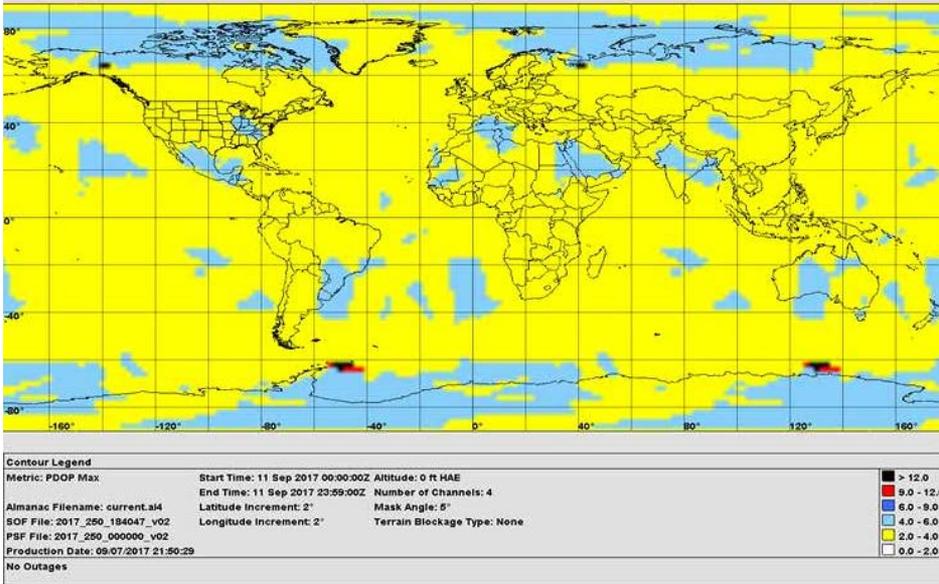
AUTOMATION

MODERNIZATION



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Warfighter Collaboration - GPSOC



- DoD's focal point for near real-time products to authorized users
- 24/7 Support
- Short-term tasking requests

Products Delivered

- 405 Space Support Requests (SSR) for US and Coalition Forces
- 97 Requests for Anomaly Analysis (RAA) worldwide to civil and government users
- 96 Requests for Information (RFI) requiring technical GPS analysis

Organizations Supported

- 35 Military Organizations
- 4 Main Civil Organizations

Sep 2017 – Sep 2018 : 128,000+ products created for users



U.S. AIR FORCE

Warfighter Collaboration Exercise Key Resolve Support

- GPSOC provided 500+ GPS accuracy prediction products for Combined exercise mission planning in a GPS degraded environment





U.S. AIR FORCE

Modernization Live Sky Testing

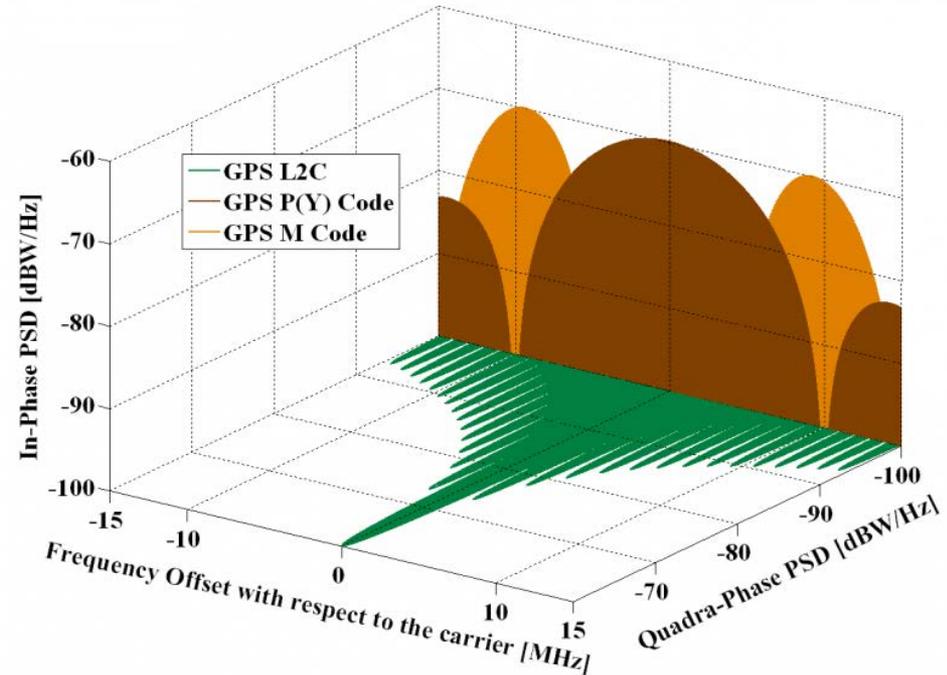
19 M-CODE Capable Satellites



7 IIRs



12 IIFs



- Added Automated M-CODE Capabilities
 - Tested functionality of improved signal encryption
 - Provided opportunity for MGUE Developmental Field Testing and Certification

SMC/GPL Testing successful; advanced MGUE development



U.S. AIR FORCE

Modernization Defensive Cyber Operations (DCO)

Continuous Monitoring
... near real-time for
system anomalies and
cyber threats



**Vulnerability
Management**



**Cyber Threat
Intelligence**



Incident Response





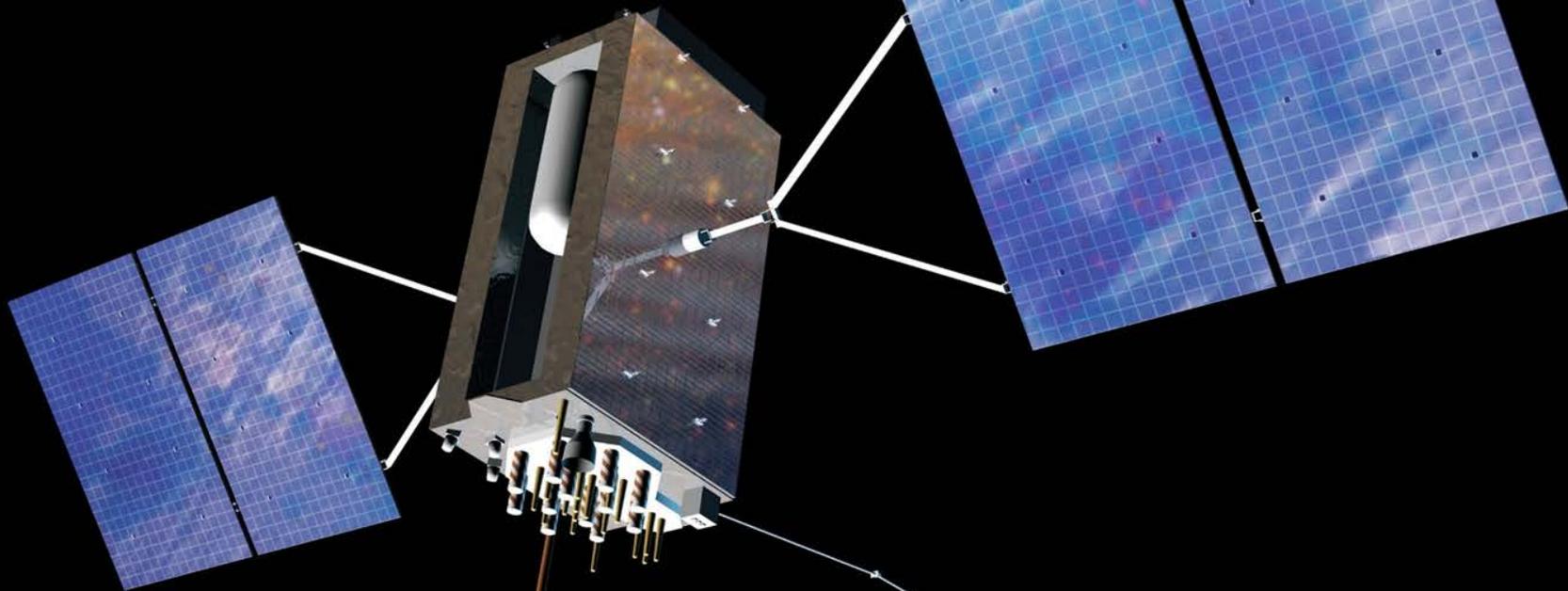
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GPS Way Ahead

- **GPS III**
 - **Scheduled to Launch Dec 2018**
 - **Operationally available in 2019**
- **AEP Contingency Operations**
 - **Scheduled for Operations in 2019**
- **OCX**
 - **Modernized Master Control System**

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