

Press Release

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Timmins 2019 Start of Strato-Science 2019 balloon flight campaign

The Strato-Science 2019 balloon flight campaign got underway mid-August at the Canadian Space Agency's Timmins launch base in Canada, located at 48° North. Four zero-pressure stratospheric balloon flights are scheduled—two for France (CABUX and PILOT) and two for Canada (Life and Super Bit).

Flying on a 412-kilogram science gondola borne aloft by a 150,000-m³ balloon to a ceiling of 33 kilometres and several different altitudes during the flight, the CABUX experiment opened the campaign with a successful launch on 25 August. The science gondola is carrying six main instruments:

- CALASET, a laser absorption spectrometer developed by the University of Toronto.
- XENON, a system to collect gas at three different altitudes (10, 20 and 30 kilometres), consisting of three sets of two sampling cylinders that are initially in a vacuum and fill by sucking in gases when their valves are opened/closed.
- ProtoCube, an experiment designed to test a new cosmic ray measuring instrument.
- VISTRO, a high-definition camera developed by Airbus that will ultimately be capable of observing Earth in the visible and infrared from the ZEPHYR S solar drone.
- HABLAN, a night-vision camera designed to assess light pollution from cities.
- K-riboo Bernadotte, the first-ever balloon-borne biology experiment, designed to characterize damage to cells subjected to radiation during the flight.

The flight of the PILOT experiment will conclude the Strato-Science campaign, carrying an astrophysics telescope payload. It will be PILOT's third flight after previous successful launches from Timmins in 2015 and Alice Springs, Australia, in 2017. These two flights yielded a wealth of science data and very interesting first results. This third flight will complete the science data acquisition phase.

Balloons are a unique, eco-friendly tool able to fly to the edge of space. They are the only means of flying for any length of time in the different layers of the atmosphere, which satellites cannot reach. CNES designs, develops and flies lighter-than-air systems for scientific users. With their ability to stay aloft for long periods in the atmosphere, balloons offer a unique tool for scientific research in many fields for which they prepare or complement satellite-borne, ground-based or airborne experiments.

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