

# Infrasound Technology Workshop 2015

## Vienna International Centre

### Board Room C

12 – 15 October 2015

#### Monday 12-10-2015

09:00 - 09:30

**Registration**

09:30 - 09:50

**Opening remarks: IMS and IDC Directors**

09:50 - 10:00

**Official photograph of the workshop**

10:00 - 10:30

**Coffee break**

#### **Session 1: IMS / IDC**

**Chairpersons: Gérard Rambolamanana (IOGA) and Gerhard Graham (CTBTO)**

10:30 - 11:00

**Overview of IMS infrasound station and engineering projects**

Julien Marty (CTBTO)

11:00 - 11:30

**IDC Infrasound technology developments**

Pierrick Mialle (CTBTO)

#### **Session 2: Instrumentation**

**Chairpersons: David Green (AWE) and Julien Marty (CTBTO)**

11:30 - 11:50

**Evolution of Distributed Infrasound Sensor Networks**

Milton Garces (ISLA)

11:50 - 12:10

**Wind noise reducing system: complementary results**

Stéphane Denis (CEA, France)

12:10 - 13:40

**Lunch**

- 13:40 - 14:00      **Progress in the integration of onsite calibration capability at IMS stations - Towards measurement quality assurance**  
Benoit Doury and Alfred Kramer (CTBTO)
- 14:00 - 14:20      **Evaluation of infrasound in-situ calibration method on a 3-month measurement campaign**  
Maurice Charbit (Telecom Paris)
- 14:20 - 14:40      **Long Duration Wind Noise Abatement Study at the University of Mississippi Field Station**  
Carrick Talmadge (NCPA)
- 14:40 - 15:00      **Pilot Interlaboratory Comparison Study - Process and main results**  
Benoit Doury (CTBTO)
- 15:00 - 15:20      **Status of Meteorological Observations at IMS Infrasound Stations**  
Pavel Martysevich (CTBTO)
- 15:20 - 15:50      **Coffee break**
- 15:50 - 16:10      **Russian IMS Infrasound Stations: Issues of Operation and Modernization**  
Evgeny Demiyani (SMDC)
- 16:10 - 16:30      **Improved Approach towards IMS Equipment and Service Contracts (Call-Offs)**  
James Robertson (CTBTO)
- 16:30 - 16:50      **Infrasound station : Renewal considerations**  
Valerie Flavin (CEA, France)
- 16:50 - 17:10      **Mitigating Power Supply Problems at IMS Infrasound Stations**  
Stefi Stefanova (CTBTO)

**Tuesday 13-10-2015**

**Session 3: Infrasound data processing and station performance**

**Chairpersons: David Fee (UAF) and Pierrick Mialle (CTBTO)**

- 09:00 - 09:20      **A global view on the coherent infrasound field**  
Alexis Le Pichon (CEA, France)
- 09:20 - 09:40      **Enhancing the association of infrasound events using a probabilistic categorization of clutter**  
Nimar Arora (Bayesian Logic)
- 09:40 - 10:00      **Five Years of Infrasound Arrivals in the International Data Center Bulletins: A Review**  
David Green (AWE Blacknest)
- 10:00 - 10:20      **Global Infrasound Network Detection and Association**  
Stephen Arrowsmith (SNL)
- 10:20 - 10:50      **Coffee break**
- 10:50 - 11:10      **I39PW Real-Time Station Performance Monitoring**  
Brian Williams (ISLA)
- 11:10 - 11:30      **Identification infrasonic signals with very low frequency**  
Nadezda Tsybulskaya (OIAP)
- 11:30 - 11:50      **KSIAR, the Korea Seismo-Infrasound Array installed at PS31**  
Tae Sung Kim (KIGAM)
- 11:50 - 12:10      **Loss of coherence influence on the detection capabilities of the IMS network**  
Adrien Nouvellet (CEA, France)
- 12:10 - 14:00      **Lunch**
- 14:00 - 14:20      **Observation and studying of local infrasound coupled by seismic wave on wide spread infrasound network**

Quan Guo (CEA, China)

14:20 - 14:40      **Progress of Infrasound Events Location and Source Discrimination in Central Eurasia Region**  
Alexandr Smirnov (KNDC)

14:40 - 15:00      **Towards a Probabilistic Infrasound Detection Scheme using the Hough Transform**  
David Green (AWE Blacknest)

15:00 - 15:30      **Coffee break**

**Poster Session**  
**Chairpersons: CTBTO**

15:30 - 16:00      **1 slide introduction to posters**

16:00 - 17:30      **Posters**

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**Wednesday 14-10-2015**

**Session 4: Modeling and Infrasound Network**

**Performance**

**Chairpersons: Steven Gibbons (NORSAR) and David Brown (CTBTO)**

- 09:00 - 09:20      **A Statistical Framework for Estimating Atmospheric Winds using Continuous Infrasound**  
Philip Blom (LANL)
- 09:20 - 09:40      **ANTARES explosion observed by the US-ARRAY : an unprecedented collection of infrasound phases recorded from the same event**  
Julien Vergoz (CEA, France)
- 09:40 - 10:00      **Atmospheric infrasound propagation modelling using the reflectivity method**  
Sven Peter Näsholm (NORSAR)
- 10:20 - 10:50      **FLAWS: Stochastic propagation models for decision analysis**  
Christophe Millet (CEA, France)
- 10:50 - 11:20      **Coffee break**
- 11:20 - 11:40      **Infrasound study of the vertical atmospheric structure**  
Igor Chunchuzov (OIAP)
- 11:40 - 12:00      **ECMWF SSW forecast evaluation using infrasound**  
Jelle Assink (KNMI)
- 12:00 - 12:20      **The method of decomposition of infrasonic signals from pulsed sources**  
Sergey Kulichkov (OIAP)
- 12:20 - 12:40      **Three-Dimensional Finite-Difference Time-Domain Simulation of Explosion Infrasound in Rough Topography**  
Keehoon Kim (LLNL)
- 12:40 - 14:20      **Lunch break**

**Session 5: Sources and Scientific applications**

**Chairpersons: Alexis Le Pichon (CEA, France) and Martin Kalinowski (CTBTO)**

- 14:20 - 14:40      **Airborne infrasound: A new way to explore the 3D acoustic wavefield**  
Kyle Jones (SNL)
- 14:20 - 14:40      **An effort to utilize the infrasound observation network data for reducing damage from convective storms and lightning**  
Nobuo Arai and Takahiko Murayama (JWA)
- 14:40 - 15:00      **Atmospheric Characterization from Repeating Seismoacoustic Events: Exploiting the Synergy of Seismic and Infrasound Data**  
Steven Gibbons (NORSAR)
- 15:00 - 15:30      **Coffee break**
- Poster Session (cont.)**  
                         **Chairpersons: CTBTO**
- 15:30 - 17:30      **Poster session**
- 18:30                **Official dinner in hotel NH Danube City**

**Thursday 15-10-2015**

**Session 5 (cont.): Sources and Scientific applications**  
**Chairpersons: Alexis Le Pichon (CEA, France) and Martin Kalinowski (CTBTO)**

- 09:00 - 09:20      **Automated detection and cataloging of global explosive volcanism using the IMS infrasound network**  
Robin Matoza (UCSB)
- 09:20 - 09:40      **Emergency launches of carrier rockets from Baikonur cosmodrome recorded by infrasound and seismic stations of KZNET network**  
Inna Sokolova (KNDC)
- 09:40 - 10:00      **Gravity waves observed through measurements of the uncorrelated tropospheric noise between 0.5 and 6 Hz**  
Lüdwik Liszka (IRF)
- 10:00 - 10:20      **Infrasonic waves from marine storms –"voice of sea"**  
Elena Golikova and Sergey Kulichkov (OIAP)
- 10:20 - 10:50      **Coffee break**
- 10:50 - 11:10      **Infrasound Waveform Inversion and Mass Flux Validation from Sakurajima Volcano, Japan**  
David Fee (UAF)
- 11:10 - 11:30      **Propagation effect on MAWs from Drakensberg Mountain using IS35 and IS47**  
Jean Bernardo Andrianaivoarisoa (IOGA)
- 11:30 - 11:50      **Signals from the October 28, 2014 Antares Rocket Detonation**  
Roger Waxler (NCPA)
- 11:50 - 12:10      **The Spatial Coherence Structure of Infrasonic Waves in the European Arctic from Regional Events**  
Alexandra Nippres (AWE Blacknest)
- 12:10 - 12:30      **The infrasound data portal**  
Jelle Assink (KNMI)
- 12:30 - 12:45      **Closing Ceremony: IMS Director**

Infrasound Technology Workshop 2015

12:45 - 14:00

**Lunch break**

14:00 - 14:30

**Chairperson meeting - Poster removal**

**End of ITW 2015**

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