supernova.eso.org

ESO Supernova
Planetarium & Visitor Centre

Quarterly Programme | 2018

July–September

Klaus Tschira Stiftung gemeinnützige GmbH

KTS

Heidelberg Institute for Theoretical Studies

HITS

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About the logo

The multiple overlapping stars in our logo symbolise both the energy of a supernova and the vibrant energy of the educational facility. Associations with a spirograph or the repetitive swinging of a pendulum are welcome. The underlying fundamental geometry in the logo comes from the stars used in the ESO logo.

ESO Supernova
Planetarium & Visitor Centre

Welcome to the ESO Supernova!

Tania Johnston

Time flies when you love what you do. We at the ESO Supernova certainly fall into that category. This new quarterly programme stands as proof that three months have already passed and we have stepped into our second quarter of activity.

With this edition we continue to bring the Universe and ESO closer to you. Our planetarium show lineup sees a new premiere, *The Sun, Our Living Star*. This show invites you to discover the secrets of our star and experience never-before-seen images of the Sun's turbulent surface in immersive fulldome format.

This quarter we also bring you three talks by scientists on astronomy in 2030, gravitational waves and life outside Planet Earth. Our public events will include solar observations, observing the longest total lunar eclipse of the 21st century from the ESO Supernova and celebrating Researchers' Night.

We will have a special one-off planetarium screening: *Mayan Archaeoastronomy: Observers of the Universe* in Spanish.

On the cultural side, our temporary NASA/ESA Hubble Exhibition *Our Place in Space* will continue to be on display inside the Void, while *tonelabs* return to the ESO Supernova with their spectacular show *Fragmented Future*.

Enjoy your time at the ESO Supernova!

Tania Johnston
ESO Supernova Coordinator

The ESO Supernova Planetarium & Visitor Centre

The ESO Supernova Planetarium & Visitor Centre is a cutting-edge astronomy centre for the public located at the site of ESO Headquarters in Garching bei München. It was made possible by a cooperation between the European Southern Observatory (ESO) and the Heidelberg Institute for Theoretical Studies (HITS). The building is a donation from the Klaus Tschira Stiftung and ESO runs the facility.

The ESO Supernova is a non-profit educational facility that receives no state funding other than through ESO's normal operating budget. The entrance and all activities are free of charge throughout 2018. From 2019 we will sell tickets for activities like planetarium shows, tours and events. The entrance to the exhibition and all educational activities will remain free.

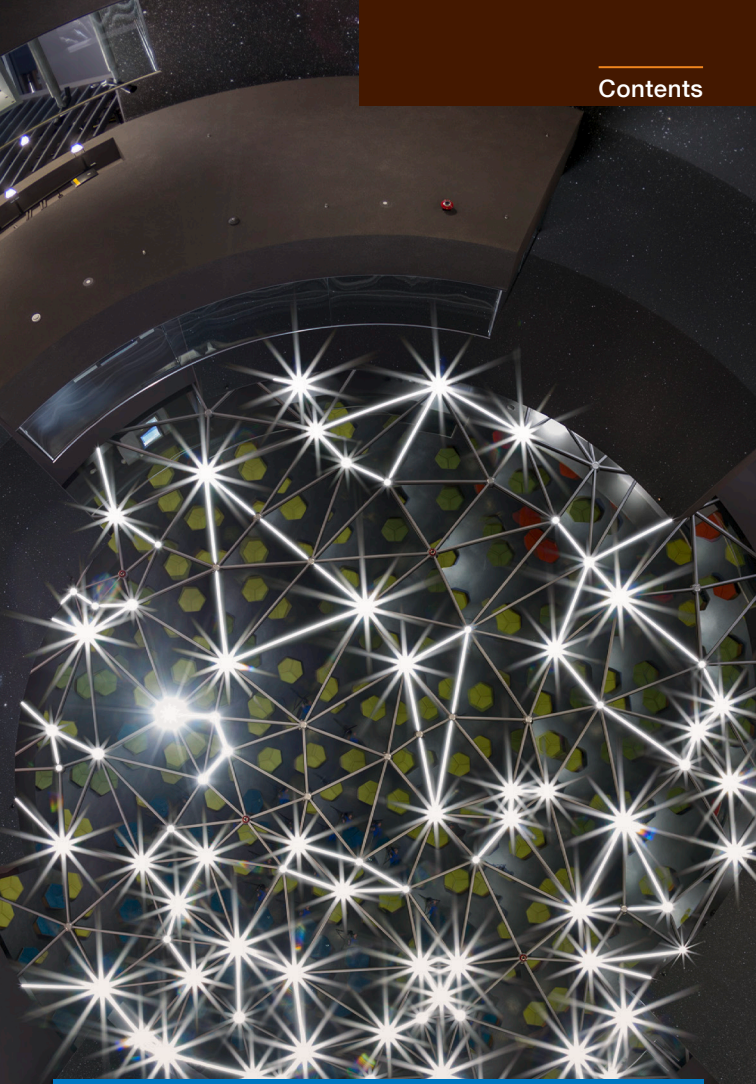
The ESO Supernova's vision is to make our community aware and proud of their astronomical achievements. By sharing the fascinating world of astronomy and ESO, we aim to inspire coming generations to appreciate and understand the Universe around us. The ESO Supernova's mission is to engage you — the visitors — as active participants. By designing curriculum-based learning experiences and using Big Data in astronomy to create innovative and authentic visualisations of front-line science, we bring ESO's observing facilities in the Southern Hemisphere closer to you.

The heart of the ESO Supernova is a planetarium with state-of-the-art projection technology, 109 seats, a dome 14 metres in diameter and a scientifically accurate three-dimensional astronomical database, which ensures an authentic and immersive experience. The ESO Supernova also contains a 2200-m^2 interactive astronomical exhibition and guided tours. In addition, school classes can book one of our hands-on workshops.

ESO Supernova in numbers

13	Themes in the "The Living Universe" exhibition
2200 m^2	Area of the exhibition space
255 m	Length of the exhibition ramp
109	Seats in the planetarium
14 m	Diameter of the planetarium dome
25°	Inclination of the planetarium dome
15.5 m	Height of the Void
140 m^2	Area of the Void
2	Seminar rooms
166 m^2	Total area of the seminar rooms
100 000	Expected number of visitors per year

Contents



ESO/P.Horálek

The Skies Above Us

Ages 4+

Educational show

Designed specifically for our youngest school groups, this educational show investigates the Earth–Moon–Sun system and tells stories of the constellations. This interactive and engaging show is aimed at children aged 4–7.

Duration: 00:45
Languages: EN/DE

A Tour of the Solar System

Ages 8+

Educational show

For primary school visitors and young families, this educational planetarium show, ideally suited to children aged 8–11, combines an exploration of the night sky with a factual journey through our Solar System.

Duration: 01:00
Languages: EN/DE

Hidden Universe

Ages 8+

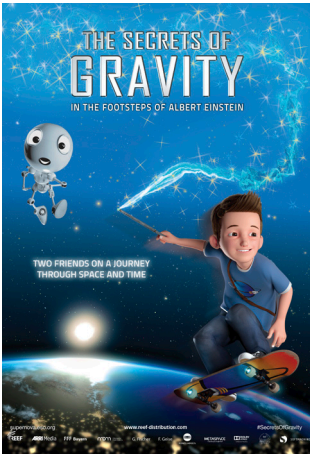
Family show

With the full power of IMAX® cinematography, explore the earliest galaxies and travel the terrain of Mars; witness images of distant celestial structures including stunning new views of the Sun; peer deep inside the Universe's most mysterious nebulae where stars are born; explore ESO's flagship facility, the Very Large Telescope (VLT); visit the largest astronomical project in existence, the Atacama Large Millimeter/sub-millimeter Array (ALMA) — all in the film *Hidden Universe*.

Duration: 00:51
Languages: EN/DE

The Secrets of Gravity — In the Footsteps of Albert Einstein

Ages 6+



Family show

Robot ALBY takes young Luke on a magical journey of discovery through time and space, during which they not only uncover the secrets of gravity, but also learn about friendship and imagination — for both Luke and ALBY have secrets of their own.

Duration: 01:00
Languages: EN/DE

Europe to the Stars

Ages 10+

Family show

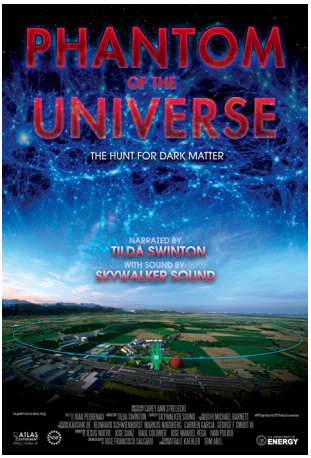
Join an epic journey behind the scenes at the most productive ground-based observatory in the world, revealing the science, history, technology and people of the European Southern Observatory.

Discover ESO's story of cosmic curiosity, courage and perseverance; a story of observing a Universe of deep mysteries and hidden secrets; and a story of designing, building and operating the most powerful ground-based telescopes on the planet.

Duration: 00:50
Languages: EN/DE

Phantom of the Universe

Ages 11+



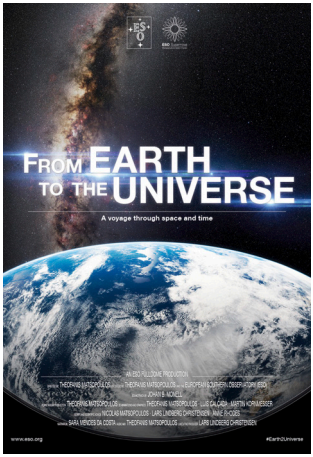
Family show

Follow the search for dark matter, from the first hints of it ever observed to today's advanced experiments in particle colliders. Race alongside protons and witness their collisions in stunning visualisations, understand dark matter, discover what we know about it so far and what scientists are still looking for.

Duration: 00:42
Languages: EN/DE

From Earth to the Universe

Ages 8+



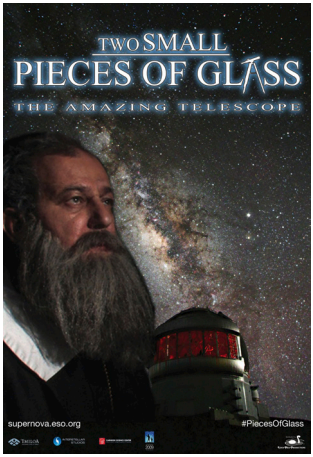
Family show

This stunning voyage through space and time conveys the Universe as revealed to us by science. Revel in the splendour of the Solar System's many worlds. Travel to the colourful birthplaces and burial grounds of stars, and still further out beyond the Milky Way to the unimaginable immensity of a myriad galaxies. Along the way, you will learn about the history of astronomy, the invention of the telescope, and today's giant telescopes that allow us to probe ever deeper into the Universe.

Duration: 00:47
Languages: EN/DE

Two Small Pieces of Glass — The Amazing Telescope

Ages 8+



Family show

Join two teenagers at a local star party and learn how the telescope has helped us understand our place in space and how it continues to expand our knowledge of the Universe. From Galileo's modifications to a child's spyglass — using two small pieces of glass — to the launch of the NASA/ESA Hubble Space Telescope, the show will present the past, present and future of astronomy.

Duration: 00:38
Languages: EN/DE

The Sun, Our Living Star

Ages 10+

Family show

Discover the secrets of our star and experience never-before-seen images of the Sun's turbulent surface in immersive full-dome format. The Sun has shone on our world for four and a half billion years. It is our nearest star and our planet's powerhouse, the source of the energy that drives our winds, our weather and all life.

Duration: 00:40
Languages: EN/DE

A cutting-edge planetarium & astronomy centre for the public

located in Garching bei München,
at the Headquarters of the
European Southern Observatory (ESO)

ESO/P. Horálek

Support the ESO Supernova.
Donate at supernova.eso.org/donate

The ESO Supernova exhibition is designed to be explored on your own, as you can choose the depth of knowledge you want to access and you also have hands-on exhibits to explore.

But you can also join one of our special guided tours. We offer two different tours, each available in both German and English. Make your choice, reserve a place in advance, print a ticket from a ticket kiosk at the ESO Supernova, and join us. All tours start from the Void, next to the entrance area, and last for about 45 minutes.

Premises Tour

Standard tour

Take a peek into the heart of the European Southern Observatory by visiting the ESO Headquarters building, and learn more about the history and future of ESO. The building is normally closed to visitors.

Duration: 00:45
Languages: EN/DE
Max. no. participants: 25

ArchitecTour

Standard tour

All the ESO buildings are architectural stars, known worldwide for their intricate design. Join this tour to see these buildings close up, learn about their clever details, and explore the ESO Headquarters.

Duration: 00:45
Languages: EN/DE
Max. no. participants: 25

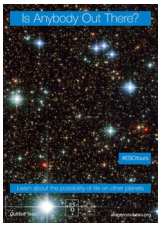
For practical reasons the guided tours are limited to 25 people. Please ensure that you reserve your tickets in advance. Check the detailed schedule within this programme or the infoscreens at the ESO Supernova for the starting times of the tours.

Do you want a special tour for you and your friends, focusing on a specific topic? Would you prefer to have a tour in French or Spanish, or at a specific time? If so, we have the tour for you! Choose one of the tours from the list below and reserve it online. These tours cost 200 € each for up to 25 people. Standard tours are also bookable for private groups at the same cost.

Duration: 00:45
Max. no. participants: 25

Languages: EN/DE
Other languages on demand

Is Anybody Out There?



Themed tour

Learn about the possibility of life on other planets in the Solar System, and about the detection of planets orbiting other stars. Be amazed at the difficulties astronomers face in their quest to explore planets light-years away.

Big, Bigger, ELT

Themed tour

Learn about the evolution of the telescope, from Galileo's instrument to the most modern telescopes used by ESO, such as the Very Large Telescope and the future ELT. Our guides will tell you why we need ever bigger telescopes and what astronomy and your cell phones have in common.

The Astronomical Zoo

Themed tour

Galaxies, stars, planets: these are just a few of the different types of objects visible in the night sky. Learn more about them and other strange objects like black holes, white dwarfs and brown dwarfs. Are they all stars like the Sun? You will find out.

We Are Made of Stardust!

Themed tour

Most atoms in our body were once inside a star. Learn how the evolution of the Universe is closely connected to the evolution of life and how material is recycled in stars.

It All Started with a Bang!

Themed tour

How do we know about the Big Bang? What came before it, and what will happen at the end of the Universe? How old is the Universe, and how do we know? Questions like these will be answered on this tour.

The Big Questions

Themed tour

Astronomers have solved many of the mysteries of the Universe, but there are still many big open questions. Learn about all the questions we don't have answers to yet: What are dark matter and dark energy? Is there a second Earth out there? Are we alone?

We Are All Doomed!

Themed tour

Learn how risky it is for life to exist in a Universe full of supernovae, gamma-ray bursts, galactic collisions, black holes, and asteroids. How do we survive the end of the Sun, or the end of the Universe? How can we prepare for all that?

A beautiful summer's day at the ESO Supernova

B. Tafreshi (twanight.org)

Education at the ESO Supernova

The ESO Supernova provides unforgettable learning experiences for students of all ages. Professional educators use astronomy to inspire young people and awaken their interest in science and technology, through interactive activities and experiences that will leave a lasting impression. Classes come to the ESO Supernova to discover the wonders of the Universe and to spend time investigating real astronomical problems.

An ESO Supernova educational experience includes interactive planetarium shows, workshops and tours, as well as access to our engaging exhibition. Experiences are adapted to the age of visiting school groups — we welcome students aged 4–18. In addition to our range of family-friendly planetarium shows, we have two specially-developed educational shows with strong curriculum links.

We have created six different hands-on workshops tailored to different stages in the school curriculum, from kindergarten to grade 13. Each workshop is linked to the Bavarian curriculum and gives students a fun and interactive experience of what it's like to be an astronomer investigating a real scientific problem. These workshops also demonstrate to teachers how an astronomical context can be used to teach a wide range of curriculum subjects, linking them together in an interdisciplinary way.

A full educational visit lasts between three and four hours. These packages are available in German as well as English. School groups must have advance reservations for workshops, guided tours and planetarium shows. All our educational experiences are **free**.

For teachers, the ESO Supernova offers special teacher training sessions and we coordinate a network of teachers in Bavaria, Germany and Europe.

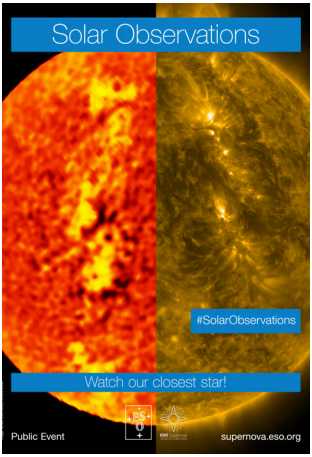
Please visit our website for additional information!

ESO/P.Horálek

Teacher workshops, events and activities

ESO/M. Zamani

Solar Observations

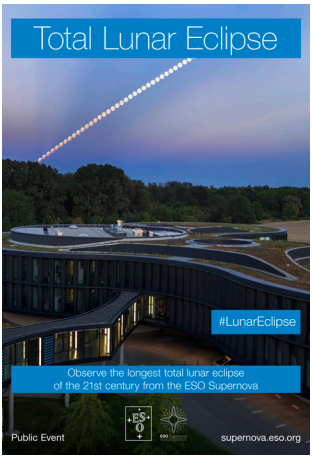


Duration: 01:30
Language: EN/DE
Date: 15.07. | 15.08.

Family activity

In this activity you will discover the Sun and learn about how to observe this bright shining ball of gas without damaging your eyes. Using equipment provided by the Amateur Group for Astronomy Projects at ESO (AGAPE) you will be able to explore structures on the solar surface, seeing the delicate filaments, prominences at the solar limb, and much more. The Sun will no longer be just a featureless, untextured ball of gas to you but instead a dynamic and exciting star that's definitely worth exploring.

Total Lunar Eclipse



Family activity

On 27 July 2018, we invite you to observe a total eclipse of the Moon as it rises in the evening sky in Germany. Totality will last approximately 103 minutes, making this the longest total lunar eclipse in the 21st century. Visit the ESO Supernova to observe this phenomenon and take part in other interesting activities connected with the Moon.

Duration: 04:00
Language: EN/DE
Date: 27.07.

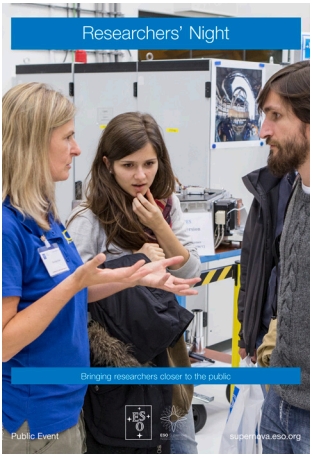
Further than the Eye can See!

Family activity

In this activity you will discover a type of light that our eyes are not able to see — infrared light. You will use modified webcams to find out what the world would look like if your eyes were sensitive to this kind of light. A thermal imaging camera will make infrared radiation visible. You will find out that it's important to look beyond the visible, to see the Universe through different eyes, in order to get the whole picture.

Duration: 01:30
Language: EN/DE
Date: 01.09. | 09.09.

Researchers' Night



Family activity

Join us for Researchers' Night at the ESO Supernova where we will delve into the world of professional astronomy with an enticing programme of short talks and discussions. You will also get the chance to talk to ESO astronomers in a rare behind-the-scenes glimpse into the world of professional astronomy.

Duration: 02:00
Language: EN/DE
Date: 28.09.

tonelabs — Fragmented Future

Cultural performance

Musicians Ali and Max, alias tonelabs, live in Munich and produce electronic music which is not just a sequence of sounds, but also an attitude to life. Combining animations and videos from around the world, *Fragmented Future* is an electronic concert that invites you to discover new dimensions.

Duration: 01:30
Language: DE
Date: 17.08.

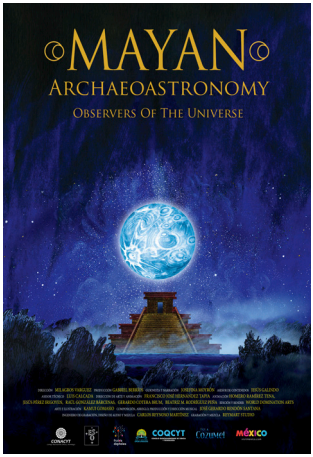
The Sky Next Month

Public talk

A summary of the astronomical highlights to look out for in the coming month's night sky, and a round-up of the latest news.

Duration: 01:00
Language: DE
Dates: 03.08. | 31.08.

Mayan Archeoastronomy: Observers of the Universe



Public talk

Discover Mayan culture and its heritage of science and mythology during this special event that will feature a series of talks and the first completely animated, fulldome movie made in Mexico, *Mayan Archaeoastronomy: Observers of the Universe*. This event is in Spanish.

Duration: 01:30
Language: ES
Date: 20.07.

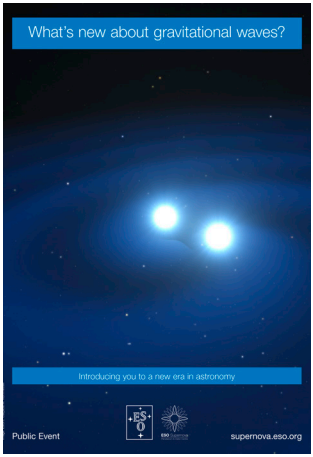
Are There Habitable Planets? And Can We Reach Them?

Public talk

What kind of life might we expect on other planets? Are our concepts of life universal? Do other bodies in our Solar System harbour life? Mars, or the moons of Jupiter and Saturn? Are there signs of life on one of the over two thousand exoplanets that we have discovered in recent years? And will we ever be able to reach one of them?
Speaker: Markus Kissler-Patig

Duration: 01:30
Language: DE
Date: 07.09.

What's New About Gravitational Waves?

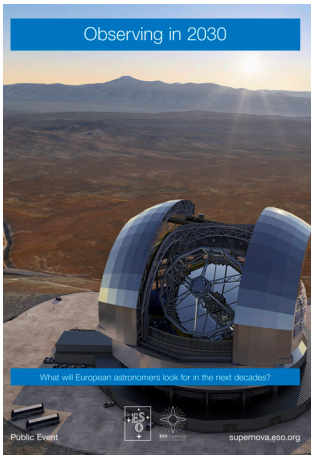


Public talk

In February 2016 gravitational waves from deep space were directly measured for the first time. Such waves are emitted by colliding black holes or neutron stars and other violent cosmic events. Since then the two laser interferometers of the Advanced LIGO experiment have registered several such events. What may we expect from future observations? Is this the beginning of a new era in astronomy?
Speaker: Andreas Müller

Duration: 01:30
Language: DE
Date: 14.09.

Observing in 2030



Public talk

Join Xavier Barcons, Director General of ESO, for an exploration of alien worlds, black holes, and dark energy and matter, three of the hottest topics in astronomy, and how Europe will support scientists investigating these cosmic mysteries in the coming decades.
Speaker: Xavier Barcons

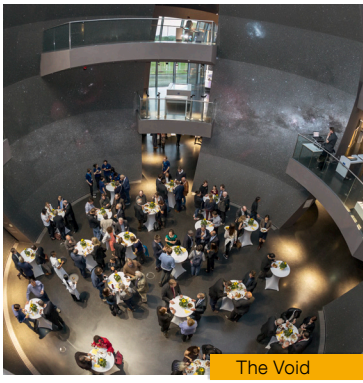
Duration: 01:30
Language: EN
Date: 21.09.

Exploring the Universe is what the ESO Supernova is all about. This engaging, exciting and educational venue can provide a perfect starry backdrop for your event.

The building contains a large exhibition area, which spirals up and down through the whole building, and a spacious area known as the Void that is beautifully illuminated by natural light during the day and lit at night to reproduce the constellations of the southern sky. There are also two seminar rooms, a rooftop terrace, a foyer and a digital planetarium. The ESO Supernova offers a generous space for private events, large or small, with room for up to 600 guests. Depending on your needs, you can use the planetarium as a unique venue for your event, the Void for press conferences held in a modern environment, the exhibition area for an exciting and innovative event, or the seminar rooms for a more classic approach.

Please refer to our Events brochure for more details. For an offer, please fill out the form at: https://supernova.eso.org/your-event/

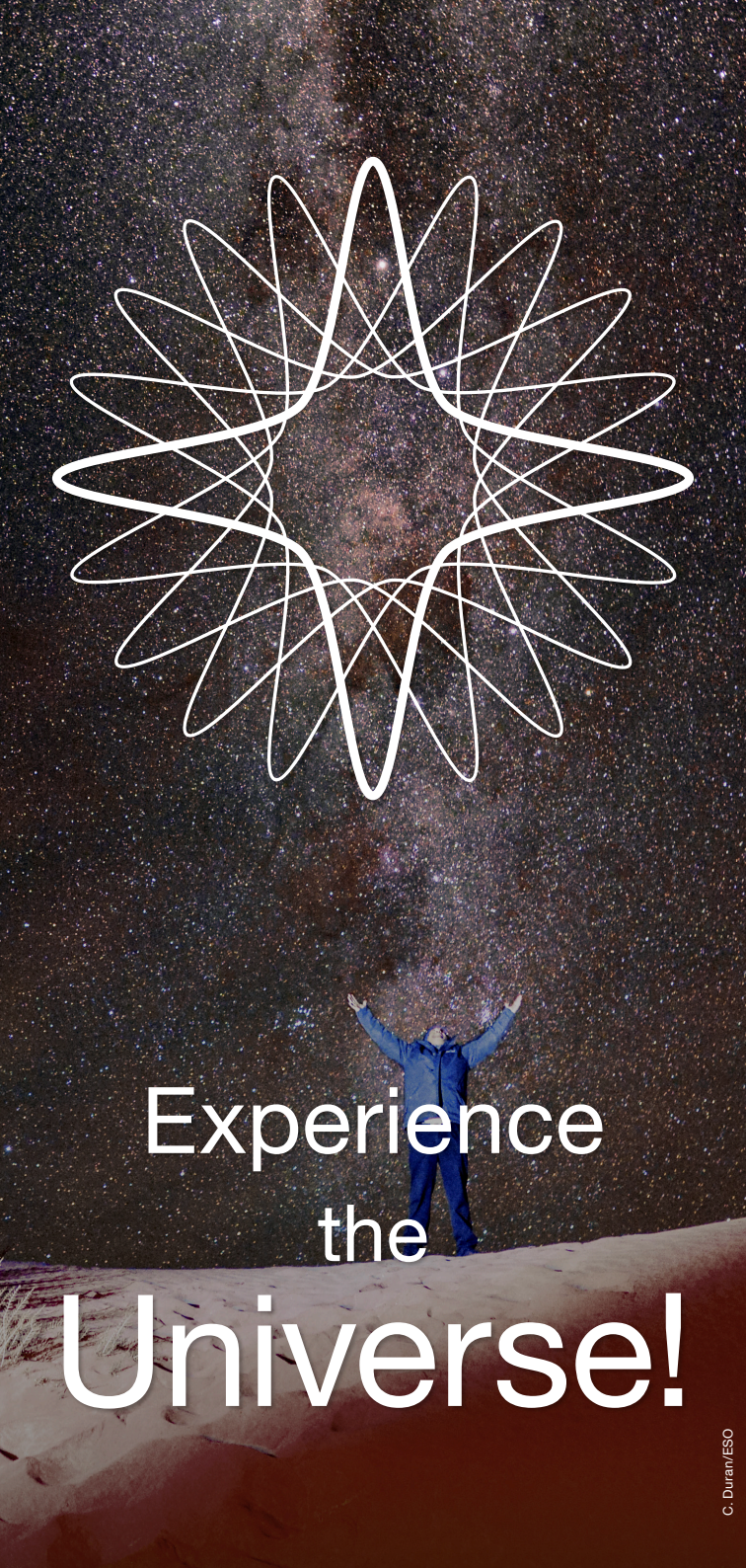
The planetarium



The Void

The exhibition area

The seminar rooms


Experience
the
Universe!
C. Duran/ESO

The Permanent Exhibition: The Living Universe

The ESO Supernova hosts an outstanding, modern and interactive astronomical exhibition, which is as entertaining as it is educational. Explore, touch and use real astronomical artefacts and conduct experiments to get an idea of what it means to be an astronomer, to work in science, and to discover the mysteries of the Universe.

The exhibition covers the topic of life in the Universe in the broadest sense. It connects you with topics that can seem very distant and abstract by focusing on the human–Universe connection, general astronomy, life in the Universe, and how we observe the Universe using ESO facilities.

Investigate all 13 different themes of the exhibition or select your own highlights. Choose the depth of knowledge you would like for every single item, giving you complete control over how deeply you would like to delve into the fascinating science of astronomy.

How long you stay is up to you — you can spend just 30 minutes on a quick walkthrough, or up to four hours on an in-depth study of all the exhibits. You can even make several visits, concentrating on a different part of the exhibition each time!

All information in the exhibition is available in English and German.

The Hubble Space Telescope

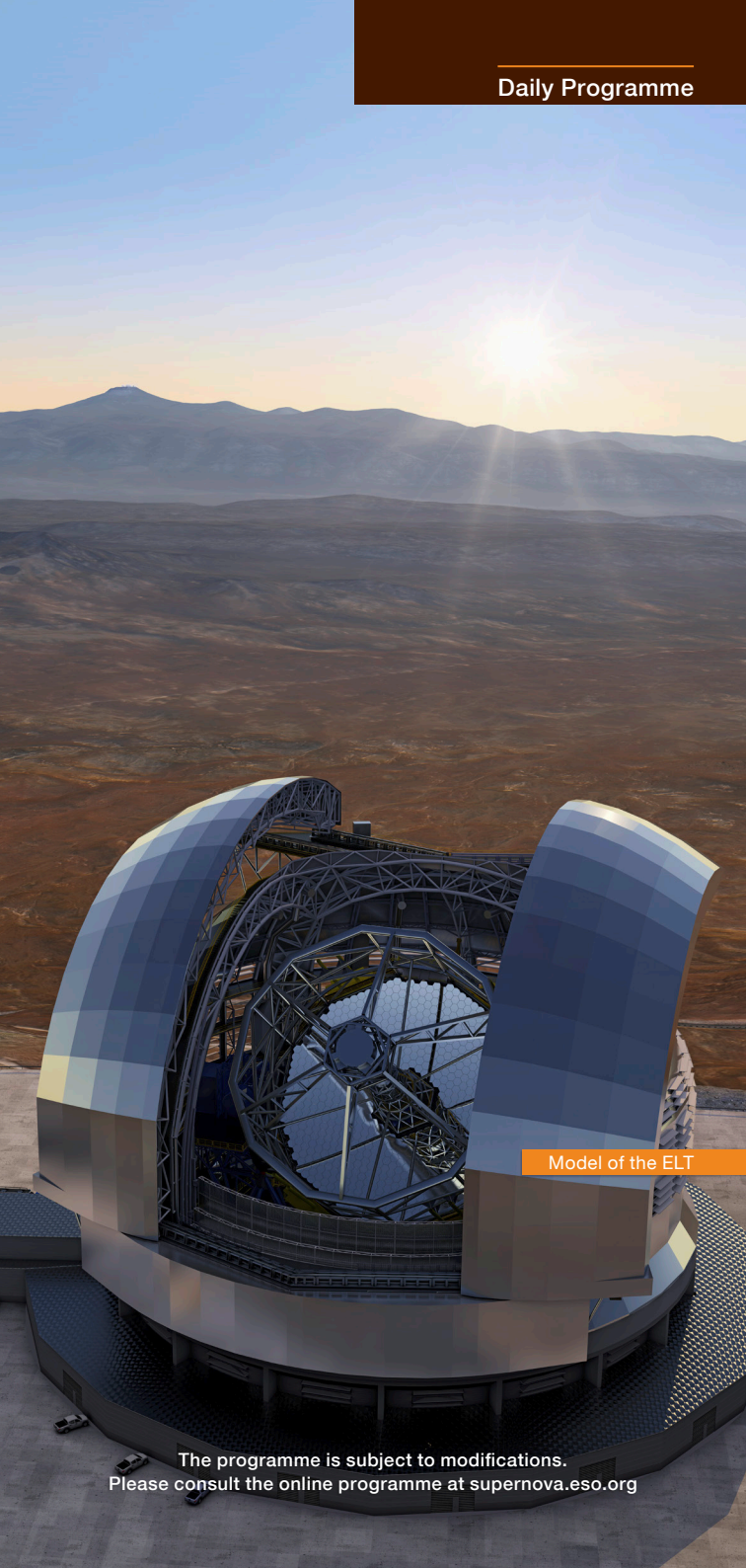
Temporary exhibition: Our Place in Space

In 2015, the NASA/ESA Hubble Space Telescope celebrated its 25th anniversary. Named in honour of Edwin Hubble, the astronomer who discovered the expansion of the Universe, Hubble was placed in orbit in 1990 and is the result of a close international partnership between NASA and the European Space Agency.

Now, 28 years later, Hubble has surpassed the expectations of its designers and builders. Its discoveries have changed the way we see and understand the Universe. Not only has Hubble transformed our knowledge of the Universe, it has also greatly impacted culture, society and art. For almost three decades now, Hubble's images have inspired artists all over the world. They have provided a stunning pictorial landscape to the deep existential questions that we all share: Where do we come from? Where we are going? Are we alone? These questions are of great interest to professional astronomers but also have deep meaning for each one of us as inhabitants of planet Earth.

In the exhibition *Our Place in Space*, astronomers and artists alike give us their interpretation of where we are, where we belong, what our past might have been and what our future might be. The exhibition also takes a look at space exploration, and how we have expanded our horizons from the boundaries of our planet's atmosphere out towards our neighbouring worlds.

Date: From 17.05 until 02.09.2018



Model of the ELT

The programme is subject to modifications.
Please consult the online programme at supernova.eso.org

July

Sky and Historical Events	
01.7.2004	*The Cassini-Huygens space probe entered Saturn's orbit*
04.7.1054	*Crab nebula supernova observation*
05.7.1687	*Newton's theory of universal gravitation published*
06.7.2018	Third Quarter Moon July
07.7.1978	*Discovery of Charon*
13.7.2018	New Moon July
13.7.2018	Partial Solar Eclipse
14.7.2015	*New Horizons' Pluto fly-by*
16.7.1994	*Impact of comet Shoemaker/Levy fragments on Jupiter*
17.7.1850	*First star photograph*
19.7.2018	First Quarter Moon July
20.7.1976	*Viking 1 space probe landed on Mars*
20.7.1969	*First human on the Moon*
21.7.1609	*Kepler's First and Second Laws of Planetary Motions announced*
23.7.1995	*Discovery of the Hale-Bopp comet*
23.7.1999	*Chandra X-ray Observatory launched in orbit*
27.7.2018	Full Moon July
27.7.2018	Mars at opposition
27.7.2018	Total Lunar Eclipse
28.7.1851	*First photograph of a solar eclipse*
28.7.2018	Delta Aquarids Meteor Shower
28.7.1919	*Foundation of the International Astronomical Union*

01.07.18	12:30	SHOW	The Secrets of Gravity	DE
SUN	14:00	SHOW	Europe to the Stars	DE
	14:00	TOUR	Premises Tour	EN
	15:00	TOUR	ArchitecTour	DE
	15:30	SHOW	Hidden Universe	EN
04.07.18	10:00	SHOW	The Skies Above Us	DE
WED	11:30	SHOW	A Tour of the Solar System	DE
	14:00	SHOW	Hidden Universe	DE
	15:30	SHOW	The Secrets of Gravity	EN
05.07.18	10:00	SHOW	The Skies Above Us	DE
THU	11:30	SHOW	A Tour of the Solar System	DE
	14:00	SHOW	Hidden Universe	DE
	15:30	SHOW	The Secrets of Gravity	EN
06.07.18	10:00	SHOW	The Skies Above Us	DE
FRI	11:30	SHOW	A Tour of the Solar System	DE
	14:00	SHOW	From Earth to the Universe	DE
	15:30	SHOW	Phantom of the Universe	EN
07.07.18	12:30	SHOW	A Tour of the Solar System	DE
SAT	14:00	SHOW	Phantom of the Universe	DE
	14:00	TOUR	ArchitecTour	EN
	15:00	TOUR	Premises Tour	DE
	15:30	SHOW	From Earth to the Universe	EN
08.07.18	12:30	SHOW	The Secrets of Gravity	DE
SUN	14:00	SHOW	Europe to the Stars	DE

08.07.18	14:00	TOUR	Premises Tour	EN
SUN	15:00	TOUR	ArchitecTour	DE
	15:30	SHOW	Hidden Universe	EN
11.07.18	10:00	SHOW	The Skies Above Us	DE
WED	11:30	SHOW	A Tour of the Solar System	DE
	14:00	SHOW	Hidden Universe	EN
12.07.18	10:00	SHOW	The Skies Above Us	DE
THU	11:30	SHOW	A Tour of the Solar System	DE
	14:00	SHOW	Hidden Universe	DE
	15:30	SHOW	From Earth to the Universe	DE
13.07.18	10:00	SHOW	The Skies Above Us	DE
FRI	11:30	SHOW	A Tour of the Solar System	DE
	14:00	SHOW	From Earth to the Universe	DE
	15:30	SHOW	Phantom of the Universe	EN
14.07.18	12:30	SHOW	A Tour of the Solar System	DE
SAT	14:00	SHOW	Phantom of the Universe	DE
	14:00	TOUR	ArchitecTour	EN
	15:00	TOUR	Premises Tour	DE
	15:30	SHOW	From Earth to the Universe	EN
15.07.18	12:30	SHOW	The Secrets of Gravity	DE
SUN	12:30	EVENT	Solar Observations	DE
	14:00	SHOW	Europe to the Stars	DE
	14:00	TOUR	Premises Tour	EN
	14:00	EVENT	Solar Observations	EN
	15:00	TOUR	ArchitecTour	DE
	15:30	SHOW	Hidden Universe	EN
18.07.18	10:00	SHOW	The Skies Above Us	DE
WED	11:30	SHOW	A Tour of the Solar System	DE
	14:00	SHOW	Hidden Universe	DE
	15:30	SHOW	The Secrets of Gravity	EN
19.07.18	10:00	SHOW	The Skies Above Us	DE
THU	11:30	SHOW	A Tour of the Solar System	DE
	14:00	SHOW	Hidden Universe	DE
	15:30	SHOW	The Secrets of Gravity	EN
20.07.18	10:00	SHOW	The Skies Above Us	DE
FRI	11:30	SHOW	A Tour of the Solar System	DE
	14:00	SHOW	From Earth to the Universe	DE
	15:30	SHOW	Phantom of the Universe	EN
	19:00	EVENT	Mayan Archaeoastronomy	ES
21.07.18	12:30	SHOW	A Tour of the Solar System	DE
SAT	14:00	SHOW	Phantom of the Universe	DE
	14:00	TOUR	ArchitecTour	EN
	15:00	TOUR	Premises Tour	DE
	15:30	SHOW	From Earth to the Universe	EN
22.07.18	12:30	SHOW	The Secrets of Gravity	DE
SUN	14:00	SHOW	Europe to the Stars	DE
	14:00	TOUR	Premises Tour	EN
	15:00	TOUR	ArchitecTour	DE
	15:30	SHOW	Hidden Universe	EN

25.07.18	10:00	SHOW	The Skies Above Us	DE
WED	11:30	SHOW	A Tour of the Solar System	DE
	14:00	SHOW	Hidden Universe	DE
	15:30	SHOW	The Secrets of Gravity	EN
26.07.18	10:00	SHOW	The Skies Above Us	DE
THU	11:30	SHOW	A Tour of the Solar System	DE
	14:00	SHOW	Europe to the Stars	DE
	15:30	SHOW	Two Small Pieces of Glass	DE
27.07.18	10:00	SHOW	The Skies Above Us	DE
FRI	11:30	SHOW	A Tour of the Solar System	DE
	14:00	SHOW	From Earth to the Universe	DE
	15:30	SHOW	Phantom of the Universe	EN
	19:00	EVENT	Lunar Eclipse	EN/DE
28.07.18	12:30	SHOW	A Tour of the Solar System	DE
SAT	14:00	SHOW	Phantom of the Universe	DE
	14:00	TOUR	ArchitecTour	EN
	15:00	TOUR	Premises Tour	DE
	15:30	SHOW	From Earth to the Universe	EN
29.07.18	12:30	SHOW	The Secrets of Gravity	DE
SUN	14:00	SHOW	Europe to the Stars	DE
	14:00	TOUR	Premises Tour	EN
	15:00	TOUR	ArchitecTour	DE
	15:30	SHOW	Hidden Universe	EN

August

Sky and Historical Events	
04.8.2018	Third Quarter Moon August
05.8.2011	*JUNO spacecraft launched towards Jupiter*
11.8.2018	New Moon August
11.8.2018	Partial Solar Eclipse
12.8.1877	*Discovery of Deimos (Mars II)*
12.8.2018	Perseids Meteor Shower
18.8.1868	*Solar eclipse that led to the discovery of helium*
18.8.2018	First Quarter Moon August
24.8.2006	*Reclassification of Pluto as a dwarf planet*
24.8.2016	*Discovery of Proxima b*
25.8.2003	*Spitzer Space Telescope launched in orbit*
25.8.2012	*Voyager 1 has left our solar system*
26.8.2018	Full Moon August
30.8.1992	*First Trans-Neptunian Object to be discovered (QB1)*

01.08.18	10:00	SHOW	Hidden Universe	DE
WED	11:30	SHOW	Europe to the Stars	DE
	14:00	SHOW	The Secrets of Gravity	DE
	15:30	SHOW	From Earth to the Universe	EN
02.08.18	10:00	SHOW	Two Small Pieces of Glass	DE
THU	11:30	SHOW	Phantom of the Universe	DE
	14:00	SHOW	Hidden Universe	DE
	15:30	SHOW	Europe to the Stars	EN

03.08.18	10:00	SHOW	The Secrets of Gravity	DE
FRI	11:30	SHOW	Phantom of the Universe	DE
	14:00	SHOW	From Earth to the Universe	DE
	15:30	SHOW	Hidden Universe	EN
	19:00	EVENT	The Sky next month	DE
04.08.18	12:30	SHOW	A Tour of the Solar System	DE
SAT	13:00	TOUR	ArchitecTour	EN
	14:00	SHOW	Two Small Pieces of Glass	DE
	15:00	TOUR	Premises Tour	DE
	15:30	SHOW	Phantom of the Universe	EN
05.08.18	12:30	SHOW	Europe to the Stars	DE
SUN	13:00	TOUR	Premises Tour	EN
	14:00	SHOW	From Earth to the Universe	DE
	15:00	TOUR	ArchitecTour	DE
	15:30	SHOW	The Secrets of Gravity	EN
08.08.18	10:00	SHOW	Hidden Universe	DE
WED	11:30	SHOW	Europe to the Stars	DE
	14:00	SHOW	The Secrets of Gravity	DE
	15:30	SHOW	From Earth to the Universe	EN
09.08.18	10:00	SHOW	Two Small Pieces of Glass	DE
THU	11:30	SHOW	Phantom of the Universe	DE
	14:00	SHOW	Hidden Universe	DE
	15:30	SHOW	Europe to the Stars	EN
10.08.18	10:00	SHOW	The Secrets of Gravity	DE
FRI	11:30	SHOW	Phantom of the Universe	DE
	14:00	SHOW	From Earth to the Universe	DE
	15:30	SHOW	Hidden Universe	EN
11.08.18	12:30	SHOW	A Tour of the Solar System	DE
SAT	13:00	TOUR	ArchitecTour	EN
	14:00	SHOW	Two Small Pieces of Glass	DE
	15:00	TOUR	Premises Tour	DE
	15:30	SHOW	Phantom of the Universe	EN
12.08.18	12:30	SHOW	Europe to the Stars	DE
SUN	13:00	TOUR	Premises Tour	EN
	14:00	SHOW	From Earth to the Universe	DE
	15:00	TOUR	ArchitecTour	DE
	15:30	SHOW	The Secrets of Gravity	EN
15.08.18	10:00	SHOW	Hidden Universe	DE
WED	10:00	EVENT	Solar Observations	DE
	11:00	TOUR	Premises Tour	EN
	11:30	SHOW	Europe to the Stars	DE
	12:00	EVENT	Solar Observations	EN
	13:00	TOUR	Premises Tour	DE
	14:00	SHOW	The Secrets of Gravity	DE
	14:00	EVENT	Solar Observations	DE
	15:30	SHOW	From Earth to the Universe	EN
16.08.18	10:00	SHOW	Two Small Pieces of Glass	DE
THU	11:30	SHOW	Phantom of the Universe	DE
	14:00	SHOW	Hidden Universe	DE
	15:30	SHOW	Europe to the Stars	EN

17.08.18	10:00	SHOW	The Secrets of Gravity	DE
FRI	11:30	SHOW	Phantom of the Universe	DE
	14:00	SHOW	From Earth to the Universe	DE
	15:30	SHOW	Hidden Universe	EN
	19:00	EVENT	tonelabs | Fragmented Future	DE
18.08.18	12:30	SHOW	A Tour of the Solar System	DE
SAT	13:00	TOUR	ArchitecTour	EN
	14:00	SHOW	Two Small Pieces of Glass	DE
	15:00	TOUR	Premises Tour	DE
	15:30	SHOW	Phantom of the Universe	EN
19.08.18	12:30	SHOW	Europe to the Stars	DE
SUN	13:00	TOUR	Premises Tour	EN
	14:00	SHOW	From Earth to the Universe	DE
	15:00	TOUR	ArchitecTour	DE
	15:30	SHOW	The Secrets of Gravity	EN
22.08.18	10:00	SHOW	Hidden Universe	DE
WED	11:30	SHOW	Europe to the Stars	DE
	14:00	SHOW	The Secrets of Gravity	DE
	15:30	SHOW	From Earth to the Universe	EN
23.08.18	10:00	SHOW	Two Small Pieces of Glass	DE
THU	11:30	SHOW	Phantom of the Universe	DE
	14:00	SHOW	Hidden Universe	DE
	15:30	SHOW	Europe to the Stars	EN
24.08.18	10:00	SHOW	The Secrets of Gravity	DE
FRI	11:30	SHOW	Phantom of the Universe	DE
	14:00	SHOW	From Earth to the Universe	DE
	15:30	SHOW	Hidden Universe	EN
25.08.18	12:30	SHOW	A Tour of the Solar System	DE
SAT	13:00	TOUR	ArchitecTour	EN
	14:00	SHOW	Two Small Pieces of Glass	DE
	15:00	TOUR	Premises Tour	DE
	15:30	SHOW	Phantom of the Universe	EN
26.08.18	12:30	SHOW	Europe to the Stars	DE
SUN	13:00	TOUR	Premises Tour	EN
	14:00	SHOW	From Earth to the Universe	DE
	15:00	TOUR	ArchitecTour	DE
	15:30	SHOW	The Secrets of Gravity	EN
29.08.18	10:00	SHOW	Hidden Universe	DE
WED	11:30	SHOW	Europe to the Stars	DE
	14:00	SHOW	The Secrets of Gravity	DE
	15:30	SHOW	From Earth to the Universe	EN
30.08.18	10:00	SHOW	Two Small Pieces of Glass	DE
THU	11:30	SHOW	Phantom of the Universe	DE
	14:00	SHOW	Hidden Universe	DE
	15:30	SHOW	Europe to the Stars	EN
31.08.18	10:00	SHOW	The Secrets of Gravity	DE
FRI	11:30	SHOW	Phantom of the Universe	DE
	14:00	SHOW	From Earth to the Universe	DE
	15:30	SHOW	Hidden Universe	EN
	19:00	EVENT	The Sky next month	DE

September

Sky and Historical Events	
01.9.1859	*Discovery of solar wind*
02.9.1859	*Carrington Event (Solar Storm)*
03.9.2018	Third Quarter Moon September
09.9.2018	New Moon September
10.9.2004	*First image of an exoplanet*
14.9.2015	*First observation of gravitational waves*
16.9.2018	First Quarter Moon September
23.9.1846	*Discovery of Neptune*
23.9.2018	September Equinox
25.9.2018	Full Moon September
26.9.1905	*A. Einstein introduced the Special Theory of Relativity*
29.9.1954	*Foundation of CERN (Organisation européenne pour la recherche nucléaire)*

01.09.18	12:30	SHOW	A Tour of the Solar System	DE
SAT	12:30	EVENT	Further than the Eye can See!	DE
	13:00	TOUR	ArchitecTour	EN
	14:00	SHOW	Two Small Pieces of Glass	DE
	15:00	TOUR	Premises Tour	DE
	15:00	EVENT	Further than the Eye can See!	EN
	15:30	SHOW	Phantom of the Universe	EN
02.09.18	12:30	SHOW	Europe to the Stars	DE
SUN	13:00	TOUR	Premises Tour	EN
	14:00	SHOW	From Earth to the Universe	DE
	15:00	TOUR	ArchitecTour	DE
	15:30	SHOW	The Secrets of Gravity	EN
05.09.18	10:00	SHOW	Hidden Universe	DE
WED	11:30	SHOW	A Tour of the Solar System	DE
	14:00	SHOW	The Secrets of Gravity	DE
	15:30	SHOW	From Earth to the Universe	EN
06.09.18	10:00	SHOW	Two Small Pieces of Glass	DE
THU	11:30	SHOW	Phantom of the Universe	DE
	14:00	SHOW	Hidden Universe	DE
	15:30	SHOW	Europe to the Stars	EN
07.09.18	10:00	SHOW	The Secrets of Gravity	DE
FRI	11:30	SHOW	Phantom of the Universe	DE
	14:00	SHOW	The Sun, Our Living Star	DE
	15:30	SHOW	Hidden Universe	EN
	19:00	EVENT	Are there habitable planets? And can we reach them?	DE
08.09.18	12:30	SHOW	A Tour of the Solar System	DE
SAT	13:00	TOUR	ArchitecTour	EN
	14:00	SHOW	The Sun, Our Living Star	DE
	15:00	TOUR	Premises Tour	DE
	15:30	SHOW	Phantom of the Universe	EN
09.09.18	12:30	SHOW	Europe to the Stars	DE
SUN	12:30	EVENT	Further than the Eye can See!	DE

09.09.18	13:00	TOUR	Premises Tour	EN
SUN	14:00	SHOW	The Sun, Our Living Star	DE
	14:00	EVENT	Further than the Eye can See!	EN
	15:00	TOUR	ArchitecTour	DE
	15:30	SHOW	The Secrets of Gravity	EN
12.09.18	10:00	SHOW	The Skies Above Us	DE
WED	11:30	SHOW	A Tour of the Solar System	DE
	14:00	SHOW	Hidden Universe	DE
	15:30	SHOW	The Secrets of Gravity	EN
13.09.18	10:00	SHOW	The Skies Above Us	DE
THU	11:30	SHOW	A Tour of the Solar System	DE
	14:00	SHOW	Europe to the Stars	DE
	15:30	SHOW	The Sun, Our Living Star	DE
14.09.18	10:00	SHOW	The Skies Above Us	DE
FRI	11:30	SHOW	A Tour of the Solar System	DE
	14:00	SHOW	The Sun, Our Living Star	DE
	15:30	SHOW	Phantom of the Universe	EN
	19:00	EVENT	What's new about gravitational waves?	DE
15.09.18	12:30	SHOW	A Tour of the Solar System	DE
SAT	14:00	SHOW	Phantom of the Universe	DE
	14:00	TOUR	ArchitecTour	EN
	15:00	TOUR	Premises Tour	DE
	15:30	SHOW	The Sun, Our Living Star	EN
16.09.18	12:30	SHOW	The Secrets of Gravity	DE
SUN	14:00	SHOW	Europe to the Stars	DE
	14:00	TOUR	Premises Tour	EN
	15:00	TOUR	ArchitecTour	DE
	15:30	SHOW	Hidden Universe	EN
19.09.18	10:00	SHOW	The Skies Above Us	DE
WED	11:30	SHOW	A Tour of the Solar System	DE
	14:00	SHOW	Hidden Universe	DE
	15:30	SHOW	The Secrets of Gravity	DE
20.09.18	10:00	SHOW	The Skies Above Us	DE
THU	11:30	SHOW	A Tour of the Solar System	DE
	14:00	SHOW	Europe to the Stars	DE
	15:30	SHOW	The Sun, Our Living Star	DE
21.09.18	14:00	SHOW	The Sun, Our Living Star	DE
FRI	15:30	SHOW	Phantom of the Universe	EN
	19:00	EVENT	Observing in 2030	EN
22.09.18	12:30	SHOW	A Tour of the Solar System	DE
SAT	14:00	SHOW	Phantom of the Universe	DE
	14:00	TOUR	ArchitecTour	EN
	15:00	TOUR	Premises Tour	DE
	15:30	SHOW	The Sun, Our Living Star	EN
23.09.18	12:30	SHOW	The Secrets of Gravity	DE
SUN	14:00	SHOW	Europe to the Stars	DE
	14:00	TOUR	Premises Tour	EN
	15:00	TOUR	ArchitecTour	DE
	15:30	SHOW	Hidden Universe	EN

26.09.18	10:00	SHOW	The Skies Above Us	DE
WED	11:30	SHOW	A Tour of the Solar System	DE
	14:00	SHOW	Hidden Universe	DE
	15:30	SHOW	The Secrets of Gravity	DE
27.09.18	10:00	SHOW	The Skies Above Us	DE
THU	11:30	SHOW	A Tour of the Solar System	DE
	14:00	SHOW	Europe to the Stars	DE
	15:30	SHOW	The Sun, Our Living Star	DE
28.09.18	10:00	SHOW	The Skies Above Us	DE
FRI	11:30	SHOW	A Tour of the Solar System	DE
	14:00	SHOW	Europe to the Stars	EN
	15:30	SHOW	Phantom of the Universe	DE
	19:00	EVENT	Researcher's Night	EN/DE
29.09.18	12:30	SHOW	A Tour of the Solar System	DE
SAT	14:00	SHOW	Phantom of the Universe	DE
	14:00	TOUR	ArchitecTour	EN
	15:00	TOUR	Premises Tour	DE
	15:30	SHOW	The Sun, Our Living Star	EN
30.09.18	12:30	SHOW	The Secrets of Gravity	DE
SUN	14:00	SHOW	Europe to the Stars	DE
	14:00	TOUR	Premises Tour	EN
	15:00	TOUR	ArchitecTour	DE
	15:30	SHOW	Hidden Universe	EN

ESO Supernova at sunset

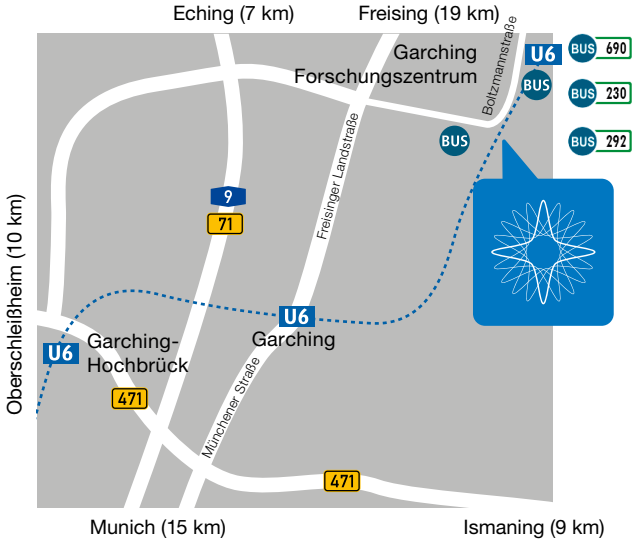
Tickets & Reservations

All admission is free of charge in 2018. You can help us keep the entrance to the exhibition free for everyone by making a donation of your choice. Though free, tickets are still required for planetarium shows, tours and special events and we highly recommend booking in advance online. Tickets are printed from ticket machines on-site.

If you would like to book an educational workshop, hire one of our rooms for a special event or organise a group visit, please consult the contact information: https://supernova.eso.org/news/contact/

Opening Hours:

Wednesday	09:00–17:00
Thursday	09:00–17:00
Friday	09:00–17:00
Saturday	12:00–17:00
Sunday	12:00–17:00



How to Get Here

The ESO Supernova is located 2 km north-east of Garching and about 15 km north-east of Munich in the “Forschungszentrum” area.

GPS: 48° 15’ 36.90” N, 11° 40’ 15.16” E

By car: Take the A9 exit Garching-Nord (Garching-North), which leads you to the “Forschungszentrum” area. Go straight ahead at the traffic lights. ESO is located in the south-east corner of the campus, which is in front of you as the road turns left.

By subway: The ESO Supernova is only four minutes on foot from the final station of the U6 line, Garching Forschungszentrum.

By bus: Bus stop on Boltzmannstraße: Bus 292 via Oberschleißheim, Bus 230 via Ismaning and Bus 690 via Eching.

Parking is available in front of the ESO Supernova but we recommend using public transport.

Parking for coaches is available behind the main ESO Headquarters building.

Disabled parking is available close to the entrance.

Image Credit: Miroslav Druckmuller

ESO Supernova
Planetarium & Visitor Centre

supernova.eso.org

Karl-Schwarzschild-Str. 2, 85748 Garching bei München, Germany
Phone: +49 89 32006 900 E-mail: supernova@eso.org
www.eso.org

/ESOSupernova @ESOSupernova

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