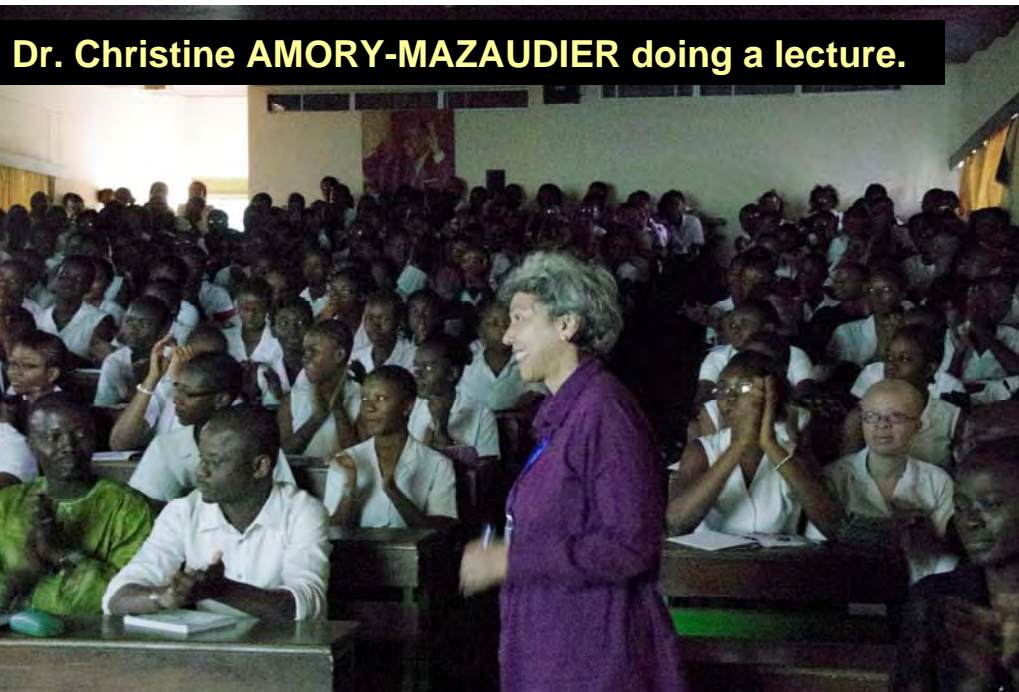


Report on a Special Space Weather Outreach Event in Abidjan on 27 Sept 2013



Report by George Maeda, ICSWSE Staff, and Editor of the ISWI Newsletter

17 Oct 2013

Background

Recently, the *International Center for Space Weather Science and Education* (Japan) in collaboration with African educators (mainly **Prof. Vafi** of the national university in Cocody, Cote d'Ivoire) conducted the *2013 MAGDAS/ISWI School in Africa*. See the next page for some photos of this school.

School Group Photo



Capacity Building in Africa
2013 MAGDAS/ISWI School
23~27 Sept @ Abidjan, Cote d'Ivoire

Harbor cruise



School classroom



The African lecturers



School lunch



MAG9 sensor hut



Local traffic jam



Special Outreach Event

On the last day of the school, some of the organizers of the school and one of the lecturers, **Dr. Christine AMORY-MAZAUDIER** (Laboratoire de Physique des Plasmas / Ecole Polytechnique/ UPMC/CNRS, France) went to a local high school (Lycee Sainte-Marie de Cocody) and conducted a special lecture for many of the senior students of this all-girl school in Abidjan. Photos of this event are at the end of this report.

The title of the lecture was:

The Sun Earth Connections : *Space Weather*

The motivation for it:

**To attract young, bright students
into the field of space physics
research; give them some “food
for thought”.**

Abstract of the lecture

(written by Dr. Christine AMORY-MAZAUDIER)

In this talk we first present the Sun, star of our solar system, and the Earth our planet. We introduce after the two main forces acting at a large scale in the Sun Earth System :

- the gravity force
- the electromagnetic force.

- **Concerning the gravity Force** : it is well known that the earth orbits the sun in one year and turns on itself in one day. These movements form the rhythm of our daily life.

- **Concerning the electromagnetic force** : from historical data we introduced the sunspots observed since the Middle Ages and recalled the existence of the Earth's magnetic field has been known for more than two millenia.

We now know that the Sun (as the Earth) has a magnetic dipole field that turns about every eleven years. We also know that the sun turns on itself to a higher speed at the equator than at the poles. This creates twists of the dipole field lines forming magnetic loops which are small magnets, and these are the spots.

We introduce later the connections between the Sun and the Earth through the solar wind (flow of particles flowing away from the sun) and through the electromagnetic radiations.

We show a movie of a coronal mass ejection and the creation of aurora. We explain the process of photo-ionisation which creates the ionosphere; and we explain the role of the ionosphere in the transmission of electromagnetic waves between satellite and Earth.

We conclude by mentioning the uses of GPS in daily life.

End of Abstract

Report on a special outreach event – by G. Maeda (ICSWSE)

Observations

- This special lecture was extremely well-received by the students. They were all in rapt attention for the entire duration of the lecture.
- Whenever a space weather school is planned, this kind of “outreach to local high school students” should be part of the school agenda. It is a vital investment for the future of space science.



School grounds in Abidjan



Arrival at the high school





Pre-lecture introductions



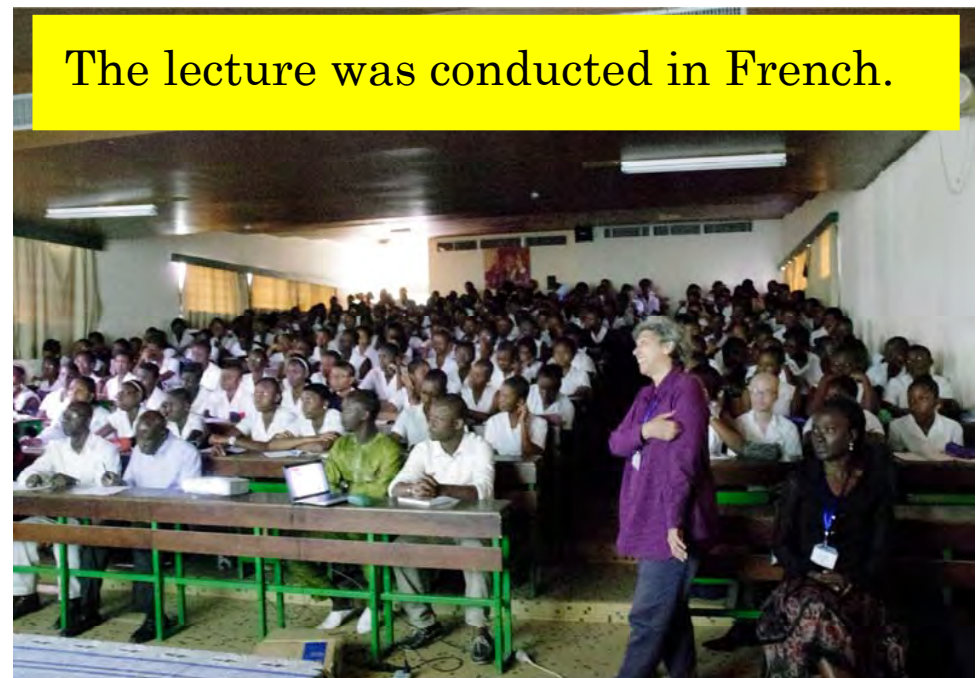
Words of advice from a senior.



Very attentive students...



The lecture was conducted in French.



Encouraging bright girls to enter science



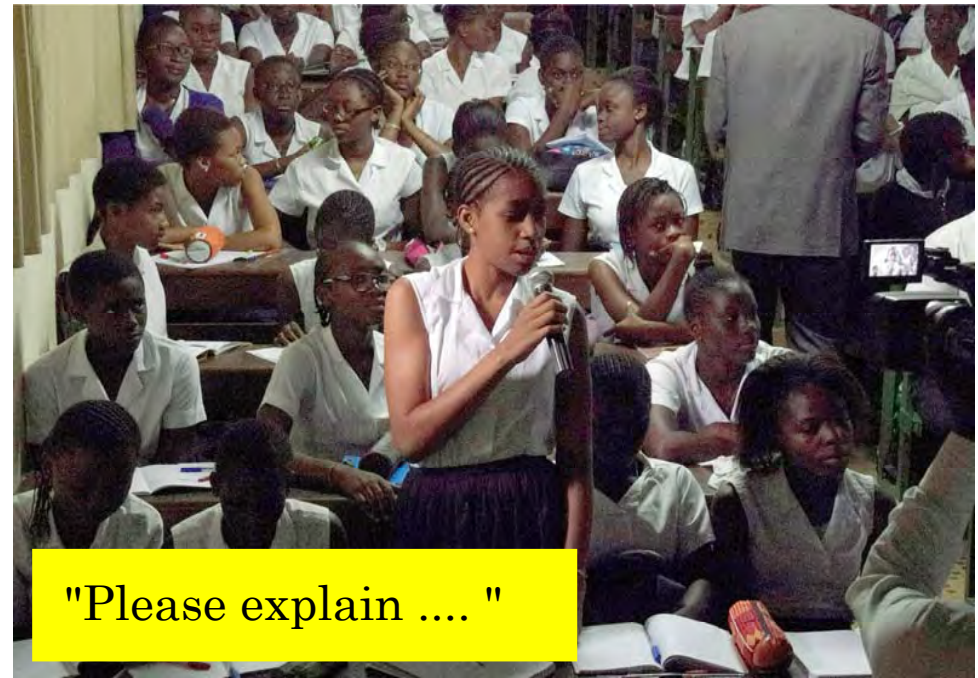
Making a case with the power cord.



Perhaps she'll select science ...

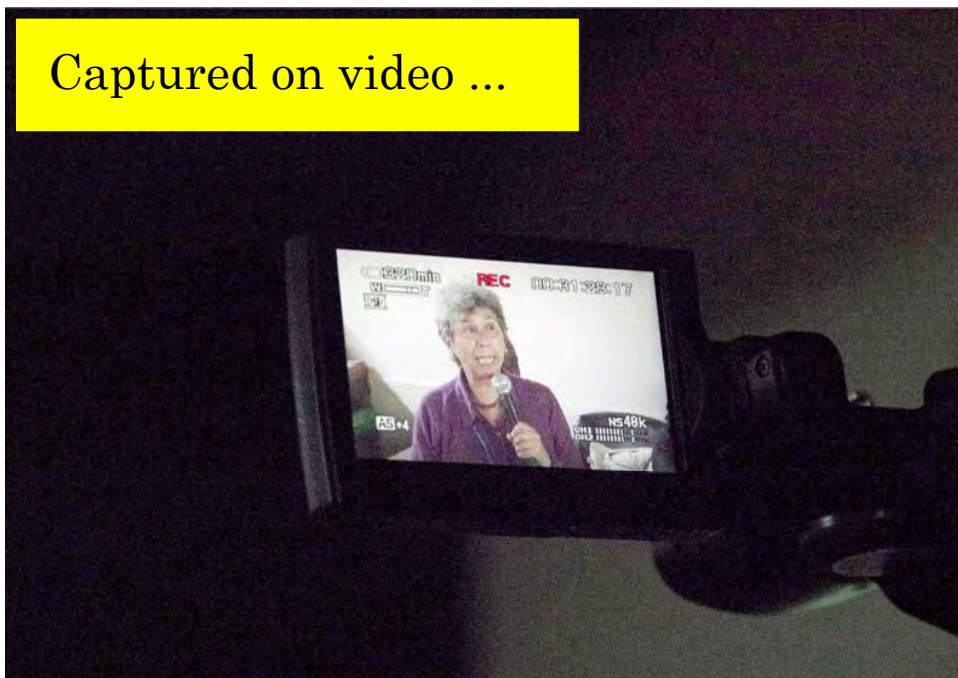


An excellent auditorium

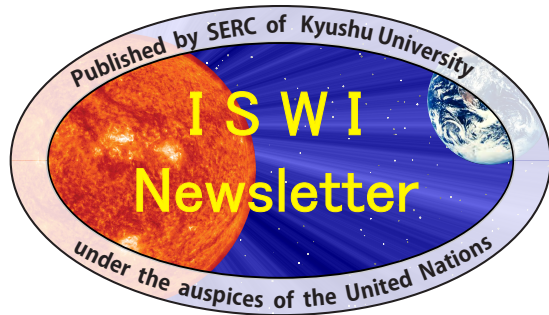


"Please explain "

Captured on video ...



Many probing questions ...



A brilliant, exciting, and passionate lecture, Dr. Christine !



- Observer of lecture
- G. Maeda, Editor of the ISWI Newsletter
- 16 Oct. 2013, Fukuoka, Japan.



Some of the participants pose outside for a group photo.

