

FOR IMMEDIATE RELEASE

Blockbuster exhibition *Mars: The Red Mirror* touches down at ArtScience Museum

*Explore 12,000 years of stories and discoveries about Mars
at Singapore's most comprehensive exhibition on
the Red Planet*



(L to R): *Four-metre inflatable sculpture of Mars (2023) by Luke Jerram; Marsonauts (2023) by Nero Cosmos*

SINGAPORE (23 November 2023) – Docking at ArtScience Museum from 25 November, *Mars: The Red Mirror* will launch visitors on an out-of-this-world expedition through 12,000 years of culture, art, history, and science about Mars from ancient times to the present day.

It is the most comprehensive historical and cultural exhibition on the Red Planet to land in Singapore, featuring over 300 objects, including significant historical artefacts, rare scientific manuscripts, films, contemporary works of art, and even an authentic Martian meteorite.

Having been a subject of fascination over millennia, Mars has captured humankind's imagination like no other planet. Space agencies from around the world are actively exploring Mars, with three active rover missions currently on the planet, and several manned space missions on the horizon. *Mars: The Red Mirror* reflects the enduring connection humanity has to the Red Planet by bringing together narratives from pioneering scientists, modern day experts, filmmakers, writers, and contemporary artists who have been exploring Mars through time and across diverse cultures.

First presented in Spain in 2021, *Mars: The Red Mirror* is curated by Juan Insua of the Centre of Contemporary Culture of Barcelona (CCCB). The Asian premiere of this exhibition at ArtScience Museum turns its focus to Asia – from showing how Mars was depicted in ancient China, India, and Japan, to highlighting the work of pioneering Asian astronomers, and providing insight into the portrayal of Mars in Southeast Asian pop culture. The exhibition also shows how space agencies from across Asia are scientifically exploring Mars, including Singapore's own Space Faculty and the Japan Aerospace Exploration Agency (JAXA). The emphasis on Asia provides a

more inclusive and comprehensive narrative about humanity's relationship with Mars, underscoring the significant role that Asia has played – and continues to play – in this collective quest to understand the Red Planet.



Mars: The Red Mirror features three main colour-coded sections inspired by the *Mars* trilogy

Unfolding across three main sections, the design and structure of the exhibition is inspired by the award-winning *Mars* trilogy – a series of science fiction novels by American writer Kim Stanley Robinson. Titled *Red Mars*, *Green Mars* and *Blue Mars*, these novels feature in the exhibition and chronicle the settlement and terraforming of Mars, demonstrating how science fiction has shaped humankind's Martian dreams and sowed fantasies about travelling to Mars.

Journeying from ancient myth to what may become a very real future, *Mars: The Red Mirror* examines humanity's possible future relationship with Mars in the context of the current ecological crisis facing planet Earth. It poses several crucial questions to visitors: Should humans consider settling on another planet even with the ecological problems on Earth? And is Mars being sought as an escape, or as a mirror that reflects the challenges that must be addressed on this planet?

"This weekend at ArtScience Museum, we embark on an extraordinary journey across space and time, exploring the enigmatic allure of Mars. Of all the astronomical bodies in the night sky, Mars has held a special fascination for humanity through the ages. *Mars: The Red Mirror* shines a light on the Red Planet at a critical moment, where space agencies around the world are planning missions to Mars. For the inauguration of *Mars: the Red Mirror*, we are welcoming to Singapore a senior official from the Japanese space agency, JAXA, an artist who has trained as an astronaut, the founder of the Indonesia Space Science Society and senior representatives of the museums we have collaborated with on the exhibition. Their presence underscores the significance of an exhibition that not only explores our nearest planetary neighbour but also highlights the uniqueness and special qualities of our own planet. *Mars: The Red Mirror* also blends art and science, offering a new perspective on both Mars and Earth. It invites visitors to contemplate our past, present, and future in the cosmos, at a time when the exploration of Mars is more relevant than ever," said Honor Harger, Vice-President of ArtScience Museum at Marina Bay Sands.

"The Centre for Contemporary Culture of Barcelona (CCCB) is very proud to collaborate with ArtScience Museum with the exhibition *Mars: The Red Mirror*, an invitation to delve into the powerful image of Mars. The show is a cultural journey to the Red Planet that begins with the ancient myth of the god of war and, since the 19th century, has been a rich seam for scientific observation, geopolitical struggle, and science fiction until it has become, today, a mirror of our wounded planet. The exhibition is an adventure for the imagination and a new fruitful and beautiful exploration of the crossroads between the sciences and the humanities," said Judit Carrera, Director of Centre of Contemporary Culture of Barcelona.

Mars: The Red Mirror takes an interdisciplinary approach to Mars, blending art, science, and history. It also serves as an educational platform which will inspire both children and the young at

heart, to explore space science and astronomy. By including Asian astronomical history and contemporary art, the exhibition offers a unique perspective that resonates with diverse audiences, particularly in the Asian context.

Inside the Exhibition



*The entrance to the exhibition showcases a fragment of Meteorite KG 002 and *The Moment* (2022) by Katie Paterson*

The exhibition begins with two objects: a fragment of a Martian meteorite found in the Sahara Desert in 2010, and *The Moment*, an artwork by renowned artist Katie Paterson. The handblown hourglass measures 15 minutes of time using dust containing Martian dust, asteroids, fragments of meteorites and materials from exploding stars. The journey continues with a timeline of the history of Mars from the Big Bang, 13.78 billion years ago, to the first image of Earth taken from Mars in 2004.

Section I: Mars in Ancient Cultures



First section of the exhibition – Mars in Ancient Cultures

The exhibition continues by showing how humanity's relationship with the Red Planet has evolved. In the distant past, planets were considered mysterious spheres in the sky and were regarded as mystical symbols or gods. Mars has been consistently represented as a god of war across history – going by different names in different cultures, including Nergal, Mangala, Harmakhis, Auqakuh and Ares. *Mars in Ancient Cultures* illustrates these depictions and interpretations of Mars across cultures and civilisations.



(L to R): Figurine of Mars, 4th-3rd Century BC, courtesy of Fine Arts Museum of Lyon; Bust of Mars, 2nd-3rd Century, courtesy of Fine Arts Museum of Lyon; Figura en bronze d'un guerrier grec, Collection of Archaeological Museum of Catalonia; Lintel from entrance to a Vishnu or a Durga temple, Collection of Asian Civilisations Museum, National Heritage Board, Singapore

On display are sculptures of Mars from Greek and Roman mythology. In ancient Greece, Ares was the deity who held ultimate power over all war-related matters, embodying the spirit of masculinity. He possessed unparalleled strength that could become lethal if not subjected to restraint and reason by a higher order. In ancient Rome, Ares was known as Mars, retaining the attributes of his Greek counterpart while acquiring the status of a god. Though often depicted as a warrior, Mars was not just a Romanised Ares. He was also an agricultural deity, embodying the life-giving energy of spring, and was worshipped for the physical and spiritual protection of crops.

Mars was also highly revered in ancient Asian cultures. In India, Mars was referred to as Mangala and regarded as a warrior god. In ancient Chinese art, Mars and the other planets were represented as deities closely associated with either the 12 houses of the zodiac or primary elements. A synthesis of both Chinese and Indian influences can be observed in ancient Japan through the depictions of Mars in relation to Buddhism. Visitors can view paintings, drawings and ancient artefacts which feature Mars as a celestial being rooted in various Asian religions.



Section on Copernicus' Universe

In the 2nd century, mathematician and astronomer Claudius Ptolemy devised a theory that the Sun, Moon, planets, and stars orbited the Earth. His “geocentric model” of the universe remained widely accepted for 1,300 years, until scholar Nicolaus Copernicus challenged it, proving that the Earth itself moved around the Sun. The Copernican Revolution began in the 16th century and ushered in a new understanding of humankind’s place in the universe. Visitors will be able to view Copernicus’ revolutionary “heliocentric model” which depicted the Sun being positioned at the centre of the solar system, with planets orbiting around it.

Section II: Science and Fiction of The Red Planet

The second section of the exhibition explores how captivating stories about Mars have shaped our understanding of the planet and our relationship to it. Towards the end of the 19th Century, the mythology of Mars as a god was challenged by a more scientific understanding of the planet. This set the stage for a collision between science fact and science fiction, which resulted in new narratives that continued into the 20th Century.



Second section of the exhibition – Science and Fiction of the Red Planet

Here, visitors can learn about the astronomers, engineers and inventors who examined Mars and laid the foundations for modern astronautics. Italian astronomer Giovanni Schiaparelli was an early pioneer of making maps of Mars. The exhibition presents two maps of his famous 1877 observations of the Red Planet. They include drawings of a network of linear structures he observed on the surface of Mars that he termed 'canali'. This was mistranslated into English as 'canals', implying that they were artificial. This mistranslation gave rise to a wave of theories and speculation about the possibility of intelligent life existing on the Red Planet.



The War of the Worlds showcase

This section also showcases Mars in science fiction literature and film, including a display on the most famous Martian invasion story, *The War of the Worlds*, by English writer H. G. Wells. The 1898 novel depicts intelligent creatures from Mars which attack England and are eventually killed off by a bacterial infection. The exhibition features physical copies of early editions alongside vivid drawings by artist Henrique Alvim-Correa.

The exhibition also presents the iconic radio broadcast of the story by Orson Welles in 1938. His dramatic reading of the events depicted in the novel sowed panic amongst radio audiences who believed it was an actual emergency announcement.

Additionally, the invention of the radio brought with it new means of searching for life on Mars. Many believed that radio waves were being emitted from Mars, fueled by the ongoing discussions about the possibility of artificial canals on the Red Planet.



Rare Indonesian science fiction comics about Mars collected by Venzha Christ

During the 20th century, Martian imagery began to appear in pulp magazines and comics. Published against the backdrop of colonisation and globalisation, countries in Asia began taking inspiration from the Western world, and developed a fascination with Mars.

Popular Western characters such as Flash Gordon, Mickey Mouse, and Casper the Friendly Ghost were adapted by Asian comic book artists who wrote stories of these characters going to Mars. In Japan, writers ideated unique and original characters in relation to Martian narratives, such as Sailor Mars in the influential manga series *Sailor Moon*. One of the highlights of the show is a collection of over 60 rare Indonesian science fiction comics depicting Mars. While some were adapted from American cartoon stories and characters, others feature original narratives by Indonesian comic book artists that blended imagery of Mars with local cultural practices such as 'wayang', the traditional Indonesian shadow puppet tradition.



Visitors can watch films and documentaries about the Red Planet in the Mars Cinema

By the end of the 20th century, Mars had become a deep-seated influence for science fiction cinema, television, and music in Asia and the West. A dedicated cinema within the gallery will screen a line-up of films and documentaries about Mars, ranging from movies that dominated suburban drive-in cinemas to an episode of American astronomer Carl Sagan's famous television series *Cosmos*, which explores the search for Martian life.

Section III: Mars in the Anthropocene

The last section of *Mars: The Red Mirror* turns its attention to the present. With a focus on the climate emergency that threatens Earth, it surfaces crucial dilemmas of humanity's present and future – whether to preserve its one and only home, or to migrate to outer space in search of a 'Planet B'.

Artworks by well-known contemporary artists from around the world also invite contemplation on the climate crisis and dreams of a multiplanetary life.



starship (2023) and *starbase* (2022) by Michael Najjar

Major highlights include a large four-metre inflatable sculpture of Mars by British artist Luke Jerram that features detailed NASA imagery of the Martian surface, and a triptych titled *starbase* by German artist and adventurer Michael Najjar. The artwork presents the futuristic new spaceport currently under construction by SpaceX in South Texas which is likely to be the site of the first manned mission to Mars. Michael Najjar is one of several artists around the world who have undertaken astronaut training in order to document the development of manned space exploration.



(L to R): *The Kepler Station* (2018) by Florian Voggeneder; *The Wilding of Mars* (2019) by Alexandra Daisy Ginsberg

Austrian photographer Florian Voggeneder has also trained in a space agency as part of his multi-year investigation into astronautic space travel. *The Kepler Station* by Voggeneder depicts a scientific Mars simulation conducted to gain insights for future manned missions to the planet. A simulated space station was built in Oman and became the habitat for a group of space researchers for one month. To qualify to be part of the Mars-analogue simulation, Voggeneder had to complete a multi-month educational and physical programme at the Austrian Space Forum and participate in research studies and various space science experiments.

Additionally, the gallery presents Asian artists and their approach to Mars, including Venzha Christ, founder of the Indonesia Space Science Society, who presents an installation exploring Indonesian attitudes to space exploration.

The artworks in the exhibition also question whether it is ethical to send humans to other worlds. This includes *The Wilding of Mars*, a video installation by British artist Alexandra Daisy Ginsberg. Portraying the growth of a wild garden on Mars that is thriving over millennia, the plants seeded with Earth's life forms are shown spreading north from the South Pole of Mars, developing an ecosystem determined by global and local parameters of water, temperature and nutrients. Here, the work is presented as two simulations running in parallel, implying the potential of endless possible worlds which challenge the assumption that the outcome of space exploration must end in human benefit. As plant life takes Mars in a different direction, Mars also impacts Earth lifeforms in its own unique ways.

The final galleries of the exhibition also spotlight international scientific missions to Mars. The exhibition provides insight into the important role Singapore plays in space exploration, highlighting the work of Space Faculty, led by Lynette Tan from Singapore. By championing space technology's transformative potential, Space Faculty plans to expand the space economy in Asia. The exhibition features a scientific experiment by Space Faculty and Genome Institute of Singapore (GIS) which explores how plants may grow in Martian soil. A terrarium in the gallery compares the growth of plants in normal soil with soil designed to simulate the conditions on Mars.



Marsonauts (2023) by Nero Cosmos

The exhibition ends with *Marsonauts* by Swiss artist Nero Cosmos. Using an AI algorithm, Cosmos creates unique images of astronauts that he calls “marsonauts”. He is creating a new “marsonaut” image every day until the first astronaut steps foot on Mars. He has taken a culturally inclusive approach to creating his “marsonaut” images by using diverse source images to train his AI algorithm. He believes anyone and anything can become a “marsonaut” regardless of race, gender, religion, nationality, disability, class, sexual orientation, or age. The four “marsonaut” that feature at the end the exhibition are named Marco, Sarah, Wei and Olga.

Companion Public Programmes to *Mars: The Red Mirror*

Mars: The Red Mirror extends ArtScience Museum's Season of Science Fiction with a comprehensive slate of educational activities including talks, tours, drop-in activities, a film season titled *In Search of Tomorrow*, and a symposium.

Held on 25 November in tandem with the exhibition launch, *Humanity Reimagined – Mars Opening Symposium* invites visitors to delve deeper into how Mars has captured humanity's collective imagination and what it represents. The programme also discusses the multiplanetary future of humans and how designing for Mars might offer new tools in tackling the climate emergency on Earth. Speakers include Dr Masaki Fujimoto, the Deputy Director General of the

Institute of Space and Astronautical Science at the Japan Aerospace Exploration Agency, JAXA, and exhibition participants, Juan Insua, Michael Najjar, Venzha Christ and Lynette Tan.

From 4 December, visitors aged 7 and above can also embark on a quest within the exhibition to discover the wonders of the Red Planet. By scanning a QR code at the entrance, visitors can kickstart their expedition to explore ancient sculptures and paintings as well as learn about notable figures, space missions and Mars itself through fun facts, games and quizzes.

Please refer below to the full list of upcoming programmes.

Public Programmes

Date and Time:	Venue:	Programme and Description:
25 Nov, Sat 2pm – 6pm	ArtScience Cinema, Level 4	<p>Humanity Reimagined – Mars Opening Symposium</p> <p>In tandem with the launch of <i>Mars: The Red Mirror</i>, visitors are invited to explore how Mars has long captured humanity’s collective imagination and what it represents for everyone.</p> <p>The exhibition’s opening symposium contemplates humankind’s relationship with the Red Planet by unfolding stories that have centred on it from antiquity to present day. The programme also discusses the multiplanetary future of humanity and how designing for Mars might offer new tools in tackling the climate emergency we face on Earth.</p> <p>Speakers include Juan Insua (Curator of Mars: The Red Mirror and Former Director of CCCB Lab), Dr Masaki Fujimoto (Deputy Director General of the Institute of Space and Astronautical Science at JAXA), Michael Najjar (German artist, adventurer and future astronaut), Venzha Christ (Indonesian media artist and Founder of HONF Foundation and ISSS), Geneviève Galliano (Chief Curator of Department of Antiquities at Museum of Fine Arts of Lyon), Lynette Tan (CEO and Chairwoman of Space Faculty), Dr Roy Ang (Scientist at Genome Institute of Singapore’s Laboratory of Biodiversity Genomics), and more.</p> <p>The symposium is limited in capacity and is ticketed at \$10 per participant. To register, please visit this link.</p>
25 Nov, Sat 11am – 12pm	Basement 2, Entrance to <i>Mars: The Red Mirror</i>	<p>Curators’ Tour with Juan Insua and Dimitris Kontopoulos</p> <p>Join an exclusive tour of <i>Mars: The Red Mirror</i>, conducted by Juan Insua, the curator of the exhibition and former Director of CCCB Lab. Together with ArtScience Museum’s Senior Producer, Dimitris Kontopoulos, visitors will be guided through the exhibition while discovering incredible stories and scientific explorations of the Red Planet.</p> <p>The tour is limited in capacity and is ticketed at \$10 per participant. To register, please visit this link.</p>

<p>Since 16 Oct</p>	<p>ArtScience Cinema, Level 4</p>	<p><i>In Search of Tomorrow</i> Film Programme</p> <p>In the shiny and bold world of science fiction, humanity's aesthetic of the future has always been shaped by our fear of the unknown, and our unshakable desire to peek behind the curtain.</p> <p>Till December, ArtScience Cinema takes an expansive dive into the kaleidoscopic tapestry of sci-fi on screen. From 1950s pseudoscience B-movies to space epics that push the boundaries of filmmaking, the genre continues to be redefined with new classics that explore speculative, even mystical, narratives.</p> <p><i>In Search of Tomorrow's</i> line-up of films explores humanity's insatiable creativity and fascination with divining our futures – featuring the visionary, modernist eras of Soviet cinema, glitchy wasteland cities of Japanese cyberpunk, and mind-warping, techno-spiritual worlds that blur the line between sci-fi and magical realism.</p> <p>The film line-up includes:</p> <ul style="list-style-type: none"> • Piaffe (2022) *Singapore Premiere • Man in the Well (2016) *Southeast Asian Premiere • Devil Girl from Mars (1954) • 2001: A Space Odyssey (1968) • Solaris (1972) • Tetsuo: The Iron Man (1989) • Ghost in the Shell (1995) • Selected episodes from Astro Boy TV series (1980) • Selected episodes from Cosmos: A Personal Voyage (1980) • Electric Dragon 80.000 V (2001) • The Martian (2015) • Mars Express (2023) <p>Mix of free and ticketed admission with online pre-booking. Admission to free screenings is on a first-come-first-served basis. For more information, please visit this link.</p>
<p>From 28 Nov, Tuesday, 4pm</p>	<p>Basement 2, Entrance to Mars: <i>The Red Mirror</i></p>	<p>Public Guided Tour</p> <p>Visitors can explore the fascinating world of Mars – Earth's closest planetary neighbour in the solar system and a prospective home for humanity. Together with the Museum's Education Specialist, discover the cultural influences and science of the Red Planet, from ancient tales to present day space missions.</p> <p>Each tour is limited in capacity and is ticketed at \$5 per participant. To register, please visit this link.</p>
<p>4 Dec to 7 Apr</p>	<p>Basement 2, Exhibition Galleries</p>	<p>Mars Quest for Kids</p> <p>Visitors can embark on a quest into <i>Mars: The Red Mirror</i> to discuss the wonders of the Red Planet. Explore ancient sculptures and paintings that depict Mars and learn about key figures, space missions and the planet itself through fun facts, games and quizzes.</p>

		<p>Visitors just need to scan the QR code at the exhibition to launch this quest.</p> <p>This activity is complimentary to all <i>Mars: The Red Mirror</i> ticket holders, and is recommended for kids aged 7 and above.</p>
<i>Dec to Feb, Weekdays</i>	Basement 2, Exhibition Galleries	<p>Drop-In: Create Your Own Martian Animation</p> <p>Moving to Mars is an adventure to tell. How does one bring this story to life? In this drop-in, visitors can make their own flipbook and animate their story of travelling to Mars.</p>

Mars: The Red Mirror will run from 25 November 2023 to 7 April 2024.

Tickets and Reservations

Tickets are available for purchase at all Marina Bay Sands box offices and online. It is recommended that guests pre-purchase tickets online in advance due to limited capacity and timed entry of the exhibition.

For more information on *Mars: The Red Mirror* please visit <https://www.marinabaysands.com/museum/exhibitions/mars.html>

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About Marina Bay Sands Pte Ltd

Marina Bay Sands is Asia's leading business, leisure and entertainment destination. The integrated resort features Singapore's largest hotel with over 2,200 luxurious rooms and suites, crowned by the spectacular Sands SkyPark and iconic infinity pool. Its stunning architecture and compelling programming, including state-of-the-art convention and exhibition facilities, Asia's best luxury shopping mall, world-class dining and entertainment, as well as cutting-edge exhibitions at ArtScience Museum, have transformed the country's skyline and tourism landscape since it opened in 2010.

Marina Bay Sands is dedicated to being a good corporate citizen to serve its people, communities and environment. As one of the largest players in hospitality, it employs more than 11,000 Team Members across the property. It drives social impact through its community engagement programme, Sands Cares, and leads environmental stewardship through its global sustainability programme, Sands ECO360.

For more information, please visit www.marinabaysands.com

About ArtScience Museum

ArtScience Museum is a major cultural institution in Singapore that explores the intersection between art, science, technology and culture. It is the cultural component of Marina Bay Sands. Since its opening in February 2011, ArtScience Museum has staged large-scale exhibitions by some of the world's major artists, including Leonardo da Vinci, M.C. Escher, Salvador Dalí, Andy Warhol and Vincent Van Gogh, as well as exhibitions that explore aspects of science and technology – including particle physics, big data, robotics, palaeontology, marine biology and space science. For more information, please visit www.marinabaysands.com/museum.html

About Centre de Cultura Contemporània de Barcelona (CCCB)

CCCB is a multidisciplinary cultural centre that deals with the key challenges of contemporary society through different languages and formats, with an extensive programme that includes major thematic exhibitions, series of conferences and literary meetups, film screenings and festivals. For more information, please visit <https://www.cccb.org/en>

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