

Space Mission

New permanent exhibition Opening on 23 October 2023 at the Cit  des sciences et de l'industrie

"In our imagination, space is both an invitation to extraordinary adventures and a hostile region that reminds us of our physical limits. While driving spectacular technological progress, space exploration is called into question for its environmental footprint. It raises new technological and geostrategic issues, and remains one of humankind's greatest challenges. The Space Mission exhibition invites visitors to explore these questions in a breathtaking setting that allows them to leave Earth in the shoes of the women and men who paved the path into space."

Bruno Maquart, President of Universcience

On 23 October 2023, the Cit  des sciences et de l'industrie presents its new permanent exhibition on space exploration: Space Mission. Intended for a wide audience aged 8 years and up, this exhibition takes visitors on a voyage through time and space. Since the late 19th century, our notion of space has been very much in the realm of the imagination, thanks to science fiction, fantasy literature, comic strips, films and TV series. This notion has been nurtured and developed by space exploration and conquest strategies, with programmes such as Artemis and the launching into orbit of the Lunar Gateway, all part of our plans to return to the Moon. When reality gets confronted with the imaginary world, doesn't it collide with our limitations, be they physical, physiological or psychological, or our spatial and temporal boundaries?

The *Space Mission* exhibition promises visitors a trip through the realm of space, today and in the future. It invites each of us to step into the shoes of an astronaut for an experience that feels like a waking dream. The exhibition is arranged in five sections - Explore, Travel, Gateway to Space, Living in Space, Food for Thought - to give an overview of the current state of play in terms of research, technology and discussion about space missions. It gives us insight into the reality and complexity of this field, to help us see the opportunities offered by space, but also the constraints attached to them.

EXPLORE: to explore space, humans cannot manage without robots. This first part of the exhibition offers visitors a chance to see objects that go where humans cannot, for safety or time reasons. From Venus Express to the Cassini probe, via Huygens, Juice or the Perseverance rover, each was designed for a specific exploratory purpose. Collection of images or sounds, analysis of atmospheres or rock samples, and preparation for the arrival of human beings are among the missions carried out for us by these robots, hence pushing out even further the boundaries of our understanding of the Universe and our place within it.

By the end of this first section, the visitor will appreciate the complexity of implementing a robotic exploratory mission and will be ready to "travel".

TRAVEL: here, visitors put on spacesuits. As members of a team of scientists, they leave for a drilling site on Europa, one of Jupiter's moons, located 628.3 million kilometres from Earth.



Designed in partnership with the Centre National d'Etudes Spatiales (CNES), in collaboration with the European Space Agency (ESA) and with the support of Richard Mille and Airbus.

The *Space Mission* exhibition is part of the editorial line entitled "getting your hands dirty / Technical engineering in action". This theme proposes exhibitions that demonstrate technical expertise, showcase innovation and industrial creation and bring engineering science into play. It aims to build a detailed picture of all items of utility, made by humans or produced by machines... without the fear of getting their hands dirty.

They experience this space exploration trip through an immersive show that begins with take-off and ends on landing. Between spacecraft launchers, propulsion methods and trajectory calculations, they study a reality that has nothing to do with science fiction films. Leaving the Earth's gravity to be confronted with space is a subtle art that comes with a mix of possibilities and constraints. A number of models, including one of Ariane 6, are on display to complete the visitor experience.

After this journey, the exhibition invites visitors to use a "gateway to space".

GATEWAY TO SPACE: the Moon has been somewhat neglected since our first steps there in 1969. But today it is back at the forefront of our ambitions. This third section of the exhibition presents the public with a roadmap featuring the Artemis programme. Led by NASA in partnership with ESA (European Space Agency) and other space agencies, this programme resulted in the launch, at the end of 2022, of the new SLS (Space Launch System) with Orion, the vessel that succeeded Apollo. This spacecraft's first uncrewed voyage around the moon was a success and it landed safely back on Earth, paving the way for a future crewed mission. Two replicas are on display: a full-scale model of I-HAB, the European living module of the Lunar Gateway space station, and another of the space vehicle Orion.

The visitor is now able to "live in space" beyond Earth's orbit.

LIVING IN SPACE: after the Moon, the next goal is to send humans to Mars. Thanks to the work of the twenty-four space agencies dotted across the world, the coming decades should see humans venture beyond Earth's orbit and further into space. Visitors are now travelling in the future, to set foot on the Moon and visit an established lunar base. They find out how astronauts manage to be self-sufficient with the help of the resources found there and by recycling as many resources as possible. They also learn which architectural solutions are being studied to adjust to conditions on the Moon. This section features a multimedia game on the theme of day-to-day life on a Martian base, for which the visitor becomes an astronaut who is training to spend a day on Mars.

Visitors are now given "food for thought" about this space dream.

FOOD FOR THOUGHT: in this last section, the public takes a step back. An audiovisual installation gives the experts a chance to speak (an astrophysicist, a sociologist and a geopolitician) to offer food for thought on society's relationship with space and, in particular, our motivations for sending humans there.

AROUND THE EXHIBITION

SERIES OF "HUMANS IN SPACE" LECTURES

A series of lectures is programmed between 21 October and 16 December 2023 on the theme of "Humans in Space". Including an interactive session in which the visitor becomes the hero.

ÉDITIONS JEUNESSE

"Mission spatiale" by Roland Lehoucq. Joint publication by Editions Fleurus and the Cité des Sciences et de l'Industrie; "La Grande Imagerie" collection.

A book packed with images, published in France's leading documentary collection, to learn about the conquest of space: how long have we been exploring space, how does a rocket work, why do we travel so far? The book takes an original approach to explaining the extraordinary work of astronauts, displaying on each of its eleven double pages why and how humans travel to space. It shows both the advantages and disadvantages of space exploration and humans' entry into space.

Hardcover, 32 pages, format 23.5 x 29.5 cm; retail price: €8.95. Available on: 6 October 2023.

Activity book

No. 2 in the “Exhibition booklets” collection.

From 8 years, Texts: Sylvie Baussier and Michel Viso, illustrations: Tomoë Sugiura, 32 pages, format 15 x 21 cm, price: €5.95. Available in October 2023

DEMONSTRATIONS

Astromyths

General public | From 7 November 2023 | Duration: 45 min.

Man on the Moon, extraterrestrials, astrology, effects of the full Moon... Astronomy covers a multitude of topics that also lead to misbeliefs and misinformation. Through an amusing analytical and experimental approach, this awareness activity invites the public to take a closer look at some of astronomy's common preconceptions and popular beliefs.

Spatial physics

General public | From 10 October 2023 | Duration: 45 min.

Set off for space and discover, through experiences and anecdotes, the amazing field of spatial physics that governs the life of astronauts.

Science or fiction

General public | From 10 October 2023 | Duration: 45 min.

Through extracts from films, video games, comic strips, etc., spot the scientific inconsistencies that typically appear in sci-fi material to become aware of and understand its degree of scientific credibility, with the help of amusing demonstrations and experiments. An opportunity to consider the link between science and sci-fi.

Mission Bellona

General public | From 15 October 2023 | Duration: 45 min.

Mission Bellona has been announced. A crew of astronauts is to be sent into space, further than any human has ever been before and they need your help! Sign up for astronaut school and join them on their mission. Will you manage to overcome the obstacles you meet along the way? Your goal is to set foot on Mars.

PRACTICAL INFORMATION

Cité des sciences et de l'industrie

30, avenue Corentin-Carou -75019 Paris
M Porte de la Villette T3b

Opening times (except during a health crisis)

Open every day except Monday, from 10am to 6pm, and until 7pm on Sundays.

cite-sciences.fr

Admission

→ **€13, reduced rate €10**

(under 25s, over 65s, students, teachers and large families)

→ **12€** (“sustainable mobility” rate for visitors arriving by bicycle, scooter, segway or a similar means of transport)

→ **Free** for children under the age of 2, the unemployed, minimum allowance beneficiaries, disabled persons and their companions.

The admission ticket is valid for the exhibitions on levels 1 and 2, the Argonaute and the Planetarium

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