

## 2 SPACE OPERATIONS SQUADRON



### **MISSION**

The 2 Space Operations Squadron provides precise, three-dimensional position, velocity and timing information to military and civilian users around the globe by operating the Navstar Global Positioning System, the military's largest and the world's most widely used satellite constellation. The squadron operates and maintains the Master Control Station at Schriever AFB and a worldwide network of GPS-dedicated ground antennas and monitoring stations to provide around-the-clock command and control of the 31-satellite constellation.

Detachment 1, 2 SOPS, located at Cape Canaveral Air Force Station, Fla., is responsible for training and contingency support at contracted sites, maintenance of a GPS Ground Antenna and Monitor Station, and the management of various test assets. These test assets support prelaunch compatibility testing of new GPS satellites, operational satellites, and software and hardware developmental testing.

### **LINEAGE**

2 Surveillance Squadron (Sensor) constituted, and activated, 16 Jan 1962

Organized, 1 Feb 1962

Discontinued and inactivated, 1 Jan 1967

Redesignated 2 Satellite Control Squadron, 16 Jul 1985

Activated, 1 Oct 1985

Redesignated 2 Space Operations Squadron, 30 Jan 1992

### **STATIONS**

Ent AFB, CO, 1 Feb 1962-1 Jan 1967

Falcon AFS (later, AFB), CO, 1 Oct 1985

### **ASSIGNMENTS**

Air Defense Command, 16 Jan 1962

9 Aerospace Defense Division, 1 Feb 1962-1 Jan 1967

2 Space Wing, 1 Oct 1985

50 Operations Group, 30 Jan 1992

### **COMMANDERS**

Unkn, 1 Feb 1962-1 Jan 1967

Lt Col Steven C. Stadler, 1 Oct 1985

Lt Col Barry R. Springer, 15 Apr 1988

Lt Col Michael E. Shaw, 3 Apr 1989

Lt Col William L. Shelton, 15 Aug 1990

Lt Col Harrison C. Freer, 23 Jun 1992

Lt Col Frank M. Dearmond, 29 Jun 1994

Maj Thomas A. Shircliff Jr., 24 Jan 1995

Lt Col Roger C. Hunter, 17 Mar 1995

Lt Col Joseph P. Squatrito, 4 Oct 1996

Lt Col James K. McLaughlin, 15 Jul 1998

Lt Col Daniel P. Jordan, 15 Jun 2000

Lt Col Scott A. Henderson, 26 Jul 2002

Lt Col Stephen T. Hamilton, 15 Jul 2004

Lt Col Kurt W. Kuntzleman, 22 Jul 2006

Lt Col Deanna M. Burt, 1 Aug 2008

Lt Col Jennifer L. Grant, Aug 2010

Lt Col Thomas Ste. Marie, Jun 2012

Lt Col Todd Benson, Jul 2014

Lt Col Peter C. Norsky, Jun 2016

Lt Col Stephen A. Toth, 1 Jun 2018

Lt Col Michael K. Schriever, Jun 2020

Lt Col Robert O. Wray, 6 Jul 2022

### **HONORS**

#### **Service Streamers**

#### **Campaign Streamers**

#### **Armed Forces Expeditionary Streamers**

## Decorations

Air Force Outstanding Unit Awards

1 Jun 1964-31 May 1966

1 Dec 1987-30 Nov 1989

1 Sep 1990-31 Aug 1991

1 Oct 2000-1 Oct 2001

1 Oct 2001-1 Oct 2002

2 Oct 2002-2 Oct 2003

## EMBLEM



2 Satellite Control Squadron emblem: On a Blue disc, a Light Blue globe grid lined Yellow issuing from base and charged with a Scarlet lighting flash bendwise; in chief a White eight point pole star above and (Yellow pole stars) on a White orbit ring arcing over the globe; a Yellow pole star all within a narrow Yellow border. (Approved, 6 May 1989)





2 Space Operations Squadron emblem: On a disc Azure a demi-globe issuant from base Celeste gridlined Or, charged with a lightning flash bendwise Gules enfiling an orbit ring arcing to chief from sinister base to dexter base Argent, charged at its apex with a polestar Or, in chief a compass rose of the fifth, all within a narrow border Yellow. Attached below the disc, a Blue scroll edged with a narrow Yellow border and inscribed "2D SPACE OPERATIONS SQ" in Yellow letters. Attached above the disc, a Blue scroll edged with a narrow Yellow border and inscribed "PATHWAYS FOR PEACE" in Yellow letters. **SIGNIFICANCE:** Ultramarine blue and Air Force yellow are the Air Force colors. Blue alludes to the sky, the primary theater of Air Force operations. Yellow refers to the sun and the excellence required of Air Force personnel. The compass rose alludes to the North Star and reflects an established form of navigation. It also represents the unit's involvement with the Global Positioning System, a precision global navigation system, indicated by the demi-globe. The polestar on an orbit ring reflects the unit's use of satellite transmissions. The lightning flash signifies the command and control operations conducted by the Squadron in support of its parent wing.



## **MOTTO**

PATHWAYS FOR PEACE

## **OPERATIONS**

3/26/2009 -The 2 and 19<sup>th</sup> Space Operations Squadrons assumed control of the Air Force's newest GPS satellite shortly after its launch from Cape Canaveral Air Force Station, Fla., March 24. The satellite, named GPS IIR-20(M), is the 34th satellite in the GPS constellation, which provides precise navigation and timing data to military and civilian customers around the world. Space operators with 2 SOPS and 19th SOPS took over early-orbit operations for the new satellite 68 minutes after launch, said Lt. Col. Douglas Schiess, 2 SOPS operations officer. "We're getting it ready to provide its combat effects to warfighters as soon as possible," Colonel Schiess said. "It's a great team effort by 2 SOPS and 19th SOPS." GPS IIR-M satellites provide combat capability for military applications such as Joint Direct Attack Munitions and handheld, vehicle-based and aircraft navigation aids. Civilian applications include ATMs, bank and stock market transactions and power grid management. Currently, 31 of the 34 GPS satellites in orbit transmit navigation and timing signals to users. A Delta II launch vehicle carried GPS IIR-20(M) into low-Earth orbit. From there, a booster will lift the satellite into its operational orbit approximately 12,500 miles above the Earth. The launch was delayed from June 2008 due to a fault in the 40-second timer that triggers separation of the third-stage booster from the satellite. Air Force and contractor engineers resolved the problems, said Lt. Col. John Wagner, mission director for the Launch and Range Systems Wing at Los Angeles Air Force Base, Calif. The IIR-M spacecraft includes several upgrades from the earlier Block IIR model. A modernized antenna panel provides a stronger signal that is more resistant to GPS jamming and stronger encryption for military signals. It also includes two military signals and one civil signal beyond those transmitted by earlier GPS satellites. Other Air Force Space Command agencies that supported the launch include the 22 Space Operations Squadron here, the 45th Space Wing at Patrick AFB, Fla., and the Space and Missile Systems Center at Los Angeles AFB. Contractor partners included United Launch Alliance, the Aerospace Corporation and Lockheed Martin

Corporation. Taking Control: Two Air Force Space Command space operations squadrons, the 2 SOPS and 19th SOPS at Schriever AFB, Colo., took charge of the new GPS satellite shortly after its launch March 24.

8/27/2009 "I've got it," said Lt. Col. Deanna M. Burt, 2 Space Operations Squadron commander. The commander of the Regular Air Force squadron took control of Air Force Space Command's newest GPS satellite 73 minutes after the launch of a Delta II rocket from Cape Canaveral Air Force Station, Fla., Aug. 17. At 6:35 a.m. (4:35 a.m. MDT), the last GPS IIR-series satellite headed into space. The 45th Space Wing from Patrick AFB, Fla., conducted launch operations but after the satellite separated from the rocket, the 2 SOPS and Air Force Reserve Command's 19th SOPS at Schriever AFB took over responsibility. "First acquisition is when the satellite becomes ours," said 19th SOPS commander Lt. Col. Traci L. Kueker-Murphy. "That's when the satellite finally separates from the rocket and starts sending its own telemetry signals that we pick up to determine its location and attitude." A satellite launch requires the support of almost 1,000 people; from the launch operations people at Cape Canaveral to the people at Schriever waiting to take possession. This satellite will join an on-orbit constellation of 34 GPS IIAs and IIRs, bringing the count to 35. "This satellite will enhance our GPS constellation and provide us with better navigation and more capability," Colonel Kueker-Murphy said. "Additionally, we're getting ready to enter a new era with the next generation GPS Block IIF, projected to launch in January 2010." GPS provides all-weather precise navigation and timing to users around the world. The robust constellation ensures U.S. troops in Afghanistan and elsewhere are getting the best information available about their location and that of their targets, keeping them out of harm's way. The satellite launched Aug. 17 will go through a process of initialization and maneuvering to place it in its operational orbit. This process takes less than a month and then the satellite will be ready for use. The GPS satellite program at Schriever is operated in a collaborative effort between the two squadrons. "We have a great symbiotic total force relationship with 2 SOPS. We have a 'divide and conquer' mentality toward our workload," Colonel Kueker-Murphy said. "The reservists specialize in launch and modernization of GPS and augment the 2 SOPS, while the 2 SOPS is able to focus on day-to-day operations that deliver combat effects to the warfighter."

GPS IIF Satellite Transitions to Operators' Control Air Force Space Command earlier this month transferred control authority of the latest on-orbit GPS IIF navigation satellite to the airmen of the 2 Space Operations Squadron and Air Force Reserve Command's 19th SOPS at Schriever AFB, Colo., according to a release. "Ownership has been transferred from the developers to the operators," said 2 SOPS Commander Lt. Col. Todd Benson in the April 17 release. "We'll continue with more on-orbit checkup. Soon, we'll set the vehicle 'healthy to all users,' which means the general populace can start using it," he added. The Air Force and its industry partners on March 25 launched this satellite, the ninth GPS-IIF spacecraft, into space from the central Florida coast. It was the first of three GPS IIF launches scheduled in 2015. The Schriever airmen took control of the satellite on April 3, states the release. AFSPC in 2014 deployed the most GPS satellites that it has in more than 20 years, launching four into orbit. 2015

Latest GPS IIF Satellite Shifts to Air Force Control Satellite controllers at Schriever AFB, Colo., took charge of the latest GPS IIF navigation satellite on Nov. 6, a mere six days after it was launched. "It was a fast turn from launch to taking control of the spacecraft," 2 Space Operations Squadron commander Lt. Col. Todd Benson. "We've done five launches in the last 15 months," said Benson. "You won't find that experience anywhere else," he added. The 11th next generation GPS satellite-SV-73-blasted off from Cape Canaveral AFS, Fla., Oct. 31, and the next GPS IIF satellite is slated for deployment in February. The overall GPS constellation currently comprises 40 satellites. 2015

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DEPARTMENT OF THE AIR FORCE UNIT HISTORIES

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Sources

Air Force Historical Research Agency. U.S. Air Force. Maxwell AFB, AL.

The Institute of Heraldry. U.S. Army. Fort Belvoir, VA

Air Force News. Air Force Public Affairs Agency.