

## **TRW-Built Hyperion Sending Data to Earth; NASA's First Hyperspectral Imager On-Orbit**

Redondo Beach, Calif. — Jan. 17, 2001 — One and a half months after its launch aboard NASA's Earth Observing-1 (EO-1) spacecraft, the TRW Inc.-built (NYSE:TRW) Hyperion hyperspectral imager is transmitting images of the Earth's surface to ground stations around the world. Hyperion is NASA's first hyperspectral imager to become operational on-orbit.

The initial images taken of northern Virginia show terrain features, buildings, roads, vegetation and water. The images are being processed by TRW at its Space Park facilities in California and then returned to NASA Goddard Space Flight Center for redistribution to the EO-1 Science Team for application demonstrations.

"We're very pleased with the imagery being sent back by Hyperion," said Dale Hoffman, vice president and general manager, TRW Space & Technology Division. "In the short time it's been on-orbit, the instrument has demonstrated superior performance. We believe Hyperion will set the standard for hyperspectral imagery by providing quality data and long-term benefits for our customers and the scientific community."

Hyperion sees the Earth in 220 spectral bands from the visible to shortwave infrared with 30-meter spatial resolution. One of three science instruments on EO-1, Hyperion captures images in a swath 7.5 kilometers by 180 kilometers with high radiometric accuracy. Images hundreds of kilometers long will be collected routinely by Hyperion.

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Data from Hyperion is providing more detail of the Earth's surface than is currently available from multispectral instruments, such as the Enhanced Thematic Mapper Plus instrument on Landsat 7. The detailed classification of complex land ecosystems with hyperspectral imagery is expected to increase the accuracy of remote sensing data in applications including mining, geology, forestry, agriculture and environmental management.

Using hyperspectral data, minerals on the Earth's surface can be identified and new mineral maps can be created to select sites for exploration; forest inventories can be developed for

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remote regions to support ecological planning and management. Through the use of new space-based capabilities, a host of issues can be addressed on a worldwide scale.

Hyperion is TRW's newest [hyperspectral imager](#). TRW has been designing and developing airborne and spaceborne hyperspectral instruments since 1989, and its airborne instruments have completed hundreds of hours of flight, taking images of metropolitan, agricultural and environmentally sensitive areas. TRW provides a full spectrum of services from planning and data acquisition to application analysis.

EO-1 is the first satellite in NASA's New Millennium Program (NMP) Earth Observing series. NMP is an initiative to demonstrate advanced technologies and designs that show promise for dramatically reducing the cost and improving the quality of instruments and spacecraft for future space missions. EO-1's primary focus is on developing and testing instruments that are smaller, less expensive and more capable than existing instruments.

TRW Space & Electronics Group builds communications, scientific and defense spacecraft for military, civil and commercial customers. It is an operating unit of TRW Inc., which provides advanced technology products and services for the global automotive, aerospace, telecommunications and information systems markets. TRW's Web site is [www.trw.com](http://www.trw.com).

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