

GIRGEA : Groupe International de Géophysique Europe Afrique-Asie / April 11, 2011/

IGRGEA : International Geophysical research Group Europe Africa-Asia

It was at the Vancouver Assembly of IAGA, in 1987, that the Interdivisional Commission on developing Countries (ICDC) requested to intensify International Electrojet studies in the framework of International Equatorial Electrojet Year 1992-1994 (IEEY). After IGY and programs that followed it, IEEY is for the first time a planetary experiment to be handled largely by scientists from developing countries.

In 1995, at the end of the IEEY, the International Geophysical Research Group Europe Africa (IGRGEA) has been organized to follow the research work initiated during IEEY. The IGRGEA is a **laboratory without borders a worldwide network of scientists**.

The main objectives of the IGRGEA is to develop research in geophysics and build research teams of excellence in developing countries. To reach this objective, scientific programmes are defined in the framework of International projects, involving senior scientists from the whole world and students mainly from developing countries. The IGRGEA was involved in the International Heliophysical Year 2005-2009 (IHY <http://ihy2007.org>), and is presently involved in the International Space Weather Initiative (ISWI <http://www.iswi-secretariat.org>).

IEEY, IHY and ISWI programmes are part of the UNBSS initiative to develop Basic Space Science in developing countries (<http://www.osa.unvienna.org>)

The IGRGEA is based on the respect of ethical rules, the original data collected in a given country are used by the students of the country for their training in order to obtain their PhD and a position in their country.

At that time, from 1995 until 2010, 18 PhD were defended by students from different countries (Benin, Burkina Faso, Côte d'Ivoire, Egypt, Spain, France, Inde, Senegal, Vietnam), 16 have a position in their country, there are 7 new positions (*the other have the position during their PhD*). Two young scientists left geophysical research after their PhD to do computer sciences.

At that time 32 PhD are under progress, 8 students have already a position in their country.

First decade 1990-2000	Second decade 2001 until now	Last 4 years 2007 until now
29 papers	51 papers	31 papers
8 PhD	10 PhD	7 PhD
Scientist - south 1 st author : 0	Scientist - south 1 st author : 30	Scientist - south 1 st author : 22
Student-south 1 st author: 4	Student-south 1 st author : 22	Student-south 1 st author : 16

Subjects covered by these articles:

* Vietnam Monsoon, *Long term variations in the equatorial ionosphere at the magnetic equator and on the tropical ionization crests in Asia,* Long term variations in magnetic activity, * Total Electron Content during maximum and minimum Sunspot Cycle, * Solar action on geomagnetism, *Equatorial electrojet, *Regular variation of Sq magnetic field in Vietnam, * Ionosphere Disturbance Dynamo,* Terrestrial movements of the earth's crust deduced from continuous measurements of GPS Stations in South-East Asia, * The Franco-Egyptian Year, * Use of GPS data to estimate the water vapor content of the Troposphere,*Climatology of gravity waves activity,*Equinox transition at the magnetic equator,etc...

Five African students have been appointed as University professors in Ivory Coast and in Burkina Faso. The perennality is assured.

In a near future all the scientific results of IGRGEA will be described on the website www.girgea.org