

NEW FEATURE

Cité de l'espace has opened the Martian Ground and its immersive presentation to help people understand the current exploration of Mars.

OPENING : 5 APRIL 2022

The leading site in Europe for dissemination of space and astronomical culture to the general public, Cité de l'espace is strengthening its position with a new permanent facility unique in Europe, designed in partnership with CNES: the Martian Ground. In connection with current space news, Cité de l'espace regularly offers new immersive events to allow visitors to discover and understand the major issues in space exploration. The planet MARS is therefore at the heart of this new lively place where the public will discover life-size mobile replicas of the rovers Perseverance (NASA-United States) and Zhurong (CNSA-China) which are currently operating on the red planet looking for traces of past life.

Cité de l'espace and the Centre National d'Etudes Spatiales (CNES) present The **Martian Ground - The Rovers Take the Stage!** In the shape of a 900 M² crater where the red planet's special soil and rocks are faithfully reproduced, this **new scientific mediation area** highlights the most explored planet in the solar system: **MARS**. Supported by CNES, this facility was designed and developed in collaboration with the scientific experts of the French space agency and the Institut de Recherche en Astrophysique et Planétologie (IRAP), to reproduce to the full a Martian landscape which is as realistic as possible (colours, textures, reliefs, etc.).

In the centre of an amphitheatre which can accommodate **up to 218 visitors** at the same time, robotic Martian exploration take the stage on **Martian Ground** -presented by Cité de l'espace's scientific presenters in the shape of a **daily presentation of 25 minutes**.

A scientific presentation up close to the reality of Martian exploration, **Martian Ground** was designed for all audiences. It is accessible for those with **four disabilities** (auditory, mental, mobility and visual). Thus, at the heart of the central area of the Martian crater, life-size and completely automated models of the **Perseverance (NASA - United States) and Zhurong (CNSA - China)** rovers - both currently exploring the planet Mars - are activated by Cité de l'espace's scientific presenters to **show in an authentic way** how they move on the red planet and the missions they are carrying out.



 est un équipement  et Terrain Martien a été créé :

Avec le soutien de



En partenariat avec



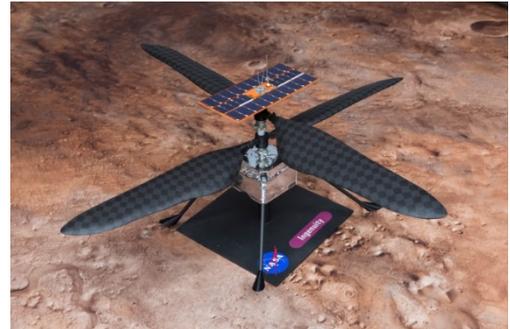


From 5 April 2022 visitors discover the specific features of the two rovers such as the energy with which they operate (solar panels or nuclear battery), their mobility as well as how they are piloted from Earth and the purposes of the instruments with which they are equipped, such as the laser camera, SuperCam, designed and operated by CNES and IRAP, the research laboratory in Toulouse.

The first and only Martian flying vehicle, **Ingenuity** is also involved. Thanks to a life-size model, visitors discover this small helicopter designed exclusively to fly in the thin Martian atmosphere during the Mars2020 mission (Perseverance).

The final scene showcases the "family" of Martian rovers from **Sojourner** (NASA's first rover to land on MARS in 1997), via **Perseverance** and **Zhurong**. The "family of rovers" will be added to as new Martian explorations progress.

This immersive presentation invites the public to wonder about the future of exploration of MARS: first of all bringing back samples from MARS to Earth, then in the longer term, future human Martian missions. This complements the various facilities installed at Cité de l'espace to find out about the red planet: the "Mars Lab" presentation and a genuine Martian meteorite on display in a MARS area in the permanent exhibitions.



This new facility was produced by Cité de l'espace in partnership with CNES (Centre National d'Etudes Spatiales), with the support of the Comat company and Région Occitanie and in collaboration with IRAP.

ARRANGEMENTS FOR RECEIVING VISITORS

Cité de l'espace has established a reception facility suitable for the health context. **Conditions and reception regulations are subject to change.** Cité de l'espace, therefore invites its visitors to consult its website regularly www.cite-espace.com

PHOTO LIBRARY

Subject to mentioning Cité de l'espace and the name of the photographer <https://www.media.cite-espace.com/>

ABOUT CITÉ DE L'ESPACE

Stimulating curiosity, arousing the desire to know more, creating scientific vocations, making space, astronomy and scientific culture accessible to all, these are what's at stake for **Cité de l'espace**. The leading site in Europe as regards the dissemination of space and astronomical culture to the general public, **Cité de l'espace** is a facility of Toulouse Métropole, opened in 1997 at the initiative of Toulouse City Hall, with the support of the Region Occitanie Pyrénées-Méditerranée, its co-founders, CNES, Airbus Defence and Space, Météo-France, the Ministry of National Education, joined by Thales Alenia Space, the Caisse des Dépôts et Consignations, the Caisse d'Epargne de Midi-Pyrénées, as well as: ESA, Canopé, the University TOULOUSE III Paul-Sabatier, CNRS, OMP, IRAP, Safran and Onera.

Cité de l'espace is supported this year, 2022, in its exhibition and events developments by its official partners, MGEN and Banque Populaire Occitane, as well as by its partners MEDES, CNRS, Comat, Kineis.

www.cite-espace.com

ABOUT TOULOUSE METROPOLE

With its unique ecosystem in Europe, the metropolis of Toulouse is undoubtedly the European capital of aviation and space and through its industrial fabric contributes to the success of the greatest national and European achievements. Academic attractiveness is also an asset, particularly in the field of research and higher education: its R&D laboratories, recognised as world-class and its excellent courses.

The second biggest academic hub in France with 110,000 students - including almost 40,000 students in engineering science and two major schools dedicated to aviation and space - Toulouse has positioned itself as the metropolis of scientific knowledge and is continuing to build at Montaudran the innovation district, integrating with Toulouse Aerospace the campus in the city and the city in the campus. A facility of Toulouse Métropole, Cité de l'espace is the biggest site in Europe for disseminating space and astronomical culture for all with 400,000 visitors annually. Toulouse Métropole has entrusted its operation and development to the Société d'Economie Mixte d'Exploitation de Centres Culturel, Educatif et de Loisirs (SEMECCEL), which also manages L'Envol des Pionniers, as a public service delegate.

ABOUT THE REGION OCCITANIE / PYRENEES-MEDITERRANEE

The **Region Occitanie / Pyrénées-Méditerranée** is the second largest region in France. Formed by a merger of the former regions Languedoc-Roussillon and Midi-Pyrénées, its capital is located in Toulouse. Chaired by **Carole Delga**, Région Occitanie works in many sectors such as the environment, transport, education, economic development, training, employment, tourism, culture, sport and health.

Cité de l'espace is 6.87% owned by the Région Occitanie / Pyrénées-Méditerranée. **The Région supported the Martian Terrain project in the amount of €275,000.**

ABOUT CNES

CNES (Centre National d'Etudes Spatiales) is the public institution responsible for proposing French space policy to the Government and implementing it in Europe. It designs satellites and puts them into orbit and invents the space systems of the future; it promotes the emergence of new services, useful in daily life. CNES, established in 1961, is the originator of major space projects, launchers and satellites and is the natural contact in the industry to push innovation forward. CNES has almost 2,400 employees, women and men who are fascinated by space which opens infinite, innovative application fields, and are involved in five focus areas: Ariane, science, observation, telecommunications, defence. CNES is a major stakeholder in technological innovation, economic development and industrial policy in France. It also establishes scientific partnerships and is involved in many international co-operation projects. France, represented by CNES, is one of the main contributors to the European Space Agency (ESA). For further information on CNES, visit www.cnes.fr

ABOUT Comat

Founded in 1977, **Comat** is a strategic equipment manufacturer in the space sector for **the Exploration & Science** markets (ISS, Mars, Moon), for **the Telecom and Earth Observation** markets and the **Small Sats** markets. Comat develops equipment for all markets with the capacity to Direct, Deploy and Propel. **Comat** relies on its industrial capacity (iMAIT) and its partners to respond in a competitive manner to various programmes. As innovation is the strength of the company, Comat teams up with start-ups to respond to new markets. Comat's ambition is to become a European leader in space equipment. **Comat** has been highly involved in the SuperCam project, being present in the design stages to optimise the design in view of the severe constraints in space manufacturing. For almost four years, this SME from Toulouse has produced more than 2,000 mechanical parts for the five prototypes and the flight model. **Comat's** engineers then put the instrument together in a clean room with **the IRAP** and **CNES** teams. They brought their assembly and testing skills to delivering NASA's Jet Propulsion Laboratory in the USA.

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