



Civil GPS Service Interface Committee (CGSIC)

GPS Operations / Modernization Update

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Highest Overall Classification:

UNCLASSIFIED



Agenda

- **Current Operations**
- **Space Segment Update**
- **Control Segment Update**
- **USG Partnerships**



Current Operations

Mission Delta 31 Overview

VISION:

The world's premiere provider of positioning, navigation, timing, and satellite control...for all users, in all places, at all times

Mission Delta 31



GPS Enterprise Architecture

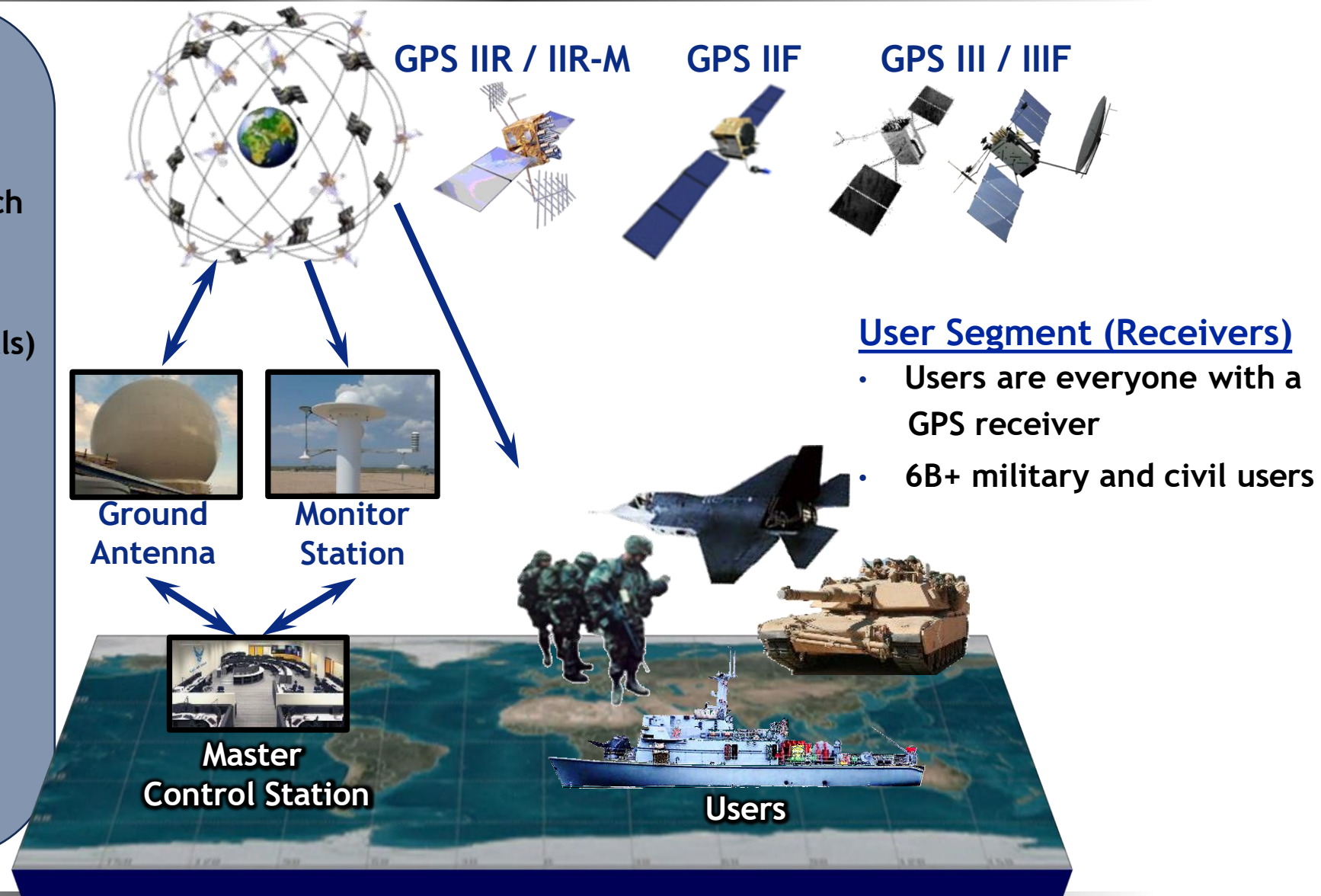
United States Space Force

Space Segment (Satellites)

- Required: 24 ops-ready satellites
 - 6 orbital planes, 4 satellites each
 - Semi-synchronous orbit
 - 55° Inclination
- Current: 32 Presented (+7 residuals)
- Altitude: 20,200 km

Control Segment (Ground)

- Master Control Station (MCS)
 - Schriever SFB, CO
- Ground Antennas (4) and USSF Monitor Stations (6)
- National Geospatial Intelligence Agency monitor stations (11)
- Alternate MCS
 - Vandenberg SFB, CA



User Segment (Receivers)

- Users are everyone with a GPS receiver
- 6B+ military and civil users

Highest Overall Classification:

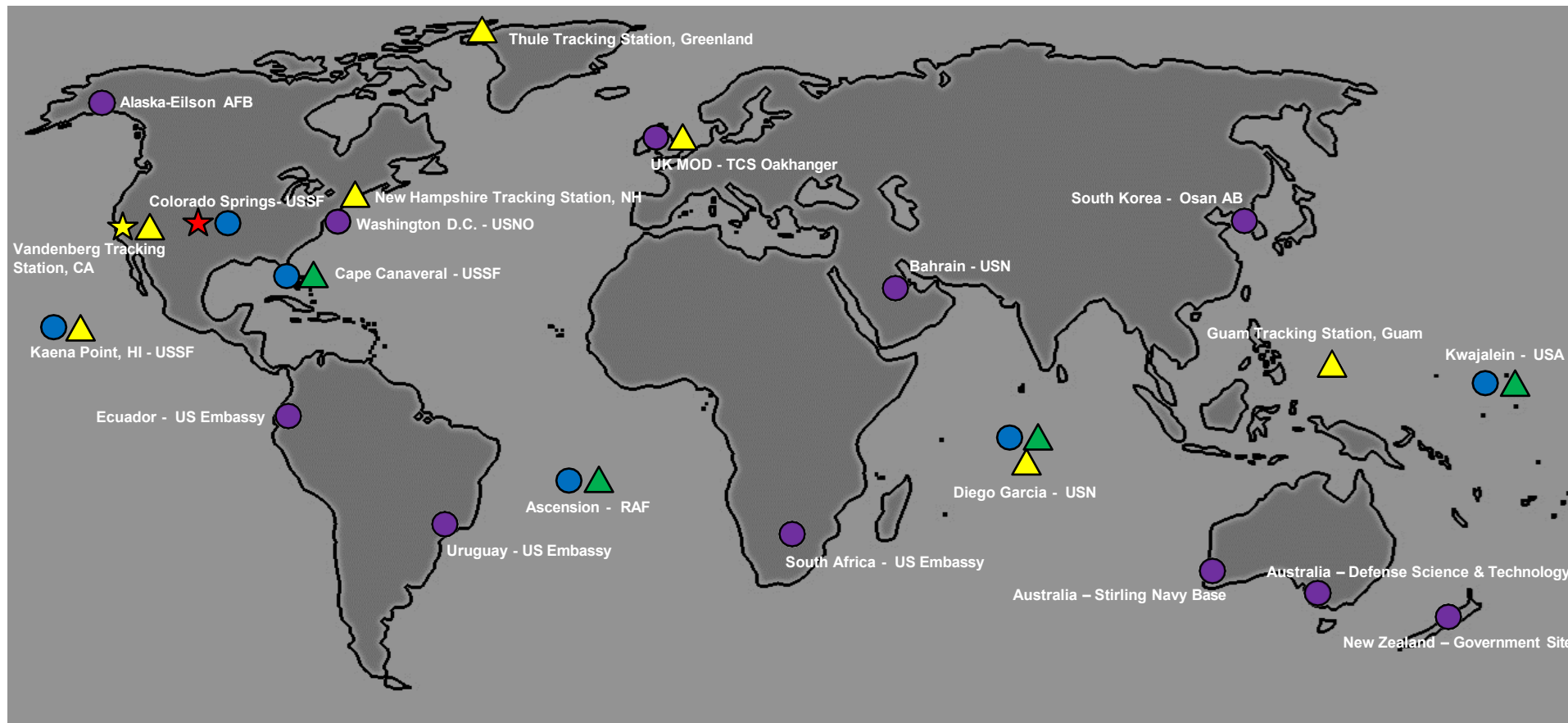


GPS Space Segment - Signals by Block Type

Satellite	Number On Orbit	CNAV			LNAV		MNAV	
		L1	L2	L5	L1	L2	L1	L2
GPS IIR	5				•	•		
GPS IIR-M	7		•		•	•	•	•
GPS IIF	11		•	•	•	•	•	•
GPS III	9	•	•	•	•	•	•	•
GPS IIIF	0	•	•	•	•	•	•	•

- **GPS Performance Standard documents USG's commitments (current version: 5th Edition, April 2020)**
 - Defines requirements for healthy, pre-operational signals and fully operational signals
 - LNAV - L1C/A is the current civil signal delivered as a fully operational civil signal
 - CNAV - L2C is currently set healthy and designated as a pre-operational "use at risk" signal
 - CNAV - L5 is currently set unhealthy and designated as pre-operational "use at risk" signal

GPS Ground Segment + Mission Partners



★ Master Control Station (MCS)

★ Alternate Master Control Station (AMCS)

▲ Ground Antenna

▲ Satellite Control Network (SCN) Remote Tracking Station

● National Geospatial-Intelligence Agency (NGA) Monitor Stations

● Space Force Monitor Station



Space Segment Update



GPS III Launch Campaign Summary

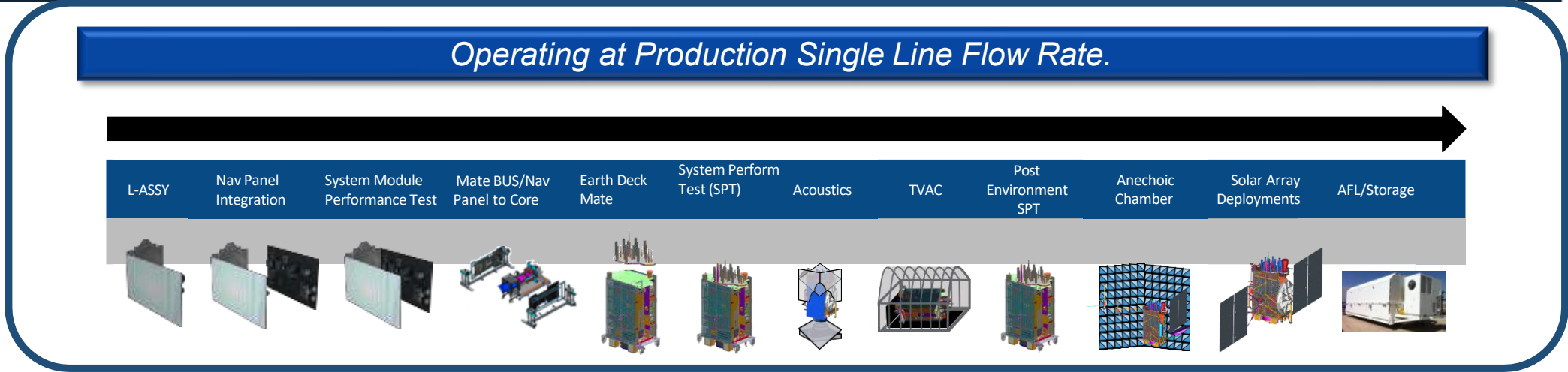
- USSF launched 3 additional GPS IIIs since last CGSIC (Sept 16-17, 2024):
 - GPS III SV07 launched 16 Dec 2024
 - GPS III SV08 launched 30 May 2025
 - GPS III SV09 launched 27 Jan 2026
- Final GPS III, SV10 is scheduled for launch on April 20, 2026



GPS III SV09 launch on 27 January 2026



Systems Delta 831-GPS IIF Program SV Summary



GNST+

- ✓ Panels Arrive
- ✓ Panel Integration
- ✓ Panels Mate to Core
- ✓ Initial SPT
- ✓ TVAC
- ✓ Acoustics
- ✓ Final SPT
- ✓ EMI/EMC/PIM
- ✓ Int and Test Pathfind

SV11

- ✓ Panels Arrive
- ✓ Panel Integration
- ✓ Core Mate
- Initial SPT
- TVAC
- Acoustics
- Final SPT
- EMI/EMC/PIM
- AFL 4QFY27

SV12

- ✓ Panels Arrive
- Panel Integration
- Core Mate
- Initial SPT
- TVAC
- Acoustics
- Final SPT
- EMI/EMC/PIM
- AFL 3QFY28

SV13

- ✓ Panels Arrive
- ✓ Panel Integration
- ✓ Panels Mate to Core
- Initial SPT
- TVAC
- Acoustics
- Final SPT
- EMI/EMC/PIM
- AFL 3QFY27

SV14

- ✓ Panels Arrive
- ✓ Panel Integration
- ✓ Panels Mate to Core
- Initial SPT
- TVAC
- Acoustics
- Final SPT
- EMI/EMC/PIM
- AFL 2QFY28

GPS IIF Program Plan is production up to 22 total GPS IIFs (SVs 11-32; f/o #s from GPS III SV 1-10)

- SVs 11-22 (12 total) on contract
- SV23, SV24 to be purchased in FY26
- SV25, SV26 planned procurement FY27



Control Segment Update



GPS Control System Modernization

- Space Force continues to use OCX for launch and checkout of GPS III satellites
- MD 31 partnered with multiple Department of War organizations since September 2025 to conduct a detailed control system assessment to:
 - Protect and sustain USG's current GPS constellation & signal performance standards
 - Enable GPS IIF launch campaign and provide operational C2 of GPS IIF capabilities
 - Modernize CNAV signal monitoring capabilities

Department of War and US Space Force remain committed to deliver GPS modernization requirements



USG Partnerships

USG Partnership – CNAV L5



- **Ongoing collaboration on opportunities to “Set L5 Healthy”**
 - Evaluate existing receiver networks and monitoring systems
 - Deploy solution(s) onto GPS ops floor and within GPS control segment
 - Integrate with current L1C/A ops procedures to ensure L5 Integrity/Accuracy
- **Potential Incremental Strategy:**
 - L5 Set Healthy: current Performance Standard pre-operational commitments (Integrity/Accuracy)
 - L5 Initial Capability: expand monitoring and update Performance Standard (define specific Continuity/Availability commitments)
 - L5 Fully Operational: update Performance Standard to meet/exceed L1C/A (Integrity/Accuracy/Continuity/Availability commitments)
 - Requires 24 slot SVs with L5 signal capabilities (ie - GPS III-Fs are essential)

Mission Delta 31's Global Positioning System

***Delivering trusted, global PNT service
24/7/365 since 1993...
now serving over 6 billion customers***