Saab Ericsson Space

PRESS INFORMATION

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NASA orders upgrade of sounding rocket guidance system from Saab Ericsson Space

NASA and its launch services provider Northrop Grumman, have awarded Saab Ericsson Space a contract to upgrade its S19 family of Guidance, Navigation and Control systems.

-The Saab Ericsson Space family of S19 type guidance systems has been used for thirty years, mainly in NASA sounding rocket based research in New Mexico. This order for upgrades clearly shows that we have done a good job and that we are trusted to continue, says Lars Ljunge, Manager of Saab Ericsson Space guidance system line of products.

A NASA research rocket is launched. The guidance system control fins are seen near the top of the rocket.

One major task of these guidance systems is to make it possible to launch scientific research payloads to very high altitude at ranges such as White Sands Missile Range in New Mexico and at Esrange in Kiruna, Sweden and still make them land in a predefined, safe area. Another important task is to reduce the wind sensitivity of the rocket, so that launches can be performed under almost any wind condition. More than 200 sounding rocket launches over the past three decades have been guided by systems from Saab Ericsson Space, some of them up to more than 700 km of altitude. The latest launch was performed at White Sands on July 7. Normally, the guidance

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systems are recovered and refurbished to fly again several times before replacement.

The upgraded system is dubbed S19 L and uses a laser gyro and a new guidance processor. The upgraded design will offer reduced weight and cost as well as further improved reliability. Current order is for delivery of four modified systems. These systems are to be ready for use in June of 2006.

Guidance system activities require deep knowledge in many Saab Ericsson Space specialty areas such as:

- Orbital mechanics, including vehicle dynamics, aerodynamics and computer modelling
- Robust control system design, including closed loop stability of flexible bodies
- Software design and verification of real-time applications
- System verification, including hardware-in-the-loop testing
- Rocket operations and launch support

Saab Ericsson Space is an international, independent supplier of space equipment. The company's main products are computers, microwave electronics and antennas for spacecraft and adapters and separation systems for launchers. The company has its headquarters in Gothenburg, Sweden, a division located in Linköping, Sweden, and subsidiaries in Austria (Austrian Aerospace) and the USA (Saab Ericsson Space Inc). Saab Ericsson Space has approximately 525 employees. The company is jointly owned by Saab and Ericsson.

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An S19 type system, with its ground control equipment.