



Poster Session

Poster Session I + GPMFC Student Poster Competition

4:00 pm — 6:00 pm, Tuesday June 17 // Session D00 //

 Oregon Convention Center, Exhibit Hall E

Topics: [Atoms](#); [Charged Particles](#); [Cold](#); [Cold Atoms](#); [Degenerate Gases](#) ... [Show all topics](#)



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The Iron Project: R-Matrix calculations for atomic data and spectral features of Fe-peak elements Ti I and Cr I

Poster 6

Presenter: Sultana Nurun Nahar (Ohio State Univ - Columbus)

Author: Md Faysal (University of Dhaka)

Ti is found on our earth and exoplanets, red giants and supergiants. It combines easily with oxygen and regulates the emitting flux of red giants. Cr I has been found in stars and also in interstellar medium. Spectral analysis of their presence require both oscillator strengths for bound-bound and photoionization cross sections for bound-free transitions. Oscillator strengths largely account for the spectral line strengths and features in the spectra. We will present atomic data for oscillator strengths and spectral features of Ti I and Cr I. The results for dipole allowed transitions were obtained using R-matrix method in LS coupling and split in to fine structure components using algebraic transformation. Using a close coupling wavefunction expansion for Ti I that includes 36 LS states of the core ion Ti II [1] produces

908 bound states that produced 33203 LS multiplets. Fine structure split produced 270423 transitions. The Cr I wavefunction expansion includes 40 states of the core ion Cr II [2]. There are 134 bound septet and quintet bound states are found that can form coupling to the ground state 6S of the core ion Cr II and produced 1035 LS multiplets. Additionally, lifetimes and forbidden transitions obtained from atomic structure code SUPERSTRUCTURE will also be presented.

POSTERS (166)

Filter presentations



Poster 1

Photoionization of Neutral Barium and Biphoton Emission of Helium-like Ions

Justin D Piel (presenter), Chris H Greene

Poster 2

Predicting spectroscopic constants and dipole moments of diatomics: a machine learning approach

Mahmoud A Ibrahim (presenter), Ahmed Elhalawani, Ruiren Shi, Xiangyue Liu, Jesús Pérez-Ríos

Poster 3

Excitation of Molecular Hyperfine States with Electric-field Gradients

Grant David Mitts (presenter), Clayton Ze Chi Ho, Hao Wu, Joshua Rabinowitz, Eric R Hudson

Poster 4

Progress towards a portable, primary Doppler thermometer

Daniel S Barker (presenter), Sean M Bresler, Erin Adkins, Matthew T Hummon, David A Long, Benjamin J Reschovsky, Vladimir Aksyuk, Stephen P Eckel, Tobias Herman, John Kitching

Poster 5

Spectroscopy of dysprosium monoxide for optical cycling, cooling, and trapping

Zack Lasner (presenter), Nicole Albright, Kendall Rice, John M Doyle, Benjamin L Augenbraun

Poster 6

The Iron Project: R-Matrix calculations for atomic data and spectral features of Fe-peak elements Ti I and Cr I

Sultana Nurun Nahar (presenter), Md M Faysal

Poster 7

Exploration of suitable pumping schemes for Bose-Einstein condensates of vacuum-ultraviolet photons

Thilo Falk vom Hoevel (presenter), Eric Boltersdorf, Franz R Huybrechts, Frank Vewinger, Martin Weitz

Poster 8

Narrow-linewidth transitions out of the metastable $^2F^{\circ}_{7/2}$ state in Yb^+

Hassan Ali Farhat (presenter), William Liu, Wesley C Campbell, Patrick Joseph McMillin

Poster 9

The Auger Radioisotope Microscope (ARM): characterization of Auger electrons multiplicities and energy spectrum

Francesco Granato (presenter), Patrick R Stollenwerk

Poster 10

Evolution of Relativistic Effects on Wigner Photoionization Time Delay of Spin-Orbit Doublets

David A Keating (presenter), Steven T Manson, Pranawachandra Chakradhar Deshmukh

Poster 11

Modeling Dust Grain Opacity with Mie Scattering

Sarah Stangl (presenter), Mark C Zammit, Christopher Mauney

Poster 12

Fine structure transitions of sulfur in collisions with molecular hydrogen

James F Babb (presenter), Peigen Yan

Poster 13

Adiabatic association of weakly bound molecules through confinement induced resonances

Seth T Rittenhouse (presenter), Lorenzo Oghittu, Nirav P. Mehta, Arghavan Safavi-Naini, Premjith Thekkepatt, Florian Schreck, Klaasjan van Druten

Poster 14

Anomalies in the rotational spectra of ^{86}Sr ULRRM dimers

A. Li (presenter), C. Wang, Y. Lu, S. K. Kanungo, T. C. Killian, F. B. Dunning, S. Yoshida

Poster 15

Electron-impact excitation of Singly-ionized Neon using the B-Spline atomic R-Matrix code

Abigail Gebremariam (presenter), Klaus R Bartschat, Kathryn R. Hamilton

Poster 16

Electron-impact excitation of Neutral Copper using the Dirac B-Spline atomic R-Matrix code

Lo Bailey Laboda (presenter), Klaus R Bartschat, Kathryn R. Hamilton

Poster 17**Resonances arising from ion confinement in hybrid atom-ion systems**

Nirav P. Mehta (presenter), Lorenzo Oghittu, Seth T Rittenhouse, Rene Gerritsma, Arghavan Safavi-Naini

Poster 18**Towards the Realization of a Cluster State of Neutral Atoms in a 3D Optical Lattice**

Maarten Alexander de Haan (presenter), Peng Du, Mritunjay K Joshi, Lyuhang Wu, David S Weiss

Poster 19**Toward efficient trace detection and characterization of diagonal radioactive molecular ions using a spectrally filtered broadband laser**

Patrick R Stollenwerk (presenter)

Poster 20**Chemical production of CaH in a CBGB source and progress toward a 3D MOT**

Jinyu Dai (presenter), Qi Sun, Benjamin Cohen Riley, Rian Koots, Jesus Perez Rios, Debayan Mitra, Tanya Zelevinsky

Poster 21**Exploring nonadiabatic effects in Rydberg molecules**

Shuaijie Li (presenter), Alisher Duspayev, Georg A Raithel

Poster 22**Bose-Einstein Condensation of Dipolar Molecules**

Asaf Toprakci (presenter), Niccolò Bigagli, Haneul Kwak, Weijun Yuan, Siwei Zhang, Tijs Karman, Ian C Stevenson, Sebastian Will

Poster 23**The single active electron approximation for carbon monoxide in strong laser fields; a comparison with the multi-electron response**

Evan Curtis Jones (presenter), Barry C Walker, Matt Pham, James Wisely

Poster 24**Study of Wigner time delay in Ne 2s and 2p subshells including relaxation effects.**

Sourav Banerjee (presenter), Aarthi Ganesan, Subhasish Saha, Jobin Jose, Pranawachandra Chakradhar Deshmukh, Steven T Manson

Poster 25**Photoinduced Neutral Roaming and Hydrogen Migration in Methanol**

Noah Frese (presenter), Debadarshini Mishra, Clark Bray, Cameron W Brady, Aaron C LaForge, Jose Gascon, Angelo Rossi, Nora Berrah

Poster 26

Time-resolved Rydberg Dynamics in Molecules

Erfan Saydanzad (presenter), Hung Hoang, Uwe Thumm

Poster 27

Experimental and Theoretical Study of Four-Wave Mixing in Krypton

Miguel Alarcon (presenter), Arvinder S Sandhu, Chris H Greene, Sergio Yanez-Pagans

Poster 28

Resonant X-ray Scattering of Intense Ultrafast Pulses

Akilesh Venkatesh (presenter), Phay J Ho

Poster 29

Probing Molecular Chirality with Nonlinear X-ray Spectroscopies

Yeonsig Nam (presenter), Majed Chergui, Linda Young, J  r  my R Rouxel

Poster 30Measuring Attosecond Photonionization Delays in N₂O

Erik Isele (presenter)

Poster 31

Photoelectron – residual-ion interaction in angle-resolved streaked shake-up ionization of helium

Uwe Thumm (presenter), Hongyu Shi

Poster 32

Comparative study of spectral broadening Yb laser pulses in gas-filled hollow-core fibers

Michael McDonnell (presenter), Islam Samy Shalaby, Colin Murphy, Nisnat Chakraborty, Kody Gray, James Kirkham Wood, Dipayan Biswas, Arvinder S Sandhu

Poster 33

Entangled Photoelectron Attosecond Spectroscopy

Jonathan Sar-Shalom (presenter), Nicolas Douguet

Poster 34

Air lasing with structured light fields

Jingsong Gao (presenter), Meng Han

Poster 35Breakup of SO₂⁺ in femtosecond laser pulses

Itzik Ben-Itzhak (presenter), Nirmallya Das, Naoki Iwamoto, Eric Wells

Poster 36

Reconstruction of three-dimensional molecular electronic densities from coherent diffraction images using a generative Adversarial Network in reciprocal space

Siddhartha Poddar (presenter), Ulf Saalmann, Jan Michael Rost

Poster 37

Optical cooling of the torsional modes of a tapered nanofiber

Brielle E Anderson (presenter)

Poster 38

Photon-mediated dipole-dipole interactions as a resource for quantum science and technology in cold atoms

Hsiang-Hua Jen (presenter)

Poster 39

Comparison of Frequency Stability Measurements of a Quad-bore Ultra-low Ex-pansion Cavity

Josiah Bingaman (presenter), John Dickson, Nathan O'Malley, Bryan Rezende, Noah Lindsell, Timothy N Nunley, Jeremy Glick, David H Meyer, Paul Kunz

Poster 40

Molecular Angular Momentum Orientation Using Dressed States Created by Laser Radiation

Jacob Thomas Stahovich (presenter), Brendan A Rowe, John Patrick Huennekens, A Marjatta Lyyra, Ergin H Ahmed

Poster 41

Frequency conversion through wave-mixing rubidium Rydberg states.

Erik G Brekke (presenter), Cordell Umland

Poster 42

Effective nonlinear mechanical cooling and amplification in the quadratic optomechanics

Sukjin Yoon (presenter), Hyojun Seok

Poster 43

Single photon cross-phase shifts can be enhanced by localizing the photon in both frequency and time

Andy Jiao (presenter), Vida-Michelle Nixon, Kyle E Thompson, Aephraim M Steinberg

Poster 44

Modeling of Polarization Dynamics in Optical Fibers for Quantum Networking

Patrick Banner (presenter), Steven Rolston, Joe Britton

Poster 45

Parallelized telecom-band quantum network using an ytterbium-171 fiber array

Zhubing Jia (presenter), Lintao Li, Xiye Hu, William Huie, Won Kyu Calvin Sun, Aakash Aakash, Yuhao Dong, Narisak Hiri-o-tuppa, Jacob Covey

Poster 46**Remote entanglement generation with trapped ions and Greenberger-Horne-Zeilinger (GHZ) entangled states**

Yao De George Toh (presenter), Sagnik Saha, Mikhail Shalaev, Isabella Goetting, Ashish Kalakuntla, Harriet Shi, Christopher Monroe

Poster 47**Measuring non-classical statistics of fluorescence from a single atom on atom array towards quantum networking**

Yuya Maeda (presenter), Toshiki Kobayashi, Kentaro Shibata, Shuta Nakajima, Makoto Yamashita, Rikizo Ikuta, Takashi Yamamoto

Poster 48**test test**

Daniel TestUser (presenter)

Poster 49**Spectrally tailored clock laser for quantum state engineering and many-body physics in a 3D optical lattice clock**

Max Nicolas Frankel (presenter), Lingfeng Yan, Stefan Lannig, Yu Hyun Lee, William R Milner, Ben Lewis, Dahyeon Lee, Kyungtae Kim, Jun Ye

Poster 50**Towards cooling the center of mass motion of a levitated nanosphere with cold atoms**

William Eom (presenter), Eduardo Alejandro, Cris A Montoya, Apryl Witherspoon, Andrew Albert Geraci

Poster 51**Multi-photon scattering in subwavelength atomic arrays**

Yidan Wang (presenter), Oriol Rubies-Bigorda, Valentin Walther, Susanne F Yelin

Poster 52**Towards Telecommunication-Band Quantum Networking with an Atom-Cavity Platform**

Matthew Bilotta (presenter), Andrei Ruskuc, Eirini Mandopoulou, Brandon Grinkemeyer, Danilo Shchepanovich, Sophie Weiyi Ding, Offek Tziperman, Michel Tao, Marco Loncar, Vladan Vuletic, Mikhail D Lukin

Poster 53**An apparatus for coupling two-dimensional materials to cavity photons**

Han Slade Hiller (presenter)

Poster 54**Progress in Continuous-Wave Superradiance and Gap Protection Against Doppler Dephasing in a High-Finesse Optical Ring Cavity**

Zhijing Niu (presenter), Cameron Wagner, Vera M Schäfer, Julia R Cline, Dylan J Young, Eric Y Song, Seth H Chew, Nathan R Taylor, Haoqing Zhang, Anjun Chu, Helmut Ritsch, Ana Maria Rey, James K Thompson

Poster 55**Trapped atoms and collective emission on an integrated nanophotonic microring circuit**

Xinchao Zhou (presenter), Dipanjan Das, Chen-Lung Hung

Poster 56**Homebuilt Laser System for Frequency Domain Measurements of Gravity using Echo Atom Interferometry**

Jaskaran Randhawa (presenter), Gehrig Michael Isaac Carlse, Joseph Cuzzupoli, Eduardo Ramos, Thomas M Vacheresse, Alexander Pouliot, A Kumarakrishnan

Poster 57**Exploring quantum mechanical concepts using items from tabletop games**

Danyel Cavazos-Cavazos (presenter)

Poster 58**Towards a Scalable and More Efficient Ytterbium Atom Array Quantum Device**

Timothy Chang (presenter), Nick N Gharabaghi, Areeq Hasan, Laura Zhou, Tsz-Him Leung, Joonhee Choi

Poster 59**Geometric Phases due to Used Transitions cause Disturbances in a Hyperfine Qubit**

Joseph McGowan (presenter), Nick Mantella, Aephraim M Steinberg

Poster 60**Parallel rearrangement of single atoms with an SLM for quantum simulation and characterization of rydberg interaction strength between neighboring atoms**

Alexander Urech (presenter), Ivo Kottnerus, Robert J C Spreeuw, Yu Chih Tseng, Florian Schreck

Poster 61**Towards quantum cellular automata with Rydberg atom arrays**

Shraddha Anand (presenter), Ryan White, Vikram Ramesh, Hannes Bernien

Poster 62**Simulating fermion dynamics and topological matter with reconfigurable atom arrays**

Simon J Evered (presenter), Marcin J Kalinowski, Alexandra A Geim, Tom Manovitz, Dolev Bluvstein, Sophie Helena Huiyuan Li, Nishad Maskara, Hengyun Zhou, Sepehr Ebadi, Muqing Xu, Joseph Campo, Madelyn Cain, Stefan Ostermann, Susanne F Yelin, Subir Sachdev, Markus Greiner, Vladan Vuletic, Mikhail D Lukin

Poster 63**Floquet transverse-field Ising dynamics in a Rydberg-dressed optical tweezer array**

Neomi A Lewis (presenter), Gabriel L Moreau, Michael D Wahrman, Shankari V Rajagopal, Monika H Schleier-Smith

Poster 64**Observation of quasi-ballistic transport at infinite temperature in a Rydberg simulator**

Daniel K. Mark (presenter), Adam L Shaw, Thomas Schuster, Federica Maria Surace, Wenjie Gong, Soonwon Choi, Manuel Endres

Poster 65**Exploring Non-equilibrium Phase Transitions in a Strontium Cavity QED System**

Eric Y Song (presenter), Dylan J Young, Seth H Chew, Joyce Kwan, Diego Barberena, Anjun Chu, Edwin Chaparro, Sanaa Agarwal, David Wellnitz, Jeremy T Young, Zhijing Niu, Vera M Schäfer, Robert J Lewis-Swan, Ana Maria Rey, James K Thompson

Poster 66**Long-distance connecting of Logical-qubits with different encoding schemes**

Mohammadsadegh Khazali (presenter)

Poster 67**Efficient Matter-based Fault-Tolerant Blind Quantum Computing**

Francisco Machado (presenter), Gefen Baranes, Iria Wang, Aziza Suleymanzade, Pieter-Jan Constant Stas, Yan-Cheng Wei, Susanne F Yelin, Johannes Borregaard, Mikhail D Lukin

Poster 68**Compact, Cryogenic Surface-Electrode Penning Trap for Quantum Information Experiments**

Brian Joseph McMahon (presenter), Brian C Sawyer

Poster 69**Fast Ion-Photon Remote Entanglement**

Garrett Percevault (presenter), Shashank Dharanibalan, Dylan Heberle, Benjamin Malia, Nikola Porto, Nicholas Barton, Amos M Smith, Christopher C Tison, Clayton L Craft, Zachary S Smith, Stefan F Preble, David Hucul

Poster 70**Site-selective cavity readout and classical error correction of a 5-bit atomic register**

Josiah John Sinclair (presenter), Beili Hu, Edita Bytyqi, Michelle Chong, Alyssa Rudelis, Joshua Ramette, Zachary Vendeiro, Vladan Vuletic

Poster 71**Dual-Type, Dual-Species ^{171}Yb - ^{87}Rb Atom Arrays and Inter-Species Rydberg Interactions**

Tao A Zheng (presenter), Franklin J Vivanco, Majid Zahedian, Luis Fernandez, Zhanchuan Zhang, Greg Ferrero, Foivos Vouzinas, Wenchao Xu

Poster 72

Utilizing discrete truncated Wigner approximation to test QAOA and QA on large graph optimization problems

Dennis Breu (presenter), Michael Fleischhauer

Poster 73

Refining Control of Electric-Field Gradient Gates on Molecular Ion Qubits

Clayton Ze Chi Ho (presenter), Joshua Rabinowitz, Grant David Mitts, Hao Wu, Eric R Hudson

Poster 74

Towards quantum science with a large-scale optical tweezer array

Hannah J Manetsch (presenter), Gyohei Nomura, Elie Bataille, Kon H Leung, Xudong Lv, Nadine Meister, Manuel Endres

Poster 75

Towards high-fidelity alkali atom entanglement via single-photon Rydberg excitation and microwave dressing

Linipun Phuttitarn (presenter), Sam Avery Norrell, Uday Singla, Cody A Poole, Trent Graham, Matthew Otten, Mark Saffman

Poster 76

Benchmarking high-fidelity Rydberg gates and fidelity response theory on a quantum simulator

Xiangkai Sun (presenter), Richard Bing-Shiun Tsai, Lewis RB Picard, Yuan Le, Adam L Shaw, Ran Finkelstein, Manuel Endres

Poster 77

Towards Quantum Internet Using Hybrid Quantum Technology

Zeyang Li (presenter), Lavanya Taneja, Xin Wei, Abhishek Karve, Aishwarya Kumar, David I Schuster, Jon Simon

Poster 78

Modeling LIGO on a Quantum Computer: Demonstration for Undergraduate Quantum Mechanics

Cindy Tran (presenter), Tanaporn Na Narong, Eric S Cooper

Poster 79

Distributed multi-parameter quantum metrology with a superconducting quantum network

Yong-Ju Hai (presenter), Jiajian Zhang, Lingna Wang, Jingjing Niu, Youpeng Zhong, Haidong Yuan

Poster 80

Progress towards entanglement enhanced Bragg interferometer

Chitose Maruko (presenter), Chengyi Luo, Eliot Bohr, Leah Huzjak, Haoqing Zhang, Anjun Chu, John D Wilson, James Thompson, Ana Maria Rey

Poster 81**Enhanced optical communication with quantum processors**

Kelly W Smith (presenter), Johannes Borregaard

Poster 82**Qubit Loading and Operations on a Tweezer Array Based Quantum Computer of Bosonic Strontium**

Max Z Festenstein (presenter), Rik van Herk, Marijn Venderbosch, Zhichao GUO, Jesús del Pozo Mellado, Rianne S Lous, Edgar Vredenburg, Servaas Kokkermans

Poster 83**Current efforts to test quantum dissipation theory**

Raul Puente (presenter), Arjun Krishnan Uppath Mohanan, Wayne Cheng-Wei Huang, Zilin Chen, Harindranath B Ambalampitiya, Herman Batelaan

Poster 84**Quantum Error Correction using Spin-Motion Interactions**

Omid Khosravani (presenter)

Poster 85**Modeling and Verification of Doppler Effects in Warm Vapor Rydberg Ladder-EIT Spectroscopy**

Paul Kunz (presenter), Jeremy Glick, Brielle E Anderson, Timothy N Nunley, David H Meyer

Poster 86**Supersolidity in Rydberg tweezer arrays**

Lukas Homeier (presenter), Simon Hollerith, Sebastian Geier, Neng-Chun Chiu, Antoine Browaeys, Lode C Pollet

Poster 87**Quantum Gases of Dy in High-Finesse Multimode Cavities**

Derek M Baldwin (presenter), Kuan-Yu Lin, Zhendong Zhang, Kangning Yang, Benjamin L Lev

Poster 88**Quantum Monte-Carlo Simulations of Protonated Argon Clusters**

Saajid Chowdhury (presenter), Jesús Pérez-Ríos

Poster 89**Quasiparticle Properties of Long-range Impurities in a Bose Condensate**

Taha Alper Yogurt (presenter), Matthew T Eiles

Poster 90**Three-Body Interaction Effects in ^7Li Bose-Einstein Condensates**

Ricardo Espinoza Masbernat (presenter), Randall G Hulet

Poster 91**Fermion mediated pairing in a Bose-Fermi mixture**

Bethel B Kifle (presenter), Henry Ando, Geyue Cai, Cheng Chin, Sarah Ann McCusker

Poster 92**Single-Site Resolved Microscopy in a Hybrid Optical Lattice-Tweezer System**

Yufei Wang (presenter), Xiao Li, Ligeng Yu, Song Bo

Poster 93**Quantum Gas Microscopy of Fermions in the Continuum**

Jean Paul Nohra (presenter), Cyprien Daix, Maxime Dixmerias, Joris Verstraten, Tim de Jongh, Bruno Peaudecerf, Tarik Yefsah

Poster 94**Atom-resolved Microscopy of 2D Bose and Fermi Gases in the Continuum**

Mingxuan Wang (presenter), Ruixiao Yao, Sungjae Chi, Richard J Fletcher, Martin W. Zwierlein

Poster 95**Tunable domain-wall dynamics in multi-domain spin structures in an ultracold ^{87}Rb gas**

Olha Farion (presenter), Mehdi Pourzand, Jeffrey McGuirk

Poster 96**Efficient approach to determining the eigenenergies and eigenstates of three and four identical particles under external harmonic confinement**

Jacob D Norris (presenter), Doerte Blume

Poster 97**Low energy excitations in 1D Fermi gases**

Yu-Hao Yeh (presenter), Aashish Kafle, Danyel Cavazos-Cavazos, Ruwan Senaratne, Randall G Hulet

Poster 98**Investigating quantum correlations in collective emission of light using TWA simulations**

Jens Hartmann (presenter), Michael Fleischhauer

Poster 99**Quantum simulation of ultrafast dynamics with degenerate strontium**

Anna R Dardia (presenter), Yifei Bai, Petros Kousis, Daniel M Harrington, Siddharth Mukherjee, David M Weld

Poster 100**Thermodynamics of fermions in flat band systems**

Shao-Wen Chang (presenter), Malte Nils Schwarz, Erin Moloney, Dan Stamper-Kurn, Ke Lin, John Ciavarra, Nikhil Maserang

Poster 101**Kinetic magnetism and stripe order in the antiferromagnetic bosonic t-J model**

Timothy J. James Harris (presenter), Ulrich Schollwöck, Annabelle Bohrdt, Fabian Grusdt

Poster 102**Ultracold bosons in a two-dimensional optical quasicrystal**

Zhuoxian (Chelsea) Ou (presenter), Leanne C Reeve, Qijun Wu, Baptiste Lerat, Yong-Guang Zheng, Ulrich Schneider

Poster 103**Towards engineering Hofstadter ladders with Raman-coupled bosonic mixtures**

Sarah Hirthe (presenter), Ignacio Pérez Ramos, Andreas Meyer, Rémy Vatré, Leticia Tarruell

Poster 104**Towards the $\nu = 1$ Pfaffian Fractional Quantum Hall State with Ultracold Bosons in an Optical Lattice**

Annie Zhi (presenter), Yanfei Li, Tizian Blatz, Joyce Kwan, Perrin C Segura, Annabelle Bohrdt, Martin Greiter, Fabian Grusdt, Markus Greiner

Poster 105**Radiation Trapping of Amplitude-Modulated Resonant Light**

Charles B Henry (presenter), Mark Watkins, Jacob L Roberts

Poster 106**Coherence of light scattering by atom wavepacket**

Hanzhen Lin (presenter), Vitaly Fedoseev, Yu-Kun Lu, Yoo Kyung Lee, Jiahao Lyu, Wolfgang Ketterle

Poster 107**Emergence of second-order coherence in superfluorescence**

Constanze Bach (presenter), Felix Tebbenjohanns, Christian Liedl, Philipp Schneeweiss, Arno Rauschenbeutel

Poster 108**Cold Atom Systems for Deployable Quantum Inertial Navigation and Gravitational Sensing**

Benjamin D Smith (presenter), Cody R Bassett, Adrian S Orozco, Christian D Sanchez, Roger Ding, Jongmin Lee

Poster 109**Detachable Zeeman Slower Electromagnet for Laser Cooling Experiments**

Emma G Hataway (presenter), Ben A Olsen, Emma K Falk, Kaia E O'Neill, Morgan P Berghof

Poster 110**An Octupole Magneto-Optical Trap for Gray-Molasses Cooling of Potassium-41**

Frank Nyonator (presenter), Khoa Nguyen, Benjamin Foulks, Jonathan P Wrubel

Poster 111**High-efficiency telecom frequency conversion via a diamond-type atomic ensemble**

Ling-Chun Chen (presenter), Meng-Yi Lin, Jiun-Shiuan Shiu, Xuan-Qing Zhong, Po-Han Tseng, Yong-Fan Chen

Poster 112**Towards fast error syndrome measurements in dual species atomic qubit arrays**

Sam Avery Norrell (presenter), David Petrosyan, Cody A Poole, Linipun Phuttitarn, Uday Singla, Trent Graham, Mohit Gupta, Swamit Tannu, Andreas Velten, Mark Saffman

Poster 113**Progress Towards an Analog Quantum Simulator of Potassium Silver Molecules**

Angela Xiang (presenter), Nachiket D Bhanushali, Michael Vayninger, Zoe Z Yan

Poster 114**Non-Conventional Thermal States of Interacting Bosonic Oligomers**

Amichay Vardi (presenter), Tsampikos Kottos, Alba Ramos, Vladimir Yurovsky

Poster 115**Probing false vacuum decay on a cold-atom gauge-theory quantum simulator**

Zi-Hang Zhu (presenter), Ying Liu, Gianluca Lagnese, Federica Maria Surace, Wei-Yong Zhang, Ming-Gen He, Jad C Halimeh, Marcello Dalmonte, Sid Morampudi, Frank Wilczek, Zhen-Sheng Yuan, Jian-Wei Pan

Poster 116**Chaos and entanglement growth in a system of two connected Bosonic optical lattices**

Kartik K Sreedhar (presenter), Steven L Tomsovic

Poster 117**Porgess toward quantum information processing with Dipole-phonon interaction in trapped ions**

Lu Qi (presenter), Evan C Reed, Boyan Yu, DUANYANG WANG, Kenneth R Brown

Poster 118**Design and Assembly of a Barium Ion Quantum Simulation Testbed**

XingHe Tan (presenter), Akimasa Ihara, Ali Khatai, Akbar J Jozani, Collin J Epstein, Anastasiia Bershanska, Crystal Senko, Rajibul Islam

Poster 119**Scalable ion-trapping system for quantum technology applications**

Roman Zhuravel (presenter), Abhishek Menon, George Tomaras, Michael W Straus, Midhuna Suganthi Duraisamy, Xinyi Dai, Visal So, Liam Jeanette, Yuanheng Xie, Norbert M Linke, Guido Pagano

Poster 120**Progress towards non-destructive detection of the spin of trapped electrons**

Zijue Luo (presenter), Qian Yu, Alberto M Alonso, Neha Yadav, Isabel Sacksteder, Shuqi Xu, Xiaoxing Xia, Abhinav Parakh, Juergen Biener, Hartmut Haeffner, Boerge Hemmerling

Poster 121**High-Dimensional QuDit Control for Scalable Trapped Ion Quantum Computing**

Gaurav A Tathed (presenter), Nicholas C Zutt, Pei Jiang Low, Crystal Senko

Poster 122**Characterization of A Novel 2D-3D Photonic Integrated Circuit for Broadband, High-Efficiency Control of Trapped Ion Qubit Arrays**

Bingran You (presenter), Daniel Klawson, Yiyang Zhi, Lai Jiang, Wenjun Ke, Ke Sun, Qiming Wu, Chunyuan Fan, Arkadev Roy, Sirui Tang, Jianheng Luo, Benjamin V Saarel, Shuqi Xu, Michael Bareian, Ming-Chiang Wu, Hartmut Haeffner

Poster 123**Super and Sub-Radiance in a Tunable Spacing Quantum Gas Microscope**

Michal Szurek (presenter), Alexander M Douglas, Lin Su, Robin Groth, Ognjen Markovic, Oriol Rubies-Bigorda, Stefan Ostermann, Susanne F Yelin, Markus Greiner

Poster 124**Quantum Droplets of Dipolar Molecules**

Haneul Kwak (presenter), Niccolò Bigagli, Weijun Yuan, Siwei Zhang, Tijs Karman, Ian C Stevenson, Sebastian Will

Poster 125**Cavity-enabled real-time observations and manipulation of many-atom dynamics**

David C Spierings (presenter), Matthew L Peters, Guoqing Wang, Meng-Wei Chen, Yu-Ting Chen, Niv Drucker, Beili Hu, Vladan Vuletic

Poster 126**Ytterbium atoms in optical tweezers for fermionic many-body physics**

Alessandro Muzi Falconi (presenter), Omar Abdel Karim, Riccardo Panza, Wenliang Liu, Sara Sbernadori, Riccardo Forti, Matteo Marinelli, Francesco Scazza

Poster 127**Community Portal for High-Precision Atomic Physics Data and Computation**

Charles Cheung (presenter), Marianna S Safronova, Dmytro Filin, Bindiya Arora, Amani Kiruga, Parinaz Barakhshan, Rudolph Eigenmann, Adam Marrs, Akshay Bhosale

Poster 128**Demonstration of atom spin gyroscope operating with high bandwidth over 100 Hz**

Sin Hyuk Yim (presenter), Sangkyung Lee, Taek Jeong, Jeong Bin Nam, Dongkyu Kim, Sang Hyuk Hong, Hyeonjae Kim

Poster 129

Progress toward improved limits on charge-parity violation using octupole-deformed Radium atoms

David Peana (presenter), Kevin G Bailey, Peter Mueller, Thomas P O'Connor, David Vera, Michael N Bishof, Yousuf Alishan, Gordon Arrowsmith-Kron, Aiden Robert Boyer, Jaideep Taggart Singh

Poster 130

A ^3He - ^{21}Ne Co-magnetometer for searching Spin-Gravity Interactions

Shaobo Zhang (presenter), Michael V Romalis, Jingyao Wang

Poster 131

Towards a Portable Two-Photon Cesium Optical Clock

Kenneth G Jackson (presenter), Su-Peng Yu, Florian Christaller, Siddhi Kharat, Scott Smale, Donald Booth, James P Shaffer

Poster 132

Cold Beam Optical Clock with Multifrequency Spectroscopy

William G Tobias (presenter), Bryan Hemingway, Steven Peil

Poster 133

Volume Efficient Quantum Limited Rb Radio-Frequency Magnetometer

Jingyao Wang (presenter), Michael V Romalis

Poster 134

Quantum Enhanced Atom Interferometer

Annesh Mukhopadhyay (presenter), Vigneshwaran Chandrasekaran, Tyler Volkoff, Changhyun Ryu

Poster 135

ZOMBIES: Towards measuring the parity-violating nuclear anapole moment of ^{137}Ba in BaF molecules

Emine Altuntas (presenter), Mangesh Bhattarai, Vincent Chen, Robert Xi, David P DeMille

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MEHDI A Ayouz (presenter), Arnaud Buch

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GPMFC STUDENT POSTER COMPETITION

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Alessandro L Banducci (presenter), Aung S Naing, Haoran Ding, Swetam Sinha, Jennifer Stanley, Samuel M Brewer

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Wei J Li (presenter), Sara Ahanchi, Jeffrey G Lee, Daniel S Barker, Kevin C Cox, Gretchen K Campbell, Nathan A Schine

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Xinghan Wang (presenter)

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Pengyu Zhou (presenter), David P DeMille, Olivier Grasdijk, David Kawall, Jianhui Li, Emma McClure, Tristan Winick, Junlin Wu, Yuanhang Yang, Tanya Zelevinsky

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Wenwei Xu (presenter), Brandon Iritani, Gisung Sim, Debayan Mitra, Jingjing Huang, Tanya Zelevinsky

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