British Geophysical Association, New Advances in Geophysics Meeting 2010

Magma Emplacement and Storage in the Earth's Crust

Day 1: Thursday 11 February 2010

09:30 Registration/Coffee

10:00 Welcome and Introduction
Tim Wright, University of Leeds

10:05 KEYNOTE: Geophysical evidence for current magma accumulation in the continental crust: Examples from the Andes.
Matt E. Pritchard, Cornell University

10:45 Using InSAR to Map and Study Deformation of Aleutian Volcanoes
Zhong Lu, United States Geological Survey

11:15 Erupting silicic bathololiths
Joachim Gottsmann, University of Bristol

11:45 Fifteen years of observation of the Montserrat magmatic system
Geoff Wadge, University of Reading

12:15 LUNCH & POSTERS

13:15 KEYNOTE: Geophysical Constraints on Magma Emplacement and Storage at Mid-Ocean Ridges
William Wilcock, University of Washington

14:00 The petrological record of magmatic processes in the Icelandic crust
John Maclellan, University of Cambridge

14:30 Seismicity beneath the Askja volcanic system, central Iceland, indicating multiple centres of melt injection from the mantle in a single spreading segment.
Janet Key, University of Cambridge

15:00 Anatomy of dyke intrusion at 15–18 km depth beneath Upptyppingar, north Iceland
Bob White, University of Cambridge

15:30 COFFEE & POSTERS
16:00  **Eruptive episodes: Interplay between magma movements and storage in shallow elastic crust and at deeper ductile levels**  
Freysteinn Sigmundsson, *University of Iceland*

16:30  **Evidence of melt in the crust and mantle beneath the East African Rift system**  
James Hammond, *University of Bristol*

17:00  **Locating magma in Afar, Ethiopia – Magnetotelluric studies**  
Kathy Whaler, *University of Edinburgh*

17:30  **Geodesy reveals deep lateral magma flow and complex magma plumbing in Ethiopian spreading centre**  
Tim Wright, *University of Leeds*

18:00  **POSTER SESSION AND WINE RECEPTION**

19:30  **CLOSE**

20:00  Conference Dinner – tba

**Day 2: Friday 12 February 2010**

09:00  Registration

09:30  **KEYNOTE: Magma emplacement and storage at ocean ridges**  
Charles Langmuir, *Harvard University*

10:15  **Basalt Storage and Differentiation in the Lower Crust and its Relationship to the Seismic Moho**  
Jon Blundy, *University of Bristol*

10:45  **COFFEE**

11:15  **KEYNOTE: Controls of the width of a propagating dyke**  
Claude Jaupart, *Institut de Physique du Globe de Paris*

12:00  **Lateral transport of magma in long, wide dykes: the Palaeogene dykes of northern England**  
Joe Cann, *University of Leeds*

12:30  **A simple analytical solution for the coupling of magma chambers and dykes**  
Eleonora Rivalta, *University of Leeds*

13:00  **LUNCH**

14:00  **Thermal implications of magma emplacement geometries and emplacement rates**  
Catherine Annen, *University of Bristol*
14:30  Lateral emplacement of granitic magma: laccolithic as opposed to cauldron subsidence in the Palaeogene Mourne granites, N. Ireland  
Carl Stevenson, University of Birmingham

14:55  Cone sheet emplacement in sub-volcanic systems: a case study from Ardnamurchan, NW Scotland  
Craig Magee, University of Birmingham

15:20  Closing Remarks  
Jon Blundy, University of Bristol

15:30  COFFEE/CLOSE

POSTER SESSION (Day 1)

InSAR Observations of Magmatic Processes in the Eastern Branch of the East African Rift  
Juliet Biggs, University of Oxford

Imaging magmatic intrusion into the upper and lower crust beneath the Ethiopian rift using receiver functions  
David Cornwell, University of Leeds

Two-Dimensional Numerical Heat Flow Modelling from Multiple Dyke Injection Events in Afar, Ethiopia.  
Kat Daniels, University of Bristol

Magma ascent by gravitational instability constrained from field observations in the San Rafael desert, Colorado Plateau, Utah  
Mikel Diez, University of Bristol

InSAR observations of the Central American Volcanic Arc between 2006-2009  
Susanna Ebmeier, University of Oxford

Resurfacing a rift: recent basaltic volcanism in Afar  
David Ferguson, University of Oxford

Crystal sedimentation: analogue and numerical modelling  
Mélanie Forien, Frankfurt Universität

Emplacement of crystal-rich magmas: insights from the Snap Lake kimberlite intrusion (NW Territories, Canada)  
Thomas Gernon, University of Southampton
Crustal structure and melt supply variability in the presence of oceanic core complexes: the Mid-Atlantic Ridge at 13°N
Christopher Mallows, University of Durham

Melt movement along a dyke at Upptypingar, north-east Iceland
Hilary R. Martens, University of Cambridge

Probing the interior of an active volcano: 3D seismic tomography at Montserrat
Michele Paulatto, University of Southampton

The emplacement of saucer-shaped sills: the role of host rock fluidisation and the formation of magma fingers
Nick Schofield, University of Birmingham

Imaging the magma chamber under Krafla, NE Iceland
Jon Tarasewicz, University of Cambridge