

Key facts about Canada's ozone-studying SCISAT mission

What

Part of ESA's Third Party Missions (TPM) programme, **SCISAT is a small atmospheric science mission from the Canadian Space Agency, focused on improving understanding of the depletion of the ozone layer.**

The SCISAT-1 satellite is still operational after two decades, far exceeding its planned operational lifespan of two years

When

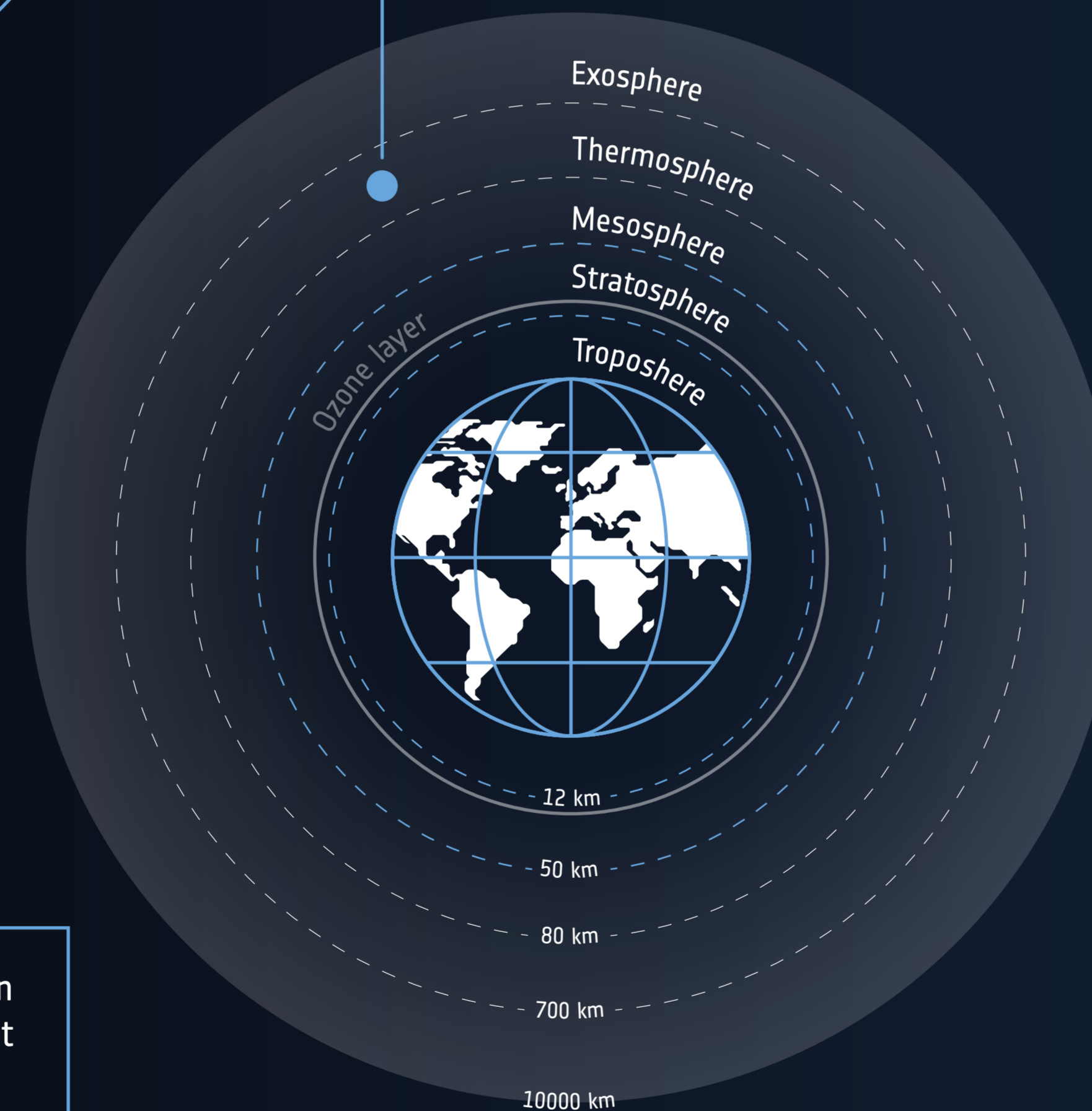
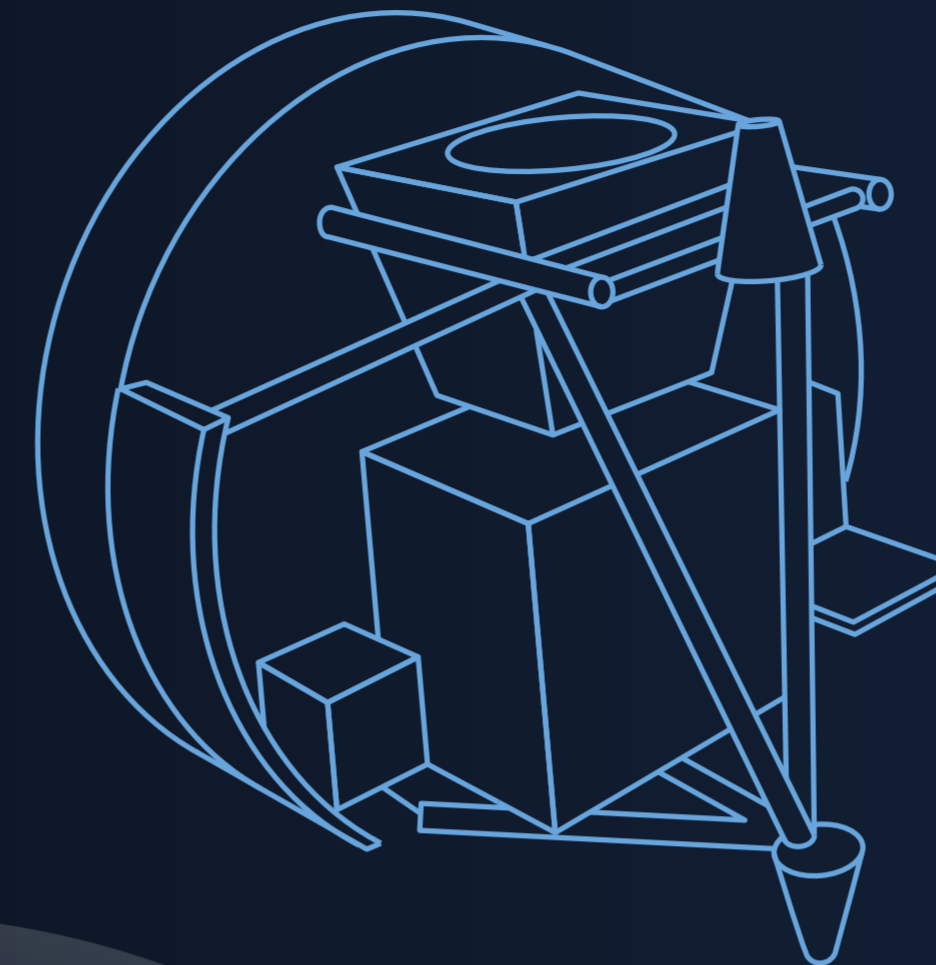
Launched on **13 AUG 2003** SCISAT-1 launched on 13 August 2003, from Vandenberg Air Force Base, USA, into a 650-kilometre altitude, high inclination orbit that takes it over both tropical and mid-latitude locations, as well as polar regions

Developed by

The Canadian Space Agency coordinated SCISAT's development, launch and operation. The mission is a partnership of Canadian universities, government and industry

SCISAT-1

650-kilometre altitude



Objectives

SCISAT's original mandate was to provide information on ozone depletion, by focusing its attention on stratospheric measurements of chemicals that affect ozone.

To reach this goal it measures more than 60 different atmospheric trace gases, but also provides excellent data related to climate change and air quality

Instruments

SCISAT-1 hosts two optical instruments, which use sunlight to identify and observe the distribution of gas species in Earth's middle atmosphere:

- **The Atmospheric Chemistry Experiment-Fourier Transform Spectrometer (ACE-FTS)**
- **The Measurement of Aerosol Extinction in the Stratosphere and Troposphere Retrieved by Occultation (MAESTRO)**

Applications

SCISAT data are continuing to make important contributions into various research areas, such as:

- **The decline of stratospheric ozone at northern mid-latitudes and in the Arctic**
- **Ozone depletion and international environmental policy assessment**
- **The effects of atmospheric chemistry, clouds and small particles, such as aerosols, on Earth's climate**
- **Air pollution monitoring and biomass burning**

Data and users

ESA's TPM programme distributes SCISAT data on a free basis for research and application development purposes:

earth.esa.int/eogateway/catalog/scisat-1-ace-fts-and-maestro