

INTERNATIONAL EQUATORIAL ELECTROJET NEWS

AIM OF THE LETTER

The aim of this semi-monthly letter is to inform about the International Equatorial Electrojet Year project in the Europe-Africa sector.

FINANCE

We owe our readers a rectification of the announcement (letter N° 1) about a funding of 300 kF by INSU : this sum has not been allocated to our project, the MRT allocation has not yet been received.

STARTING THE INTERSTATE MAGNETOMETER CHAIN

Phase one will be establishing the sites across Mali and Ivory Coast in August and September. Ms Roger FOY, engineer at ORSTOM-Senegal will bring the whole equipment at BAMAKO (Mali) ; he will install the six Malian stations first, then the remaining four across Ivory Coast, the master site being placed at KORHOGO and the last three at KATIOLA, YAMOOUSSOUKRO and LAMTO.

It is during a second mission in October 1992 that MMrs Vassal and DUKHAN of ORSTOM Senegal will start up the scientific instruments themselves : sensors and acquisition.

MMrs BOKA Kouadio and DOUMOUYA Vafi (ABIDJAN University) will help setting up the ivoirien magnetometers.

TRAINING COURSES

MMrs K. BOKA and V. DOUMOUYA will go to DAKAR for a training course on the magnetic data analysis software system.

Mr Ephrem SAMBOU (University Cheikh Anta Diop, DAKAR) will go to CNET/Lannion for a two months study course during the last quarter 1992 to prepare his Ph. D. on HF equatorial propagation.

Mr Fabrice JULLIEN (third year trainee at the Ecole Nationale Supérieure des Télécommunications, Paris) is taking a five months course in the IEEY. He will spend the two first months in France on ionogram interpretation, signal processing, automatic scaling and ionospheric modelization (propagation prediction techniques). He will next go for three months to KORHOGO to participate in the ionosonde operation and data interpretation, and to help the five CAMPUS Ph. D. students (see News letter 1).

IVORY COAST

The Minister for University Education and Scientific Research of Ivory Coast issued on July 1. 1992 a letter which authorizes the setting up of our experiments at KORHOGO and LAMTO.

Mr. Arsène Achy Seka has a telephone line at ABIDJAN University Nr. : 225/44 38 47.

SETTING UP THE KORHOGO SITE (COORDINATION : M. J. L. TIREFORD)

Five instruments will operate at Korhogo during the IEEY campaign : the CNET ionosonde, the magnetometer(s) and two HF radar (first the CEA R8F model, then the LETTI interferometer).

- The repairs of the KORHOGO buildings and the setting up of the ionosonde antennae are in progress.

- The fifth facility is the FABRY-PEROT optical interferometer lent by University College London.

IONOSONDE

The data acquisition and automatic scaling systems are being whipped to Ivory Coast.

The ionosonde should start operating by the end of September MMrs. Emile KONE and Arsène KOBEA TOKA (ABIDJAN University) Jean HENRY (CNET/Lannion) will join efforts with the VHF SERVICES enterprise in the start up phase.

CEA Radar : due for provisory setup in December 92 at KORHOGO it should operate for a 2 months campaign at KORHOGO in 1993. Mr. HOUGNINO (Ivory Coast) will participate with the CEA team.

LETTI Radar : the financing is still going on ; a first commission has given a favourable view : a second presentation for final agreement is due in September. The setting up should be terminated in the second quarter 1993.

NIGERIA

The 200 kF necessary fo re-starting the ILORIN ionosonde have not yet been obtained.

ALGERIA

Mr. Jean Henry's mission for Tamanrasset ionosonde is still to be done.

TEACHING

In the context of the International CAMPUS project, five Ivorian Research students will prepare Ph. D. lectures (3è cycle, or Ivoirian Thèse d'Etat). The group of these five students with their Ph. D. supervisors and other scientists will cooperate in a multidiscipline framework including Aeronomy, Interne and Externe Geophysics : each of the 5 Ph. D. workers will integrate this study into the global as well as pluridisciplinary approach. The Ph. D. subjects are the following :

1. DAWN and DUSK EQUATORIAL ELECTROJECT CURRENTS by BOKA Kouadio (ABIDJAN University) ;

INTERNATIONAL EQUATORIAL ELECTROJET NEWS

Supervised by Michel MENVIELLE, (CNRS Unit of internal Geophysics and geodynamics, Université Paris Sud).

2. MAGNETIC EFFECTS of the EEJ : SEASONAL VARIABILITY and SATELLITE DATA REDUCTION, by DOUMOUYA Vafi (ABIDJAN University ; supervised by Yves COHEN (Institut de Physique du Globe de Paris).
3. OPTIMIZATION in EQUATORIAL ZONE HF TRANSMISSIONS by KACOU Kande (Electricity of Ivory Coast) ; Supervised by Julien CARATORI (LETTI, Université Paris Sud)
4. SPATIO-TEMPORAL MORPHOLOGY of EQUATORIAL IONOSPHERE by HOUGNINOU Etienne ((Secondary Education) ; Supervised by Elizabeth BLANC (CEA).
5. EQUATORIAL ELECTROJET as PART of the GLOBAL IONOSPHERIC CURRENT CIRCUIT : The REGULAR DYNAMO and DISTURBANCE DYNAMO, by KOBEA TOKA Arsène (ABIDJAN University) ; Supervised by Christine MAZAUDIER.

Other Research Scientist will participate in the scientific management :

- CNET : Rudi HANBABA, Patrick LASSUDRIE DUCHENE and Yvon LE ROUX.
- ORSTOM : Ousseini FAMBITAKOYE, JACQUES VASSAL
- LETTI : Claude GOUTELARD
- NCAR : Art RICHMOND

FABRY PEROT INTERFEROMETER (University College London) Mr . Fabrice JULLIEN has spent a week in London during July to learn about the interferometer operation and maintenance and he will write an instruction normal. The funds for setting up this experiment (~ 50 kF) are still to be obtained.

ORGANIZATION OF THE PROJECT

The IEEY for Euro-Africa is led by a global coordination cell

President : Ousseini Fambitakoye

Vice President : Yves Cohen

Scientific secretary : Christine Mazaudier

Communication : Paul Vila

Information : Josette Bouvet

Secretary : Caroline Huc

Other cells deal with particular aspects :

Teaching cell : A. Achy Seka and Michel Menvielle

Research cell : a group of coordination is needed

Database cell : Christine Mazaudier

Logistic and ADMW Base for Ivory Coast (where the two radar sites are lasted ; coordinated by Daniel Duval (scientific cultural attaché) and Jean Louis Tireford (LAMTO observatory).

Local cells in each country :

Algeria : Mohamed HAMOUDI

Senegal : Ephrem SAMBOU

Nigeria : J. O. OYINLOYE

Mali : Jacques VASSAL

Scientific advisers cell : Jose ACHACHE: Michel BLANC, Christian HANUISE, Jean Louis LEMOUEL.

IAGA ANNOUNCEMENT

IDCDC Symposium. Reports on IEEY activities ; preliminary results C. Mazaudier and A. Onwumechilli.

One of the sessions will be devoted to the priorities in geomagnetism Aeronomy in developing countries A.A. Ashour M. Barreto.

EEJ studies organized by WG 1-2 combining divisions I II, Prof. E.W. MBIPOM Convenor, L. M. Barreto O. Fambitakoye (Co-convenors).

NEWS FROM CHINA

Mr; WU JIAN coordinator of the working group of scientists of the "Ionospheric Laboratory China Research (institute of Radio wave Propagation) has contacted the IEEY/Euro-Africa secretary in view of opening scientific cooperation.

Address of the laboratory :

B.P. 138 Xinxiang 453003 Henan, P.R. of CHINA

(Tel : 0373 35 39 12 ext 321).

Lab. Director : Chong CAO

Scientific subjects :

Equatorial ionosphere scintillations

EEJ associated irregularities and instabilities

Equatorial ionosphere modeling, conductivities and Electric fields.

Observations :

Ionogram and total electron content at :

HAÏKOU station : 20° N, 110.33° E ; geomagnetic Lat : 8.8° N

GUANCHOU station : 23.12° N, 113.35° E ; geomagnetic Lat : 12° N

Research Scientists :

CAO chong, DAI Kailing, HE Youwen, HUANG Changli, LI Anmin, WANG Shengli, WU Jian, XI Dilong, ZENG Weemin.