

1 Descriva brevemente la sua esperienza professionale e formativa in relazione all'attività richiesta dal bando.

2 Il candidato descriva i principali obiettivi del programma ESA Space Rider e le caratteristiche del sistema sviluppato in tale ambito.

3 Il candidato descriva le modalità di selezione e affidamento dei contratti dell'ASI.

4 Il candidato organizzi una riunione di teams utilizzando il calendario.

# RELIABILITY AND MAINTAINABILITY STANDARD FOR SPACEFLIGHT AND SUPPORT SYSTEMS

## 1. SCOPE

### 1.1 Purpose

1.1.1 This document specifies technical objectives and related strategies for NASA programs and projects to be used in planning, executing and evaluating Reliability and Maintainability (R&M). These objectives include a comprehensive set of considerations for projects and programs utilized as specified that impact reliability, as well as the specific activities for the R&M technical discipline. These considerations relate to R&M during the design, evaluation, and operation of spaceflight systems, and establish guidelines for the planning and review of related engineering and assurance activities across the lifecycle. This set of objectives, strategies and implementation guidelines are intended to promote a high level technical excellence in achieving R&M goals for all programs and projects.

1.1.2 Mandatory elements of this Standard require programs and projects to use these objectives and strategies during the planning of activities and formulation of requirements, and establish and justify to what extent and in what way they are addressed, commensurate with the accepted level of risk to safety and mission success. Upon agreement by the stakeholders and Safety and Mission Assurance (SMA) Technical Authority, the program or project is required to act in accordance with their plan. The program is expected to demonstrate that the various objectives identified in the plan are satisfied to an acceptable level during the review process. This Standard recognizes that meeting R&M objectives in a comprehensive endeavor that is achieved in an interdisciplinary manner in the execution of program and project activities over the lifecycle in cooperation with the Systems Engineering of the program and project.

1.1.3 While this document may give guidance with processes associated with the objectives, it is generally not the intent of this Standard to prescribe particular processes, rather to allow programs and projects to select effective means of incorporating R&M considerations into their activities and to enable innovation. Guidance is provided to help programs, projects, contractors, and providers select appropriate processes and methods. Additional guidance may be issued in the form of handbooks or technical bulletins.

### 1.2 Applicability

1.2.1 This Standard is approved for use by NASA Headquarters and NASA Centers, including Component Facilities and Technical and Service Support Centers, and may be cited in contract, program, and other Agency documents as a technical requirement. This Standard may also apply to the Jet Propulsion Laboratory (JPL) or to other contractors, grant recipients, or parties to agreements only to the extent specified or referenced in their contracts, grants, or agreements.

1.2.2 This Standard does not apply to facility projects except for critical technical facilities specifically developed or significantly modified for Space Flight Systems as identified in NPR

- 1 Descriva brevemente la sua esperienza professionale e formativa in relazione all'attività richiesta dal bando.
  
- 2 Il candidato descriva le principali caratteristiche del lanciatore Vega C e le evoluzioni rispetto al lanciatore Vega.
  
- 3 Il candidato descriva sinteticamente lo Statuto dell'Agazia.
  
- 4 Il candidato costruisca un documento excel e lo protegga con password.

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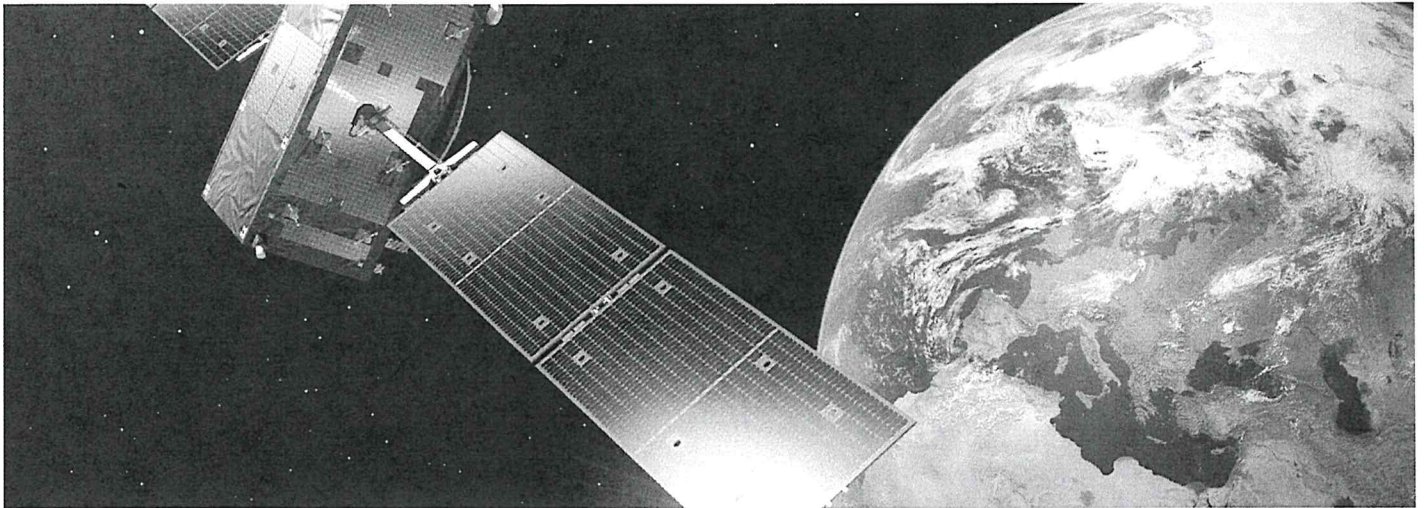
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1 Descriva brevemente la sua esperienza professionale e formativa in relazione all'attività richiesta dal bando.

2 Il candidato descriva i principali programmi per le Telecomunicazioni Istituzionali in ambito nazionale ed europeo.

3 Il candidato illustri quali sono le funzioni del Consiglio Tecnico Scientifico previsti dallo Statuto dell'Agenzia.

4 Il candidato realizzi in excel un grafico a dispersione con dei dati di sua scelta.

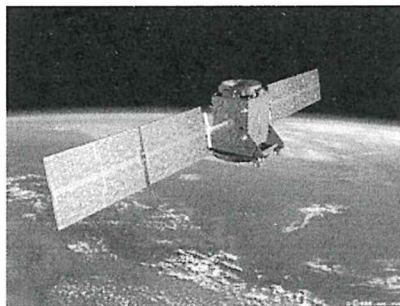


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# GALILEO



Galileo is the European Union global satellite navigation system (GNSS), designed to send radio signals for positioning, navigation and time measurement. Its entry into service, which had initially been scheduled for the end of 2019, was moved up to **December 15<sup>th</sup>, 2016**.



Galileo, which is entirely designed for **civil uses**, is capable of offering less than 10 cm accuracy in positioning, a precision that has never been reached before. Furthermore, the system isn't subject to the restrictions or disruptions which are typical of other systems designed for military uses, starting from the American GPS.

Designed by the European Union and the ESA with an important contribution from the ASI, Galileo has a huge potential to be employed in different industries, from energy to transportation, from agriculture to finance. Once up to speed, Galileo will consist of **30 satellites** (27 operational satellites and three back-ups) orbiting on 3 inclined planes on the equator (MEO, circular Medium Earth Orbit) at an altitude of 23,222 km.

The launch programme, with Soyuz and Ariane rockets, began on **October 21<sup>st</sup>, 2011**, with the departure of the first two satellites from the base of Kourou, French Guyana, and continued with the launch of the second pair, IOV3 and IOV4, in **October 2012**. The orbiting of the first four satellites was the **minimum configuration** required to validate the signal, start to provide the first navigation signals and proceed to test the full functionality of the space and ground-based segments.

The testing phase of the PRS (Public Regulated Service) began in August 2013. This is a high-precision service designed to provide **positioning data** for the development of sensitive applications, targeted at users which have been expressly authorized by the

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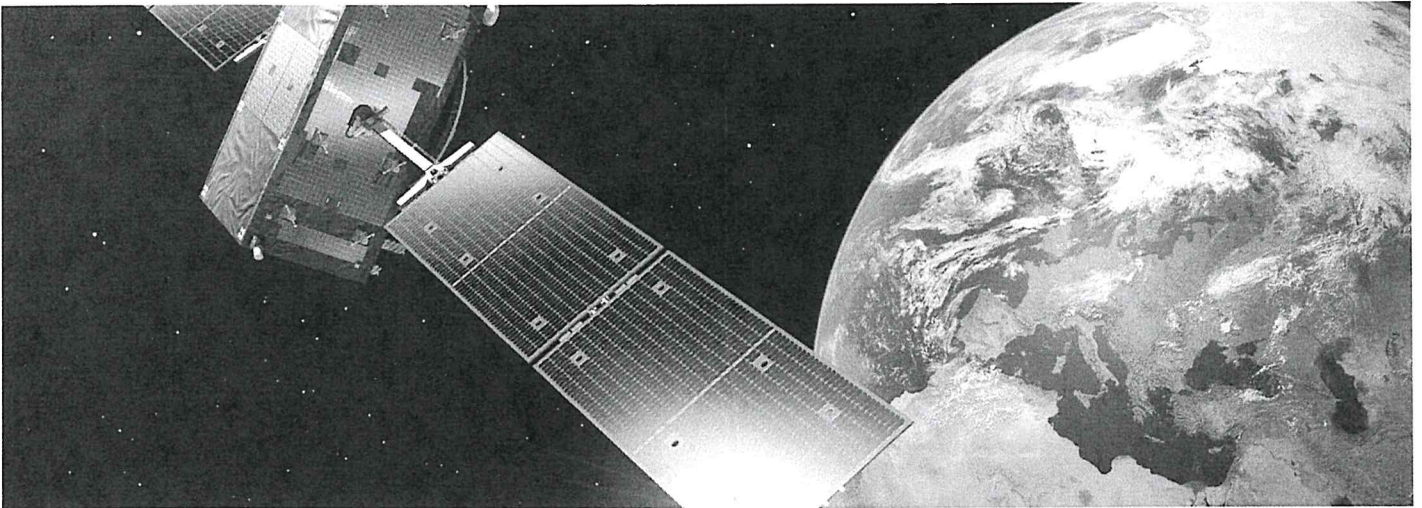
### **ENTRUSTED SURVEY IS UNDER WAY >**



ENTRUSTED is a European research project coordinated by the European GNSS Agency

THURSDAY 23 JULY 2020

- 1 Descriva brevemente la sua esperienza professionale e formativa in relazione all'attività richiesta dal bando.
  
- 2 Il candidato descriva le principali fonti di errore di misura nei segnali di navigazione.
  
- 3 Il candidato descriva le principali funzioni del DEC.
  
- 4 Il candidato costruisca un documento word e lo protegga con password.



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## TLC AND NAVIGATION

Thanks to the satellites in orbit, we are able to receive images coming from every part of the world, make phone calls everywhere, monitor the movement of work vehicles and make air and naval navigation safe.

Our planet is surrounded by a web of satellites, which allow us to receive images coming from every part of the world, make phone calls everywhere, monitor the movement of work vehicles and make air and naval navigation safe. A **global network**, which is already radically changing our daily life and will do so more and more in the next few years, giving an essential contribution to the economic development.

Through the Italian Space Agency, Italy gained a significant role in this industry thanks to important investments. At a national level, it manufactured the **Sirio** (1977) and **Italsat F1** and **F2** (1991, 1996) satellites. At a European level, it took part in several satellite development projects, including **Artemis** (2001).

Furthermore, the ASI is committed to implement a national strategy for **Galileo**, the European positioning and satellite navigation system which entered service at the end of 2016.

The future of the industry of telecommunication and navigation is linked to a **new generation of satellites**, designed to adapt to different missions: from mobile communications to multimedia services, from environmental monitoring to satellite-assisted navigation for precise positioning in air, sea and land transportation.

### ▸ All the missions

PRESENT

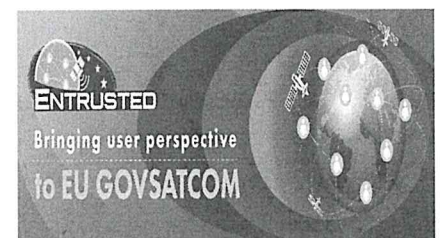


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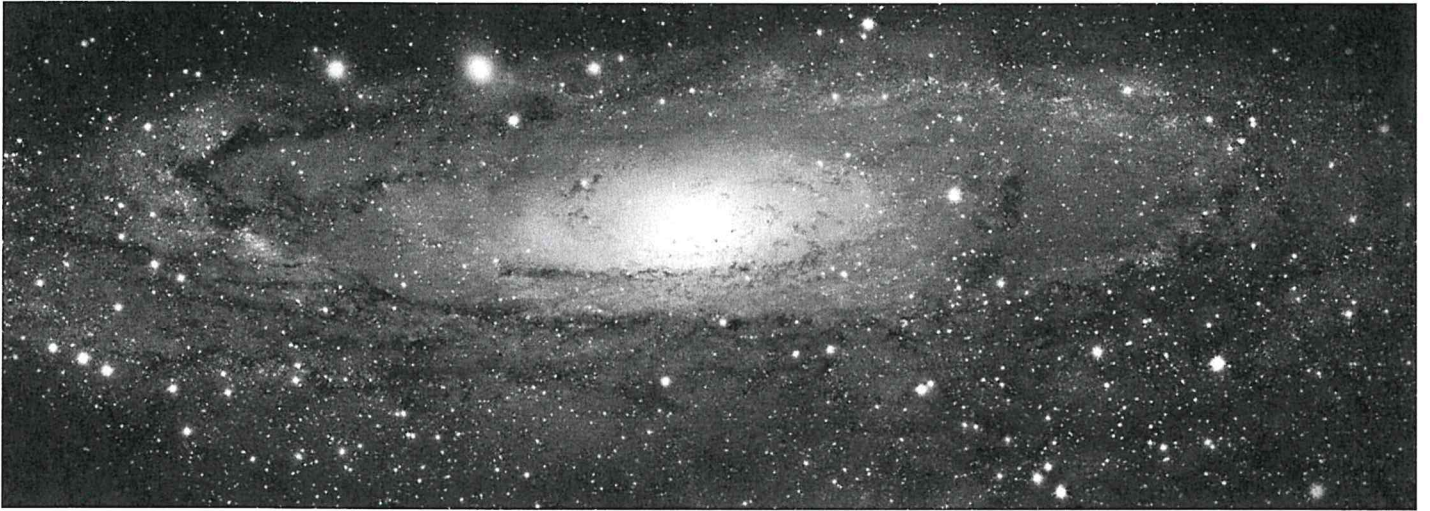


**1** Descriva brevemente la sua esperienza professionale e formativa in relazione all'attività richiesta dal bando.

**2** Il candidato descriva un payload per l'Esplorazione e osservazione dell'Universo identificandone le principali prestazioni.

**3** Il candidato descriva sinteticamente i contenuti del Piano Triennale di Attività dell'ASI previsto dallo Statuto dell'Agenzia.

**4** Il candidato realizzi in excel un istogramma con dei dati di sua scelta.



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## LISA

LISA (Laser Interferometer Space Antenna) is the ESA's future mission aimed at detecting gravitational waves from space, which involves manufacturing, launching and operating a constellation of three satellites which are millions of kilometers away from each other



The field of gravitational waves was chosen by the ESA already in 2013, as the subject of the third Large Mission (L3) of its "Cosmic Vision 2015- 2025" scientific programme, but the definition activities of the mission started only in 2016, following the success of the predecessor [LISA Pathfinder](#) (LISA-PF) and the first detection of gravitational waves from Earth.



In fact, the concept behind LISA is the detection of gravitational waves through an interferometric measurement of the tidal deformation of the distances of a constellation of free-falling test masses, placed within satellites which are millions of kilometers away from each other. LISA-PF's measurements proved, beyond all optimistic expectations, that it's possible to obtain this pure inertial motion (the free fall) in space and, therefore, gave the green light to start the development of the space observatory.

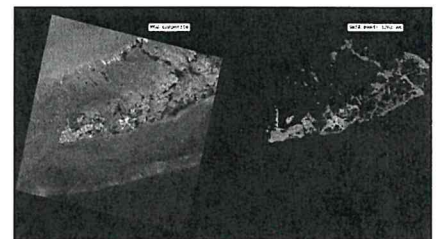
LISA will be able to observe low-frequency gravitational waves, which can't be detected with ground-based interferometers due to the gravitational disturbance of the terrestrial environment, thereby broadening the spectrum of this new cosmic dimension. These waves are emitted by huge sources, which release huge quantities of energy and will be visible, thanks to their intensity, up to the last border of the Universe: this way, gravitational astronomy will also become a cosmological instrument.

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FRIDAY 02 DECEMBER 2022

### THE ISLANDS OF THE FLORIDA STRAIT ▶

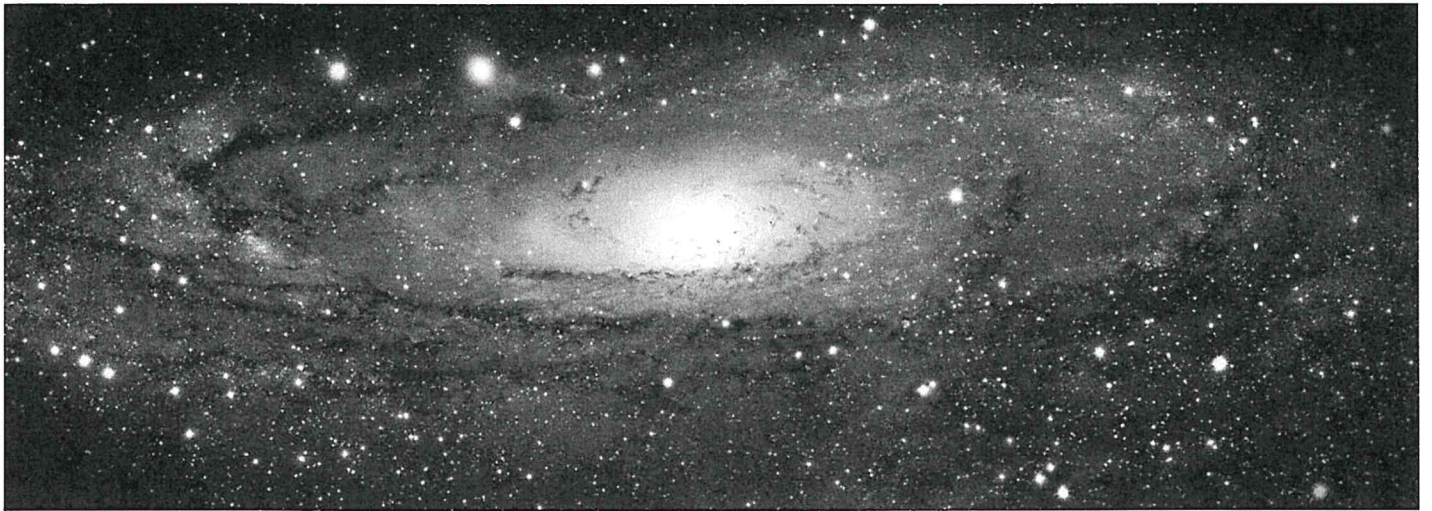


This panel shows the island of Key West in Florida as acquired by PRISMA in December 2020 [MORE...](#)

TUESDAY 22 NOVEMBER 2022

### ESA MINISTERIAL CONFERENCE: URSO, AGREEMENT WITH FRANCE AND GERMANY ON THE

- 1** Descriva brevemente la sua esperienza professionale e formativa in relazione all'attività richiesta dal bando.
  
- 2** Il candidato illustri un programma a scelta nel campo dell'Esplorazione e osservazione dell'Universo.
  
- 3** Il candidato illustri quali sono le funzioni del Presidente previsti dallo Statuto dell'Agenzia.
  
- 4** Il candidato realizzi in excel un vettore con 20 valori e ne estragga massimo e minimo.



HOMEPAGE ▸ PLANETS, STARS, UNIVERSE ▸ SOLAR SYSTEM AND BEYOND ▸

## EXOMARS

ExoMars will bring the first European vehicle to the surface of Mars

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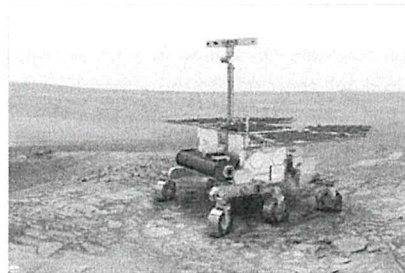


**Subject line:** Exploration of Mars

**Date of launch:** March 14<sup>th</sup>, 2016- mission suspended

### Description

Italy, through the ASI, is the main contributor to the double EXOMARS mission, with a 40% of the total investment.

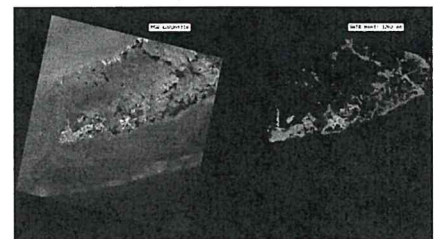


The mission is divided in two stages. During the first mission, launched on March 14<sup>th</sup>, 2016, the (TGO) probe reached the orbit of Mars after seven months of journey to start a long stage of investigations on the presence of methane and other natural gases in the atmosphere, but also to detect traces of the presence of active life. This stage also involved landing on the Red Planet – in the point named Meridiani Planum - a descent module (EDM), named Schiaparelli in honor of the Italian astronomer Giovanni V. Schiaparelli, the first person to draw an accurate map of the planet. In fact, the EDM separated from the probe on October 16<sup>th</sup>, 2016 and performed nominally all the predicted operations, up to the last stage of the descent – On October 19<sup>th</sup> – when, due to an anomaly in one of the control systems, the module crashed on Mars.

The second part of the mission involves landing on the Red Planet an innovative rover capable of moving and, in particular, penetrating the surface to analyse it. On October 21<sup>st</sup>, 2015, the ESA announced the choice of the first candidate site for the 2020 landing, selected due to its special characteristics within a shortlist of four candidates: Oxia Planum.

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