

Tuesday 24th July

TOPIC: ATOMIC CLOCKS AND QUANTUM METROLOGY

High Precision Phase and Frequency Measurements in Rare Earth Doped Crystals for Probing Nanoresonator Behavior
Nicolas Galland *CNRS SYRTE UGA Institut Neel* 1

Towards a quantum-enhanced trapped-atom clock on a chip
Mengzi Huang *Laboratoire Kastler Brossel* 2

Measurement of magic wavelength for 1140 μm clock transition in Tm atoms
Dmitry Tregubov *Lebedev Physical Institute of RAS* 3

Cross-correlation measurement between two Ti:Sapphire optical frequency combs referencing a clock laser transferred via an optical fiber link
Kota Nakashima *The University of Tokyo* 4

Towards a second generation for the brazilian atomic fountain frequency standard: Tests with the new MOT chamber
Daniel Magalhães *University of São Paulo* 5

Coherence properties of NV ensembles in HPHT diamond plates
Vadim Vorobyov *P.N. Lebedev Physical Institute of the Russian Academy of Sciences* 6

Rotation Sensing with an Atomic Clock
Jamie Johnson *University of Nottingham* 7

Spin-Squeezing for Entanglement-Enhanced Matterwave Interferometers
Graham Greve *JILA/CU-Boulder* 8

Steady-state ultracold Sr with unity phase-space density
Chunchia Chen *University of Amsterdam, Institute of Physics* 9

Ultra-stable laser based on a compact Fabry-Perot cavity
S  verine Denis *Femto-st* 10

Measurement of ultracold atom velocity distributions by matterwave interferometry
Tim Freegarde *University of Southampton* 11

Developing a Transportable Ultra-cold Atomic Rotation Sensor
David Elcock *University of Southampton* 12

Near-Unitary Spin-Squeezing for Optical Clocks
Simone Colombo *Massachusetts Institute of Technology* 13

Nondestructive measurement of trapped cold atoms
Xian Zhang *Zhejiang University* 14

Development of a planar ion trap aimed at ion spacing control by anharmonic potential
Hironori Sasaki *Osaka University* 15

Pumped-Up SU(1,1) Interferometry
Stuart Szigeti *The Australian National University* 16

Simultaneous precision magnetic and inertial sensor based on spatial fringes using Bragg transitions
 Paul Wigley *The Australian National University*..... 17

AMBiT: A program for high-precision relativistic atomic structure calculations
 Julian Berengut *University of New South Wales* 18

Sensitivity limits of an Atomic gravimeter using Raman atom interferometer
 Sang-Bum Lee *Korea Research Institute of Standard and Science* 19

Development of NPL's 2nd Generation Strontium Lattice Clock
 William Bowden *Oxford University* 20

A search for the low-energy ²²⁹Th nuclear isometric transition using an "optical" pumping technique at 29-keV
 Satoshi Uetake *Okayama University* 21

A compact inertial sensor using atom interferometry: pushing towards high-dynamic range
 Indranil Dutta *Imperial College London*..... 22

Atomic structure calculations and study the parameters of hyperfine constants, Lande g-factors and isotope shifts of Xe LIII
 Dhia Elhak Salhi *National Center for Nuclear Sciences and Technologies* 23

TOPIC: INTENSE FIELDS AND ULTRAFAST SCIENCE

Ultracold and ultrafast: Strong-field ionization of trapped alkali atoms
 Philipp Wessels *The Hamburg Centre for Ultrafast Imaging*..... 24

Extracting spectroscopic molecular parameters from short pulse photo-electron angular distributions
 Mourad Telmini *University of Tunis El Manar* 25

Wave packet motion analysis on the role of excited states in the multiphoton ionization
 Shih-Da Jheng *National Chiao Tung University Institute of Physics*..... 26

Strong field approximation model for frustrated tunneling ionization and subsequent free induction decay
 Je Hoi Mun *Institute for basic science (IBS)*..... 27

Angle resolved photodetachment time delay
 Soumyajit Saha *Indian Institute of Technology Madras*..... 28

Interferences in photoelectron spectra - Holographic structures
 Sebastián David López *Instituto de Astronomía y Física del Espacio - (UBA - CONICET)* 29

Time delays in (ω , 2ω) above threshold ionization
 Sebastián David López *Instituto de Astronomía y Física del Espacio - (UBA - CONICET)* 30

Theoretical modeling of the high-harmonic generation and ionization processes with a discrete representation of the continuum
 Piotr Gniewek *University of Warsaw* 31

Multi-photon spectroscopy of the many-electron atoms and ions in a laser field with accounting for the Debye plasma effects
 Eugeny Ternovsky *Odessa State University - OSENU*32

Strong field three electron ionization - ab initio time-dependent study
 Jakub Zakrzewski *Jagiellonian University*33

Laser Electron-Gamma-Nuclear Spectroscopy of Atmos and Multicharged Ions: Shake-Up and NEET Effects
 Olga Khetselius *Odessa State University - OSENU*34

The effect of intermediate continuum states on two-photon ionization cross section
 Andrej Mihelic *Jozef Stefan Institute*35

Instantaneous ionization rate as a functional derivative
 Igor Ivanov *Institute for Basic Science*36

Creating and multiplying knots in the polarization state of light
 Emilio Pisanty *ICFO - The Institute of Photonic Sciences*37

Fast transport and spin control of atoms in moving traps
 Qi Zhang *Shanghai University*38

TOPIC: OTHER

Turbulent cascades in out-of-equilibrium Bose gas
 Vanderlei S Bagnato *Universidade de Sao Paulo* 220

TOPIC: OUT OF EQUILIBRIUM QUANTUM SYSTEMS

Creating a superfluid by kinetically driving a Mott insulator
 Charles Creffield *Universidad Complutense de Madrid* 191

Revealing missing charges with generalised quantum fluctuation relations
 Jordi Mur-Petit *University of Oxford*192

Weakly interacting Bose gases far from thermal equilibrium - Engineering condensation with a hot needle
 Alexander Schnell *Max-Planck-Institut für Physik komplexer Systeme*193

Quench dynamics in a two-particle system with a combination of synthetic spin-orbit coupling and Raman coupling
 Ayaka Usui *OIST Graduate university* 194

Impact of geometry on many-body localization
 Dariusz Wiater *Institute of Physics Polish Academy of Sciences*195

Collective modes and quantum thermalisation with tilted dipoles Lucas Gabardos <i>Laboratoire de Physique des Lasers UMR 7538 CNRS UP13.IG</i>	196
Monitoring squeezed collective modes of a 1D Bose gas after an interaction quench using density ripples analysis Max Schemmer <i>Laboratoire Charles Fabry, Institut d'Optique</i>	197
Probing many-body localization in the presence of a quantum bath Antonio Rubio Abadal <i>Max Planck Institute of Quantum Optics</i>	198
Dynamical Phase Transition in the Collective Heisenberg Model Kenneth Jackson <i>University of Toronto</i>	199
Quantum master equation in paired degenerate subspace of finite-size dissipative Dicke model Ryosuke Imai <i>Waseda university</i>	200
Nontrivial Bloch oscillations in an optical lattice due to spin-orbit coupling Lu Zhou <i>East China Normal University</i>	201
Turning-off two-body and generating three-body interactions between ultracold neutral bosonic atoms Philip Johnson <i>American University</i>	202
Scale-dependent anomalous diffusion in spatially disordered environments Gorka Muñoz <i>ICFO</i>	203
Quantum noise in a transversely pumped cavity Bose-Hubbard model Gergely Szirmai <i>Wigner Research Centre</i>	204
Out-of-equilibrium many-body systems: a numerical approach based on non-equilibrium Green's functions Natale Walter Talarico <i>University of Turku</i>	205
A many-ion quantum simulator of the Dicke model for probing entanglement, chaos and information scrambling Robert Lewis-Swan <i>JILA, NIST, University of Colorado</i>	206
Relaxation dynamics of non-equilibrium quantum gas in a uniform box potential Jinyi Zhang <i>The Cavendish Laboratory, University of Cambridge</i>	207
Nonlinear damping of quantum gas at ultra-low temperature in a cylindrical box potential Jinyi Zhang <i>The Cavendish Laboratory, University of Cambridge</i>	208
Floquet-Gibbs state for dissipative quantum systems Tatsuhiko Shirai <i>University of Tokyo</i>	209
Formulation of quantum field theory for driven-dissipative Bose-Einstein condensation Takahiro Oyama <i>Waseda University</i>	210
Non-equilibrium phase structure and dynamics of driven-dissipative Rydberg spin systems Stephan Helmrich <i>Heidelberg University</i>	211
Exploring extreme nonequilibrium dynamics with ultracold atoms Toshihiko Shimasaki <i>University of California Santa Barbara</i>	212

Universal phase fluctuations in low dimensional quantum systems
 Ryan Plestid *McMaster University*.....213

Dynamics in an isolated disordered Heisenberg spin system
 Gerhard Zuern *University of Heidelberg*214

A model for strong-coupling, finite-time and finite-size interactions: the Gaussian Otto cycle
 Alejandro Pozas-Kerstjens *ICFO*.....215

Kapitza stabilization of a repulsive Bose-Einstein condensate in an oscillating optical lattice
 John Martin *University of Liège*216

Direct measurement of localization and logarithmically-slow correlation dynamics in the many-body-localized phase
 Robert Schittko *Harvard University*217

Probing microscopic models for system-bath interactions via parametric driving
 Anastasia Dietrich *University of Oxford*218

Optical conductivity of a quantum gas
 Peihang Xu *University of Toronto*.....219

TOPIC: QUANTUM COMPUTATION AND COMMUNICATION

Two-electron atoms: The Greens function approach to the Fock expansion calculations
 Evgeny Liverts *The Hebrew University*41

A fibre-tip Fabry-Pérot cavity for deterministic, strong atom-photon interactions
 Marwan Mohammed *University of Oxford*.....42

Polarised Single-Photons from a Cavity-Enhanced Atom-Light Interface in Photonic Quantum Networks
 Thomas Barrett *University of Oxford*43

From Reservoir Engineering with Trapped Ions to GKP Coding State and Phonon Lasing
 Thanh Long Nguyen *ETH Zurich* 44

Demonstration of a passive photon-atom swap gate
 Adrien Borne *Weizmann Institute of Science*45

High-fidelity Single-Qubit Gates of a Neutral-Atom Qubit in a Magic-Intensity Optical Dipole Trap
 Cheng Sheng *WIPM*46

Using and reusing coherence to realize quantum processes
 María García Díaz *Universitat Autònoma de Barcelona*47

Photonic quantum state engineering using single-photon Raman interaction
 Ziv Aqua *Weizmann Institute of Science*48

Sub-Megahertz Single Photon Source Suitable for Quantum Memories
 W. Y. Sarah Lau *University of Queensland*.....49

Repeated multi-qubit readout and feedback with a mixed-species trapped-ion register
 Matteo Marinelli *ETH Zurich*50

Spatially dependent Electromagnetically Induced Transparency Francesco Castellucci <i>University of Glasgow</i>	51
Photonic quantum state transfer between a cold atomic gas and a crystal Nicolas Maring <i>ICFO</i>	52
Energy-time entanglement between a single photon and a spin wave in a solid state quantum memory Margherita Mazzera <i>ICFO</i>	53
Multiplexed storage and real-time manipulation based on a multiple-degree-of-freedom quantum memory Tianshu Yang <i>University of Science and Technology of China</i>	54
Speeding Up Reinforcement Learning on a Trapped Ion Quantum Computer Ivan Boldin <i>University of Siegen</i>	55
Scaling of electric field noise in surface ion traps Clemens Matthiesen <i>University of California, Berkeley</i>	56
Progress towards entanglement of atomic ensemble qubits via Rydberg blockade Minho Kwon <i>Department of Physics, University of Wisconsin-Madison</i>	57
Independent gate operations on two adjacent atomic qubits in a 532-nm 1D optical lattice Donghyun Cho <i>Korea University</i>	58
Modular segmented ion trap with an integrated optical cavity Simon Ragg <i>ETH Zurich</i>	59
Towards a temporally multiplexed quantum repeater node based on laser-cooled atoms Lukas Heller <i>ICFO</i>	60
Quasi-continuous variable quantum computation with collective spins in multi-path interferometers Tomas Opatrny <i>Palacky University</i>	61
Eliminating Noise from a Broadband and Single-Mode Quantum Memory Thomas Hird <i>University of Oxford</i>	62
High-Dimensional Temporal Mode Manipulation using Quantum Memories Sarah Thomas <i>University of Oxford</i>	63
Microfabricated optical elements towards a photonic interface for ion microtrap arrays Matthew Day <i>University of Bristol</i>	64
Electron and Nuclear spin dynamics of Kramers ion at Subkelvin Temperatures Peiyun Li <i>University of Science and Technology of China</i>	65
Highly-Efficient Quantum Memory for Polarization Qubits in a Spatially-Multiplexed Cold Atomic Ensemble Mingtao Cao <i>LKB</i>	66
Electron and Nuclear spin dynamics of Kramers ion at Subkelvin temperatures Chao Liu <i>University of Science and Technology of China</i>	67
Spiral bandwidth of four-wave mixing in rubidium vapour Aidan Arnold <i>University of Strathclyde</i>	68

Superconducting qubit-qutrit circuit: A toolbox for efficient quantum gates Thomas Bækkegaard <i>Aarhus University</i>	69
Optimal condition for a cavity QED-based quantum gate Rui Asaoka <i>Meiji University</i>	70
RF-induced evaporative cooling in an optical trap Meungho Seo <i>Korea University</i>	71
A novel integrated platform for quantum storage of heralded single photons Alessandro Seri <i>ICFO</i>	72
Efficient single-photon collection for long-distance entanglement of atoms Robert Garthoff <i>LMU Munich</i>	73
Towards quantum interfaces based on trapped $^{25}\text{Mg}^+$ ions Aleksandr Borisenko <i>Russian Quantum Center (RQC)</i>	74
Tomography of a Raman Quantum Memory for Temporal Modes Sarah Thomas <i>University of Oxford</i>	75
Towards heralded entanglement of single atoms over long distances Tim Van Leent <i>LMU Fakultät für Physik</i>	76
Optimized Entangled State Retrieval from Quantum Memories for Networking Siddhartha Santra <i>US Army Research Laboratory</i>	77
Engineering the components of a quantum cryptographic network enhanced by quantum memories Sonali Gera <i>Stony Brook University</i>	78
Cubic Hamiltonian in few steps Šimon Bräuer <i>Palacký University</i>	79
Modal Properties of the Off-resonant Cascaded Absorption Memory Oscar Gerardo Lazo Arjona <i>University of Oxford</i>	80
Broadband Light-Matter Interactions with an Atomic Frequency Comb in a Rare-Earth-Ion-Doped Crystal Patrick Ledingham <i>University of Oxford</i>	81
Storing single photons emitted by a quantum memory on a highly excited Rydberg state María Auxiliadora Padrón Brito <i>ICFO</i>	82
Quantum compilation optimized for experiments with multi-qubit gates Liangyu Ding <i>Renmin University of China</i>	83
A novel quantum memory protocol for coherent storage and manipulation of broadband photons via dynamically controlled Autler-Townes absorption Anindya Rastogi <i>University of Alberta</i>	84
Strong upper bounds for the classical capacity on Gaussian quantum channels Kabgyun Jeong <i>Seoul National University</i>	85
Investigation of the Hyperfine Structure of the Electronically Excited State through Raman Heterodyne Detection Yu Ma <i>University of Science and Technology of China</i>	86

Genuinely entangled symmetric states with no N-partite correlations
 John Martin *University of Liège*87

Observing the quantum interference and entanglement of electron-nuclear system on Bloch sphere by Wigner distribution
 Heng Shen *University of Oxford*88

Verifying high-fidelity multi-particle processes in an ion-trap quantum computer
 Alexander Erhard *University of Innsbruck*.....89

Half-Deterministic Atom-Photon Entanglement for Quantum Repeaters
 Jun Li *University of Science and Technology of China*.....90

Quantum memory for light: beyond the three-level Λ -scheme approximation
 Alexandra Sheremet *Sorbonne Université*.....91

TOPIC: QUANTUM GASES

Negative-mass effects in spin-orbit coupled Bose-Einstein condensates
 David Colas *The University of Queensland* 121

Quantum Phases and Excitations in Bose-Fermi Mixtures in a Three-Dimensional Optical Lattice
 Hatsuda Rei *Tokyo Metropolitan University*.....122

Magnetic phases of spin-1 lattice gases with random interactions
 Simone Paganelli *University of L'Aquila*123

Laser cooling of ^{87}Rb to quantum degeneracy
 Alban Urvoy *Massachusetts Institute of Technology* 124

Measurement of interorbital spin-exchange interaction of ytterbium atoms
 Koki Ono *Kyoto university*.....125

Shear viscosity of a strongly-interacting Fermi gas
 Daichi Kagamihara *Keio University*.....126

Sound Propagation excited by Density Perturbation in a Bose-Fermi Mixture Superfluid at Finite Temperatures
 Yosuke Ono *Tokyo Metropolitan University*.....127

Observation of Atom Number Fluctuations in a Bose-Einstein Condensate
 Jan Arlt *Aarhus Universitet*128

Isothermal Compresibility and Strong Coupling Effects in an Ultracold Fermi Gas
 Ryohei Sato *Keio University*129

Photoemission Spectrum in an Ultracold Bose-Fermi Mixture with Hetero-Pairing Interaction
 Koki Manabe *Keio University*.....130

Phase-separated state in a repulsive Bose-Fermi mixture: Interface structure and breathing mode
 Bo Huang *IQOQI Innsbruck, ÖAW*131

An experiment for the study of small Hubbard models with rapid repetition rate Martin Schlederer <i>Institute for Laser Physics, University of Hamburg</i>	132
Temperature-dependent break-down of disorder-induced localization for interacting fermions coupled to a thermal bath Lingna Wu <i>Max Planck Institute for the Physics of Complex Systems</i>	133
Collisional Properties of Fermionic Potassium in the Vicinity of a D-Wave Feshbach Resonance Markus Bohlen <i>Laboratoire Kastler Brossel, ENS</i>	134
Long-range interactions and symmetry-breaking in quantum gases through optical feedback Yongchang Zhang <i>Aarhus University</i>	135
Dynamical control of phases in a Driven-Dissipative Bose-Einstein Condensate in an Optical Cavity Jayson Cosme <i>University of Hamburg</i>	136
2D and 3D Grating Magneto-Optical Traps as Cold Atom Sources Oliver Burrow <i>University of Strathclyde</i>	137
Doppler-sensitive holographic Microscopy of cold atoms Wang Yuzhuo <i>Fudan University</i>	138
Superfluid weight and Berezinskii-Kosterlitz-Thouless temperature of spin-imbalanced and spin-orbit-coupled Fulde-Ferrell phases in lattice systems Aleksi Julku <i>Department of Applied Physics, Aalto University</i>	139
Out-of-time-ordered correlator of quenched state in many-body localization Juhee Lee <i>Gwangju Institute of Science and Technology</i>	140
Collisionless sound in a uniform Bose gas Miki Ota <i>University of Trento</i>	141
Fast manipulation of Bose-Einstein condensates with an atom chip Robin Corgier <i>Institut für Quantenoptik, Leibniz Universität Hannover</i>	142
Spatially distributed genuine multipartite entanglement enables EPR steering of Bose-Einstein Condensates Philipp Kunkel <i>Universität Heidelberg, Kirchhoff-Institut für Physik</i>	143
Coherent splitting and recombination of bright solitary matter waves Ana Rakonjac <i>Durham University</i>	144
Bilayer system of dipolar bosons: few-body bound state Grecia Guijarro <i>Universitat Politècnica de Catalunya</i>	145
A new apparatus for the study of Sodium spinor BECs in highly stable magnetic field environment Arturo Farolfi <i>Università degli Studi di Trento</i>	146
A Spinor BEC co-magnetometer for phase resolving spin amplification Pau Gómez Kabelka <i>ICFO</i>	147
Anomalous momentum diffusion in a Bose-Hubbard gas Raphael Bouganne <i>Laboratoire Kastler-Brossel</i>	148

Quantized circular dichroism in ultracold atoms Duc-Thanh Tran <i>Université Libre de Bruxelles</i>	149
Speed of sound in a superfluid 2D Bose gas Raphaël Saint-Jalm <i>Laboratoire Kastler Brossel</i>	150
Non-demolition quantum thermometry of BECs in the sub-nK domain Mohammad Mehboudi <i>ICFO</i>	151
Two-dimensional Condensation of Polar Molecules in a Synthetic Gauge Field I-Kang Liu <i>Department of Physics and Graduate Institute of Photonics, National Changhua University of Education</i>	152
Non-linear relaxation of interacting bosons coherently driven on a narrow optical transition Manel Bosch <i>Laboratoire Kastler Brossel</i>	153
Observation of Spin Superfluidity in a Bose Gas Mixture Carmelo Mordini <i>University of Trento</i>	154
Synthetic dimensions in ultracold polar molecules: From topology to quantum strings Bhuvanesh Sundar <i>Rice University</i>	155
Universality of liquid Bose-Bose mixture of ultracold atoms Leandra Vranjes Markic <i>University of Split</i>	156
Modeling atom diffraction beyond the weakly-diffracting limit Benjamin Beswick <i>Durham University</i>	157
Quantum Monte Carlo simulations of spin-orbit coupled systems Andrii Gudyma <i>University of Split, Faculty of Science</i>	158
Raise and fall of a bright soliton in an optical lattice Piero Naldesi <i>LPMMC Grenoble</i>	159
Towards ultracold erbium-potassium quantum gas mixtures Jackson Ang'ong'a <i>University of Illinois at Urbana-Champaign</i>	160
Quantum liquid droplets in a mixture of Bose-Einstein condensates Cesar Cabrera Cordova <i>ICFO</i>	161
Many-body effects in synthetic lattices Fangzhao An <i>University of Illinois at Urbana-Champaign</i>	162
Dynamics and Thermodynamics of Strongly Interacting Homogeneous Bose Gases Timon Hilker <i>University of Cambridge</i>	163
Supersolid Phase with Ultracold Bose Gases in an Optical Lieb Lattice Hisashi Kawaguchi <i>Aoyama-Gakuin University</i>	164
Squeezed field description of second sound in Bose-Einstein condensates Ludwig Mathey <i>University of Hamburg</i>	165
Universal few-body correlations in a Bose polaron Shimpei Endo <i>Tohoku University</i>	166
Spin-dependent artificial magnetic fields and superfluidity in Bose-Einstein condensates Lindsay Leblanc <i>University of Alberta</i>	167

Collective oscillations of a strongly interacting 2D Fermi gas Paul Dyke <i>Swinburn University of Technology</i>	168
Bistability and Non-equilibrium Condensation in a Driven-Dissipative Atomic Superfluid Matthew Reeves <i>University of Queensland</i>	169
Synthetic Frustrated Antiferromagnets with Coherently-Coupled Binary Fermi Gases in a Triangular Optical Lattice Daisuke Yamamoto <i>Aoyama Gakuin University</i>	170
Self-bound Bose mixtures Robert Zillich <i>Johannes Kepler University</i>	171
Superfluidity of Light in an atomic vapor Quentin Glorieux <i>LKB - ENS - Sorbonne Université</i>	172
Interaction control and interorbital molecules exploiting clock transition in two electron atoms Jacopo Catani <i>LENS & INO-CNR National Institute of Optics CNR</i>	173
Strong-coupling effects on p-wave contacts in an ultracold Fermi gas with a p-wave interaction Daisuke Inotani <i>Department of Physics, Keio University</i>	174
Precision imaging of cold atoms with high resolution holographic microscopy Jian Zhao <i>Fudan University</i>	175
Drag force and superfluidity in the supersolid stripe phase of a spin-orbit-coupled Bose-Einstein condensate Giovanni Italo Martone <i>CNRS LPTMS</i>	176
Towards weakly-destructive, real-time transport measurements of interacting Fermi Gas Barbara Cilenti <i>EPFL</i>	177
Feshbach resonances and Feshbach molecules in an ultracold ${}^6\text{Li}$ - ${}^{133}\text{Cs}$ mixture Bing Zhu <i>Heidelberg University</i>	178
Long range interactions in time lattices Krzysztof Giergiel <i>Jagiellonian University in Krakow</i>	179
Quantum phase transition of a frustrated Bose-Hubbard model on triangular lattice: Density matrix renormalization group study Yutaka Saiki <i>Aoyama-Gakuin University, Department of Physics and Mathematics</i>	180
Observation of semimetal phase for ultracold fermions with 2D spin-orbit coupling in an optical lattice Chengdong He <i>Hong Kong University of Science and Technology</i>	181
Two-photon spectroscopy of ultracold rubidium atoms in magnetic field Ryo Yasuda <i>Chuo University</i>	182
Observation of Superradiant Decay of Cold Atoms via the 350 Hz Intercombination Line of Calcium Hannes Winter <i>Universität Hamburg</i>	183
Blue light emission from ultracold rubidium atoms via optical double resonance Sakura Seta <i>Chuo University</i>	184

Coupled order parameters with ultracold atoms in two crossed cavities
Philip Zupancic *ETH Zurich*..... 185

Two photon spectroscopy of ultracold rubidium atoms near dielectric surface
Taro Mashimo *Chuo university* 186

Observation of the $5^2P_{3/2} - 6^2P_{3/2}$ forbidden transition in laser-cooled rubidium atoms
Miki Fukui *Chuo University*.....187

A two-dimensional box trap for ultracold ^{39}K atoms with tuneable interactions
Panagiotis Christodoulou *University of Cambridge*..... 188

Lifetime of a chiral superfluid in an orbital optical lattice
Raphael Eichberger *Universität Hamburg* 189

One-dimensional spinor Bose gases: Spin-domain formation and giant spin-dipole polarizability
Bertrand Evrard *CNRS Laboratoire Kastler Brossel*..... 190

TOPIC: QUANTUM OPTICS AND QUANTUM NANOPHOTONICS

Nanosecond geometric control of electric dipole
Saijun Wu *Fudan University*.....92

Optical switching in Doppler broadened multilevel atomic systems
Kavita Yadav *Indian Institute of Technology Roorkee*93

Highly bright polarization-entangled photon-pairs from a Doppler-broadened ladder-type atomic ensemble
Han Seb Moon *Pusan National University*94

Bidirectional lasing with cold atoms in a ring cavity
Jon Goldwin *University of Birmingham*95

A simple approach to quantum dispersive light through single-particle quantum mechanics
Nicla Westerberg *Institute of Photonics and Quantum Sciences, Heriot-Watt University*96

Direct frequency-comb-driven Raman transitions in the terahertz range
Cyrille Solaro *Aarhus University*.....97

Excitation enhancement in optical forbidden transitions near nano structure
Satoshi Tojo *Chuo University*98

A versatile neutral-atom microtrap using high NA optics to study light-matter interaction
Lorena C. Bianchet *ICFO*.....99

Microscale atom-photon junction
Elisa Da Ros *University Nottingham* 100

Tuning dipole-dipole interactions in atomic vapours via cavities
Helge Dobbertin *Universität Rostock, Institut für Physik*101

Towards a quantum interface between cold atoms and a nano membrane
Chun Tat Ngai *University of Basel*102

Two-mode intensity squeezing using OAM-carrying pump and probe beams Nikunj Kumar Prajapati <i>William & Mary</i>	103
Quantum Mechanics in Technicolor; Analytic Expressions for a Spin-Half Particle Driven by Polychromatic Light Ben Yuen <i>University of Oxford</i>	104
Spatially-multiplexed coherent beamsplitter for squeezed light Jian Sun <i>Fudan University</i>	105
Narrowband four photon entanglement swapping Li Zongfeng <i>CAS Key Laboratory of Quantum Information, USTC</i>	106
Towards a BEC-ONF Interface Alexandros Chantif Alampounti <i>Swansea University</i>	107
Transverse and Upstream Motion of Photons in Moving Atomic Media Akbar Safari <i>University of Ottawa</i>	108
Multi-mode state retrodiction from optodynamical measurements of collective atomic dynamics Jonathan Kohler <i>UC Berkeley</i>	109
Heralded entanglement in a spinor gas in an optical cavity Stuart Masson <i>University of Auckland</i>	110
What filter do you need for your heralded single photon source? Daniel Blay <i>Macquarie University</i>	111
Atom-light interaction in thermal Rubidium vapours confined to a volume less than λ^3 William Hamlyn <i>Durham University</i>	112
Electromagnetically induced transparency (EIT), absorption (EIA) and Autler Townes (AT) splitting in N-type system Bankim Chandra Das <i>Saha Institute of Nuclear Physics</i>	113
Pulse delay and group velocity dispersion measurement in V-type electromagnetically induced transparency of hot ^{85}Rb atom Bankim Chandra Das <i>Saha Institute of Nuclear Physics</i>	114
Angular momentum spacial symmetry transformation in rubidium ground-state Arturs Mozers <i>University of Latvia</i>	115
Designing regular atomic arrays as 'free-space' photonic quantum link Pierre-Olivier Guimond <i>IQOQI Innsbruck</i>	116
Heralding of a single collective excitation in a 1D atomic array coupled to an optical nanofiber Jeremy Raskop <i>LKB (Laboratoire Kastler Brossel)</i>	117