



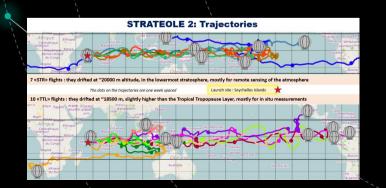






FRENCH BALLOON ACTIVITIES: NATIONAL REPORT 2022 - 2024

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THE CNES BALLOON PROGRAM

- Programmatic aspects (CNES Program Plan 2019-2024):
 - Yearly, Zero Pressure Balloon (ZPB) campaign, 3-5 flights
 - Monthly 2-3 Sounding balloons (SB) flights from Aire sur l'Adour (France)
 - On a 3-5 years basis: Super Pressure balloon (SPB) campaigns for specific projects
 - Selection of missions: CNES-CNRS steering committee, and missions in cooperation
- CNES prime for System design, qualification, safety certification, operations
- Industry for development, manufacturing (HEMERIA AS for balloons), more delegation under consideration
- Host countries for recoveries & local safety, but also as partners in science and operations

- Scientific labs:
 - Define the Mission
 - Develop the scientific instruments
 - Process the data and make the publications





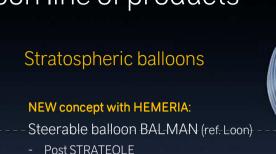




Altitude Km



CNES Balloon line of products



Observation, Defence

Flight >= 3 months

- P/L 20 kg

- Alt. ~20 km

SPB Super Pressure Balloon

BLD Sounding balloon

2 h ascent up to 25 to 35 km P/L: <= 3 kg

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See Planète Science

of for Education programs.

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Tropospheric balloons

AEC AEroClipper
1 month

TTVS

BLPB 1 month: 500 m to 3km

Flight >= 3 month

Alt. 18-20 km

P/L: 20 kg

P/L: 3 kg

ZPB Zero pressure balloon (PILOT, HEMERA, ...)

3 000 to 800 000 m3 Flight: Some hours to a few days Alt.: 15-40 km, Ceiling or slow descent

P/L: Up to 1 Ton

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Payloads:

From 100 g to > 1 000 kg

Altitude:

From the ground up to 40 km

Duration:

From some hours up to 3 months

Steerable & Persistent?

MORE DETAILS ON

HTTPS://BALLONS.CNES.FR/EN/BALLOONS-0

HTTPS://WWW.HEMERA-H2020.EU/FACILITIES-2/CNES-BALLOONS/

THANK YOU



