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COMMUNIQUE DE PRESSE

CoRoT : 3 years more for the exoplanets hunter satellite

CNES, together with its national partners (CNRS and Observatoire de Paris) and international partners (Austria, Germany, Belgium, Brazil, ESA, Spain), has extended the operations of the CoRoT mission for three additional years, until 31 march 2013. The decision was taken on Friday october 23rd.

CoRoT is a minisatellite devoted to the study of the internal structure of the stars and to the hunt for planets outside the Solar System, called exoplanets. It was launched on 27 december 2006, and the initial duration of the mission was 3 years.

But the scientific results up to now are of such importance that the mission extension has become obvious. For instance, CoRoT detected vibrations of various types of stars, some similar to the Sun, some very different such as the red giants. The CNES satellite also revealed that most of the stars are much more variable than expected. On the exoplanets side, the crop is presently 7 confirmed planets, and many more candidates are currently scrutinized at by ground telescopes. Several of these detections are world firsts, like the smallest and the only rocky one known up to now, CoRoT-7b, which is also the one exhibiting the shortest revolution period around its host star (20 hours), or like the densest one, CoRoT-3b

These results, which are gathered in a special issue of the scientific review *Astronomy & Astrophysics*, are major breakthroughs for the stellar physics and for the exoplanets search. This is the ground for the mission extension, which was decided after an exhaustive scientific and technical review process, in order to fully exploit these capacities.

In the field of the stars study, the mission extension will allow to sound new types of stars and also to revisit more deeply those which have exhibited the most unexpected behaviours. About the exoplanets, beyond a greater number of detections, the three additional years will be devoted in particular to the search for "hot super earths", that is to say planets slightly more massive than the Earth but much more closer to their star.

CoRoT in a few words :

The CoRoT satellite was developed and is operated jointly by the CNES and the CNRS-INSU laboratories, the main ones being the Laboratoire d'Etudes Spatiales et d'Instrumentation en Astrophysique (CNRS, Observatoire de Paris, Université Pierre et Marie Curie, Université Denis Diderot), the Laboratoire d'Astrophysique de Marseille (CNRS, Université Aix-Marseille 1 ; Observatoire Astronomique de Marseille Provence), the Institut d'Astrophysique Spatiale à Orsay (CNRS, Université Paris Sud) and the Observatoire Midi Pyrénées in Toulouse (CNRS, Université Paul Sabatier). The most numerous, the strongest, the project also took benefit from an important European contribution (Germany, Austria, Belgium, ESA and Spain), completed by the one from Brazil.

CoRoT, which name means "Convection, Rotation & planetary Transits" has two scientific goals : the search for planets orbiting around other stars than our Sun, and in particular for planets similar to our Earth; and the detection of the vibrations of the stars in order to sound their internal structure (stellar seismology). This satellite, has a 27 cm telescope orbiting the Earth. It was designed to detect tiny light variations from stars distant of up to a few hundreds light years from the Sun during long observation sessions.

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