

→ THE EUROPEAN SPACE AGENCY

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Location Portfolio

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# Lights, camera, Iffof

The European Space Agency (ESA) is Europe's gateway to space.

It guides the development of Europe's space capability, and undertakes pioneering research in all areas of space activity.

For over 50 years, this multinational organisation and its predecessors have been shaping and sharing space, managing the programmes needed to keep Europe at the forefront of space exploration and applications, and ensuring that investment in space

delivers benefits to the citizens of Europe and the world.

ESA is now opening its doors to national and international film productions – offering its range of unique locations and backdrops for film, television, music and commercial crews.

With film-friendly sites spread across eight European countries and two continents, ESA locations hold infinite potential for film industry professionals looking for distinctive and authentic sets for their next high-quality production.



#### FILM ESA



SPRAWLING ANTENNA FARMS IN THE BELGIAN ARDENNES ESA ESEC, Belgium





## **Previous filming**

at ESA

Snow Patrol in the Large European Acoustic Facility ESA has welcomed a number of productions to its locations around the world, attracting a wide variety of shoots from Hollywood blockbuster movies to futuristic music videos.

Anna Winocour's feature film **Proxima** (2019), starring **Eva Green** as an astrophysicist and single mother selected for a year-long spaceflight, was shot partly on location at ESA EAC, the European Astronaut Centre, in Cologne. Winocour and her 60-strong crew used EAC's neutral buoyancy pool, training hall, simulators and Columbus mock-up as sets, as well as consulting with ESA researchers and astronauts to shape the story.

#### Where else could we go to film real space stuff but the European Space Agency?

Gary Lightbody, Snow Patrol

Wanting to create something "visceral and terrifying" for the audience, **Tom Cruise** filmed scenes for his Hollywood blockbuster **The Mummy** on board Novespace's Airbus A310 near Bordeaux in France. Shot over two days on the aircraft, the zero gravity scene provides one of the most impressive and exciting moments in the movie, released in June 2017. In a behind-the-scenes feature about the flight Cruise said: *"To have this opportunity to do that in Zero G is just going to give an audience a different kind of emotional quality."* 

The ultra-modern nature of some of ESA's locations make the ideal backdrop for music videos. **Snow Patrol** shot the video for single 'Life on Earth', and publicity material for their 2018 chart-topping album *Wilderness*, in the Hertz Chamber and Large European Acoustic Facility at ESA





Techno DJ and producer Lilly Palmer in the Hertz Chamber

### YOU ARE MY GUIDE

ESTEC in the Netherlands. Lead singer Gary Lightbody said, "Where else could we go to film real space stuff but the European Space Agency? Their facilities at ESTEC in the Netherlands gave us one of the best locations, all high tech and very atmospheric."

The high-tech Hertz chamber was also used by DJ and producer **Lilly Palmer**, a rising star on the global techno scene, who livestreamed a DJ set from its distinctive interior.

Meanwhile at ESA ESRIN, near Rome, award-winning Italian director/ cinematographer **Daniele Ciprì** used the enigmatic interiors of the Phi Experience and Data Centre for indie band **Marcondiro's** music video for their single 'Amati', which is about a love story between two robots.

#### ...To do that in Zero G is just going to give an audience a different kind of emotional quality.

Tom Cruise

For television, **BBC** drama-documentary **Space Odyssey: Voyage to the Planets** filmed actors at the real Mission Control at ESA ESTEC, and used footage provided by ESA and NASA from the International Space Station. Another BBC series, **Simon Reeve's South America**, explored Europe's Spaceport in French Guiana, the home of European rocket launches. The Spaceport was also the backdrop for a space age fashion show in homage to late fashion designer **Pierre Cardin** in 2023.

Recognising the importance of film in bringing the ideas and themes of space to wider audiences, ESA provides grants to short films with a space theme in its **New Worlds Film Competition**.

#### ISABELLE MADELAI

#### EVA GREEN MATT DILLON PROXIMA UN FILM DE ALICE WINOCOUR



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INSFLORIAN SANSON MINITARE JULIEN LACHERAY La TRESE-Andrew Par Isabelle Madelaine & Émilie Ti . Arcelesumen de la Région île-de-france ande international



**BELGIUM ESA ESEC** European Space Security and Education Centre **FRANCE** ESA Headquarters Novespace

#### GERMANY

ESA EAC European Astronaut Centre ESA ESOC European Space Operations Centre ESA CEL Concurrent Engineering Lab ITALY ESA ESRIN ESA Centre For Earth Observation THE NETHERLANDS ESA ESTEC

The European Space Research and Technology Centre

#### SPAIN

ESA ESAC European Space Astronomy Centre Cebreros OGS Optical Ground Station

## **ESA Locations**

UK ESA ECSAT European Centre for Space Applications and Telecommunications

#### **FRENCH GUIANA** Europe's Spaceport







#### LOCATION

### E U R O P ESA S P A C E S E CESECAND E D U C AFENTRE

#### Sites Antenna farm Antenna interiors Mission Control Room 90 m<sup>2</sup> Mars Conference Room 140 m<sup>2</sup> Exteriors

#### Address 1, Place de l'ESA B-6890 Redu Belgium

Nestled in the natural beauty of the Belgian Ardenne, ESA ESEC (European Space Security and Education Centre) boasts an eye-catching antenna farm, with over 40 large-scale antennas that continuously communicate data from satellites orbiting the Earth.

With its surrounding fields, and mix of vintage and new equipment and buildings, ESA ESEC is an impressive and contrasting feature in the landscape, located in the vicinity of the picturesque and easily-accessible Belgium village of Redu.

#### **33** HECTARES

ESA ESEC sits on a huge site surrounded by fields with a total area of **33 hectares** 

### 20 m

The largest antenna, the Galileo L-Band, stands at **20 m wide** 



The idyllic slate and stone village of Redu, population 400, is known as **Belgium's book village**, attracting thousands of book-lovers from all over the world





















LOCATION

## EUROPESA SPACE Headquarters

#### Sites

Council Chambers 640 m<sup>2</sup> Astrolabe Visitor Centre 77 m<sup>2</sup> Terrace with view of Eiffel Tower 105 m<sup>2</sup> Modern office spaces & interiors VIP Terrace VIP Room Exteriors

#### Address

ESA HQ 8 (Mario Nikis) 10 Rue Mario Nikis CS 45741 F 75738 Paris Cedex 15 France

Perfectly positioned in the heart of Paris's 15th arrondissement, the impressive Headquarters of the European Space Agency reopened its doors in March 2023, following five years of intensive refurbishment works.

Flexible and ultra-modern, ESA Headquarters is the very embodiment of a European organisation at the cutting edge of high technology.

Spanning a total surface area of 11,606 m<sup>2</sup>, the building's striking contemporary architecture and sleek interiors sit against the backdrop of the Eiffel Tower, bringing the spirit of quintessential Paris into this thoroughly new setting.







#### FRANCE > ESA HEADQUARTERS



















**Modern office spaces & interiors** Entry hall with striking staircase 250 m<sup>2</sup>





#### FRANCE > ESA HEADQUARTERS







LOCATION

## Novespace

**Site** Airbus A310 Zero G 19.45 x 5 m; ceiling height 2.26 m Address Novespace 29 rue Marcel Issartier 33700 Mérignac France

Shooting in zero gravity conditions is the only authentic way to capture weightlessness on screen, and Novespace's Airbus A310 Zero G is the only location in Europe that offers passengers this experience.

During a zero gravity flight, passengers prepare themselves for the parabolic manoeuvre - a special manoeuvre made by the pilot that creates a state of weightlessness inside the aircraft that lasts for 22 seconds each time. These zero gravity conditions are used by ESA scientists for important space experiments - with the manoeuvre performed up to 31 times on their research flights.

Given that it boasts the largest volume in the world in terms of passenger capacity and surface area, it's no surprise that Novespace's Airbus A310 Zero G has already attracted major films and commercials - including Tom Cruise's *The Mummy*, with the Hollywood actor shooting his authentic weightlessness scenes on-board.





Novespace is the **only** zero gravity operator in Europe, and Airbus A310 Zero G boasts the largest volume in the world







#### FRANCE > NOVESPACE



**Airbus A310 Zero G** 19.45 x 5 m; ceiling height 2.26 m Novespace's zero gravity aircraft





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# EURESAEAN ASTROEACENTRE

#### Sites

Columbus PR mock-up 32 m<sup>2</sup> Astronaut Training Hall 1471 m<sup>2</sup> Neutral buoyancy facility 1081 m<sup>2</sup> Entry Hall 167 m<sup>2</sup> **ESA EAC Exteriors** 

Address Linder Hoehe D-51147 Cologne Germany

ESA EAC (European Astronaut Centre) is the European centre of excellence for astronaut training and support - preparing the select few men and women for their liftoff to an exciting future of space exploration.

Here in Cologne, European and international astronauts are equipped with the skills and knowledge they need to fly to the International Space Station (ISS), using a range of specialist training facilities.

These include replicas of the European Columbus laboratory, which is ESA's largest contribution to the International Space Station; simulators and training models; and a 10-metre-deep Neutral Buoyancy Facility where astronauts prepare for spacewalks.

#### 31 SPACE MISSIONS

An impressive 31 space missions have been performed by 27 astronauts from ESA and its member states



ESA's Columbus Research Astronauts are trained in Laboratory was launched to the **International Space** as a number of space Station in 2008, where it is permanently attached



SCUBA diving at EAC, operations are rehearsed under water in simulated microgravity conditions



**Neutral buoyancy facility** 1081 m<sup>2</sup> Buoyancy training facility

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#### GERMANY > ESA EAC



















#### LOCATION

# EUROPESA SPACE OPERAESOCENTRE

#### Sites

Main Control Room 215m<sup>2</sup> Entry Hall 145m<sup>2</sup> Press Centre 274m<sup>2</sup> GSRF 336m<sup>2</sup> General interiors **Exteriors & Smile Antenna** 

#### Address Robert-Bosch-Str. 5 64293 Darmstadt Germany

Minutes before launch, the atmosphere in the Main Control Room is tense. Engineers watch their screens, waiting for the moment when years of preparation come to fruition. A voice on the intercom loop reads the countdown: 10, 9, 8, 7...

Welcome to European Space Agency's mission control - the place that links the people on the ground with the spacecraft travelling to the frontiers of human knowledge.

Here at ESA ESOC (European Space Operations Centre) in Darmstadt, engineering teams work around the clock to control spacecraft in orbit, while also managing the global tracking station network and designing and building the systems on the ground that support missions in space.



Since 1967, over **100** satellites belonging to ESA and its partners have been successfully operated from Darmstadt













#### GERMANY > ESA ESOC







## CONCESARENT ENGINEEENGLAB

**Sites** Concurrent Engineering Lab 40 m<sup>2</sup> TRACE room 69.82 m<sup>2</sup> Exteriors Address Otto-Berndt-Straße 2 64287 Darmstadt Germany

The technical systems used in the space industry are cutting edge and ever-evolving.

Based at Darmstadt Technical University, the Concurrent Engineering Lab is a modern facility equipped with the very latest equipment, where researchers and students can work to develop innovative solutions in this area.





![](_page_31_Picture_3.jpeg)

![](_page_32_Picture_0.jpeg)

## ESA CEESARE FOR EARTESPERTION

#### Sites

Memorabilia Wall 68 m<sup>2</sup> Phi Experience 218 m<sup>2</sup> Visitor Centre 113 m<sup>2</sup> Building 12 220 m<sup>2</sup> Magellan Terrace 546 m<sup>2</sup> Big Hall 426 m<sup>2</sup> Green Space 30000 m<sup>2</sup> cultivated land, 10940 m<sup>2</sup> olive groves

#### Address

Via Largo Galileo Galilei, 1, 00044 Frascati RM Italy

Satellites keep a constant watch over the Earth, and the data they provide help to safeguard the planet in which we live.

ESA's Earth observation activities are located in the small town of Frascati, 20 km South of Rome. Europe's small-scale launcher vehicle Vega was developed here, as well as its future iterations Vega C, and Space Rider - Europe's first reusable space transportation system.

ESA ESRIN is also home to the European Centre for Space Records, preserving the valuable technical records of completed ESA projects, and a Virtual Reality Theatre, offering visual presentations of complex Earth Observation and geographic data for both specialists and students.

![](_page_33_Picture_10.jpeg)

ESA ESRIN sits on a site of 30000 m<sup>2</sup> of cultivated land and 10940 m<sup>2</sup> of **olive groves** 

The **largest archive** of **environmental data** in Europe is maintained at ESA ESRIN

![](_page_33_Picture_14.jpeg)

![](_page_34_Picture_0.jpeg)

![](_page_35_Picture_1.jpeg)

![](_page_35_Picture_3.jpeg)




















#### SITE

Phi-lab Tow









#### LOCATION

# EUROPESA SPACE TECHNERGE CND RECOVERED

#### Sites

Erasmus Innovation Centre 796.6 m<sup>2</sup> Hertz Chamber 364 m<sup>2</sup> Large European Acoustic Facility 99 m<sup>2</sup> Large Space Simulator 10 m wide, 15 m high, volume of 2300 m<sup>3</sup> Large Diameter Centrifuge 8 m wide Test Centre 11893 m<sup>2</sup> Other interiors

#### Address Keplerlaan 1 Postbus 299

2200 AG Noordwijk The Netherlands

Nestled beside coastal dunes in Noordwijk in the Netherlands, ESA ESTEC (The European Space Research and Technology Centre) is ESA's largest site and the technical heart of Europe's space efforts.

This is where most ESA spacecraft projects are born and guided through their phases of development. It is home to Europe's largest satellite test centre, equipped with simulation facilities to reproduce every aspect of the space environment: the Large Diameter Centrifuge for high-gravity testing; and the Large Space Simulator - Europe's single largest vacuum chamber, used to test full-size spacecraft in representative space conditions.

### 50000 L LIQUID NITROGEN DECIBELS

Up to 50000 litres of liquid nitrogen are pumped into giant vacuum testing chambers to keep them as cold as outer space

### 156

The acoustic chamber LEAF can produce up to 156 decibels - like standing close to multiple jets taking off













#### THE NETHERLANDS > ESA ESTEC



90 Film ESA



#### SITE







Other interiors New conference room 327 m<sup>2</sup> Ready in second half of 2024 23

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## EUROPESA SPACE ASTROESACENTRE

#### Sites

D Building Exteriors with castle SMOS control room 60 m<sup>2</sup> Gaia Satellite Cesar observatory 4 m<sup>2</sup> approx. GSSC Science Support Centre 40 m<sup>2</sup> Aerial view of ESA ESAC

#### Address

Camino Bajo del Castillon S/N 28692 Villanueva de la Cañada Madrid Spain

Telescopes in space are humankind's eyes in the heavens: from their observing positions high above Earth's atmosphere, they provide us with astounding views of the Universe at many different wavelengths.

ESA ESAC (European Space Astronomy Centre) is where some of those views are first studied – signals from black holes and distant galaxies, from neighbouring planets and even from planets far beyond the Solar System, are beamed back to the Madrid countryside.



ESA's science fleet explores our **solar system**, our **galaxy** and **beyond** 









SITE







#### SPAIN > ESA ESAC





D Building Hall 176 m

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LOCATION

## Cebreros Ground Station

#### Sites

Big dish antenna 35 m wide, 40 m high Operations room 122 m<sup>2</sup> Exteriors and landscape

#### Address

Cebreros Satellite Tracking Station Carretera AV-562, Km 10 E-05260 Cebreros Avila Spain

Rising up from tree-covered terrain 77 km west of central Madrid, Cebreros ground station is a futuristic sight in the rolling-hill countryside region of Avila.

Here the 35-metre wide, 40-metre high Deep Space Antenna 2 receives signals from a number of deep-space missions, including Mars Express, Gaia, BepiColombo, Solar Orbiter, Juice and Euclid.

### 10 NOV 2005

Cebreros antenna's first X-band signal was received from the spacecraft **Venus Express**, on 10 November 2005



The big dish antenna weighs approximately **620 tonnes** 



Exteriors & landscape The antenna in the tree-covered terrain of Cebreros









#### LOCATION

# Optical Ground Station

Sites Optical Ground Station Address 38570 La Orotava Santa Cruz de Tenerife Spain

ESA's Optical Ground Station (OGS) provides a link between deep-space and Earth, housing a 1 meter aperture Zeiss telescope used to search for asteroids and confirm the orbits of newly discovered objects in space.

Situated on the volcanic island of Tenerife, the OGS also performs regular testing of optical systems on ESA spacecraft in-orbit, and participates in communication experiments with satellites from international partners.



The OGS is located **2400 m** above sea level



**Optical Ground Station** A link between deep-space and Earth

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#### LOCATION

### EUROPEANER FOR SPACE ECSATTS AND TELEUROPEANER FOR TELEUROPEANER

Sites Vulcan Facility 165 m<sup>2</sup> Conference Centre 1500 m<sup>2</sup> Director's office 29 m<sup>2</sup> 5G/6G Hub 28 m<sup>2</sup> Exteriors

#### Address

Fermi Avenue Harwell Campus Didcot OX11 0FD United Kingdom

Satellite communications are not only fundamental for space exploration, they are also widely used across more down-to-earth markets - many of which we interact with in day-to-day life.

At ESA's UK hub, ESA ECSAT (European Centre for Space Applications and Telecommunications), the focus is on developing commercial satcom products and services, downstream applications, and the 'spin-out' of space into non-space sectors.

Located on the sprawling Harwell Campus in Oxfordshire, it is also the home of the Earth Observation Climate Office, which uses data from satellite observations to advance global efforts to tackle the climate crisis.

**6G** 

ECSAT hosts **ESA's flagship 5G/6G Hub**, a research and demonstration facility that spurs industry collaboration to advance the 5G digital transformation and prepare for the development of 6G









#### UK > ESA ECSAT









Cesa

Taking the pulse of our planet

### Climate Office A climate globe within ESA ECSAT's entrance foyer











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#### LOCATION

# EURO Europe's PORT IN Spaceport NA

#### Sites

Vega launch complex Ariane 5 launch complex Ariane 6 launch complex Jupiter Control Tower Diane tracking station Galliot tracking station Payload Preparation Facilities Space Museum (under renovation)

#### Address

ESA/STS Kourou Office BP 816 Route de l'Espace 97388 Kourou Cedex France

Situated in the northeast of South America in French Guiana, an overseas department of France, Europe's Spaceport is the site of Ariane and Vega launches.

Here in this lush site close to the equator boosters are prepared, launchers are assembled and fuelled, and satellites propelled into space.

90% of the 700 km<sup>2</sup> site is left in a natural state, with habitats including tropical rainforest, mangroves, wet and dry savannahs, water courses, and 50 km of Atlantic coastline.

## 5°3'

Kourou lies at latitude 5°3', just over **500 km north of the equator**. Its nearness to the equator makes it ideally placed for launches to geostationary orbit thanks to the 'slingshot' effect



Outside of hurricane and earthquake zones, the stable climate allows year-round launches



Since its inauguration in **1968**, the Spaceport has witnessed more than **300 launches** 











#### FRENCH GUIANA > EUROPE'S SPACEPORT

SITE








**144** Film ESA





Film ESA **145** 

#### FRENCH GUIANA > EUROPE'S SPACEPORT

SITE



**146** Film ESA





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2	Spain OGS	IQOQI Vienna, Austrian Academy of Sciences
4	Kourou	ESA-CNES-ARIANESPACE-ArianeGroup/S Martin
5	ESEC	ESA - A. Van Der Geest
5	EAC	ESA - H. Rueb, 2010
5	ESOC	ESA - J. Mai
5	ESTEC	ESA
6	ESTEC	ESA/Snow Patrol/S. Lipman
8	ESTEC	ESA - A.Le Floc'h
8	ESTEC	Sascha Martin
9	EAC	Dharamsala - Darius Film

# Belgium

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### France

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45	EAC	ESA - S. Corvaia
46	EAC	ESA–S. Corvaja, 2015
48	EAC	ESA - H. Rub, 2010
49	EAC	ESA-S. Corvaja
49	EAC	ESA
50	EAC	ESA
51	EAC	ESA - Isabelle Kahabka
51	EAC	ESA - S. Corvaja
51	EAC	ESA - S. Corvaja
51	EAC	ESA - S. Corvaja
53	ESOC	ESA - J.Mai
54	ESOC	ESA- J.Mai
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57	ESOC	ESA - André Løfaldli
58	ESOC	ESA - Jürgen Mai
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61	CEL	TU Darmstadt
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### Italy

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76	ESRIN	ESA - Alessia Garofalo
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# The Netherlands

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90	ESTEC	ESA - G. Porter
91	ESTEC	ESA - A.Van Der Geest
92	ESTEC	ESA
92	ESTEC	ESA - Felix Schmidt
93	ESTEC	ESA - G.Porter
94	ESTEC	SBGA Blengini Ghirardelli
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### Spain

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107	ESAC	ESA - Rocio Penalver Reid
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110	Cebreros	ESA - J. Mai
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117	OGS	StarryEarth via Flickr
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120	OGS	IQOQI Vienna, Austrian Academy o

### United Kingdom

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129	ECSAT	Kamini Manick, Vulcan Lab team
129	ECSAT	Romain Charles, Spaceship ECSAT team
129	ECSAT	Elena Filippazzo, ESA outreach office
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# French Guiana

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