

# 2015 Workshop on the **Physics of volcanoes** -Day 1

## **23. February**

09:15 Opening

### **Session 1: Intrusions and unrest (alphabetic order)**

- 09:30 Corbi : Caldera collapse unloading volcanoes: the textbook case of Fernandina, Galápagos
- 09:50 De Zeeuw van Dalfsen : A geomorphological study of the nested summit craters of Láscar volcano.
- 10:10 Farias : Field observations and Numerical Simulations on the influence of Tectonic Earthquakes in Volcanic Activity
- 10:30 Holohan : Effects of Host-rock Fracturing on Deflation-related Volcano Deformation Sources
- 10:50 Klügel : Lateral magma transport in the lower oceanic crust: the 2011-12 submarine eruption at El Hierro (Canary Islands)

### **Coffee and poster break (11:10-11:30)**

- 11:30 Maccaferri : The 2000 Miyakejima dike injection: insight on the mechanisms governing the dike arrest
- 11:50 Nikkhoo : Implications of geodetic data and seismic tomography inversions on Lazufre volcanic region
- 12:10 Papale : The physics of large-scale magma convection and mixing
- 12:30 Passarelli : Stress changes, focal mechanisms and earthquake scaling laws for the 2000 dike at Miyakejima (Japan)
- 12:50 Ritter : Mantle Processes Related to the Eifel Volcanism
- 13:10 Jousset : Evidences for remote triggering: examples from volcanic and sedimentary sites.

### **Lunch and poster break (13:30-14:30)**

- 14:30 Rivalta : Mechanical models of dike propagation: schools of thought.
- 14:50 Schierjott : A numerical and analogue study of dike ascent in continental rift zones
- 15:10 von der Lieth : Modelling deformation associated with strombolian activity
- 15:30 Wiesmaier : Magma mixing mechanisms: bubbles
- 15:50 Zimmer : Thermal and Geochemical Monitoring at Lastarria and Láscar Volcanoes, Chile

### **Coffee, beer and poster break (16:10-17:00)**

- 17:00 Discussion table: volcanology in Germany, facts and visions

# 2015 Workshop on the **Physics of volcanoes** -Day 2

## **24. February**

### **Session 2: Eruptions and impact (alphabetic order reverse)**

- 09:00 Zaksek : Photogrammetric retrieval of volcanic ash cloud top height from SEVIRI and MODIS during 2010 Eyjafjallajökull eruption
- 09:20 Weber : Airborne analysis of the eruption plumes of Eyjafjallajökull, Grimsvötn and Bardarbunga, Iceland, from 2010 to 2014
- 09:40 Warnach : Retrieval of BrO at Tungurahua volcano and the NOVAC network
- 10:00 Walter : Volcapse - observing volcanoes from combined satellite radar and camera time-lapse imaging methods
- 10:20 Tirpitz : Optical In-Situ-Sulfurdioxide-Sensors as an Alternative to Conventional Electrochemical Instruments
- 10:40 Scolamacchia : Exploring the binding action of S in aggregates of lapilli and ash.

### **Coffee and poster break (11:00-11:30)**

- 11:30 Scharff : Monitoring the recent unrest at Volcán de Colima, Mexico, with a Doppler radar
- 11:50 Salzer : Co-seismic dome deformation at Mount St. Helens constrained from optical camera imagery
- 12:10 Rocholl : Precipitation of Apatite from Phreatic Eruption Clouds and its Role in the Formation of Composite Accretionary Lapilli
- 12:30 Kuhn : Quantitative imaging of volcanic plumes The SO<sub>2</sub>-camera and beyond
- 12:50 Kueppers : Can we calibrate volcanoes?
- 13:10 Richter : Small-scale Topographic Changes at Active Volcanoes from Terrestrial Laser Scanner Data and InSAR

### **Lunch and poster break (13:30-14:30)**

- 14:30 Klein : Improved determination of volcanic SO<sub>2</sub> emission rates from SO<sub>2</sub> camera images
- 14:50 Hansteen : The added value of continuous gas flux measurements for volcano monitoring
- 15:10 Fernandez : Acoustic signature of an impulsively starting jet
- 15:30 Dinger : BrO/SO<sub>2</sub> emission ratios from four active "NOVAC" volcanoes
- 15:50 Cimarelli : Experimental Generation of Volcanic Lightning

### **Coffee, beer and poster break (16:10-17:00)**

- 16:45 Discussion table: Where is the 2nd workshop 2016 taking place?
- 17:00 End of 1st Physics of Volcanoes Workshop

## Poster presentations

- 1 Allahbakhshi : Long-term effects of rifting-induced stress changes on the earthquake statistics in the Tjörnes Fracture Zone (North Iceland)
- 2 Bigge : Radiative Transfer in Volcanic Plumes
- 3 Cigala : Shock-tube experiments to investigate volcanic jet dynamics
- 4 Cimarelli : Multi-parametric observation of volcanic lightning produced by ash-rich plumes at Sakurajima volcano, Japan.
- 5 Darmawan : Merapi's lava dome splitting explosion on 18 November 2013 observed by lidar and digital image correlation analysis.
- 6 Gaete : Volcanoes triggered by dynamic and static stress changes in Chile: Observations, stress field changes and physical modelling
- 7 Heimann : Seismological constraints on the depth and shape of an active mid-crustal plutonic intrusion beneath the Lazufre volcanic region (Chile-Argentina)
- 8 Holohan : Stress Evolution during Caldera Collapse
- 9 Jacobsohn : Building a new SO2 camera system
- 10 Levy : The 2014 Fogo eruption, Cape Verde Islands, observed with TerraSAR-X InSAR
- 11 Maccaferri : The stress shadow induced by the 1975-1984 Krafla rifting episode.
- 12 Müller : Changes in topography at the Holorhaun fissure and lavaflow determined by using nearfield and airborne photogrammetry
- 13 Müller : Volcanic ash aggregation in the lab - can we mimic natural processes
- 14 Passarelli : Dike intrusions during rifting episodes obey scaling relationships similar to earthquakes
- 15 Plank : Evolution of the Holuhraun fissure eruption (Bardarbunga Volcano, Iceland 2014) monitored by multi-sensor and multi-temporal remote sensing data
- 16 Witt : Dynamics of the 2014 Holuhraun fissure eruption analysed by video monitoring system
- 17 Woith : BubbleLab: Laboratory experiments to understand pressure transients in natural fluid regimes
- 18 Palo : The Long-Period seismicity during the volcanic crises: examples from case studies