

Asia Pacific Workshop on Time and Frequency 2015 (ATF2015)

Changping Campus of National Institute of Metrology, Beijing, China

October 31, 2015

Opening Speech (09:30-09:35)

Dr. Duan Yuning, Deputy Director of NIM, China

Session 1. Advanced Time and Frequency Transfer

Chair : Zhanjun Fang (NIM, China)

- 9:35-10:05 **Advanced Time and Frequency Transfer (*invited*)**
Feng-Lei Hong, Yokohama National University / National Metrology
Institute of Japan
- 10:05-10:25 **Radio-frequency Transfer on a 112Km Urban Optical Fiber**
Myoung-Sun Heo, Won-Kyu Lee, Chang-Yong Park, Sang-Eon Park,
Sang-Bum Lee, Taeg-Yong Kwon, and Dai-Hyuk Yu, Korea Research
Institute of Standards and Science
- 10:25-10:45 **Development of frequency measurement system of optical clocks
without a flywheel oscillator**
Miho Fujieda, Hidekazu Hachisu, Hiroshi Takiguchi, Tadahiro Gotoh, and
Tetsuya Ido, National Institute of Information and Communications
Technology
- 10:45-11:05 **Accurate frequency comparison of clocks considering the effect of the
distributed dead-time**
Takehiko Tanabe⁽¹⁾, Daisuke Akamatsu⁽¹⁾, Takumi Kobayashi⁽¹⁾, Akifumi
Takamizawa⁽¹⁾, Shinya Yanagimachi⁽¹⁾, Takeshi Ikegami⁽¹⁾, Tomonari
Suzuyama⁽¹⁾, Hajime Inaba⁽¹⁾, Sho Okubo⁽¹⁾, Masami Yasuda⁽¹⁾, Feng-Lei
Hong^{(1),(2)}, Atsushi Onae⁽¹⁾ and Kazumoto Hosaka⁽¹⁾, (1) National Metrology
Institute of Japan, National Institute of Advanced Industrial Science and
Technology, (2) Department of Physics, Graduate School of
Engineering, Yokohama National University,
- 11:05-11:25 **Stability Improvement for Remote Frequency Measurements on
TWSTFT applications by Utilizing L-Band Scheme**
Yi-Jiun Huang, Telecommunication Laboratories, Chunghwa Telecom Co.,
Ltd.

Session 2. Optical Frequency Standards

Chair : Kazumoto Hosaka(NMIJ, Japan)

- 11:25-11:45 **Progress Report on 171Yb Optical Lattice Clock of KRISS**
Chang-Yong Park, Hui-Dong Kim, Won-Kyu Lee, Myoung-Sun Heo,
and Dai-Hyuk Yu, Korea research Institute of Standards and Science
- 11:45-12:05 **Evaluation of the Strontium Optical Lattice Clock at NIM**
Yige Lin, Qiang Wang, Ye Li, Fei Meng, Baike Lin, Zhen Sun,
Erjun Zang, and Fang Fang, Tianchu Li, Zhanjun Fang, National
Institute of Metrology
- 12:05-12:25 **A Low-Noise 1542nm Laser Stabilized to an Optical Cavity**
R. Suo*, F. Fang and T. Li, National Institute of Metrology

Lunch Break (12:30-13:30)

Session 2. Time Scale and Microwave Frequency Standards

Chair : Amitava Sen Gupta (NPLI, India)

- 13:30-13:50 **Trials for upgrading of Japan Standard Time**
Yuko Hanado, F. Nakagawa and K. Imamura, national Institute of
Information and Communications Technology
- 13:50-14:10 **Development of Comparison System of Several Atomic Clocks for
Contribution of UTC**
A.Hapiddin, A.M. Boynawan, Ratnaningsih, Research Center for Metrology
Indonesian Institute of Sciences, Komplek PUSPIPITEK
- 14:10-14:30 **Operation of NIM5 fountain with 1.5×10^{-15} uncertainty and the design
of new NIM6**
F. Fang, W. Chen, K. Liu, N. Liu, R. Suo and T. Li, National Institute of
Metrology
- 14:30-14:50 **Development of Rubidium bulb and cell for Rubidium Atomic Clock**
Ashish Agarwal* and A Sen Gupta, CSIR-National Physical Laboratory

Poster Session (Short oral presentations)

Chair : Feng-Lei Hong (YNU/NMIJ, Japan)

- 14:50-14:52 **Status of Time and Frequency Transfer at NIM**
Liang Kun, Yang Zhiqiang, Zhang Aimin, Wang Weibo, Xu Qinghua,
Gao Yuan and Fang Zhanjun, National Institute of Metrology

- 14:52-14:54 **Complete uncertainty evaluation of the Cesium fountain primary Frequency standard NPLI-CsF1**
A. Acharya*#, P. Arora#, V. Bharath*#, S. Yadav#, A. Agarwal# and A. Sen Gupta# , *Academy of Scientific and Innovative Research, #Time and Frequency Division, CSIR-National Physical Laboratory,
- 14:54-14:56 **Report of TL's Proficiency Test on Frequency Calibration in 2015**
Huang-Tien Lin, Po-Cheng Chang, Zhang-Jie Huang, and Chia-Shu Liao, Telecommunication Laboratories, Chunghwa Telecom Co., Ltd.
- 14:56-14:58 **Time and Frequency activities at the Vietnam Metrology Institute**
Trieu Viet Phuong, Vietnam Metrology Institute
- 14:58-15:00 **Status report of Time and Frequency research Activities At NIS**
Gihan Gomah Hamza, National Institute for Standards
- 15:00-15:02 **A Survivability Scheme against Link and Equipment failures of the Telephone Speaking Clock**
Ching-Chiang Lin and Chia-Shu Liao, Telecommunication Laboratories, Chunghwa Telecom Co., Ltd,
- 15:02-15:04 **Sharing of Cesium Tube Replacement**
Liu Yan Ying and Tan Toh Eng, National Metrology Centre
- 15:04-15:06 **Test Operation of an NICT NTP Server in Indonesia**
Yasuhiro Koyama*1, Akihiko Machizawa*1, Tsukasa Iwama*1, Izumi Noma*2, A Mohamad Boynawan*3, Ratnaningsih*3 and Asep Hapidin*3
*1 National Institute of Information and Communications Technology,
*2 E3 Design Inc., *3 Research Center for Metrology - Indonesian Institute of Sciences, Komplek PUSPIPITEK.

Coffee Break & Poster Q&A (15:06-15:30)

Session 4. Calibration

Chair : Huang-Tien Lin(TL, Taiwan)

- 15:30-15:50 **Improving the Video Totalized Method of Stopwatch Calibration**
Samuel C.K. Ko, Aaron Y.K. Yan and Henry C.K. Ma, The Government of Hong Kong Special Administrative Region Standards and Calibration Laboratory (SCL)
- 15:50-16:10 **Long-term properties evaluations of Frequency remote calibration system using GPS (2)**
Tomonari Suzuyama, Atsuko Okuda, and Masaki Amemiya, National Metrology Institute of Japan (NMIJ), National Institute of

Advanced Industrial Science and Technology (AIST)

16:10-16:30 **The low-cost Dual Mixer Time Difference system for calibrating a high stability frequency source**

Piyaphat Phoonthong, National Institute of Metrology (Thailand)

16:30-16:50 **40 GHz Microwave Frequency Measurement Using Down-Convert Technique at TL**

Po-Cheng Chang and Chia-Shu Liao, Telecommunication Laboratories, Chunghwa Telecom Co., Ltd

Closing (16:50)

Yasuhiro Koyama (NICT, Japan)