

Atomic Physics Division Fachverband Atomphysik (A)

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Overview of Invited Talks and Sessions (Lecture halls GrHS Mathe, KIHS Mathe, HS PC; Poster Tent)

Invited Talks

A 1.1	Mon	11:00–11:30	KIHS Mathe	Spatially dependent polarization spectroscopy with structured light modes — ●RIAAN PHILIPP SCHMIDT, RICHARD AGUIAR MADURO, ANTON PESHKOV, SONJA FRANKE-ARNOLD, ANDREY SURZHYKOV
A 1.2	Mon	11:30–12:00	KIHS Mathe	Circular dichroism in multiphoton ionization of resonantly excited helium ions near channel closing — ●NICLAS WIELAND, RENE WAGNER, MARKUS ILCHEN, NICOLAS DOUGUET, PHILIPP SCHMIDT, KLAUS BARTSCHAT, MICHAEL MEYER
A 2.1	Mon	11:00–11:30	HS PC	Towards an optical atomic clock based on Ni¹²⁺ — ●MALTE WEHRHEIM, LUKAS J. SPIESS, SHUYING CHEN, ALEXANDER WILZEWSKI, PIET O. SCHMIDT, JOSÉ R. CRESPO LOPEZ-URRUTIA
A 3.1	Mon	17:00–17:30	KIHS Mathe	QRydDemo - A Rydberg atom quantum computer demonstrator — ●JIACHEN ZHAO, CHRISTOPHER BOUNDS, CHRISTIAN HÖLZL, MANUEL MORGADO, GOVIND UNNIKRISSHANN, ACHIM SCHOLZ, JULIA HICKL, SEBASTIAN WEBER, HANS-PETER BÜCHLER, SIMONE MONTANGERO, JÜRGEN STUHLER, TILMAN PFAU, FLORIAN MEINERT
A 4.1	Mon	17:00–17:30	HS PC	Precision Measurements to Test Theory at ALPHATRAP — ●MATTHEW BOHMAN, FABIAN HEISSE, CHARLOTTE KÖNIG, IVAN KORTUNOV, JONATHAN MORGNER, VICTOR VOGT, KLAUS BLAUM, STEPHAN SCHILLER, SVEN STURM
A 6.1	Tue	11:00–11:30	GrHS Mathe	Water Window HHG continua driven by sub-cycle, nonsinusoidal IR Pulses — ●FABIAN SCHEIBA, MIGUEL SILVA, GIULIO MARIA ROSSI, ROLAND E. MAINZ, MAXIMILIAN KUBULLEK, RAFAEL D. Q. GARCIA, FRANZ X. KÄRTNER
A 7.1	Tue	11:00–11:30	KIHS Mathe	Ultracold and ultrafast: Tandem ion imaging and electron spectroscopy for quantum gases — JETTE HEYER, JULIAN FIEDLER, MARIO GROSSMANN, LASSE PAULSEN, MARLON HOFFMANN, MARKUS DRESCHER, KLAUS SENGSTOCK, JULIETTE SIMONET, ●PHILIPP WESSELS-STAARMANN
A 12.1	Wed	11:00–11:30	HS PC	A planar rotor in an ion crystal — ●MONIKA LEIBSCHER, FERDINAND SCHMIDT-KALER, CHRISTIANE P. KOCH
A 13.1	Wed	11:00–11:30	KIHS Mathe	Microscopy of matter wave emission into a two-dimensional structured reservoir — ●FELIX SPIESTERSBACH, JAN GEIGER, VALENTIN KLÜSENER, IMMANUEL BLOCH, SEBASTIAN BLATT
A 16.1	Wed	14:30–15:00	HS PC	Entanglement in the motional degree of freedom created in ultracold collisions — ●YIMENG WANG, CHRISTIANE KOCH
A 17.1	Wed	14:30–15:00	GrHS Mathe	Time Resolved Diffractive Imaging of Laser Induced Dynamics in Materials — ●TOM BÖTTCHER, RICHARD ALTENKIRCH, STEFAN LOCHBRUNNER, CHRISTIAN PELTZ, THOMAS FENNEL, FRANZISKA FENNEL
A 25.1	Thu	11:00–11:30	GrHS Mathe	Circular Dichroic Attosecond Transient Absorption Spectroscopy — ●LAUREN DRESCHER, NICOLA MAYER, KYLIE GANNAN, JONAH ADELMAN, STEPHEN LEONE

A 26.1	Thu	11:00–11:30	KIHS Mathe	Breaking the barrier of resolution in broadband spectroscopy — •JÉRÉMIE PILAT, BINGXIN XU, THEODOR W. HÄNSCH, NATHALIE PICQUÉ
A 27.1	Thu	11:00–11:30	HS PC	High precision spectroscopy of trilobite Rydberg molecular series — •RICHARD BLÄTTNER, MARKUS EXNER, ROHAN SRIKUMAR, MATT EILES, PETER SCHMELCHER, HERWIG OTT
A 31.1	Thu	14:30–15:00	KIHS Mathe	Characterization of an XUV Frequency Comb by Spectroscopy of Rydberg States — •LENNART GUTH, JAN-HENDRIK OELMANN, TOBIAS HELDT, JANKO NAUTA, NICK LACKMANN, ANANT AGARWAL, LUKAS MATT, THOMAS PFEIFER, JOSÉ R. CRESPO LÓPEZ-URRUTIA

Invited Talks of the joint Symposium SAMOP Dissertation Prize 2025 (SYAD)

See SYAD for the full program of the symposium.

SYAD 1.1	Mon	14:30–15:00	HS 1+2	A simple method to separate single- from multi-particle dynamics in time-resolved spectroscopy — •JULIAN LÜTTIG
SYAD 1.2	Mon	15:00–15:30	HS 1+2	Time-resolving quantum dynamics in atoms and molecules with intense x-ray lasers and neural networks — •ALEXANDER MAGUNIA
SYAD 1.3	Mon	15:30–16:00	HS 1+2	How rotation shapes the decay of diatomic carbon anions — •VIVIANE C. SCHMIDT
SYAD 1.4	Mon	16:00–16:30	HS 1+2	Interstellar stardust from stellar explosions recorded in a deep-ocean ferromanganese crust within the last 10 million years — •DOMINIK KOLL

Invited Talks of the joint Symposium Quantum Science and more in Ghana and Germany (SYGG)

See SYGG for the full program of the symposium.

SYGG 1.1	Tue	11:00–11:05	WP-HS	Welcome Adress — •BIRGIT MÜNCH
SYGG 1.2	Tue	11:05–11:20	WP-HS	Quantum Education in Ghana — •DORCAS ATTUABEA ADDO
SYGG 1.3	Tue	11:20–11:45	WP-HS	Mathematical and Computational Physics Research In Ghana: To Cultivate a Knowledge-Based and Sustainable Development Economy — •HENRY MARTIN, HENRY ELORM QUARSHIE, MARK PAAL, FRANCIS KOFI AMPONG, ERIC KWABENA KYEH ABAVARE, MATTEO COLANGELI, ALESSANDRA CONTINENZA, JAIME MARIAN
SYGG 1.4	Tue	11:45–12:10	WP-HS	Forecasting the Economic Health of Ghana Using Quantum-Enhanced Long Short-Term Memory Model — •PETER NIMBE, HENRY MARTIN, DORCAS ATTUABEA ADDO, NICODEMUS SONGOSE AWARAYI
SYGG 1.5	Tue	12:10–12:40	WP-HS	Quantum Technology with Spins — •JOERG WRACHTRUP
SYGG 1.6	Tue	12:40–13:00	WP-HS	Renewable Energy Technologies for Rural Ghana: The Role of Appropriate Technology for Tailored solutions — •MICHAEL KWEKU EDEM DONKOR

Invited Talks of the joint Symposium Precision Measurements at the Intersection of Atomic and Nuclear Physics (SYPM)

See SYPM for the full program of the symposium.

SYPM 1.1	Wed	14:30–15:00	HS 1+2	Probing new bosons and nuclear structure with ytterbium isotope shifts — •TANJA MEHLSTÄUBLER, CHIH-HAN YEH, HENNING FÜRST, LAURA DREISSEN
SYPM 1.2	Wed	15:00–15:30	HS 1+2	Probing the Stars: Nuclear Astrophysics with Stable and Radioactive Ion Beams — •RAGANDEEP SINGH SIDHU
SYPM 1.3	Wed	15:30–16:00	HS 1+2	Precision measurements and metrology applications at the borderline between atomic and nuclear physics — •ADRIANA PÁLFFY
SYPM 1.4	Wed	16:00–16:30	HS 1+2	Atomic parity violation: the seventh decade — •DMITRY BUDKER

Prize and Invited Talks of the joint Awards Symposium (SYAS)

See SYAS for the full program of the symposium.

SYAS 1.1	Thu	14:30–15:10	HS 1+2	A journey in mathematical quantum physics — ●REINHARD F. WERNER
SYAS 1.2	Thu	15:10–15:50	HS 1+2	Precision Tests of the Standard Model at Low Energies Using Stored Exotic Ions in Penning Traps — ●KLAUS BLAUM
SYAS 1.3	Thu	15:50–16:30	HS 1+2	Controlling light by atoms and atoms by light: from dark-state polaritons to many-body spin physics — ●MICHAEL FLEISCHHAUER
SYAS 1.4	Thu	16:30–16:35	HS 1+2	Quantum history at your fingertips: Launch of the DPG’s Quantum History Wall — ●ARNE SCHIRRMACHER

Invited Talks of the joint Symposium New Avenues in Molecular Alignment and Orientation (SYAO)

See SYAO for the full program of the symposium.

SYAO 1.1	Fri	14:30–15:00	HS 1+2	Ultralong-range Rydberg molecules: Rotational hybridization, control of alignment and orientation, and Rydberg blockade — ●ROSARIO GONZÁLEZ-FÉREZ
SYAO 1.2	Fri	15:00–15:30	HS 1+2	Quantum control of molecular rotation — ●DOMINIQUE SUGNY
SYAO 1.3	Fri	15:30–16:00	HS 1+2	Strong-Field Ionization and Electron Rescattering Probabilities in the Molecular Frame — ●JOCHEN MIKOSCH, MARTIN GARRO, NARAYAN KUNDU, HORST ROTTKE, KILLIAN DICKSON, VARUN MAKHIJA, FEDERICO BRANCHI, FELIX SCHELL, MARK MERO, C P SCHULZ, SERGUEI PATCHKOVSKII, MARC VRAKING
SYAO 1.4	Fri	16:00–16:30	HS 1+2	Coherent rotational control of gas phase molecular dipoles by concerted Terahertz and Near-IR pulses — ●SHARLY FLEISCHER

Sessions

A 1.1–1.6	Mon	11:00–13:00	KIHS Mathe	Atomic Systems in External Fields I
A 2.1–2.7	Mon	11:00–13:00	HS PC	Precision Spectroscopy of Atoms and Ions I (joint session A/Q)
A 3.1–3.7	Mon	17:00–19:00	KIHS Mathe	Ultra-cold Atoms, Ions and BEC I (joint session A/Q)
A 4.1–4.7	Mon	17:00–19:00	HS PC	Precision Spectroscopy of Atoms and Ions II (joint session A/Q)
A 5.1–5.8	Mon	17:00–19:00	HS I PI	Ultracold Matter (Bosons) I (joint session Q/A)
A 6.1–6.5	Tue	11:00–12:30	GrHS Mathe	Attosecond Physics I (joint session A/MO)
A 7.1–7.7	Tue	11:00–13:00	KIHS Mathe	Ultra-cold Atoms, Ions and BEC II (joint session A/Q)
A 8.1–8.8	Tue	11:00–13:00	HS I PI	Ultracold Matter (Bosons) II (joint session Q/A)
A 9.1–9.34	Tue	14:00–16:00	Tent	Poster – Ultra-cold Atoms, Ions and BEC (joint session A/Q)
A 10.1–10.6	Tue	14:00–16:00	Tent	Poster – Ultra-cold Plasmas and Rydberg Systems (joint session A/Q)
A 11.1–11.65	Tue	14:00–16:00	Tent	Poster – Cold Atoms and Molecules, Matter Waves (joint session Q/A/MO)
A 12.1–12.7	Wed	11:00–13:00	HS PC	Precision Spectroscopy of Atoms and Ions III (joint session A/Q)
A 13.1–13.7	Wed	11:00–13:00	KIHS Mathe	Ultra-cold Atoms, Ions and BEC III (joint session A/Q)
A 14.1–14.7	Wed	11:00–12:45	GrHS Mathe	Interaction with VUV and X-ray light I (joint session A/MO)
A 15	Wed	13:15–13:45	HS 6	Members’ Assembly
A 16.1–16.7	Wed	14:30–16:30	HS PC	Collisions, Scattering and Correlation Phenomena I
A 17.1–17.6	Wed	14:30–16:15	GrHS Mathe	Interaction with Strong or Short Laser Pulses I (joint session A/MO)
A 18.1–18.5	Wed	14:30–15:45	KIHS Mathe	Precision Spectroscopy of Atoms and Ions IV (joint session A/Q)
A 19.1–19.8	Wed	14:30–16:30	WP-HS	Ultracold Matter (Bosons) III (joint session Q/A)
A 20.1–20.5	Wed	17:00–19:00	Tent	Poster – Atomic Clusters
A 21.1–21.8	Wed	17:00–19:00	Tent	Poster – Atomic Systems in External Fields

A 22.1–22.7	Wed	17:00–19:00	Tent	Poster – Attosecond Physics
A 23.1–23.10	Wed	17:00–19:00	Tent	Poster – Interaction with Strong or Short Kaser Pulses (joint session A/MO)
A 24.1–24.6	Wed	17:00–19:00	Tent	Poster – Interaction with VUV and X-ray light
A 25.1–25.5	Thu	11:00–12:30	GrHS Mathe	Attosecond Physics II (joint session A/MO)
A 26.1–26.7	Thu	11:00–13:00	KIHS Mathe	Precision Spectroscopy of Atoms and Ions V (joint session A/Q)
A 27.1–27.6	Thu	11:00–12:45	HS PC	Ultra-cold Plasmas and Rydberg Systems I (joint session A/Q)
A 28.1–28.8	Thu	11:00–13:15	HS XV	Cluster and Nanoparticles I (joint session MO/A)
A 29.1–29.7	Thu	11:00–12:45	HS V	Ultracold Matter (Fermions) I (joint session Q/A)
A 30.1–30.8	Thu	14:30–16:30	GrHS Mathe	Ultra-cold Atoms, Ions and BEC IV (joint session A/Q)
A 31.1–31.7	Thu	14:30–16:30	KIHS Mathe	Precision Spectroscopy of Atoms and Ions VI (joint session A/Q)
A 32.1–32.5	Thu	14:30–15:45	HS PC	Ultra-cold Plasmas and Rydberg Systems II (joint session A/Q)
A 33.1–33.3	Thu	17:00–19:00	Tent	Poster – Collisions, Scattering and Correlation Phenomena (joint session A/MO)
A 34.1–34.1	Thu	17:00–19:00	Tent	Poster – Atomic Collisions and Ultracold Plasmas
A 35.1–35.21	Thu	17:00–19:00	Tent	Poster – Precision Spectroscopy of Atoms and Ions (joint session A/Q)
A 36.1–36.1	Thu	17:00–19:00	Tent	Poster – Correlation Phenomena
A 37.1–37.11	Thu	17:00–19:00	Tent	Poster – Highly Charged Ions and their Applications
A 38.1–38.7	Fri	11:00–12:45	GrHS Mathe	Ultra-cold Atoms, Ions and BEC V (joint session A/Q)
A 39.1–39.8	Fri	11:00–13:00	KIHS Mathe	Highly Charged Ions and their Applications
A 40.1–40.7	Fri	11:00–13:00	HS XV	Cluster and Nanoparticles II (joint session MO/A)
A 41.1–41.7	Fri	11:00–13:00	HS V	Ultracold Matter (Fermions) II (joint session Q/A)

Members' Assembly of the Atomic Physics Division

Wednesday 13:15–13:45 HS 6