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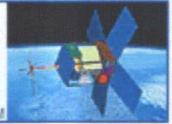


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## GPS NEWS

## GPS Block IIR Celebrates Nickel Anniversary On Orbit

Schriever AFB - Sept 2, 2002

An addition to an Air Force system recently celebrated its nickel anniversary, but has been worth its weight in gold to warfighters in Afghanistan and coal miners trapped in a Pennsylvania mineshaft.



truly one of the great contributions of space technology to all

The NAVSTAR Global Positioning System -- operated by the 2nd Space Operations Squadron at Schriever AFB, Colo. -- provides 24-hour navigation and timing information to military and civilian users worldwide.

While GPS has been utilized for decades, it has been in the past five years that the constellation has benefited from GPS Block IIR satellite. The first successful GPS Block IIR Satellite on-orbit, designated as SVN43, was launched July 23, 1997, which began a new era in GPS operational performance.

"The addition of the GPS Block IIR has greatly improved the navigation products we deliver to the war fighter," said Lt. Col. Scott Henderson, 2nd SOPS commander. "(Joint Direct Attack Munitions) delivered in theater use GPS to hit more than 90 percent of their intended targets."

In Operation Enduring Freedom, airmen have called in bomber support from the ground when the enemy was no more than 75 feet away. Mining experts used a GPS receiver to locate the mineshaft prior to drilling a 300-fet air passage for the rescue of 9 men earlier this summer.

One of the many operational performance enhancements on the Block IIRs was the state-of-the-art atomic clock. With the new clocks installed,

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## CYBERWARS

## First Test Of 'Net Decoy' System Shows Promise

Mildenhall - Sept 2, 2002



The airmen of the 100th Communications Squadron here hosted the first-ever demonstration of the pioneering "Net

Decoy" system, combining two defensive information systems that detect, track and potentially identify cyberspace intruders.

- [Al Jazeera TV Rubs Arab Govts the Wrong Way](#)
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## DEEP IMPACT

## New Hypothesis Of The Tunguska Explosion

Novosibirsk - Sept 2, 2002



A geologist from Novosibirsk has set up a new

On US Missile  
Defense: Report

Pakistan To Build  
Two More Nuclear  
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GPS promised users increased navigation accuracy. After five years on orbit, SVN43 and its five Block IIR partners are maintaining a signal-in-space accuracy of less than one meter, compared to the original design requirement of 16 meters.

"It was designed and built for enhanced capabilities to global users and the war fighter," said Jim Martens, Lockheed Martin site manager for the Block IIR Program. "It has exceeded our expectations."

Martens presented a plaque commemorating the event to Henderson.

"We are proud to provide the GPS Block IIR satellite, as well as doing our part in day-to-day technical support to the squadrons operating the system, providing a precision navigational signal to worldwide users," said Martens at a small ceremony Aug 8.

Henderson and Martens recognize that it takes a team of Air Force and contractor professionals for their valued partnership in fielding and operating the new generation of GPS satellites.

"It's a total team effort to make it all come together," said Henderson. "The beauty of GPS and the 50th Space Wing is the work of 1st SOPS, 2nd SOPS, 19th SOPS, Lockheed Martin and the Joint Program Office in Los Angeles."

The 1st SOPS led the launch and early orbit mission for that first GPS IIR launch, placing the satellite into the proper operational slot, establishing three-axis stabilization and deploying the solar arrays and antennas. The LEO mission marked the most accurate apogee kick motor targeting in GPS history, hitting the proper orbit within .046 degrees. SVN43 also accomplished the first autonomous Sun/Earth acquisition in GPS history.

2nd SOPS provides routine on-orbit support, including state-of-health checks, navigation uploads and delta-velocity maneuvers to maintain orbital position. Once the vehicle drifted into its operational orbit, 2nd SOPS initialized the navigation and secondary payloads and began operational checkout of the new bird.

The Navstar GPS JPO of the Space and Missile Systems Center is the DoD agency for acquiring GPS satellites, ground systems and military user equipment.

hypothesis of the explosion in Podkamennaya Tunguska, which took place on June 30, 1908. It was not a meteorite that caused such extensive destructions and conflagration, but a fluid jet, which had shot up under high pressure from the interior of the Earth.

- Scientists Confirm Age Of The Oldest Meteorite Collision On Earth
- Chemist Seeks To Make Outer Space Events Easy To Predict
- Beware Of Buses From Deep Space

#### DRAGON SPACE

### Dual Test Dummies To Ride Shenzhou 4

Beijing - Aug 27, 2002



Two dummies will be part of a collection of experiments on Shenzhou-4 (SZ-4) that

will be the last unmanned test mission of the manned spacecraft later this year, Chinese media has reported in recent days.

- SZ-4 Stated For Launch By January 10
- China's Orbital Station Continues Remote Science Program
- Shenzhou Unknowns Continue To Confuse China Watchers

#### ASTERIODS AND COMETS

### Loss Of Contour Will Put Spotlight On APL

Los Angeles - Aug 25, 2002



The loss of the Contour comet probe will soon put the investigative spotlight on

the Applied Physics Laboratory (APL) at the Johns Hopkins University in Maryland as a appointed panel seeks to find out what went wrong with the \$180 million probe as it fired its main engine to leave Earth orbit on August 15.

- Blink And Its History
- German Teacher Discovers New Comet In SOHO Data
- Asteroids Offer Dark Clues To Missing Matter

#### OPINION SPACE

The JPO Advanced Plans Branch is actively studying the opportunity to improve accuracy, availability, integrity, and survivability to meet emerging military and civil needs for the next 30 years. This next block of satellites, called GPS III, will continue to deliver the new civil signals and improved military codes that were initiated on the GPS IIR-M and IIF programs.

The Air Force plans to launch 14 GPS Block IIR satellites over the next four years. The current GPS III program expects first launch of research and development satellites by 2010.

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EARTH OBSERVATION

**Satellites To Profile Weather, Improve Forecasts Through GPS**

Boulder - Aug 23, 2002

A revolutionary, globe-spanning satellite network will furnish round-the-clock weather data, monitor climate change, and improve space weather forecasts by intercepting signals from the Global Positioning System (GPS).



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