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**Evaluation of the Blackbody Radiation Shift Uncertainty of NRC’s Sr+ Ion Clock**

Bin Jian{1}, Pierre Dubé{1}, Alan Madej{2}
{1}National Research Council of Canada, Canada; {2}York University, Canada

**Introduction of Software-Defined Receivers in Two-Way Satellite Time and Frequency Transfer**

Yi-Jiun Huang{3}, Wen-Hung Tseng{3}, Shinn-Yan Lin{3}, Sung-Hoon Yang{1}, Miho Fujieda{2}
{1}Korea Research Institute of Standards and Science, Korea, South; {2}National Institute of Information and Communications Technology, Japan; {3}Telecommunication Laboratories, Chunghwa Telecom, Co., Ltd., Taiwan

Session: A1L-B: Two-way Time & Frequency Transfer Systems

**Global Internet Access from Space for Humanitarian Applications**

Timothy Lee
Boeing, United States

**Validity of Cross-Spectrum PN Measurement**

Ulrich Rohde{2}, Ajay Poddar{4}, Karl-Heinz Hoffmann{1}, Enrico Rubiola{3}
{1}Bayerische Akademie, Munich, Germany; {2}BTU Cottbus, Germany; {3}FEMTO-ST Institute, Besancon, France; {4}Synergy Microwave Corp, United States

**Improved Optically SILPLL Based Forced Oscillators**

Tianchi Sun{1}, Afshin Daryoush{1}, Ajay Poddar{2}, Li Zhang{2}, Ulrich Rohde{2}
{1}Drexel University, United States; {2}Synergy Microwave Corp, United States

**Power Splitter Thermal Noise Correlations in Cross-Spectrum Noise Measurements**

Archita Hati{1}, Craig Nelson{1}, C.F. Magnus Danielson{2}
{1}NIST, United States; {2}Net Insight AB, Sweden

Session: A1L-C: Phase Noise and OEO’s

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O. Lelièvre{3}, Vincent Crozatier{4}, Ghaya Baili{4}, Perrine Berger{4}, Grégoire Pillet{4}, Daniel Dolfi{4}, Loïc Morvan{4}, Fabienne Goldfarb{1}, Fabien Bretenaker{1}, Olivier Lartigue{1}
{1}Laboratoire Aimé Cotton, France; {2}Laboratoire d’Analyse et d’Architecture des Systèmes, France; {3}Thales Research & Technology, France; {4}Thales Research & Technology, France

Session: A2L-A: FOCUS SESSION: Space Clocks

**Space Passive Hydrogen Maser -A Passive Hydrogen Maser for Space Applications-**

Jing Li, Jihong Zhang, Yingnan Bu, Chunyan Cao, Wenming Wang, Hefei Zheng
Beijing Institute of Radio Metrology and Measurement, China

Session: A2L-B: Spectroscopic Sensors

**High Speed Mid-Infrared Detectors Based on MEMS Resonators and Spectrally Selective Metamaterials**

Michael Breen, Will Streyer, Ruochen Lu, Anming Gao, Daniel Wasserman, Songbin Gong
University of Illinois, United States

**Optomechanical nanoresonator readout with optical downmixing**

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University of Cambridge, United Kingdom

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University of California, Berkeley, United States

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Université de Neuchâtel, Laboratoire Temps-fréquence, Switzerland

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Peking University, China
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CSIR National Physical Laboratory, India

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*Honeywell Automation and Control Solutions

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CNES, France

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USNO, United States

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