

## **Canadian Science and Technology Uncovering Details of Ozone Depletion**

Saint-Hubert, Quebec, February 26, 2002 – Marking its first anniversary in space, Canada's OSIRIS (Optical Spectrograph and InfraRed Imager System) instrument is performing excellently and collecting significant data relating to ozone depletion. OSIRIS was launched on board the Odin satellite on February 20, 2001, as part of a joint astronomy/aeronomy mission led by Sweden and involving Canada, France and Finland.

"The OSIRIS instrument is a prime example of collaboration by Canadian government, industry and scientists on an issue of major concern to Canadians," said Marc Garneau, President of the Canadian Space Agency (CSA). "This innovative made-in-Canada technology is being used by a team of Canadian and other Odin scientists internationally to provide important insights into ozone depletion."

The instrument was built by Routes AstroEngineering Ltd. of Kanata (Ottawa), Ontario, with approximately \$6 million in funding from the CSA. The CSA is also providing approximately \$0.5 million per year for operational support and validation. The science team, led by Dr. E.J. (Ted) Llewellyn of the University of Saskatchewan also receives funding from the Natural Sciences and Engineering Research Council (NSERC). The team includes scientists from York University, Trent University, the University of Toronto as well as the University of Saskatchewan.

"NSERC is providing almost \$1 million over five years for ground-based scientific support as well as for the analysis of data coming from the mission, including research grants to support this exceptional program of research," said NSERC president Dr. Tom Brzustowski. "NSERC Research Grants recognize the creativity and innovation that are at the heart of all advances in research, whether made individually or in groups. Researchers such as Ted Llewellyn who are devoted to scientific advancement lead our country to a brighter future," he added.

OSIRIS is providing a unique data set by producing maps of concentrations of ozone every 1.5 km above the earth; other satellites yield maps of the total amount of ozone above any point. From these profiles, it will be possible to obtain insights into how the ozone depletion is occurring rather than just where over the earth. Moreover, these altitude maps are produced daily, providing greater and more detailed data than previously possible. Work is in progress to confirm the new maps through detailed comparison with data collected by other ground- or space-based sensors that yield partial coverage of the earth's atmosphere.

The collaboration also represents an innovative approach to space research. Doug Degenstein, now an Assistant Professor of Engineering Physics at the University of Saskatchewan, was part of the industrial team while he was also a graduate student. This allowed for more efficient and cost-effective collaboration between the scientific and industrial partners. The concept of a graduate internship also ensures that Canada is developing highly qualified personnel in an effective manner and greatly enhances technology transfer between university and industry.

A map of ozone produced from OSIRIS data is available at: [www.space.gc.ca/osiris-data](http://www.space.gc.ca/osiris-data)

### About the Canadian Space Agency

Established in 1989 and headquartered in Saint-Hubert, Quebec, the Canadian Space Agency coordinates all aspects of the Canadian Space Program. Through its Space Knowledge, Applications and Industry Development business line, the CSA delivers services involving: Earth and the Environment; Space Science; Human Presence in Space; Satellite Communications; Generic Space Technologies; Space Qualification Services and Youth Awareness. The Canadian Space Agency is at the forefront of the development and application of space knowledge for the benefit of Canadians and humanity.

### About NSERC

NSERC is the primary federal agency investing in people, discovery, and innovation. The Council supports both basic university research through research grants and project research through partnerships among universities, governments and the private sector, as well as the advanced training of highly qualified people.

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