

# IAGA V-MOD Business Meeting

## Monday 2 July, Chemistry Building, Room B, 12.45-13.45

- Activity since IAGA2005 Toulouse
- IGRF plans
- World Digital Magnetic Anomaly Map
- International Standards Organisation
- Proposals for IAGA resolutions
- IAGA2009 Sopron, Hungary - proposals for symposia titles and convenors
- Election of new chair and co-chair for the Working Group

# Activity since IAGA2005 Toulouse (excl WDMAM)

- Toulouse minutes posted on V-MOD website
- website maintained by US NGDC
- special issue of the journal Earth, Planets and Space on “Modelling the Earth’s Magnetic Field” with 10 papers published in 2005
- future satellite missions...ESA Swarm
- many models being produced/papers being published
- Chair/co-chair dealt with IGRF enquiries
- reporter reviews on modelling: Terry Sabaka-modelling the magnetic field in recent times and Chris Finlay-historical field modelling...ASV040 on Saturday
- ground-based data collection

# Ground-based data collection

- on-line WDC at DMI moved to BGS at start of 2007

Master Catalog of WDC Geomagnetism Edinburgh - Mozilla Firefox

http://www.wdc.bgs.ac.uk/catalog/master.html

**World Data Centre for Geomagnetism (Edinburgh)**  
**Geomagnetic Data Master Catalogue**

Observatory list by IAGA code

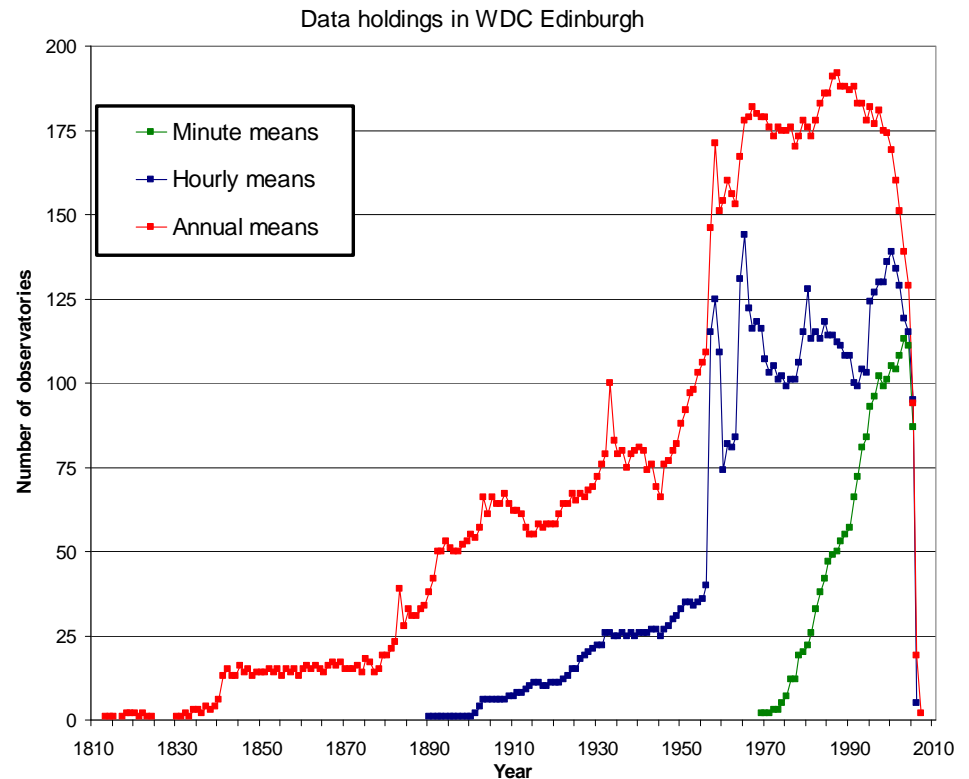
Observatory list by name

- ABN Abinger HR
- ABK Abisko HR MIN
- AAE Addis Ababa HR MIN
- AGH Agincourt HR
- ALE Alert HR MIN
- ABG Alibag HR MIN
- ASP Alice Springs HR MIN
- AAA Alma Ata HR
- ALM Almeria HR
- AMT Amatsia HR
- AML Amberley HR
- AMU Anchorage HR
- ANN Annamalainagar HR
- TAN Antananarivo HR MIN
- API Apia HR MIN
- ARC Arctowski HR MIN
- ARK Arkhangelsk HR
- ARS Arti HR
- ASC Ascension HR MIN
- ASO Aso HR
- BAG Baquio HR
- BLC Baker Lake HR MIN
- BNG Bangui HR MIN
- BGX Bar Gyora HR MIN
- BRW Barrow HR MIN
- BSL Bay St. Louis HR MIN
- BWN Bear Island HR MIN
- BVI Beijing HR
- BMT Beijing Ming Tombs HR MIN
- BEL Belok HR MIN
- BLT Beloit HR
- KGD Bereznyaki HR
- BDE Big Delta HR
- BOX Borok HR MIN
- BOU Boulder HR MIN
- BFE Brorfelde HR MIN
- BDV Budkov HR MIN
- BRT Burlington HR

Hourly values Catalogue

1-Min Values Catalogue

Abisko	(ABK)
1979	JFMAMJ JASOND
1981	JFMAMJ JASOND
1982	JFMAMJ JASOND
1983	JFMAMJ JASOND
1984	JFMAMJ JASOND
1985	JFMAMJ JASOND
1986	JFMAMJ JASOND
1987	JFMAMJ JASOND
1988	JFMAMJ JASOND
1989	JFMAMJ JASOND
1990	JFMAMJ JASOND
1991	JFMAMJ JASOND
1992	JFMAMJ JASOND
1993	JFMAMJ JASOND
1994	JFMAMJ JASOND
1995	JFMAMJ JASOND
1996	JFMAMJ JASOND
1997	JFMAMJ JASOND



# IGRF plans

- IGRF-11 will be produced in 2009
- Task Force to be decided now to
  - issue open call in Mar 2009 specifying
    - models required (DGRF2005, IGRF2010-2015) by 1 Oct 2009
    - information to be provided with coefficients, eg data used, brief description of parent model, fit to data
    - 1 model per team (individuals to commit themselves to 1 team)
  - determine final models by 1 Dec 2009 using
    - information provided
    - comparisons with independent data (difficult)
    - inter-model comparisons
    - voting
  - upload on website, publish announcements and papers

World Digital Magnetic Anomaly Map

Version 1 is ready!

Talks: Tues all day Dept of Maths

Posters: Tues 6-8 pm Rocca Paolina

Well done everyone who was involved!

# WDMAM plans

- Version 2
- Task Force to be decided now to
  - collect more data
  - work towards version 2

# IAGA V-MOD Business Meeting

## Monday 2 July, Chemistry Building, Room B, 12.45-13.45

- Activity since IAGA2005 Toulouse
- IGRF plans
- World Digital Magnetic Anomaly Map
- International Standards Organisation
- Proposals for IAGA resolutions
- IAGA2009 Sopron, Hungary - proposals for symposia titles and convenors
- Election of new chair and co-chair for the Working Group

# ISO standard for the Main field?

Background and benefits

What could be specified in the standard?

ISO Procedure



# Background

ISO passed Resolution 263:

The delegates of WG4 discussed the possibility of a NWI on the Earth main magnetic field. ISO TC20/SC14/WG4 delegates recognized that IAGA Div V working group on the main field modeling continues to be the organization that provides scientific leadership in the effort to develop an Earth main magnetic field standard.

# Who wants a norm?

- The IAGA leadership believes that an ISO norm for the main field would strengthen the IGRF
- The relevant ISO committee would welcome it because there are already established standards for the main field which are also mentioned in other norms (e.g. magnetosphere)
- Engineers who integrate main field models can state their compliance with an ISO norm
- Devices would only be compliant if they were updated every five years for the current

# Content of the norm

- Would have to be general
  - Have to accommodate IGRF, WMM and other models
  - Should not limit our freedom to choose model degree
  - Should not specify coefficient estimation methods
- What can we safely include?
  - Spherical harmonic representation
  - Definition of SH coefficients for main field and SV
  - Field component and transform equations

# Procedure

- Someone from V-MOD writes a draft norm
- The draft is first circulated in V-MOD
- Then the IAGA-Div-V leadership can comment
- Submitted to ISO
- Circulated to member countries for comment
- Valid for 5 years, up for renewal/change

# Pro/Cons

Con:

- Potential waste of time

Pro:

- If WE write the standard, it will not restrict field modelers
- Someone outside of IAGA may submit a badly drafted standard, potentially causing lots of problems for IAGA

Kent Tobisko (US representative on ISO) has promised to help

- With the paper work
- Would do all of the ISO committee work

# New V-Mod officers

Chair: Susan MacMillan

Vice-Chair: Stefan  
Maus

Suggested new:

Chair: Stefan Maus

Vice-Chair: Chris Finlay  
(Zurich)

# IGRF-11 task force

Suggested chair: Chris  
Finlay

Executive:

Nils Olsen

Frank Lowes

Sue McLean/Stefan Maus

Vincent Lesur

Susan MacMillan

Erwan Thebault

(Tanya)

Aude C (EOPGS)

Terry Sabaka

# WDMAM task force

	2003-2007	2007-2011
GTK	Korhonen (Chair)	Korhonen (Chair)
NASA	Purucker	Purucker (V-Chair)
GFZ	Mandea	Lesur
NOAA	McLean/Maus	McLean/Maus
IPGP		Thebault
Russia	Tamara L	Tamara L
	Reeves (v-Chair)	Reeves
	Ravat	Hamoudi (Algeria)
	Milligan	Milligan
	Ishihara	Ishihara
ADAMAP	Ghidella	Luis Gaya Piquet
Canada		M. Pilkington



## Sessions 2009

- Current methods of Modelling, with V-OBS(Finlay, Lesur, Sabaka)
- Decade (Olsen and Purucker)
- Jerks , with DIV-I(Mandea and Holme)
- WDMAM (Thebault, Korhonen)