

# TOWARDS MARS - STRATOSPHERIC BALLOONS AS TEST-BEDS FOR MARS EXPLORATION

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CNES, ASI, CSA, DLR, SNSB, CNRS, CU, HU, INAF, KIT, SSC, ASC, Airstar



## Balloon platforms for Mars science and exploration

Conditions on the Mars surface with atmospheric pressure of 0.7-0.9 kPa and average temperatures of – 45 °C are similar to those on Earth at 30-32 km altitudes

Balloons can be used as low-cost platforms for:

- tests of scientific instruments for Mars missions
- drop tests of parachute systems and probes
- education and outreach activities, e.g. student projects

## Opportunities offered within HEMERA

- 6 flights with Zero Pressure Balloons for up to 150 kg payload from Esrange and Timmins during 2019-2021
- Several instruments will fly on one gondola that will be recovered
- 20 flights with Sounding Balloons for up to 3 kg payload from Aire sur l’Adour
- Virtual data access to all interested parties will be provided
- Call for Ideas open until April 27 to collect various ideas
- First Call for Proposals for experiment selection will open in July 2018
- First selection ready in Jan 2019

Second Call for Proposals planned for Dec 2019



[www.hemera-h2020.eu](http://www.hemera-h2020.eu)

## What is HEMERA?

European Balloon Infrastructure funded by EU within its programme Horizon 2020

Partners: space agencies, research entities and industry

HEMERA will:

- Provide free of charge balloon flights to user community
- Carry out networking and joint research activities
- Improve ballooning technology and scientific instrumentation

Launch sites: Esrange (SE), Timmins (CA) and Air sur l'Adour (FR)

