### Infrasound Technology Workshop 2015

**Vienna International Centre**

**Board Room C**

**12 – 15 October 2015**

### Monday 12-10-2015

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>09:00 - 09:30</td>
<td>Registration</td>
</tr>
<tr>
<td>09:30 - 09:50</td>
<td>Opening remarks: IMS and IDC Directors</td>
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<tr>
<td>09:50 - 10:00</td>
<td>Official photograph of the workshop</td>
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<tr>
<td>10:00 - 10:30</td>
<td>Coffee break</td>
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#### Session 1: IMS / IDC

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

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<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>10:30 - 11:00</td>
<td>Overview of IMS infrasound station and engineering projects</td>
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<tr>
<td></td>
<td>Julien Marty (CTBTO)</td>
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<tr>
<td>11:00 - 11:30</td>
<td>IDC Infrasound technology developments</td>
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<td>Pierrick Mialle (CTBTO)</td>
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#### Session 2: Instrumentation

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

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<thead>
<tr>
<th>Time</th>
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<tbody>
<tr>
<td>11:30 - 11:50</td>
<td>Evolution of Distributed Infrasound Sensor Networks</td>
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<td>Milton Garces (ISLA)</td>
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<td>11:50 - 12:10</td>
<td>Wind noise reducing system: complementary results</td>
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<td>Stéphane Denis (CEA, France)</td>
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<td>12:10 - 13:40</td>
<td>Lunch</td>
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<tr>
<td>Time</td>
<td>Session</td>
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<tr>
<td>13:40 - 14:00</td>
<td>Progress in the integration of onsite calibration capability at IMS stations - Towards measurement quality assurance (Benoit Doury and Alfred Kramer (CTBTO))</td>
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<tr>
<td>14:00 - 14:20</td>
<td>Evaluation of infrasound in-situ calibration method on a 3-month measurement campaign (Maurice Charbit (Telecom Paris))</td>
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<td>14:20 - 14:40</td>
<td>Long Duration Wind Noise Abatement Study at the University of Mississippi Field Station (Carrick Talmadge (NCPA))</td>
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<td>14:40 - 15:00</td>
<td>Pilot Interlaboratory Comparison Study - Process and main results (Benoit Doury (CTBTO))</td>
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<td>15:00 - 15:20</td>
<td>Status of Meteorological Observations at IMS Infrasound Stations (Pavel Martysevich (CTBTO))</td>
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<td>15:20 - 15:50</td>
<td>Coffee break</td>
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<tr>
<td>15:50 - 16:10</td>
<td>Russian IMS Infrasound Stations: Issues of Operation and Modernization (Evgeny Demiyan (SMDC))</td>
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<td>16:10 - 16:30</td>
<td>Improved Approach towards IMS Equipment and Service Contracts (Call-Offs) (James Robertson (CTBTO))</td>
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<td>16:30 - 16:50</td>
<td>Infrasound station: Renewal considerations (Valerie Flavin (CEA, France))</td>
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<td>16:50 - 17:10</td>
<td>Mitigating Power Supply Problems at IMS Infrasound Stations (Stefi Stefanova (CTBTO))</td>
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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
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  FLOWS: 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 Andriananaivoarisoa (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 Nippress (AWE Blacknest)

12:10 - 12:30
The infrasound data portal
Jelle Assink (KNMI)

12:30 - 12:45
Closing Ceremony: IMS Director
12:45 - 14:00  Lunch break

14:00 - 14:30  Chairperson meeting - Poster removal

End of ITW 2015