

Press Release

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Successful Strato-Science 2019 balloon flight campaign from Timmins

The Strato-Science 2019 balloon flight campaign, started in mid-August, has been a clear success. The four zero-pressure stratospheric balloon flights operated by CNES—two for France (CABUX and PILOT) and two for Canada (Life and Super Bit)—were completed without a hitch from the Canadian Space Agency's Timmins launch site in Canada.

The CABUX experiment opened the Strato-Science 2019 campaign, carrying six main scientific instruments. Among these were XENON to measure atmospheric xenon gas, Bernadotte, a biology instrument to measure the effects of radiation on living cells, and VISTRO, a high-definition camera developed by Airbus for its ZEPHYR S solar drone. The flight of the PILOT experiment concluded the Strato-Science 2019 campaign, carrying a unique astrophysics telescope designed to observe galactic dust for future cosmology experiments. This third flawless flight for PILOT completed the science data acquisition phase after its two previous successful flights from Timmins in 2015 and Alice Springs, Australia, in 2017. These two flights yielded a wealth of science data and very promising research results that have already been published by scientists. The Canadian Life and Super Bit flights also went perfectly to plan.

CNES operates its annual Strato-Science balloon flight campaign alternately out of the mid-latitude base in Timmins, the polar-latitude base in Kiruna, Sweden, and from other sites of scientific interest like Alice Springs in the southern hemisphere and equatorial sites. The 2020 flight campaign will take place in Kiruna.

This year, CNES will be organizing a second balloon flight campaign called Strateole-2 starting in mid-October from Mahé in the Seychelles. Its objective is to flight qualify long-duration superpressure balloons able to stay aloft for more than three months, for which CNES is virtually the only prime contractor and operator in the world with the United States. Strateole-2 is a new and very innovative programme to study meteorological phenomena in the equatorial lower stratosphere using unique in-situ observations. Six to eight long-duration superpressure balloon flights are planned, with the first scheduled in early November. Science campaigns comprising 20 flights each are planned for late 2021 and late 2024.

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. Balloons offer a unique tool for scientific research in many fields for which they prepare or complement satellite-borne, ground-based or airborne experiments. They are easy to operate at relatively low cost for the scientific community.

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