

'ISWI Maghreb 2' Report
Organization of School of Space Weather-GNSS applications



**SCHOOL ON SPACE WEATHER
 GNSS
 Ionosphere Atmosphere and Earth's magnetic field
 Basic physics and hands-on experience
 16 - 21 February 2015 / CRASTE-LF/Rabat-Morocco**

The Space Weather GNSS Applications School was organized from 16-21 February 2014 in Rabat (Morocco), in partnership with CRASTE-LF, the International Space Weather Initiative (ISWI), the UN, the IESCO and Mohammed V University. In connection with this school, the Centre organized the EO open day to the benefit of experts and decision makers under the European projects FP7 EOPOWER and IASON.

Context of the School

It was in the framework of UNBSSI (United Nations Basic Space Science Initiative) - [1991-2012] <http://www.oosa.unvienna.org>, that different measurement campaigns were undertaken in Africa:

* IEEY: International Equatorial Electrojet Year [1992-1994]

* IHY International Heliophysical Year [2005-2009]/ <http://ihy2007.org>

* ISWI: International Space Weather Initiative [2010-2012] / <http://www.iswi-secretariat.org>

It was at the end of IEEY project in 1995, that the research network IRGGEA (International Geophysical Research Group Europe Africa) was created. The main objective of this network is to train young scientists in Africa, Europe and Asia. Currently, twenty six PhD have been completed and defended, and thirty are currently underway. The GIRGEA also organized many training schools in geophysics and Space weather, mainly in Africa www.girgea.org

At the end of the ISWI project, the ISWI program was included in the SCOSTEP scientific organization in order to continue the development the ISWI network of instruments.

The school took place at CRASTE-LF, African Regional Centre for Space Science and Technology - French Language, affiliated to UN, located in Rabat, Morocco <http://www.crastelf.org.ma>.

The main objectives of this school were 1) the use of the data of the ISWI instruments by students of the Maghreb and African Countries, mainly GPS and magnetometers networks and 2) the improvement of the level of expertise of the Maghreb and African Countries students to enable them to participate and contribute to international projects.

The two key points of the school for scientists from the Maghreb and African Countries are the development of skills:

- To use existing data sets and tools relating to terrestrial environment studies (less than 10% of the existing data are currently used);
- To use the results of studies based on environmental science and sustainable development and combining ground data with satellite data (example: geophysical studies, telecommunications, etc ...).

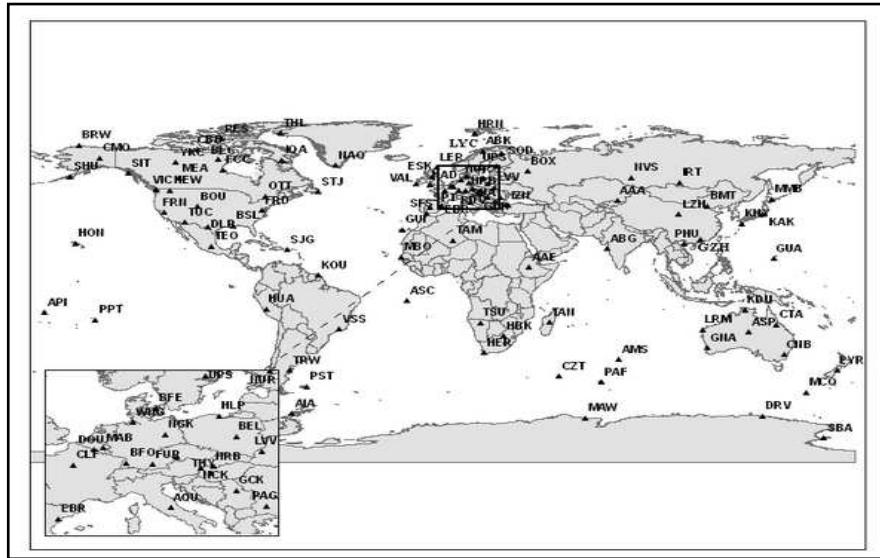
To achieve these goals, the courses included:

- 1) A scientific part on the understanding of the operations that can be performed with the data and information that can be extracted from the data and examples of applications in different fields.
- 2) A computer part on the algorithms used, their performance and installation.
- 3) Computer lab for the use of algorithms and databases like SPIDR, IRI, GIFL, etc...

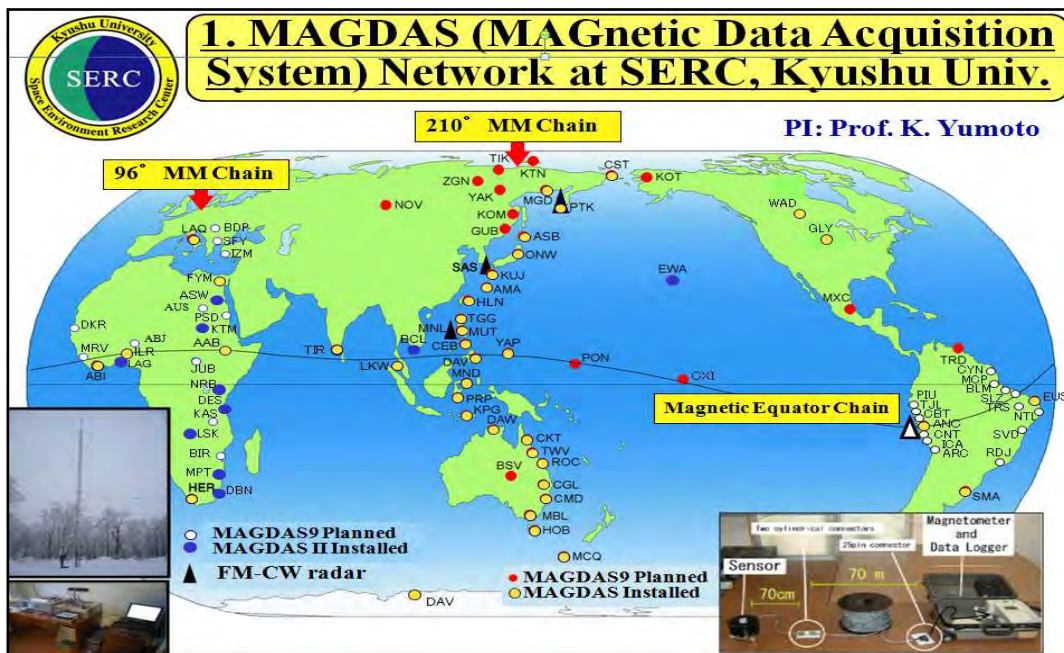
To meet these objectives, the school allowed using:

- 1) All possible operations with ground network GPS stations, radar and other instruments available via internet:
 - a. The studies of the ionosphere and the impact of the Sun on the Earth's plasma environment (International Heliophysical Year and ISWI projects);
 - b. The troposphere studies: An estimate of the integrated water vapour content (CIVE) in the atmosphere can be obtained through GPS data with specific treatments. These data provides the opportunity to initiate studies on the water cycle (seasonal variability and intra-seasonal, studies of atmospheric processes...) in this region.
 - c. Other uses of instruments for development
- 2) The use of magnetic data
 - a. The knowledge of the magnetic clues to define the geophysical context is essential. Magnetic indices are important parameters for Space Weather.

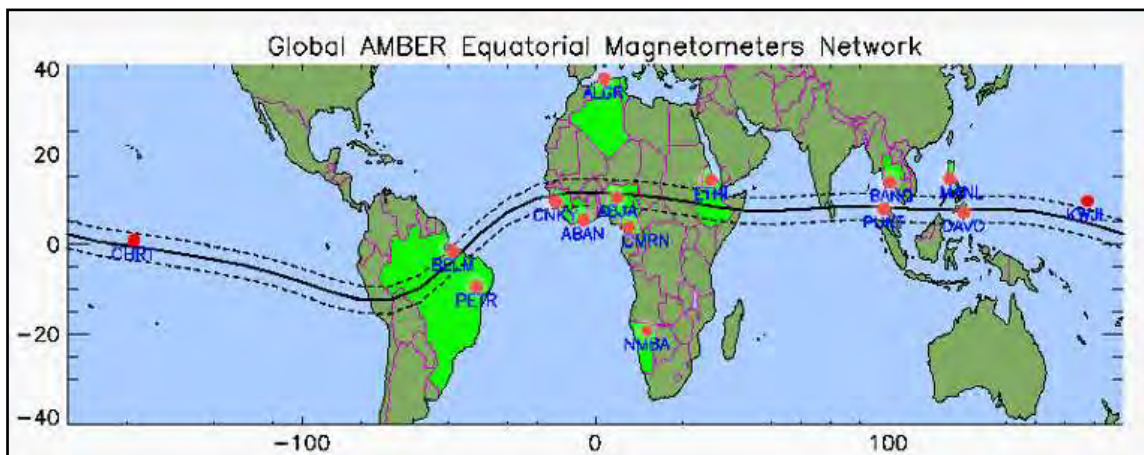
INTERMAGNET (10 stations in Africa)



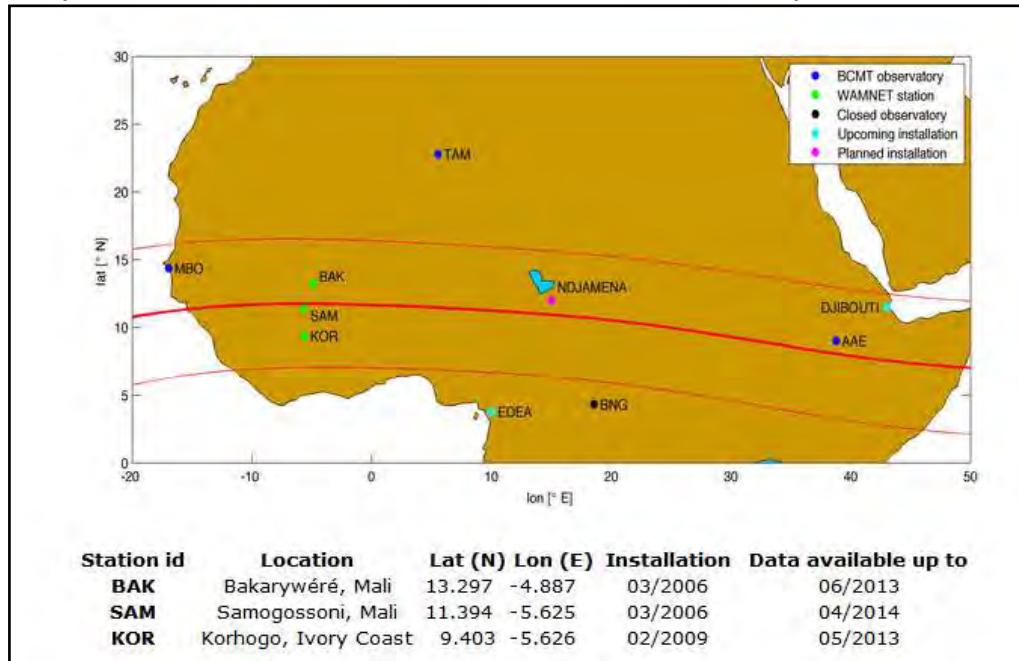
MAGDAS (14 stations in Africa)



AMBER (7 stations in Africa)



AMNET (3 stations and 1 station to install at Edea au Cameroon)



The Committees

Steering Committee

TOUZANI Abderrahmane (CRASTE-LF) Chairman
 ZAOURAR Naima, (USTHB/Algeria) Vice Chairman
 AMORY- Christine (LPP/UPMC) Vice Chairman
 EMRAN Anas (IS/ UM5 V – CRASTE-LF)
 LANSARI Abdeldjelil (CRASTE-LF)
 BOUZIANI Mourad (IAV Hassan II)
 HARA Fatima (CRASTE-LF)

Scientific Committee

TOUZANI Abderrahmane (CRASTE-LF/Morocco) Chairman
 ZAOURAR Naima, (USTHB/Algeria) Vice Chairman
 AMORY Christine (LPP/UPMC/France) Vice Chairman
 ANAD Fatma, (CRAAG/ Alergia)
 DOUMBIA Vafi (Univ. Houphouët Boigny/ Ivory Coast)
 EMRAN Anas (IS/Université Mohammed V/Morocco)
 BENKHALDOUN Zouhair (OA/ UCA/ Morocco)
 BOUNHIR Aziza (FST, LPHEA, UCA/Morocco)
 BOUZIANI Mourad (IAV Hassan II / Morocco)
 FLEURY Rolland (Enst Bretagne/ France)
 GADIMOVA Sharafat (ICG / Vienna/ Austria)
 HOUNGNINOUE Etienne (Université Abomey Kalavi/ Benin)
 LILENSTEIN Jean (IPAG/ France)
 OUATTARA Frédéric (Université de Koudougou/ Burkina Faso)
 PETITDIDIER Monique (LATMOS/France)
 Pr. PITOUT Frédéric (IRAP/ France)
 YAHIAI Yasmina , (USTHB/Algeria)

Team of professors

AMORY Christine (LPP/UPMC/France)
 BOUZIANI Mourad (IAV Hassan II / Morocco)
 DOUMBIA Vafi (Univ. Houphouët Boigny/ Ivory Coast)
 FLEURY Rolland (Enst Bretagne/ France)
 HOUNGNINOU Etienne (Université Abomey Kalavi/ Benin)
 PETITDIDIER Monique (LATMOS/France)
 PITOUT Frédéric (IRAP/ France)
 YAHIAI Yasmina, (USTHB/Algeria)
 ZAOURAR Naima, (USTHB/Algeria)

Program of School

Day /hour	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	
9h-10h30	Space Meteorology Lecture	Ionosphere Lecture	Open Ceremony	Coupling High/ low latitudes Lecture	Middle atmosphere Lecture	Magnetic Field Lecture	
10h30-11h	Pause coffee						
11h-12h30	Space Meteorology Lecture	Ionosphere Auroral Lecture	Plenary Session of EO Open Day	Low Atmosphere Lecture	Middle atmosphere Lecture	Lab/ magnetic field Closing School	
12h30-14h	Lunch						
14h-15h30	GNSS Lecture	Ionosphere Equatorial Lecture	Lab/GPS Ionosphere	Lab/GPS Troposphere	Lab/GPS Troposphere		
15h30-16h	Pause coffee						
16h30-18h	GNSS Lecture	Lab/GPS Ionosphere	Lab/GPS Ionosphere	Lab/GPS Troposphere	Lab/GPS Troposphere		
17h-18h	Time for POSTERS and discussion with professors						



The school Course

The school welcomed 29 participants from universities of North Africa and the French-speaking African Countries. The participants, who were selected, had a background in computer science and database management.

This school has helped participants to:

- Master the use of GPS data and magnetic data according to their area of competence;

After this training, participants were able to:

For GPS

- Harness the GPS data for studies of the atmosphere and ionosphere
- Know the different fields of application practice.
- Know the interesting databases in the various areas covered;
- Know GPS access existing databases
- Know how to use the data and tools available on the selected databases.

For magnetometers

- Know the different networks of magnetometers on the web
- Knowledge of site magnetic clues on the web
- Analysis of magnetic data
- Treatment of geomagnetic signals

Practical applications were based on various themes and data related to the fields of national interest.

An analysis of the targeted needs of participants and their level was made at the opening of registrations.

The participants were students for a master's degree or with thesis work in progress, and academic staff and other organizations that also needed training.



The EO open day program was addressed to a wide audience.

Wednesday, February 18, 2015

8h30-9h30 - Hosted the participants

Official opening

9h30-10h30 - Official speeches :
(CRASTE-LF, ISESCO, UN-OOSA Vienna, ICG and ISWI Maghreb)



Coffee Break and Family Picture

11h00-13h00 ✓ **Plenary Sessions**

- International Committee on Global Navigation Satellite Systems and its Programme on GNSS applications. **GADIMOVA S., Office for Outer Space Affairs United Nations Office at Vienna (Austria)**

- Space Weather: a comprehensive approach to Earth Sun System. **AMORY C. Laboratoire de Physique de Plasmas /Université Pierre et marie Curie, Paris (France)**
- FP7 project EOPOWER and IASON: example of the contribution of European projects in the GEO capacity building activities. **EMRAN A. / (Scientific Institute, (CRASTE-LF Expert) Mohammed V University (Morocco)**



- EO and Sustainable Development: Now and future. **HAKDAOUI M. Faculty of Sciences of Ben Msik, Hassan II University, Casablanca, (Morocco)**

Poster Session


The poster session was organized during the “EO Open Day” session on the EO theme that the participants had presented at the end of the day throughout the period of the Space Weather – GNSS Applications School.










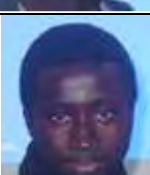











The Participants

List of participants in School of Space Weather- GNSS applications

Name	Function	Institution	Country	Email	Photo
1. ABED Youcef	Engineer Geophysics	CRAAG	Algeria	Youcef.geo@gmail.com +213 669 505 510	
2. LEMGHARBI Abdenaceur	PHD in Geophysics	USTHB University	Algeria	toyour.nacer@yahoo.fr +213 66 56 43959	
3. TAIR Sabrina	PHD in Geophysics	USTHB University	Algeria	sabrina_tar@hotmail.fr +213 7 91 77 89 10	
4. HOUNGNINOU Tinikowa Erik	PHD	Abomey Calavi University	Benin	houngnerik@yahoo.fr +229 95 53 85 21/66668652	
5. KOUGBEAGBED E Hilaire	PHD	Abomey Calavi University	Benin	hilars83@gmail.com +229 97213728/ 65173662	
6. SEBEGO Touwendaobo Ange Hubert	PHD	Ouagadougou University	Burkina faso	sebegoange@gmail.com +22670005012	
7. MESSANGA ETOUNDI Honoré	PHD	Yaounde University	Cameroon	honormess@yahoo.fr +237 73 66 78 06	
8. PAMBI DAN ROMUALD Miché Naikeboutou	STE	Mohammed V University & CRASTE- LF	Centre Africa Republic	Boutou27@hotmail.fr dan27051990@gmail.com +212634385174/ +23670406480	

9. NGAYA Herbert Rodrigue	PHD	ASECNA/IC TP	Congo	ngahero@yahoo.fr mgaya@ictp.it +393249052637	
10. COULIBALY SORO Ibrahima	PHD	Félix Houphouët Boigny University	Ivory Coast	csibrahima02@yahoo.fr +22505927018/581307 70	
11. ZILLE Ange François	PHD	Félix Houphouët Boigny University	Ivory Coast	zilleange@gmail.com +225 07 84 42 71	
12. WATT Nouma Alassane	STE	Mohammed V University & CRASTE- LF	Mauritan ia	noumawatt@gmail.com +212 634 05 18 86 / +222 44 77 21 44	
13. AGARRAM Chaimae	STE	Mohammed V University & CRASTE- LF	Morocco	Chaima.agarram@gmail.com +212 677719180	
14. AZZOUZI Ilyasse	PHD	LPP /Polytechniq ue/ UPMC	France	ilyasse.azzouzi@lp.polytechnique.fr 33 1 44 27 92 62	
15. BOUNHIR Aziza	Professor	Cadi Ayyad University	Morocco	A.bounhir@uca.ma bounhiraz@yahoo.fr +212672494908	
16. BOUYA Nawal	PHD in Geology	Mohammed V University	Morocco	bouyanawal12@gmail.com +212618078568	
17. BOUZENDAGA Salwa	STE	Mohammed V University & CRASTE- LF	Morocco	bzn.salwa@gmail.com :+212616403570	
18. EL ARROUFE Siham	PHD	Mohammed V University EMI	Morocco	elarroufsiham@gmail.com +212650326135	

19. ELMIMOUNI Mohamed	PHD	Mohammed V University EMI	Morocco	Elmimoun2@gmail.com /+212661682101	
20. FAROUK Imane	STE	Mohammed V University & CRASTE- LF	Morocco	Imaane_hafsaa@hotmail.fr +212 675021560	
21. HABITOU Nabil	STE	Mohammed V University & CRASTE- LF	Morocco	n.habitou@gmail.com +212 615262444	
22. HARA Fatima	PHD	CRASTE-LF Expert	Morocco	Fatimahara1@gmail.com +212678176824	
23. OULED BENBRAHIM Houda	STE	Mohammed V University & CRASTE- LF	Morocco	houda.oueldbenbrahim@gmail.com +212613407712	
24. RAMI Oumaima	PHD	Mohammed V University EMI	Morocco	rami.oumaima@yahoo.com +212651819497	
25. TAHAYT Abdelillah	Professor	Mohammed V University Scientific Institute	Morocco	abdelillah.tahayt@gmail.com / +212655786082	
26. GAYE Idrissa	PHD	UCAD University	Senegal	idrissagaye3@hotmail.com +221776111256	
27. NDIAYE EL HADJI Amath Diodio	STE	Mohammed V University & CRASTE- LF	Senegal	amathbi@hotmail.fr +212680462485/ 623095524	
28. NDIAYE Mamadou Lamine	STE		Senegal	louzemine@gmail.com +212681718523	

29. HORCHANI	STE-GNSS	Office of Transportati on and Logistics	Tunisia	Horchani.nahed@gmail.com +21627614043	
30. YAHIA Yasmina	Professor	USTHB University	Algeria	yasminayahiat@yahoo.fr +213 557 67 39 55	
31. ZAOURAR Naima	Professor	USTHB University	Algeria	naimaboulasba@gmail.com +213 773 93 57 89	
32. AMORY- MAZAUDIER Christine	Professor	LPP /Polytechniq ue/ UPMC & ICP	France	christine.amory@lp.p.polytechnique.fr +33661851049	
33. PETITDIDIER Monique	Researcher	LATMOS	France	monique.petitdidier@latmos.ipsl.fr +33 66233 6338	
34. PITOUT Frédéric	Professor	IRAP	France	frederic.pitout@irap.omp.eu +33 5 61 55 67 02	
35. FLEURY Rolland	Professor	Telecom- Bretagne	France	rolland.fleury@telecom-bretagne.eu +33 2 00 29 15 18	
36. DOUMBIA Vafi	Professor	Félix Houphouët Boigny University	Ivory Coast	vafid@yahoo.fr +225 08934406	
37. BOUZIANI Mourad	Professor	IAV Hassan II	Morocco	bouzianimourad@yahoo.fr +212661367351	

List of participants in “EO Open Day”

Name	Institution	Country	Email
1. ABED Youcef	CRAAG	Algeria	Youcef.geo@gmail.com
2. CHAMAKHI Djemoui	Mohammed V University & CRASTE-LF	Algeria	djimoui@hotmail.fr
3. LANSARI Abdeljelil	CRASTE-LF	Algeria	lansari@emi.ac.ma
4. LEMGHARBI Abdenaceur	USTHB University	Algeria	toyour.nacer@yahoo.fr
5. TAIR Sabrina	USTHB University	Algeria	sabrina_tar@hotmail.fr
6. ZAOURAR Naima	USTHB University	Algeria	naimaboulasba@gmail.com
7. YAHIAT Yasmina	USTHB University	Algeria	yasminayahiat@yahoo.fr
8. GADIMOVA Sharafat	UN-OOSA - Vienna	Austria	sharafat.gadimova@unoosa.org
9. HOUNGNINOU Tinikowa Erik	Abomey Calavi University	Benin	houngnerik@yahoo.fr
10. KOUGBEAGBEDE Hilaire	Abomey Calavi University	Benin	hilars83@gmail.com
11. SEBEGO T. Ange Hubert	Ouagadougou University	Burkina Faso	sebegoange@gmail.com
12. GBETKOM Paul Gérard	Mohammed V University & CRASTE-LF	Cameroon	paulinchoutmentu@yahoo.fr
13. MESSANGA ETOUNDI Honoré	Yaounde University	Cameroon	honormess@yahoo.fr
14. NDORMA Omer – Oscar	Mohammed V University & CRASTE-LF	Centre Africa Republic	ndorma_omoscar@yahoo.fr
15. KOYANGOZO Alix Johann	Mohammed V University & CRASTE-LF	Centre Africa Republic	alixes2001@yahoo.fr
16. PAMBI DAN Romuald .Miché Naïke Boutou	Mohammed V University & CRASTE-LF	Centre Africa Republic	Boutou27@hotmail.fr dan27051990@gmail.com
17. MVOULA-NTSOUMOU Stanislas	Mohammed V University & CRASTE-LF	Congo	mvoura_stany@yahoo.fr
18. AMORY Christine	LPP /Polytechnique/UPMC	France	christine.amory@lpp.polytechnique.fr
19. AZZOUZI Ilyasse	LPP /Polytechnique/UPMC	France	ilyasse.azzouzi@lpp.polytechnique.fr
20. FLEURY Rolland	Telecom-Bretagne	France	rolland.fleury@telecom-bretagne.eu
21. PETITDIDIER Monique	LATMOS	France	monique.petitdidier@latmos.ipsl.fr
22. PITOUT Frédéric	IRAP	France	frederic.pitout@irap.omp.eu
23. NGAYA Herbert	ASECNA/ICTP	Italy	ngahero@yahoo.fr rngaya@ictp.it
24. COULIBIYA Soro Ibrahima	Félix Houphouët Boigny University	Ivory Coast	csibrahima02@yahoo.fr
25. ZILLE Ange François	Félix Houphouët Boigny University	Ivory Coast	zilleange@gmail.com
26. DOUMBIA Vafi	Félix Houphouët Boigny University	Ivory Coast	vafid@yahoo.fr
27. TRAORE Baba Salim	Mohammed V University & CRASTE-LF	Ivory Coast	salimtraore89@yahoo.fr
28. EL AGHEL Teybe	Mohammed V University & CRASTE-LF	Mauritania	teyib27609@gmail.com
29. EI MOCTAR Levrack	Mohammed V University & CRASTE	Mauritania	moclevrak@gmail.com

30. WATT Nouma	Mohammed V University & CRASTE	Mauritania	noumawatt@gmail.com
31. AALIL Meriem	Mohammed V University & CRASTE-LF	Morocco	meriem-al@live.com
32. ABIDI Radouane	CRASTE-LF	Morocco	rabidi@emi.ac.ma ; abidi.radouane@gmail.com
33. ACHAB Mohammed	Mohammed V University Scientific Institute	Morocco	achab@israbat.ac.ma
34. ACHBOUR Ali	Mohammed V University & CRASTE	Morocco	ali.achebour@gmail.com
35. AGARRAM Chaimae	Mohammed V University & CRASTE-LF	Morocco	Chaima.agarram@gmail.com
36. AIT EL HADJ Ismail	Mohammed V University & CRASTE-LF	Morocco	ismail.1899@gmail.com
37. BAHY Lahcen	Mohammed V University EMI	Morocco	bahi@emi.ac.ma
38. BOUNHIR Aziza	Cady Ayyad University	Morocco	A.bounhir@uca.ma bounhiraz@yahoo.fr
39. BOUYA Nawal	Mohammed V University Scientific Institute	Morocco	bouyanawal12@gmail.com
40. BOUZENDAGA Salwa	Mohammed V University & CRASTE-LF	Morocco	bn.salwa@gmail.com
41. BOUZIANI Mourad	IAV Hassan II	Morocco	bouzianimourad@yahoo.fr
42. DAKIR Asmae	Mohammed V University & CRASTE-LF	Morocco	dakirasma@gmail.com
43. EL ARROUFE Siham	Mohammed V University EMI	Morocco	elarrooufsiham@gmail.com
44. EL GHAZIA Soumaia	Mohammed V University & CRASTE-LF	Morocco	souelghazia@gmail.com
45. EL YACOUBY Majda	Mohammed V University & CRASTE-LF	Morocco	majdoulina06@gmail.com
46. ELMIMOUNI Mohamed	Mohammed V University EMI	Morocco	Elmimoun2@gmail.com
47. ELOUASSITI Imane	MESSRSFC Higher Education Directorate	Morocco	i.elouassiti@enssup.gov.ma
48. EMRAN Anas	Mohammed V University Scientific Institute & CRASTE-LF	Morocco	emrananas@yahoo.fr ; emran@israbat.ac.ma
49. FAROUK Imane	Mohammed V University & CRASTE-LF	Morocco	Imaane_hafsaa@hotmail.fr
50. HABITOU Nabil	Mohammed V University & CRASTE-LF	Morocco	n.habitou@gmail.com
51. HAKDAOUI Mustapha	Hassan II University	Morocco	hakdaoui@gmail.com
52. HAKDAOUI Sofia	Hassan II University	Morocco	s.hakdaoui@gmail.com
53. HARA Fatima	CRASTE-LF	Morocco	Fatimahara1@gmail.com
54. LAHLOU Zineb	Mohammed V University & CRASTE-LF	Morocco	zineb.lahlou74@gmail.com
55. TAMTAOUI Ahmed	INPT	Morocco	tamtaoui@inpt.ac.ma
56. MLIHA Touati	Mohammed V University EMI	Morocco	mlihatouati@gmail.com mliha@emi.ac.ma
57. OUELD Ben Brahim Houda	Mohammed V University & CRASTE-LF	Morocco	houda.oueldbenbrahim@gmail.com

58. RAMI Oumaima	Mohammed V University EMI	Morocco	rami.oumaima@yahoo.com
59. RIMI Kawtar	Mohammed V University & CRASTE-LF	Morocco	kawtarimi@hotmail.com
60. SAMSAME Jamal	Mohammed V University & CRASTE-LF	Morocco	anarus.dts@gmail.com
61. TAHAYT Abdelilah	Mohammed V University Scientific Institute	Morocco	abdelilah.tahayt@gmail.com
62. TOUZANI Abderrahmane	CRASTE-LF	Morocco	touzani@emi.ac.ma
63. ABDOULKADER SALIFOU Mahamane Bachir	Mohammed V University & CRASTE-LF	Niger	bachirabdoulk@yahoo.fr
64. MANSOUR BADAMASSI Mamane Barkawi	Mohammed V University & CRASTE-LF	Niger	barkawimansour@yahoo.fr
65. GAYE IDRISSE	UCAD University	Senegal	idrissagaye3@hotmail.com
66. NDIAYE EL Hadji Amath Diodio	Mohammed V University Scientific Institute	Senegal	amathbi@hotmail.fr
67. NDIAYE Mamadou Lamine	Mohammed V University Scientific Institute	Senegal	louzemine@gmail.com
68. TENDENG Mariétou	Mohammed V University Scientific Institute	Senegal	marietou_tendeng@yahoo.fr
69. HORCHANI Nahed	Office of Transportation and Logistics	Tunisia	Horchani.nahed@gmail.com
70. MANNAI Abderrahim	Mohammed V University Scientific Institute	Tunisia	mannaiabderrahim@gmail.com abderrahimmannia@gmail.com

Conclusion







The School of "Space Weather-GNSS applications ISWI Maghreb II – GNSS", organized in Rabat, was a great success with the participation of 27 trainees and 10 instructors from 12 nationalities in the form of short training courses that were held at the EMI and CRASTE-LF for 6 days.

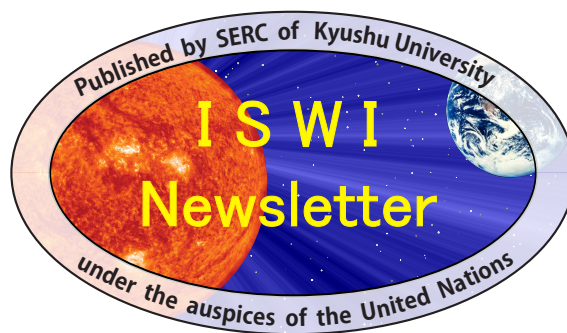
The opening ceremony of the «EO Open Day", organized in February, 18, 2015, addressed a large public and had as main objective to promote the dissemination of EO and the actions of GEO/GEOSS. It was organized in the form of a plenary session with 5 lectures. During the course of the "EO Open Day" official presentation of posters took place, accompanied by oral presentations and discussed by the trainees throughout the duration of the school. The number of participants in "EO Open Day" was 70, from 14 nationalities.

This second school of space weather-GNSS applications was addressed to all French-speaking African countries, which constituted an expansion of the network, as before it was restricted only to North African countries. Following this expansion to all countries in African French-speaking countries, it was decided to hold the third edition of this school in Ivory Coast, which will be hosted by the University of Felix HOUPHOUET BOIGNY in Abidjan in 2017 under the title 'School of Meteorology Space Maghreb-West Africa'.

VIII. BUDGET

EXPENDITURE		
Transport	Amount in MAD	Amount in USD
Plane Tickets	135 385,74	14 326,53
Urban Transport	4 000,00	423,28
Meal and Snack	Amount in MAD	Amount in USD
Open Ceremony	3 025,00	320,11
Lunch	12 870,00	1 361,90
Coffee Break	500,00	52,91
Accommodation	Amount in MAD	Amount in USD
Hotel	26 720,00	2 827,51
Club	15 000,00	1 587,30
Printing & Media	Amount in MAD	Amount in USD
Printing & Prints	5 873,00	621,48
Communications & Media	3 000,00	317,46
Organization and logistics	Amount in MAD	Amount in USD
Amphitheater et Equipped classroom	15 500,00	1640,21
Organization & Secretariat	21 963,05	2 324,13
TOTAL Expenses	243 836,79	25 802,83

Contributions of institutions	Amount in MAD	Amount in USD
	77 257,97	8 175,45
	47 250,00	5 000,00
	94 500,00	10 000,00
	11 374,23	1 203,62
	9 237,80	977,54
	4 216,78	446,22



This pdf circulated in
Vol. 7, No. 009, around
01 May 2015.