



Asia-Oceania Space Weather Alliance: AOSWA

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UN (United Nations)

ISWI (International Space
Weather Initiative) WG
2009~2011

Long-Term Sustainability WG
2011~2014

EG-C (SW)
2011~

WMO (World Meteorological Organization)

ICTSW (International
Coordinate Team for Space
Weather) 2009~

ISES

ICSU (the International Council for Science)
1931~

WDS (World Data
System)

WDC

FAGS

Regional Space Weather Week/Workshop

European Space Weather

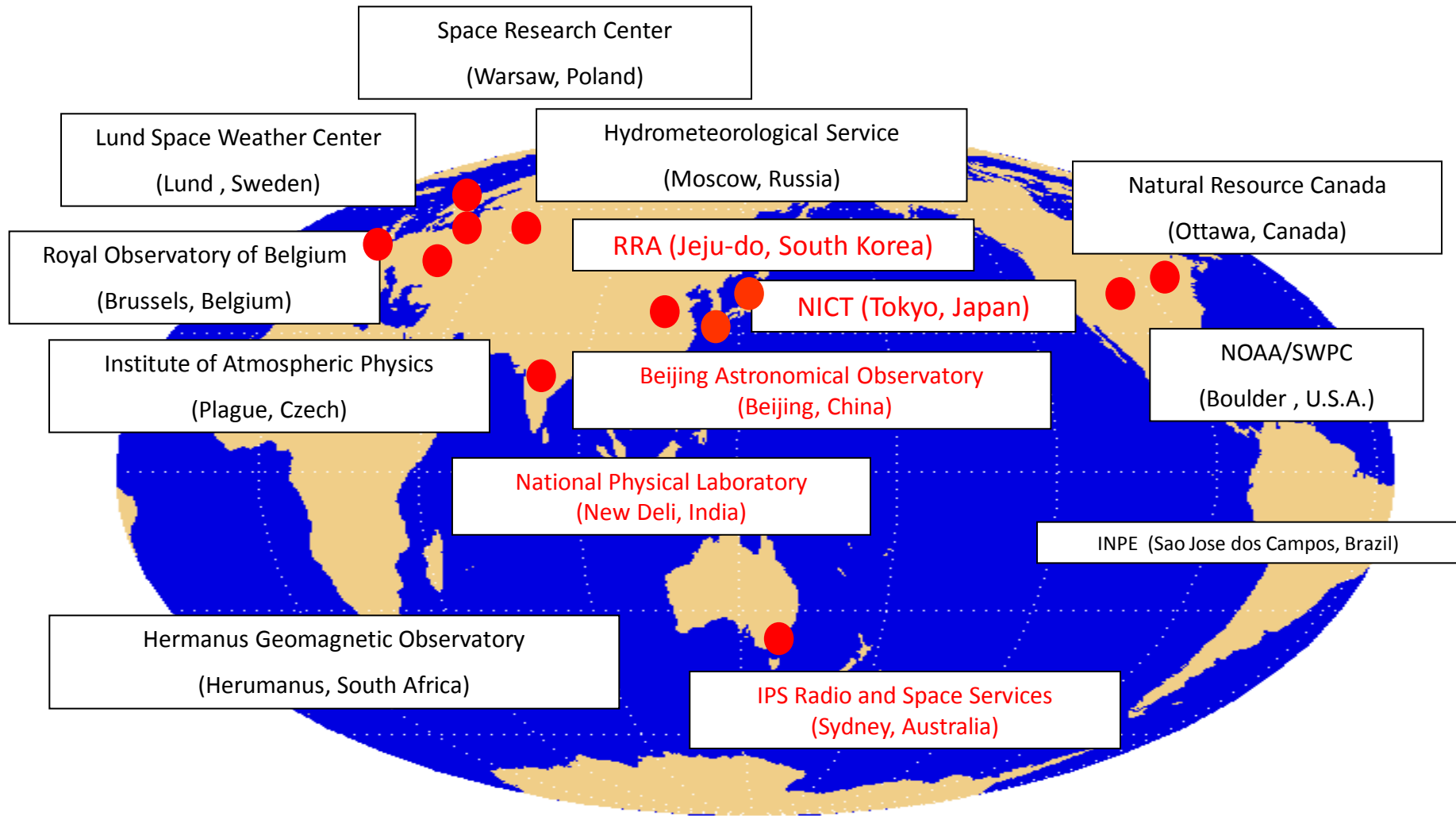
Asia-Oceania Space Weather
Alliance

Space V

NOAA

International SW (operation) organizations

Space Weather Regional Warning Centers of International Space Environment Service (ISES)



There are 5 RWCs of 14 (36%) from Asia-Oceania region!

www.fin.ucar.edu/UCARVSP/spaceweather/index.php

Space Weather Workshop

The Meeting of Science, Research, Applications, Operations, and Users

April 27-30, 2010 • Boulder, Colorado



Welcome to the Workshop's Online Registration System

The Workshop will be held April 27 - 30 at the Millennium Hotel, 1345 28th St., Boulder, CO 80302. The registration fee for the full conference is \$275.00, or \$100.00 per day.

Registration and Abstract deadline: Friday

Online Registration

Please note: you must first register before you can submit a

If you registered last year:

Space Weather Workshop @USA

sidc.oma.be/esww7/



Seventh European Space Weather Week

15-19 November, 2010 - Brugge, Belgium

The seventh European Space Weather Week will take place in Brugge, Belgium, from Monday 15th November to Friday 19th November 2010.

This meeting is being jointly organised by the Belgian Solar-Terrestrial Center of Excellence (STCE), ESA, the Space Weather Working Team and the COST ES0803 communities. The local organisation is done by the STCE and the Royal Observatory of Belgium (ROB). This event will build on the advances made during previous European Space Weather Weeks and preceding ESA Space Weather Applications Workshops.

The ESWW will again adopt the central aim of bringing together diverse communities working on all aspects of space weather from key research developments through to end user needs. Recent space weather related actions in the framework of the ESA Space Situational Awareness programme and the EC's 7th Framework Programme will be a key topic, as will targeted sessions covering spacecraft environments and effects, recent advances in space weather modelling, new space weather products and tools and new observing strategies for heliospheric phenomena.

MORE NEWS

The debate:
the space!

Space Weather Week @Europe

HOME

PROGRAM

SPECIAL EVENTS

COMMITTEES

REGISTRATION

LOCAL INFORMATION

SOCIAL PROGRAM

ESWW3

ESWW4

ESWW5

ESWW6

The 1st AOSWA Kick-off meeting 12/03/2010 Bandung - Indonesia

- How to find requirement and demand from Space Weather users?
- How to exchange observation data between countries?
 - International network for data transfer
 - Real-time data exchange and services (on Web)
 - Archived data exchange and storage (including large-scale simulation data)
- How to exchange (academic/ general/ practical/ commercial-use) information on Space Weather?

Asia-Oceania Space Weather Alliance

AOSWA meetings

2010.12 - LAPAN workshop

- The first kick-off meeting between Japan, Indonesia, Australia, India, and Malaysia

2010.01.2 - SEALION workshop @Thailand

- Indonesia, Vietnam, Taiwan, USA, Brazil, Thailand, Laos, Philippine , China and Japan
- 2nd Kick-off meeting of the AOSWA

2011.04 @NOAA, USA

- Space Weather Workshop @NOAA, USA & ISES meeting 2011
- Local meeting between A-O ISES countries

2011.08 - AOGS @Taiwan

- AOGS; “Collaborative Researches and Operations of Space Weather Forecasting in Asia-Oceania region”
- 3rd kick-off meeting of the AOSWA

2012.02 AOSWA 1st Workshop @Chiang Mai, Thailand

- 10 countries, 25 organizations, 77 participants!

AOSWA 1st Workshop

2012.08 AOGS2012 @Singapore

- Asia-Oceania Space Weather Alliance: AOSWA session
- AOSWA informal meeting

Today!

2013 AOSWA 2nd Workshop

- At Kunming, China

will be proposed by Dr. Zhanle Du

Top News Introduction Workshop AOGS Associates Event Application Education Contact Link

Associates of AOSWA

- Number of Associates 17
(10 countries)

- Number of Mailing List Member

Australia	2
China	4
India	3
Indonesia	10
Japan	27
Malaysia	4
Pakistan	1
Philippines	1
South Korea	7
Taiwan	1
Thailand	9
USA	1
Vietnam	2
Total	72

Join Us!

Associates

Australia

- [Ionospheric Prediction Service \(IPS\) / RWC Australia](#)

China

- [Center for Space Science & Applied Research \(CSSAR\)](#)
- [National Astronomical Observatories, Chinese Academy of Sciences \(NAOC\)](#)

India

- [Radio & Atmospheric Sciences Division, National Physical Laboratory \(NPL\) / RWC India](#)

Indonesia

- [National Institute of Aeronautics and Space \(LAPAN\)](#)

Japan

- [International Research Institute of Disaster Science \(IRIDeS\)](#) **New**
- [National Institute of Information and Communications Technology](#)
- [Research Institute for Sustainable Humanosphere](#)
- [Solar-Terrestrial Environment Laboratory](#)

Malaysia

- [National Space Agency of Malaysia \(ANGKASA\)](#)
- [Universiti Kebangsaan Malaysia \(UKM\)](#)

Pakistan

- [Pakistan Space & Upper Atmosphere Research Commission \(SUPARCO\)](#)

South Korea

- [Korea Astronomy and Space Science Institute](#)
- [Korean Space Weather Center \(KSWC\), National Radio Research Agency \(RRA\) / RWC Korea](#)
- [Kyung Hee University](#)

Thailand

- [International Civil Aviation Organization, Asia and Pacific Office \(ICAO APAC Office\)](#)

Vietnam

- [Institute of Geophysics, Vietnam Academy of Science and Technology](#)

AOSWA mailing list
<AOSWA@ml.nict.go.jp>

The First AOSWA Workshop

The First Asia-Oceania Space Weather Alliance Workshop

22 – 24 February 2012

Imperial Mae Ping Hotel, Chiang Mai, Thailand



The Asia-Oceania Space Weather Alliance (AOSWA) is a regional forum for the development of collaboration and promotion of the space weather activities in the Asia and Oceania region.

The AOSWA 2012 in Thailand will be held during 22 – 24 February 2012, in Chiang Mai, Thailand.

The AOSWA 2012 is regional/international workshop, providing an excellent forum for researchers and operators of space weather in Asia-Oceania and other countries to present and discuss operational collaborations, data exchanges and some competitions, which leads to the development of space weather activities in the region.

Everyone, who works in space weather fields in Asia-Oceania and other regions, is encouraged to submit a paper to the workshop. New research results and operational issues are welcome. Significant discussions are expected, especially from the view of the Asia-Oceania regional collaborations.

Possible Topics of Presentation

1. Ionospheric Variations and Their Effect on Radio Propagation
2. Geospace Variations – Causes and Effects
3. Present status and future plan of operation, service, and modeling of space weather

Important dates

1. **Abstract Submission:** 20 Dec. 2011 – 4 Jan. 2012
2. **Registration:** 20 Dec. 2011 – 16 Jan. 2012

For more information / Contact

Web site: <http://aoswa.nict.go.jp>

Email address: sw-project-office@ml.nict.go.jp



Committee Chair:

TBD, Japan

Co-Committee Chair:

TBD, Thailand

General Committee:

Dr. Ken T. Murata (NICT, Japan)
Dr. Phil Wilkinson (IPS, Australia)
Dr. Huaning Wang (NAOC, China)
Dr. Rupesh M. Das (NPL, India)
Dr. Bae Seok-Hee (RRA, Korea)

Program and Organizing Committee:

Dr. Ken T. Murata (NICT, Japan)
Dr. Dave Neudegg (IPS, Australia)
Dr. Huaning Wang (NAOC, China)
Dr. Siqing Liu (NAOC, China)
Dr. Xiaoxin Zhang (NAOC, China)
Dr. A. K. Upadhyaya (NPL, India)
Dr. Bae Seok-Hee (RRA, Korea)
Dr. Shinichi Watari (NICT, Japan)
Dr. Tsutomu Nagatsuma (NICT, Japan)
Dr. Takuya Tsugawa (NICT, Japan)
M. Shikatani (NICT, Japan)
Dr. Takashi Maruyama (NICT, Japan)

Local Organizing Committee:

Dr. Tsutomu Nagatsuma (NICT, Japan)
Dr. Masayuki Fujise (NICT, Japan)
Dr. Akachai Sang-In (CMU, Thailand)
Dr. Suttichai Premrudeepreechachan (CMU, Thailand)
Dr. Tharadol Komolmis (CMU, Thailand)
Dr. Ukrit Mankong (CMU, Thailand)

The 1st AOSWA Workshop 22-24 Feb. 2012



A screenshot of the AOSWA website. The header features the AOSWA logo (Asia-Oceania Space Weather Alliance) and a navigation menu with links: Top, Introduction, Workshop, AOSW, Associates, Event, Application, Education, Contact, and Link. The main content area is titled "The 1st AOSWA Workshop: Program" and lists the workshop dates (22-24 February, 2012) and location (Imperial Mae Ping Hotel, Chiang Mai, Thailand). A sidebar on the left lists the workshop information, including a foreword, important dates, abstract submission & registration, schedule, program overview, abstract, organization & management, conference venue, and excursion. The main content area also includes a foreword section with a photo of the General Chair, Dr. T. K. Chakraborty, and a brief description of the AOSWA alliance.

10 countries, 30 organizations, 76 participants, 41 oral presentations, 21 poster presentations, 1 tutorial lecture, an excursion, and business meeting.





Business Meeting
23th Feb. 2012

Agenda: the 1st AOSWA business meeting

- Objectives of the AOSWA
- AOSWA organizations
- AOSWA workshop policy
- 2nd AOSWA workshop and beyond
- Sessions of AOSWA workshops
- For future...

Objectives of the AOSWA

- Collaboration
 - Regional collaborations in operations and research works, including data exchange
- Capacity Building
 - Instruction of space weather operations for new comers
- Information Exchange
 - Information exchange on international, regional and national activities of space weather

- AOSWA organizations
 - AOSWA Office (Secretariat)

- NICT(-2015)

- Membership and Associates

- Dissemination at every conference?
 - Submission of a report to “Space Weather” (journal) on AOSWA and 1st workshop

- Discussion

- Mailing list (at least one address from each associate)
 - ISES/RWC meeting (annual)
 - AOGS (annual)
 - SNS?

AOSWA is open.
Industrial or governmental
organizations are welcome.
Attempt to promote in each
country.

Web/Mailing list important.

- AOSWA workshop policy

- Annual meeting? Regular? Irregular?
- Application for national/international budget
 - By each institute
 - By AOSWA

Irregular, for a while.
Attempt to be within 2 years
and eventually annual.

- 2nd AOSWA workshop and beyond

- General Committee
 - One from each RWC/ISES
 - Other members?

RWC members, for a while.
Contact with me, if you like.

- 2nd AOSWA workshop

- Organizing and Program Committee (2nd AOSWA Workshop)
- Local Organizing Committee (2nd AOSWA Workshop)
- General Chair (General Co-Chair)

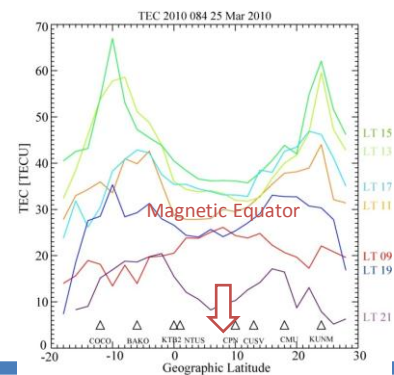
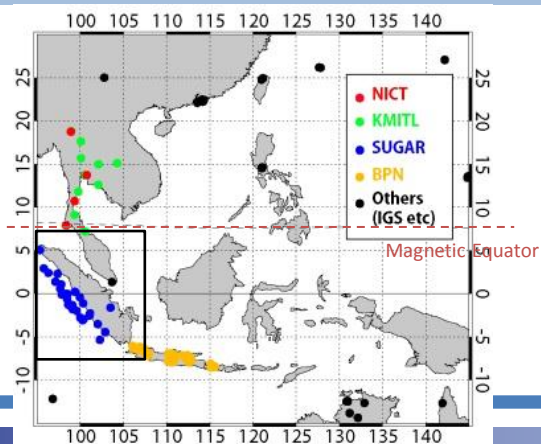
2nd workshop organized by China.
Date/Location TBD.

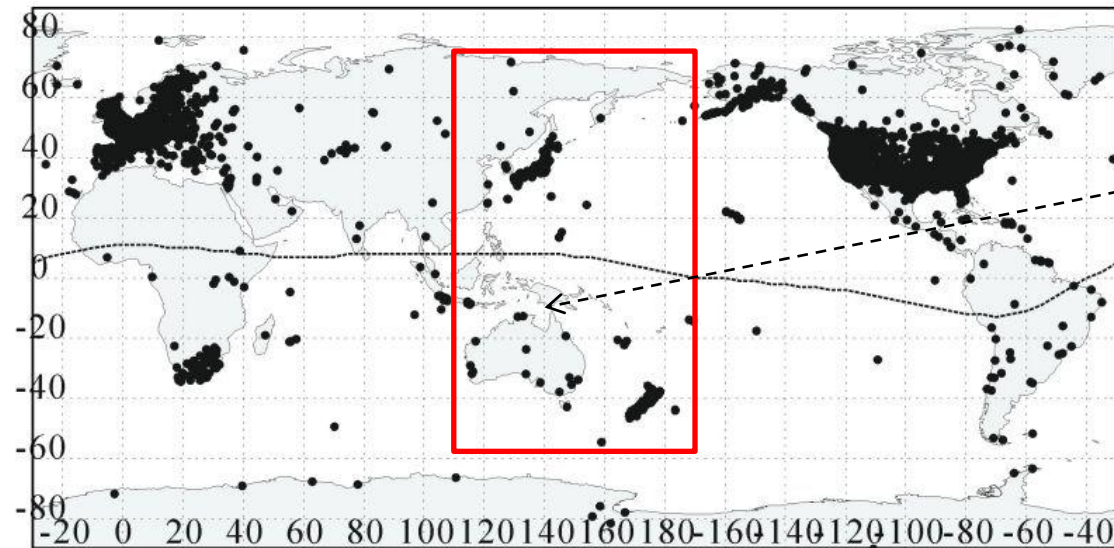
- Sessions of AOSWA workshops
 - Introduction of each institute
 - Research discussion
 - Report of operation (with technical report)
 - Tutorial session?
 - Industrial session?
 - Report of other international/regional activities?
 - Demonstration (of data and applications)?

Need to discuss more.
Eventually up to Program committee.

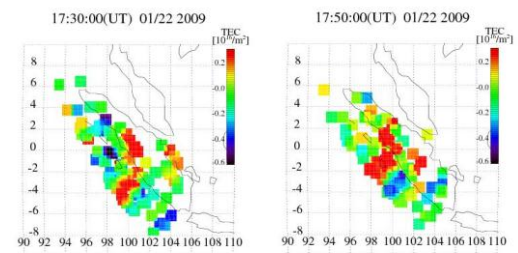
- For future...
 - Authorization of AOSWA
 - World Data System (WDS) application?

Need to discuss more.





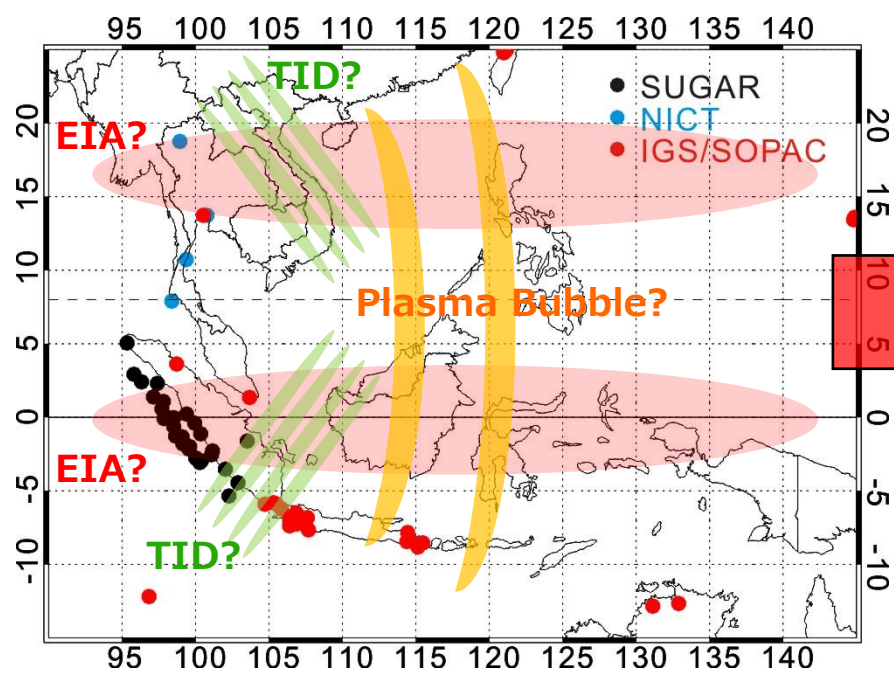
GPS receivers all over the world 5000 receiver data available online



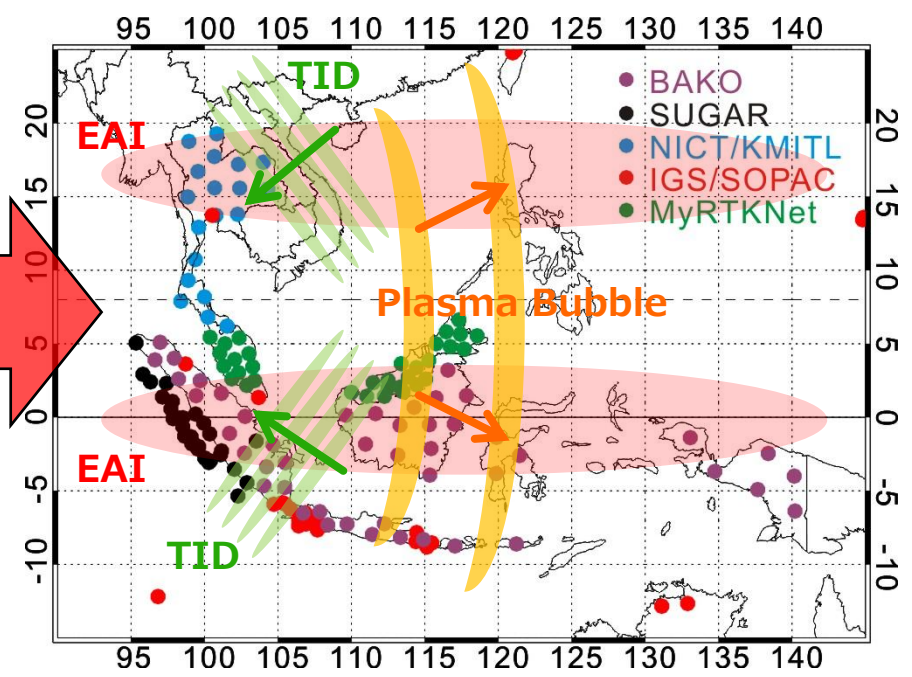
GPS-TEC at Sumatra island

Dense and wide-coverage GPS receiver network can reveal their spatial structures, propagation directions, and temporal evolutions.

Current



Near Future Plan & Vision



Thank you for your attention!
See you next in China in 2013!



1st AOSWA workshop

77 participants from 25 organizations of 10 countries

Australia, China, (India), Indonesia, Japan, Malaysia, Philippines, South Korea,
Thailand, and Vietnam