

**CURRENT STATUS OF THE CONSTRUCTION  
OF THE SPACE COLD ATOMIC CLOCK PHARAO**

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Since 1994, the French space agency, CNES, has been working on the industrial development of a space atomic clock. This clock is based on the works made at BNM-LPTF on atomic fountains.

Since June 2001, several companies have been selected for the construction of the different PHARAO sub-systems: EADS-SODERN for the laser source and the cesium tube, THALES for the frequency synthesizer and the microwave cavity, EREMS for the board gestion unit.

An engineering model of all the sub-systems has to be delivered at CNES, Toulouse, for qualification and assembly by the end of 2002.

In this paper, we will present the technical architecture of the space clock and we will give some details on critical points as low noise diode laser, optical fiber, quartz oscillator.

Finally, we end this presentation by a review of the expected performances as a function of the operating conditions and the current technical specifications of the clock.