

## FIRST IMAGE FROM COROT ENGINEERS AND SCIENTISTS WORKING ON THE COROT MISSION FINALLY REWARDED FOR THEIR YEARS OF EFFORT

On Wednesday 17 January 2007, the Corot teams at CNES Toulouse operating the science satellite, successfully opened the telescope's protective cover. **After the usual tests by specialists to ensure that the satellite was functioning correctly, the first image was taken during the night of 17-18 January and processed today at the Corot mission centre at CNES. The scientists present were delighted with the first results of the image analysis.**

Corot has now seen, for the first time, the light from stars in the Unicorn constellation near Orion, the great 'hunter' whose imposing silhouette stands out in the winter nights. According to Michel Auvergne, an astrophysicist at the CNRS observatory of Paris-Meudon, responsible for the scientific performance of the Corot instrument, the image obtained is "even more beautiful than I dreamt possible and the quality of the preliminary analysis is quite as good as our simulations."

Yannick d'Escatha, CNES President, congratulated the CNES teams and their scientific and industrial partners for the magnificent success of this technically challenging mission. He added that it opened up wonderful new opportunities for research for the CNRS scientific community in particular.

Also today, the telescope was carefully aligned with the region to be observed, facing away from the centre of our galaxy, a setting that will be maintained until April.

Investigations are continuing in preparation for a thorough examination of the data received. The mission is expected to start early in February, as soon as the instrument's calibration procedure has been completed.

It should be remembered that the CNES Corot mission (CONvection, ROTation and planetary Transits of extrasolar planets) is a world first. It is the first satellite to hunt for exoplanets, i.e. planets that orbit stars other than our Sun. The instrument's accuracy should enable scientists to discover telluric exoplanets, meaning planets similar to but larger than Earth, which was impossible until now. Corot's very precise stellar photometry instrument will also enable scientists to understand more about the interior of stars. Both aspects are of major importance for astronomy.

The instrument was developed by an integrated team of scientists from CNES and several CNRS laboratories, the most important being the *Laboratoire d'Etudes Spatiales et d'Instrumentation en Astrophysique (Observatoire de Paris-Meudon)*, the *Laboratoire d'Astrophysique de Marseille (Observatoire Astronomique de Marseille Provence)*, the *Institut d'Astrophysique Spatiale (Orsay)* and the *Observatoire Midi-Pyrénées (Toulouse)*. To increase the chances of success, further contributions were provided by Germany, Austria, Belgium, ESA and Spain (for Europe), as well as Brazil.

After Jason-1 and Calipso, the Corot satellite is the third to use a Proteus platform developed by Alcatel Alenia Space in cooperation with CNES. The afocal Corotel telescope supplied by Alcatel Alenia Space benefitted from the experience of the Helios observation programme, particularly as concerns the stability constraints required for the telescope mission. The extreme radiometric accuracy of which it is capable had never been achieved before, for an onboard instrument. It is also equipped with a high degree of protection against stray light sources (such as from the Sun and Earth) which will enable it to send back the precious information expected from the Corot mission.



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