

# Atlantic Conference on EYJAFJALLAJÖKULL AND AVIATION

Keflavik Airport, Iceland, September 15-16, 2010

**Organized by the Keilir Aviation Academy in cooperation with the President of Iceland, The Icelandic Ministry of Transport, the Civil Aviation Administration, ISAVIA, the Meteorological Office, Institute of Earth Sciences, Icelandair, ICAO, IATA, ATA, AEA, IFALPA, CANSO, EUROCONTROL and the Embassies of the US and Russia in Iceland.**

**Patron of the Conference: H.E. Ólafur Ragnar Grímsson, President of Iceland**

**Guest of Honour and Invited Speaker; Capt. Eric Moody.**

*The captain who glided his B747 to safety out of volcanic ash over Java on 24 June 1982.*





Siggi Stefniðsson (siggi@stefniðsson.com)

## CONFERENCE ORGANISER

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## CONFERENCE ORGANIZING COMMITTEE

**Mr. Hjálmar Árnason**, Managing Director at Keilir, Chairman  
**Mr. Halldór Zoega**, Financial Director at Keilir  
**Capt. Kári Kárasen**, Head of Keilir Aviation Academy  
**Capt. Arnar M. Baldvinsson**, Chief Flight Teacher, Keilir Aviation Academy  
**Capt. Guðmundur T. Sigurðsson**, Chief Ground Instructor, Keilir Aviation Academy  
**Mr. Jóhannes Tómasson**, Press Secretary, Ministry of Transport

## CONFERENCE ADVISORY BOARD

**Dr. Thorgeir Palsson**  
Professor University of Reykjavik, former Director  
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Director Icelandic Civil Aviation Administration  
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**Dr. Freysteinn Sigmundsson**  
Nordic Volcanological Center, Institute of Earth  
Sciences, University of Iceland  
**Ms. Pushpa Kathir**  
Embassy Science Fellow, US Embassy in Iceland  
**Capt. Eric Moody**  
British Airways (Ret.)



**An Invitation  
from  
the President of Iceland  
Ólafur Ragnar Grímsson**

In the middle of the Atlantic, at the crossroads of European weather systems, the youngest country on Earth has recently reminded the world how, through a combination of a volcanic eruption and enormous quantities of glacial ice, the forces of nature can produce huge ash clouds, impacting on nations far away, even disrupting for a while the travel plans of millions in different continents. For the first time since modern aviation became the pillar of international transport, a volcanic eruption has reminded all of us that our technological and economic systems must take into account the will of nature and how the Earth is capable of ultimate surprises.

Aviation stakeholders must now understand and adapt to this kind of potential disruption. Eyjafjallajökull has become a symbol of this situation, and thus it is appropriate to invite aviation leaders, experts and policy-makers to assemble at the recently established Keilir Aviation Academy at Keflavík International Airport, to discuss the lessons learned and how technology, rules, regulations and aviation training must be improved.

For us in Iceland it is important to make a contribution of this type to the constructive international dialogue that is now needed. Therefore we invite you all to participate in the Atlantic Conference on Eyjafjallajökull and Aviation. It will certainly be a worthwhile experience.

A handwritten signature in blue ink, reading 'Ólafur Ragnar Grímsson'.



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## First Day of Conference Wednesday, 15 September 2010

**08.15 Registration opens and refreshment coffee**

**09.00 Conference Opening Ceremony**

### Welcome and Introduction of the Chairman of the Conference Dr. Thorgeir Palsson.

*Mr. Hjalmar Arnason, Director of Keilir Atlantic Center of Excellence.*

### Introduction of the Keynote Speakers

*Dr. Thorgeir Palsson, Professor University of Reykjavik and Conference Chairman.*

### Volcanic eruptions worldwide and what happened in Eyjafjallajökull in 2010

*Dr. Haraldur Sigurdsson, Volcanologist and Professor Emeritus of Oceanography.*

### The EU's response to the Ash crisis

*Mr. Daniel Calleja-Crespo, Director Air Transport, European Commission.*

**09.30 FIRST SESSION – Eyjafjallajökull and Aviation – What happened and what needs to be done?**

*Chairman: Dr. Thorgeir Palsson, Professor University of Reykjavik.*

**ICAO** *Ms. Nancy Graham, Director ICAO Air Navigation Bureau.*

**IATA** *Mr. Gunther Matschnigg, Senior Vice President for Safety, Operations and Infrastructure.*

**AEA** *Mr. Ulrich Schulte-Strathaus, Secretary General.*

**EUROCONTROL** *Mr. Bo Redeborn, Director Cooperative Network Design.*

**ECAC** *Mr. L. Fonseca de Almeida, President*

**GERMANY** *Mr. Klaus Sturm, Head of Department Aeronautical Meteorology, German National Meteorological Service.*

**FLIGHT International** *Mr. David Learmount, Safety Editor.*

Each speaker has 5 minutes to outline their view on the impact of the volcanic ash from Eyjafjallajökull on the European air transport network and what needs to be done to alleviate these effects in the future. After these presentations, there will be a 30-minutes discussion period including questions from the audience.



**10.50 Morning Coffee Break** *Sponsored by*

**11.15 SECOND SESSION – Eyjafjallajökull and Aviation – The Impact on European and Global Air Transport**  
*Chairman: Mr. Graham Lake, Director General CANSO*

**EUROPEAN COMMISSION** *Mr. Peter Sorensen, Policy Officer, Single Sky and modernisation of air traffic control, DG Move*

**EASA** *Mr. John Vincent, Head of Safety Analysis and Research Department Transport.*

**SWEDEN** *Mr. Henrik Littorin, Head of Public Affairs, Swedavia.*

**USA** *Mr. Tom Hendricks, ATA Vice President - Operations and Safety.*

**ICELAND** *Mr. Birkir Holm Gudnason, CEO Icelandair.*

**ICELAND** *Mr. Asgeir Palsson, Director of ANS, ISAVIA and*

*Chairman NAT/SPG.*

**RUSSIA** *Mr. Andrey Shnyrev, Deputy Director of the Department for the National Civil Aviation Policy, Ministry of Transport of the Russian Federation: „Development of the draft agreement between the Russian Federation and EU regarding the land transportations in the case of air traffic disruptions“*

Each speaker has 5 minutes to outline their view on the impact of the volcanic ash from Eyjafjallajökull on the European air transport industry and what needs to be done to alleviate these effects in the future. After these presentations, there will be a 30-minutes discussion period including questions from the audience.

**12.30 Presentation of Poster Sessions**

*Chairman: Dr. Freysteinn Sigmundsson, Nordic Volcanological Centre, Institute of Earth Sciences, University of Iceland.*

**12.40 Lunch** *Sponsored by*



Invited Guest of Honour and Speaker:

*Captain Eric Moody. British Airways (Ret.). The captain who glided his B747 to safety out of volcanic ash above Java on 24 June 1982.*

Poster Session of Scientific Papers and Aviation Technologies. Coffee refreshment.

**14.00 THIRD SESSION – Eyjafjallajökull and Aviation – the Global Economic and Business Dimension**

*Chairman: Mr. Jon Sigurdsson, Assistant Professor of Business Administration, University of Reykjavik.*

### The importance of the aviation industry for the global economy

*Mr. Stephen Perkins, Head of Centre Joint Transport Research Centre of the OECD and the International Transport Forum.*

### The importance of air transport for the global tourism

*Mr. Geoffrey Lipmann, Special Adviser to the UNWTO Secretary-General United Nations World Tourism Organization.*

Each speaker has 12 minutes to outline their view on the impact of the volcanic ash from Eyjafjallajökull on the global air transport and tourism. After these presentations, there will be a 10-minutes discussion period including questions from the audience.

**14.35 FOURTH SESSION – Eyjafjallajökull and Aviation – Safety Aspects**

*Chairman: Dr. Petur K. Maack, Director General ICAO*

### What are the safety regulations regarding volcanic ash and why?

### The International Airways Volcano Watch System

*Mr. Karsten Theil, Regional Director of ICAO's European and North Atlantic Office*

### Flight operations in Iceland during the Eyjafjallajökull volcanic eruption in 2010

*Mr. Reynir Sigurdsson, Director ANS and Aerodromes, Iceland Civil Aviation Administration*

# CONFERENCE PROGRAM

## What are the current UK volcanic ash safety regulations?

Mr. Padhraic Kelleher, Head of the Airworthiness Division, UK Civil Aviation Authority.

## What do we do in the US, South America and the Caribbean?

Mr. David Strand, American Airlines, the airline representative to the ICAO working group on volcanic ash.

## Putting the Volcanic Ash Hazard in Perspective Delta Air Lines & London VAAC warning information during Iceland volcano Eyjafjallajökull eruption 14 April – May 2010

Mr. Tom Fahey, Mgr. Meteorology and Radio, Delta Airlines

## Lessons learned from the Mt. Redoubt volcanic eruption in 2009 and processes used to avoid flight operations in volcanic ash

Captain Robert (Bob) Graves, Director of flight operations Alaska Airlines.

## Coordinated monitoring of ash eruptions in the Russian Far East and Alaska

Dr. John Eichelberger, US Geological Survey and Academician Evgeny Gordeev, Russian Academy of Sciences and Director Institute of Volcanology and Seismology, FEB RAS.

## IFALPA's position paper submitted to ICAO's International Volcanic Ash Task Force

Capt. Carlos Garcia Royo, ATPL First officer, A340 Iberia, MSc. Geologist.

## IFALDA and ICEALDA position paper; Safety of a flight through flight planning and flight watching

Karl Fridriksson, President of ICEALDA and Vice President of IFALDA

Each speaker has 10 minutes to outline their view on the impact of the volcanic ash from Eyjafjallajökull on the European air transport network and aviation safety and what needs to be done to alleviate these effects in the future. After these presentations, there will be a 25-minutes discussion period including questions from the audience.

## 16.15 Afternoon Coffee Break

Sponsored by



Poster Session of Scientific Papers and Aviation Technologies.

## 16.40 FIFTH SESSION – Volcanic Ash and Aviation – Technical Dimensions

Chairman: Dr. Jens Bjarnason, VP Technical Services, Icelandair.

### A jet aircraft manufacturer's perspective of volcanic ash

Mr. Douglas Kihm, Boeing Technical Fellow, Certification & ETOPS, Boeing Commercial Airplanes.

### Volcanic ashes: view of an aircraft manufacturer

Capt. Manfred Birnfeld, Senior Flight Test Engineer at Airbus Flight Test Division.

### The impact of volcanic ash on aircraft engines

Mr. Patrick Emmott, Senior Vice President Technical Service, Rolls-Royce.

## The impact of volcanic ash on aircraft engines and safety risks

Eng. Jacques Renvier, Senior Vice President, System engineering and integration, Snecma / CFM partner.

Each speaker has 10 minutes to outline their view on the impact of the volcanic ash from Eyjafjallajökull on the aircraft and aircraft engines and what development work is in progress to alleviate these effects of volcanic ash in the future. After these presentations, there will be a 20-minutes discussion period including questions from the audience.

## 17.40 Closing of First Day of Conference

Dr. Thorgeir Palsson, Professor University of Reykjavik and Conference Chairman.

## 19.30

**Conference Viking Dinner**, sponsored by ISAVIA and the Russian Embassy in Iceland.



**The Viking Village**, Hafnarfjörður (casual clothes)

Vikings and Valkyries will serve traditional Icelandic food in old fashioned Viking-style trays.





## Second Day of Conference Thursday, 16 September 2010

09.00

### SIXTH SESSION - Eyjafjallajökull - Scientific Dimension – Volcanic Eruptions

Chairman: Dr. Haraldur Sigurdsson, Volcanologist and Prof. Emeritus, University of Rhode Island, USA.

#### Probabilistic assessment of volcanic risks

Dr. William Aspinall, Geophysicist and Professor University of Bristol, UK.

#### Unrest in Eyjafjallajökull and other volcanoes in Iceland

Dr. Kristin Vogfjord, Senior scientist, Icelandic Meteorological Office.

#### What happened in Eyjafjallajökull in 2010?

Role of crustal deformation studies to infer magma movements

Dr. Freysteinn Sigmundsson, Nordic Volcanological Centre, Institute of Earth Sciences, University of Iceland

#### The Eyjafjallajökull eruption 2010

Course of events, intensity and magnitude

Dr. Armann Hoskuldsson, Senior research scientist, Institute of Earth Sciences, University of Iceland.

#### Dispersal of volcanic ash and models

Dr. Constanza Bonadonna, Volcanologist and Prof. University of Geneva, Switzerland

#### Monitoring of volcanic ash clouds, forecasting of cloud movement and the new AVOID - Airborne Volcanic Object Identifier and Detector

Dr. Fred Prata, Senior scientist, NILU, Norway

Each speaker has 15 minutes to outline their view on the global risk of volcanic eruptions and available technologies for monitoring and forecasting volcanic eruptions and what development work is in progress for improving these technologies. After these presentations, there will be a 15-minutes discussion period including questions from the audience.

10.30

### Morning Coffee Break *Sponsored by*

Poster Session of Scientific Papers and Aviation Technologies.

11.00

### SEVENTH SESSION– Eyjafjallajökull – Volcanic Ash Detection and Cloud Forecasting

Chairman: Dr. Arni Snorrason, Director of IMO- Icelandic Meteorological Office

#### Monitoring and detection of Eyjafjallajökull and volcanic ash

Dr. Sigrun Karlsdottir, Director of natural hazards, Icelandic Meteorological Office

#### Volcanic ash forecasting and detection and contacts with IMO in Iceland

Mr. Ian Lisk, Meteorologist, WMO Manager, Met Office, UK

#### Airborne measurement of the Eyjafjallajökull volcano ash plume in April and May 2010 over Europe

Prof. Dr. Ulrich Schumann, Director DLR

#### Airborne measurements of the volcanic ash in the plume from Eyjafjallajökull

Dr. Jónas Eliasson, Professor Emeritus, University of Iceland

#### High resolution atmospheric simulations, modelling and forecasting of drifting of volcanic ash clouds.

Dr. Haraldur Ólafsson, Professor in atmospheric sciences, Dpt. of Physics, University of Iceland and Icelandic Meteorological Office

#### Joint NASA-NOAA project to use SO<sub>2</sub> to help detecting drifting volcanic ash clouds globally and in near-real time

Dr. Nickolay A. Krotkov, Senior Research Scientist GEST/UMBC and NASA/GSFC

#### Monitoring volcanic ash from space. Outcome of the ESA-EUMETSAT on the 14 April to 23 May 2010 eruption at the Eyjafjallajökull volcano, South Iceland

Dr. Claus Zehner, Earth Observation Applications Engineer, ESA/ESRIN and Dr. Fred Prata, Senior scientist, NILU, Norway and member of ESA-EUMETSAT workgroup.

#### Using Su - 30 aircraft for researching and impacting volcanic clouds for removal of ash with a new Russian technology

Mr. Anatoly Kvochur, Senior Designer of the Gromov Flight Research Institute, Russia.

Each speaker has 10 minutes to outline their view on volcanic ash distribution and the available technologies for forecasting models and detection and what development work is in progress for improving these technologies. After these presentations, there will be a 30 – minutes discussion period including questions from the audience.

13.00

### Lunch *Sponsored by*

#### Emergency operation model of Icelandair during the Eyjafjallajökull Eruption 2010

Birkir Holm Gudnasoon, CEO Icelandair and Hilmar B. Baldursson, VP Flight Operations, Icelandair.

#### SOME LIKE IT HOT. Why and how aviation professionals should handle the media when a crisis erupts.

Ms. Christine Negroni, Aviation journalist and published author. Member of the International Society of Air Safety Investigators.

Poster Session of Scientific Papers and Aviation Technologies. Coffee refreshment.

14.15

### EIGHTH SESSION Eyjafjallajökull and Aviation – Global Actions – Steps to be taken

Chairman: Dr. Thorgerir Palsson, Professor University of Reykjavik

EUROPEAN Commission Mr. Peter Sörensen, Policy Officer, Single Sky and modernisation of air traffic control, DG Move Transport.

ICAO Ms. Nancy Graham, Director ICAO Air Navigation Bureau

IATA Mr. Gunther Matschnigg, Senior Vice President for Safety, Operations and Infrastructure.

AEA Mr. Ulrich Schulte-Strathaus, Secretary General

FAA Mr. Steve Creamer, Brussels FAA Executive Director Africa, Europe, and the Middle East - FAA International Offices

DGAC- FRANCE Mr. Jean Pierre Mesure, Airworthiness and Flight Operations deputy director, Civil aviation safety directorate

CAA - ICELAND Dr. Petur K. Maack, Director General



# CONFERENCE PROGRAM

Each speaker has 5 minutes to outline and sum up their view on the impact of volcanic ash on the European and global air transport industry and how these problems should be dealt with in the future and by whom. After these presentations, there will be a 45-minutes discussion period including questions from the audience.

**15.45 Conference Conclusions and Closing Remarks**  
*Dr. Thorgeir Palsson, Professor University of Reykjavik and Conference Chairman*

**16.00 Conference Closing Ceremony**  
**Introduction of the President of Iceland**  
**Ólafur Ragnar Grímsson**  
*Mr. Hjalmar Arnason, Director of Keilir Atlantic Center of Excellence.*

**Eyjafjallajökull and Global Volcanic Eruptions and Aviation**  
*President of Iceland Ólafur Ragnar Grímsson*

**16.20 Buses leave the conference venue for the hotels**

**17.00 Reception by the President of Iceland for Conference**  
**18.30 Speakers, Chairmen and Press only**  
*The President's Residence, Bessastadir.*



**Eyjafjallajökull Photo Exhibition by**  
**Siggi Stefnisson (siggi@stefnisson.com)**  
**in Andrews Theater**



Siggi Stefnisson (siggi@stefnisson.com)





Siggi Stefnisson (siggi@stefnisson.com)



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