TARANIS

The TARANIS instrument (Tool for the Analysis of RAdiation from lightNIng and Sprites) is a CNES micro-satellite. The **objectives** of this mission are:

- to study electric discharges in the atmosphere,
- to study the mechanisms and conditions of stratospheric discharges,
- to study the ionospheric response,
- to study the impact on the chemical composition of the atmosphere and on the climate.

Framework : CNES TARANIS micro-satellite

The Low Frequency Electrical Measuring Instrument (IME-BF) was developed by the LATMOS team, in collaboration with the Laboratory of Physics and Chemistry of the Environment and Space (LPC2E) and NASA. It is composed of:
a double-sphere dipole type electric antenna (IME) (internal 0-3 MHz preamplifier)

a low-frequency analyser: electronic on-board processing of electrical (IME / LATMOS) and magnetic (IMM / LPC2E) data from 0 to 20 kHz and the ionic probe (SI / NASA).



Scientific Contributions

» Scientific and instrumental specifications

» Electric field and plasma measurement data processing algorithms / models for the TARANIS Mission Centre (CMT)

» Modelling of the electrical loading of the satellite in the ionospheric plasma (R&T CNES)

» Models of electro-magnetic wave propagation in the atmosphere-ionosphere-magnetosphere

» One of the advantages of our project is the continuity of the work carried out by the IME-BF team over the past few years on previous projects, i.e. DEMETER / CNES and C-NOFS / NASA micro-satellites.

OSU : OVSQ

Status: Observation Service approved by INSU/ASTRO (SO2)
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