

2011 GEM-ULTIMA Forum on Ground Magnetometers

Time: 9:00 – 13:00 US Pacific Time (UT-8), Sunday, December 4, 2011

Location: City Room (3rd Floor), Westin San Francisco Market Street (50 Third St.)

Meeting Dial-in Number: (310) 794-5378 (*)

Agenda

Session A. Community Presentations on Ground Magnetometers:

Including Stations, Data, and Observations

9:00-9:05 Welcome (Peter Chi)

9:05-9:25 Determination of the true ionospheric currents and conductances from combined ground- and space-based observations (Antti Pulkkinen)

9:25-9:45 Relationship between SSW and Lunar-tidal ionospheric current enhancement obtained by MAGDAS data (Y. Yamazaki)

9:45-10:05 Intermagnet (Jeffrey Love)

10:05-10:20 Discussion on future activities at GEM

10:20-10:30 Break

Session B. ULTIMA Reports and Operation

10:30-10:35 Welcome (Kiyohumi Yumoto)

10:35-11:50 Updates from magnetometer arrays and data networks
(Both slides and verbal updates are welcome)

☐ Magnetometer Arrays:

- o AAIMNet (Brian Fraser)
- o AMBER (Endawoke Yizengaw)
- o AUTUMN (Martin Connors)
- o CARISMA (Ian Mann)
- o IMAGE (Kristian Snekvik)
- o MACCS (Mark Engebretson)
- o MAGDAS (Kiyohumi Yumoto)
- o McMAC/Falcon (Peter Chi)
- o MEASURE (Mark Moldwin)
- o SAMBA (Eftyhia Zesta)
- o SEGMA (Massimo Vellante)
- o THEMIS (Chris Russell)

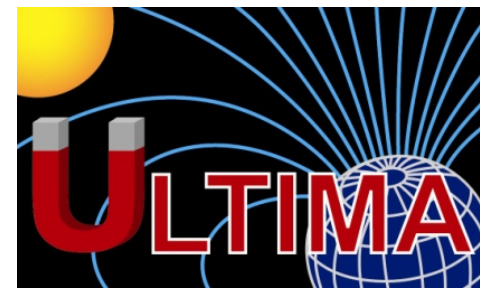
11:50-12:40 Discussion on ULTIMA Memorandum of Understanding for Use of
Geomagnetic Data

12:40-13:00 Future plan and information exchanges, etc.

(*) The first conferee to dial into the assigned number will hear destination ringing until another conferee dials into the number.

(**) If you need to contact Peter Chi by phone his cell phone number is (949) 892-0001.

Ultra Large Terrestrial Magnetometer Array



- (1) ULTIMA is an international consortium that aims at promoting collaborative research through the use of ground-based magnetic field observatories.

ULTIMA website: <http://www.serc.kyushu-u.ac.jp/ultima/ultima.html>

Afternoon session to edit the Bylaws of the new organization.



Chair; K. YUMOTO (2010-2014)

- ULTIMA Meetings
 - (1) at UCLA on Nov. 17, 2006
 - (2) at Kyoto on Oct. 24, 2007
 - (3) at Tsukuba on Nov.14, 2008
 - (4) at San Francisco on Dec. 13, 2009
 - (5) at San Francisco on Dec. 12, 2010
 - (6) at San Francisco on Dec. 4, 2011
- Bylaws signed by 10 members
 - Membership
 - Collaboration
 - Annual meetings
 - Communications

(Counterclockwise from the front left: Kiyo Yumoto, Brian Fraser, Peter Chi, Mark Moldwin, David Milling, Ian Mann, Vassilis Angelopoulos, Chris Russell; Not pictured: Ray Walker, Eftyhia Zesta, on Nov. 2006)

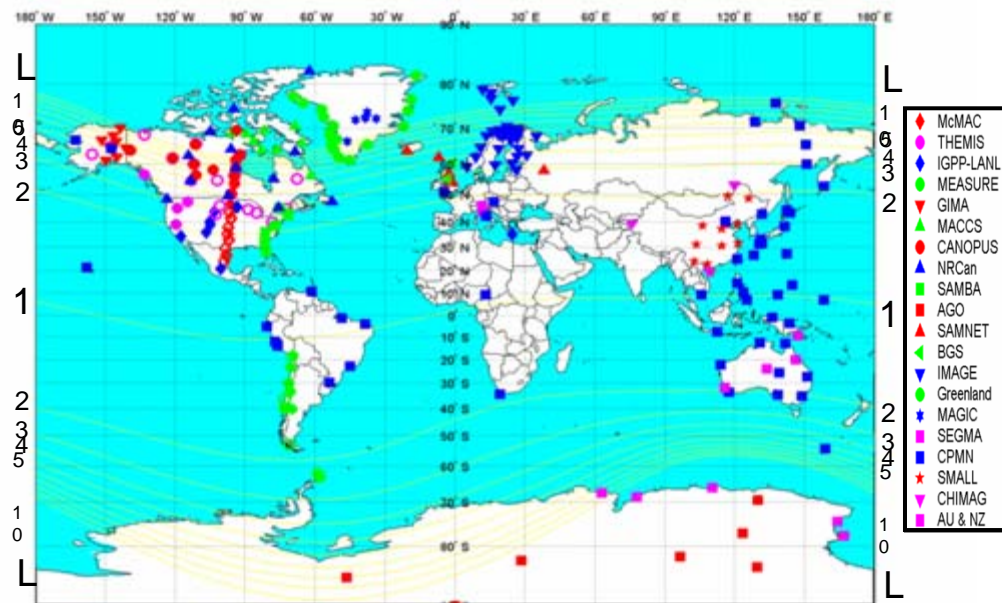
1. Purpose of ULTIMA

(Ultra Large Terrestrial Magnetometer Array)



(1) ULTIMA is an international consortium that aims at promoting collaborative research through the use of ground-based magnetic field observatories.

(2) ULTIMA is composed of individual magnetometer arrays in different countries/regions.



(3) It provides a platform for each of them to easily and efficiently collaborate with other arrays in order to expand observation coverage.

(4) It also helps identify the importance and need of individual arrays to continue operation or establish new stations in their host countries.

2. ULTIMA Bylaws: Elements

1. **Name and Purpose**
2. **Membership**
 - Regular members, Rotating members, and Observers
3. **Officers, Duties, and Terms of Office**
 - Officers: Chair, Secretary
4. **Activities:**
 - Meetings, Newsletters, E-mail Communications
5. **Instrument Operation**
6. **Data Exchange and Usage**
7. **Amendment of Bylaws**



- (a) Synergy of **global magnetometer networks**,
- (b) To facilitate **data exchange and sharing** by setting up standard procedures,
- (c) To enable analysis using data from the **global magnetometer networks**,
- (d) To enhance **communications in the ground magnetometer community**.

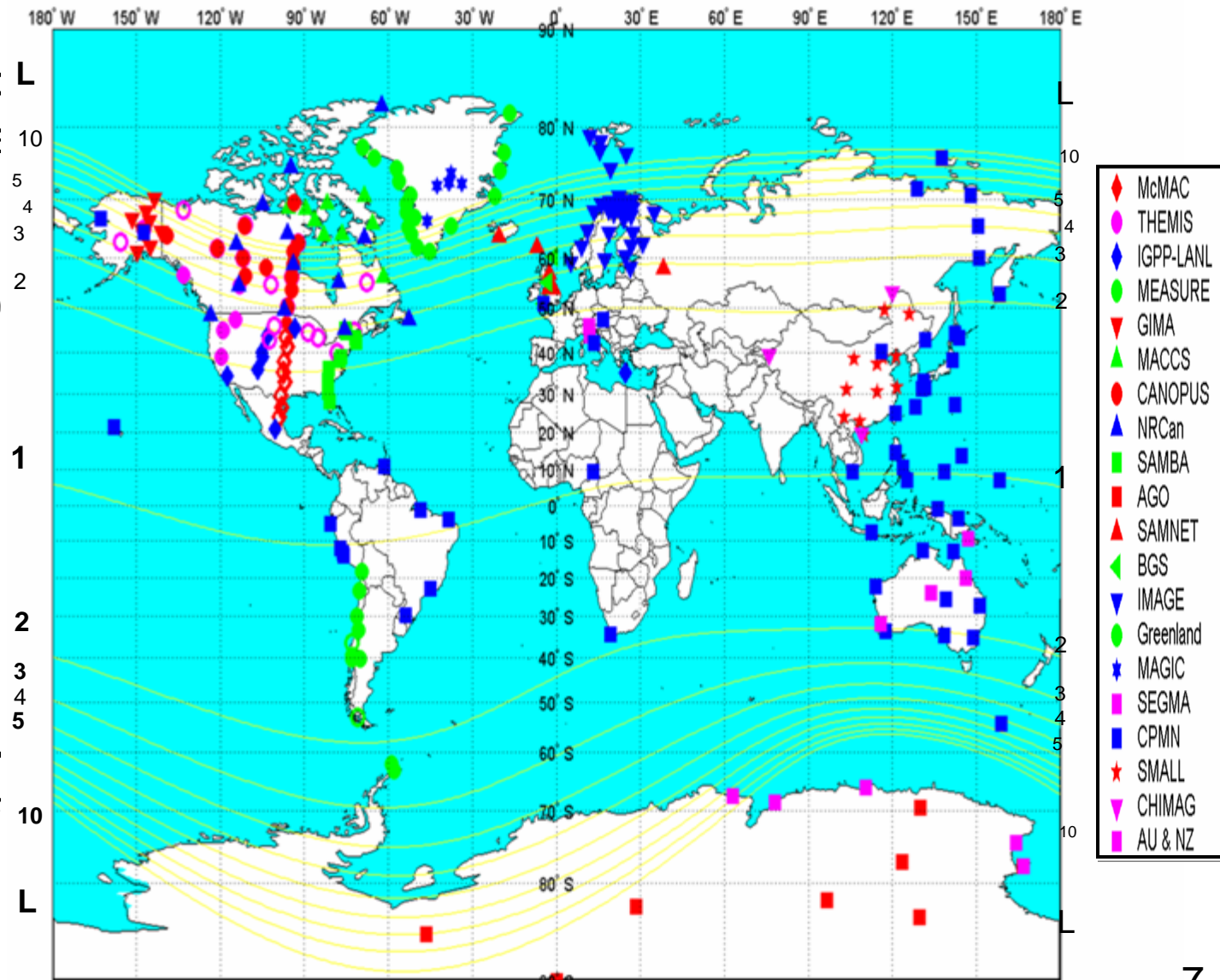
3. Present ULTIMA Members

Kiyohumi Yumoto (Chair)	MAGDAS/CPMN	Reg M
Chris Russell	IGPP/LANL, THEMIS ground mag.	Reg M
Brian Fraser	Australian Magnetometer Network	Reg M
Ian Mann	CARISMA	Reg M
Eftyhia Zesta	SAMBA	Reg M
Mark Moldwin	MEASURE	Reg M
Vassilis Angelopoulos	THEMIS ground mag.	Reg M
Mark Engebretson	MACCS and AGO	Reg M
Massimo Vellante	SEGMA	Reg M
Peter Chi (Secretary)	McMAC, Falcon	Reg M
Kristian Snekvik	IMAGE	Reg M
Endawoke Yizengaw	AMBER	Rot M

- More members in the ground magnetometer community are being invited.

4. Bottlenecks in Further Development

- (a) **Government funding** for each individual project
- (b) **Management limitation** (1 station vs. 5 stations)
- (c) **Long-term operation & maintenance** (longer than a solar cycle)
- (d) **Denser magnetometer arrays/chains** for new research areas



~250 stations (as of March 2005)