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PRESENT STAGE OF UTILIZATION OF THE ARGOS SYSTEM BY THE  
ORSTOM HYDROLOGICAL SERVICE FOR HYDROMETIC DATA COLLECTION

The hydrologic section of the French Office for Overseas Scientific and Technical Research (ORSTOM) specialized in the study of hydrological regimes in sub-tropical zones is concerned since many years with the opportunities offered by satellite remote control transmission.

Consequently several tests and controls have been conducted since 1978 in order to :

- inventory the various possibilities applicable to hydrology (rain-fall, water height level, flow gaging and flood forecasts),
- test and select the most performing equipment for the various operations (catchers, coders, power supply),
- estimate the cost for converting a standard station.

The various phases of work have taken in FRANCE (on the Seine river basin) in AFRICA (SENEGAL-SUDAN) in NORTH AMERICA (CANADA - the QUEBEC province) and SOUTH AMERICA (BRAZIL, GUYANA).

If most of the tests were made with low orbiting satellites (system ARGOS) other tests have also been conducted to evaluate the possibilities of geo-stationary satellites (SENEGAL, FRENCH GUYANA).

The data collection platforms used being of extremely reduced size, made possible their installation in existing facilities without noticeable modifications. The data collected are specially interesting since we were able to register from 15 to 20% more daily-readings with a 97% accuracy rate.

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The overall system must be reinforced with a direct receiving station in order to be really efficient and operational. ORSTOM has purchased such an equipment, installed since february 1983 in the hydrologic section Head Office in Bondy (FRANCE).

A wide future development program includes :

- installation of 20 stations in FRANCE (1st phase upon 120 scheduled) on the Seine river basin. The Loire river basin is also under progress,
- 65 stations in AFRICA to include the entire Niger basin with 8 direct receiving stations,
- a first phase of 23 stations in BRAZIL on the Amazona basin,
- 2 stations in FRENCH GUYANA,
- 10 stations in BOLIVIA on the Amazona basin with one direct receiving stations,
- a first station in CAMEROUN in 1983-1984.

Given all of what has been exposed here before it is wished that the ARGOS System be continued till years 2000 as previously scheduled, unless the launching of satellite having specialized mission in hydrology were planned.

# *Argos users conference*

LONDON  
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Centre National d'Etudes Spatiales  
French Space Agency

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