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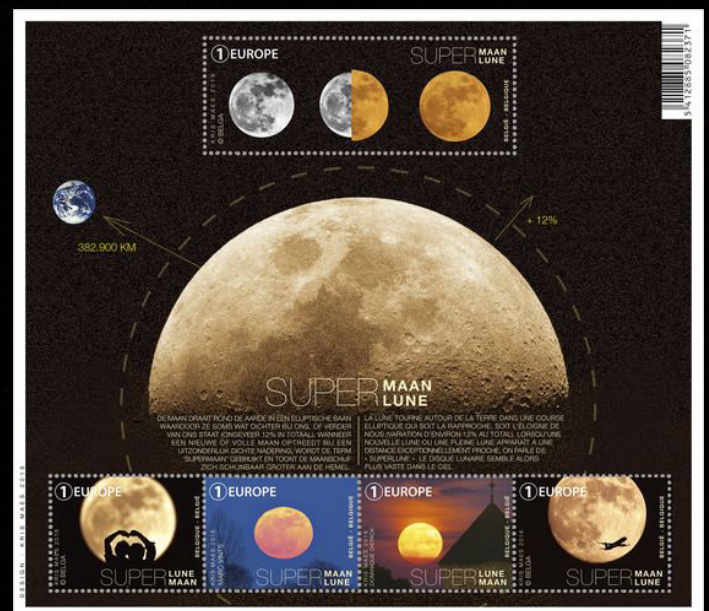
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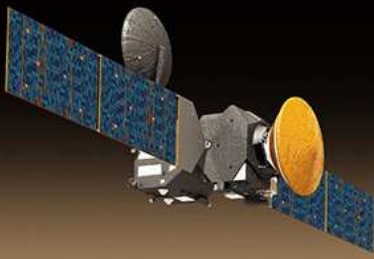
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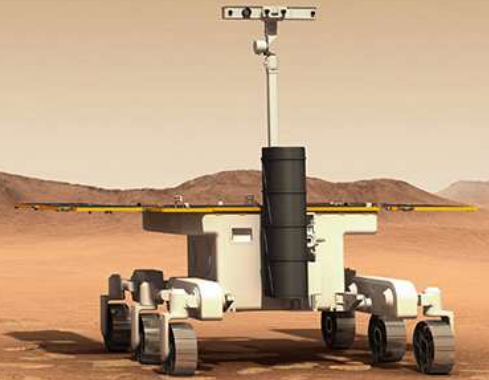
Space Mail from Chinese Shenzhou 6 Manned Spacecraft





The ASITAF covers - ExoMars

By Umberto Cavallaro



One of the most popular programmes of the last 10 years has been Exomars, ESA's exobiology laboratory on Mars, which ASITAF celebrated with a long series of commemorative covers.

Launched in 2001 as part of the larger Aurora programme (ESA's solar system exploration programme), ExoMars has had a chequered history.

It has undergone a number of redesigns and has repeatedly been in danger of being cancelled altogether.

The contract between ESA and Thales Alenia Space-Italy was signed in June 2013 during the Paris Air Show. Under this contract, TAS-I (Thales Alenia Space-Italy) was the prime contractor for a European consortium involving more than 130 aerospace companies and research institutes from ESA partner countries.

What was missing was the launcher – explained at the time Carlo Cassi, Project Manager for ExoMars 2016 – All the technologies for the first mission the Exomars 2016 were already available. Both the Trace Gas Orbiter (TGO) and the EDM (Entry, Descent and Landing Demonstrator Module, named after Schiaparelli) had already been designed and built at the Thales Alenia Space plant in Turin.

The transfer of the European probe and all its equipment and apparatus required three flights by a huge Antonov AN-124-100 cargo plane, which made the round trip in

Cover commemorating the completion of the static tests performed on the ExoMars EDM, signed by Walter Cugno and Carlo Cassi.



*Cover commemorating the Exomars Contract signed between ESA and Thales Alenia Space.
Cover signed by Walter Cugno, then ExoMars TAS-I Programme Manager.*





just five days, at a gruelling pace of work involving thirty engineers and technicians.

A special pictorial postmark (left) was used, designed by Marco Morando, one of the technicians involved in the ExoMars project.



Covers commemorating the delivery of ExoMars to Baikonur. On the left: the cover is signed by Marco Morando who designed the special postmark, Annibale Rega (Fagioli Logistics Manager), Carlo Grassi (TAS-I, ExoMars-2016 Project Manager), Andrea Allasio (TAS-I, Programme Manager of ExoMars-2020), Enrico Flamini (Scientific Director of the Italian Space Agency) and Walter Cugno (TAS-I, ExoMars Programme Director). On the right: the container with the TGO module being loaded on the Antonov AN-124 cargo (cover signed by Carlo Grassi, Andrea Allasio and Walter Cugno).



(Next three covers - one cover on next page).

The cachet of the cover commemorating the launch of ExoMars features the logo of the ExoMars 2016 team. "The concept of the logo - explains the author Mario Picca Garin, Thales Alenia Space Italy, thermo-mechanical test engineer of the Exomars 2016 mission) - was born in 2013, when we were in Noordwijk, the Netherlands, involved in the test campaign carried out at ESTEC on the EDM structural model.

One of the team suggested an ironic Martian interpretation of the famous "Scream" by Edvard Munch. With a passion for graphics and a bit of imagination, I immediately got to work on it, and the little alien surprised by the arrival of our module on the Red Planet was promptly adopted as the programme's "mascot".



When ExoMars arrived on Mars in October, an "autumnal" version of the logo was worked out on the witty commemorative envelope of Schiaparelli's descent to ExoMars, a descent which, as we recall, was only partially successful. The same logo was also used by the same designer, Picca Garin, to create the special pictorial postmark used a few days later in Bologna during the ItaliaFil event.

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ExoMars 2018 suffered a series of delays due to difficulties in working with Russian institutions. It soon became clear that the next launch window would be missed and work began on ExoMars 2020.

Once the integration of the transport and descent modules had been completed at the Thales Alenia Space plant in Turin, Italy, (below) in September 2019 the platform containing the thermo-structural model of the rover, protected by the lander's "rear jacket" (weighing a total of 2 tonnes), was transferred to the TAS plant in Cannes, where it underwent complex environmental

tests.

The spacecraft was due to return to Turin in April 2020 to be loaded onto an Antonov cargo plane from Caselle airport to Baikonur for its final journey to Mars. The launch was scheduled to take place during the "launch window" that opened between 26 July and 11 August 2020. Unfortunately, a number of unforeseen events, most notably the Covid emergency, disrupted the schedule, and the expected launch window was once again missed.

Due to the pandemic, materials testing activities in Cannes had to be suspended. In March, the rover was returned to the ISO 7 ultra-clean room in Turin, a highly controlled environment to avoid the risk of biological contamination. The forced stop was used to further optimise the technologies and to carry out a series of maintenance operations on the spacecraft: the solar panel connections were reinforced, the batteries were overhauled and thorough functional tests were carried out. In October 2020, the "return" of Rosalind Franklin - the ExoMars rover - was marked by a cover (bottom right), which once again left the Turin plant of Thales Alenia Space Italy for the Thales site in Cannes to undergo a series of final tests and measurements, including mass characteristics, dynamic balance and electromagnetic compatibility (EMC) measurements.

The schedule was designed to take advantage of the launch window that opened in September 2022.

Just as the project was coming to an end and we were finalising the cover for the new release of ExoMars 2022 for Baikonur, with many additional related projects, in March this year, due to changes in the geopolitical climate, ESA decided to abruptly end its cooperation with Roscosmos.(#1)

The ExoMars programme, on which more than €1.3 billion has already been spent, has not been cancelled, but is not expected to be completed before 2028. ESA is now aiming to replace the technologies provided by Russia and to develop the landing platform and other technologies previously to be provided by Russian companies.

(#1) See press release March 17, 2022 https://www.esa.int/Newsroom/Press_Releases/ExoMars_suspended

