



Press release, January 24, 2020

## Opening of the CHEOPS cover delayed by a few days

The cover of the CHEOPS space telescope was scheduled to be opened on Monday, January 27, 2020. The date is being pushed back by a few days because several tests are being repeated.

The CHEOPS space telescope has been orbiting the Earth at an altitude of 700 kilometers since its launch on December 18, 2019. The in-orbit commissioning of the various components since early January has been proceeding very well. A wide variety of tests have been performed in order to ensure that the instruments and the satellite platform are working properly. CHEOPS has also taken its first images with closed cover and transmitted them to Earth. Although these are completely dark, they are essential for a proper calibration of the instrument.

While everything is functioning as intended, the analysis of all the data has convinced the CHEOPS team that several instrumental parameters could be further optimized. This has led the team to repeat several tests, resulting in a delay in the original planning.

As a result, the opening of the space telescope cover, originally foreseen for Monday, January 27, 2020, is being delayed by a few days. This decision was taken because the opening is an irreversible action and all activities and tests which are still to be performed with closed cover need to be completed and properly interpreted.

The delay in the opening of the telescope cover will neither impact the overall schedule for CHEOPS nor the start of scientific operation.

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### **CHEOPS – in search of potential habitable planets**

The CHEOPS mission is the first of the ESA's newly created "S-class missions" (small class missions with an Agency budget under 50 million) and is dedicated to characterizing exoplanets' transits. "CHEOPS" (CHAracterising ExOPlanet Satellite) will make highly accurate measurements of stars and monitor small changes in their brightness that are caused by a planet transiting in front of the star.

CHEOPS was developed as part of a partnership between the European Space Agency (ESA) and Switzerland. Under the leadership of the University of Bern and ESA, a consortium of more than a hundred scientists and engineers from eleven European states was involved in constructing the satellite over five years.

CHEOPS began its journey into space on Wednesday, December 18, 2019 on board a Soyuz Fregat rocket from the European spaceport in Kourou, French Guiana. Since then, it has been orbiting the Earth on a polar orbit in roughly an hour and a half at an altitude of 700 kilometers following the terminator.

The Swiss Confederation participates in the CHEOPS telescope within the PRODEX programme (PROgramme de Développement d'EXpériences scientifiques) of the European Space Agency ESA. Through this programme, national contributions for science missions can be developed and built by project teams from research and industry. This transfer of knowledge and technology between science and industry ultimately also gives Switzerland a structural competitive advantage as a business location – and enables technologies, processes and products to flow into other markets and thus generate added value for our economy.

More information: <https://cheops.unibe.ch>

### **Bernese space exploration: With the world's elite since the first moon landing**

When the second man, "Buzz" Aldrin, stepped out of the lunar module on July 21, 1969, the first task he did was to set up the Bernese Solar Wind Composition experiment (SWC) also known as the "solar sail" by planting it in the ground of the moon, even before the American flag. This experiment, which was planned and the results analysed by Prof. Dr. Johannes Geiss and his team from the Physics Institute of the University of Bern, was the first great highlight in the history of Bernese space exploration.

Ever since Bernese space exploration has been among the world's elite. The numbers are impressive: 25 times were instruments flown into the upper atmosphere and ionosphere using rockets (1967-1993), 9 times into the stratosphere with balloon flights (1991-2008), over 30 instruments were flown on space probes, and with CHEOPS the University of Bern shares responsibility with ESA for a whole mission.

The successful work of the [Department of Space Research and Planetary Sciences \(WP\)](#) from the Physics Institute of the University of Bern was consolidated by the foundation of a university competence center, the [Center for Space and Habitability \(CSH\)](#). The Swiss National Fund also awarded the University of Bern the [National Center of Competence in Research \(NCCR\) PlanetS](#), which it manages together with the University of Geneva.

### **Exoplanet research in Geneva: 24 years of expertise awarded a Nobel Prize**

CHEOPS will provide crucial information on the size, shape, formation and evolution of known exoplanets. The installation of the "Science Operation Center" of the CHEOPS mission in Geneva, under the supervision of two professors from the [UniGE Astronomy Department](#), is a logical continuation of the history of research in the field of exoplanets, since it is here that the

first was discovered in 1995 by [Michel Mayor and Didier Queloz, winners of the 2019 Nobel Prize in Physics](#). This discovery has enabled the Astronomy Department of the University of Geneva to be at the forefront of research in the field, with the construction and installation of [HARPS](#) on the ESO's 3.6m telescope at La Silla in 2003, a spectrograph that remained the most efficient in the world for two decades to determine the mass of exoplanets. However, this year HARPS was surpassed by ESPRESSO, another spectrograph built in Geneva and installed on the VLT in Paranal.

CHEOPS is therefore the result of two national expertises, on the one hand the space know-how of the University of Bern with the collaboration of its Geneva counterpart and on the other hand the ground experience of the University of Geneva supported by its colleague in the Swiss capital. Two scientific and technical competences that have also made it possible to create the [National Center of Competence in Research \(NCCR\) PlanetS](#).