Invited Talks 2020

At Conferences and Symposia

Cape Town, South Africa, Conference on Neutrino and Nuclear Physics (CNNP2020) (25.02.2020)
Blaum, K.:
Precision mass measurements for nuclear and neutrino physics studies.

Caen, France, Meeting of the MD-Gas COST Action (18.02.-21.02.2020)
Kreckel, H.:
Heavy ion storage rings: from magnetic to electrostatic and from room temperature to cryogenic.

Cape Town, South Africa, CNNP2020 conference (24.02.-28.02.2020)
Lindner, M.:
The CONUS Experiment and future potential of coherent neutrino scattering.

CERN, Geneva, Switzerland, 3rd FCC Physics Workshop 2020, (13.01.-17.01.2020)
Jana, S.:
Displaced Vertex Signature in type-III Seesaw.

CERN, Geneva, Switzerland, online, LHCb Collaboration Week (8.-12.06.2020)
Schmelling, M.:
New insights into sWeights

Cluj-Napoca, Romania, organized online, Plenary talk invitation at 1st Annual workshop of the COST Action 18222 on Attosecond Chemistry, 9-11 September
Cattaneo, L.:
Angle-resolved photoionization dynamics in simple molecules: the case of H2 and CO

Darmstadt, Germany, NUSTAR Annual meeting (02.03.-06.03.2020)
Kreckel, H.:
Physics at the cryogenic storage ring CSR.

Geneva, Switzerland, Virtual ISOLDE Users Meeting at CERN (26.-27.11.2020)
Blaum, K.:
Lise-Meitner-Award Ceremony.

Genf, Switzerland, Seminar at ISOLDE, CERN (19.2.2020)
Crespo López-Urrutia, J. R.:
Coherent laser spectroscopy of ultra-cold highly charged ions in a cryogenic Paul trap using quantum logic

Hamburg, DESY, FLASH2020+ Kick-Off Meeting (09.12.2020)
Ott, C.:
Nonlinear coherent light-matter interaction with intense and ultrashort XUV FEL pulses

Hamburg, DESY, Laser Group Seminar (26.02.2020)
Moshammer, R.:
The IR Ppobe-Laser at the REMI Endstation: Present Status and Future Prospects

Hamburg, Germany, European XFEL / DESY Photon Science Users' Meeting (29.01.–31.01.2020)
Ott, C.:
Distorting atoms – The nonlinear driving of atom-specific transitions with intense XUV light

Hamburg, Germany, MOLEC Scientific Highlights online workshop (25.08.-26.08.2020)
Cattaneo, L.:
Comparing streaking and RABBITT measurements on a molecular target: H2

Hamburg, Germany, Soft X-ray Science at PETRA IV (breakout session 18.09.2020)
Crespo López-Urrutia, J. R.:
Densely spaced, ppb-reproducible x-ray photon energy standards

Heidelberg, SWGO-Germany Face-to-Face Meeting #1, February 4th 2020
Giacinti, G.:
SWGO Science Working Group

Heidelberg, Germany, AttoChem WG3 session "Towards Attosecond Chemistry of Liquid Crystals" within the external event "Soft Matter meets ultrafast spectroscopy (SMUS2020)", Online Event (31.08.–01.09.2020)
Ott, C.:
The strong-field-driven dipole response in complex systems: Resolving laser-driven femtosecond and attosecond coherent dynamics

Heidelberg, Germany, IMPRS-QD annual event, Online Event (27.11.2020)
Rupprecht, P.:
Controlling effective electron-electron correlations in molecules with laser pulses

Lissabon, Portugal, Summer School on High-Precision Quantum Physics, NOVA University Lisbon, Caparica, Portugal (07.-11.09.2020)
Crespo López-Urrutia, J. R.:
Trapped highly charged ions: Production and X-ray excitation with electrons and photons (10.09.2020)
Cold highly charged ions: Laser spectroscopy searches for physics beyond the Standard Model (11.09.2020)

Nanjing, China, The 10th International Workshop on Air Shower Detection at High Altitudes (8.-10.01.2020)
Aharonian, F.:
Galactic Cosmic Ray PeVatrons

Online Seattle, WA, USA, INT RG Virtual Workshop (18.11.2020)
Schwenk, A.:
Renormalization group advances for nuclei and strong interaction matter.

Online, 'Gamma-ray halos around pulsars' Workshop, December 1-3 2020
Giacinti, G.:
TeV halos classified by the dominant energetics in the region

Online, Advances in Atomic, Molecular, and Optical Physics, Center for Atomic, Molecular, and Optical Sciences & Technologies (Tirupati, India) (online, 14.-18.12.2020)
Crespo López-Urrutia, J. R.:
Complex photorecombination and line formation in highly charged ions

Online, AttoChem Action Meeting (09.09.-11.09.2020)
Pfeifer, T.:
The electronic response to attosecond excitations and steering it with strong fields from the infrared to the extreme-ultraviolet

Online, AVA School on Precision Studies (22.03.-26.03.2020)
Oreshkina, N. S.:
Time variation of fine-structure constant.

Online, Bad Honnef, Germany, 7. KAT-Strategietreffen (03.12.-04.12.2020)
Buck, C.:
The CONUS Reactor Neutrino Experiment.
Marrodán Undagoitia, T.:
Latest XENON1T results.

Online, CERN, Geneva, Switzerland, WG2 and WG3 Extended Higgs Sector joint meeting on CPV in Higgs interactions (23.06.2022)
Fabian, S.:
Electroweak Baryogenesis and Dark Matter with an Inert Doublet.

Online, DAMOP 51st Annual Meeting of the American Physical Society DAMOP (Portland, USA, 01.06.-05.06.2020) (02.06.2020)
Crespo López-Urrutia, J. R.:
Cold highly charged ions for fundamental studies in the vacuum ultraviolet

Online, DPG meeting September 2020
Wolf, T:
Neutrinoless double beta-decay status and prospects in XENON.

Online, ELI Beamlines User Conference - Virtual (12.10.-14.10.2020)
Keitel, C. H.:
Testing fundamental theories and applications with extreme laser-particle beam collisions.

Online, ELI Summer School (27.08.2020)
Moshammer, R.:
Reaction Microscope (REMI) based AMO applications in the XUV – REMI experiments

Online, German Mössbauer Workshop 2020 (07.10.-09.10.2020)
Evers, J.:
Taming the interplay of x-rays and Mössbauer nuclei with mechanical motion.

Online, Heidelberg, Germany, ISOQUANT CRC 1225 Lunch Seminar (10.11.2020)
Sturm, S.:
Precision tests of atomic physics with isolated ions in Penning traps.

Online, Hyderabad, India, International Workshop on Laboratory Astrophysics with Intense Laser, 7-8 December 2020
Reville, B.:
Laboratory analogues of astrophysical particle acceleration processes

Online, IFAE, Spain (20.07.2020)
Palacio, J.:
Search for New Physics with Electronic-Recoil Events in XENON1T.

Online, IIT Hyderabad, India, ANOMALIES 2020 (11.09.-13.09.2020)
Jana, S.:
Neutrino Magnetic Moment-Mass Conundrum in Light of Recent Experiments.

Online, International seminar on "Classical and quantum physics in extreme light fields" (06.11.2020)
Di Piazza, A.:
Radiation reaction in classical and quantum electrodynamics.

Online, Lise Meitner Excellence Program, Selection Symposium (07.07.-08.07.2020)
Pálffy-Buß, A.:
Photonic devices for x-ray quantum control

Online, Lyon, France, Intl. Conference on Composite Connections of Higgs, Dark Matter and Neutrinos (21.09.2020)
Goertz, F.:
Natural Composite Higgs, Top Partners, and Flavor.

Online, MPIK Heidelberg, Kaffeepalaver, (26.11.2020)
Cattaneo, L.:
Exploring ultrafast dynamics in Liquid Crystals

Online, Multi-messenger high energy astrophysics in the era of LHAASO (27-29 July 2020)
Reville, B.:
SNRs as Pevatrons
Giacinti, G.:
The Cosmic-ray anisotropy as a probe of the interstellar turbulence

Online, NEUTRINO Conference (22.06.-02.07.2020)
Schoppmann, S.:
The Stereo Experiment.

Online, NUCAR collaboration meeting 2020 (10.12.2020)
Grieser, M.:
Isochronous Mass Spectrometry in the CSR.

Online, NuTools, Mini-Workshop for the Applied Antineutrino Technology Community (24.07.2020)
Lindner, M.:
The CONUS experiment.

Online, Padova, Italy, 1st int. HONEST workshop on Gamma-ray Halos Around Pulsars (1.-3.12.2020)
Hinton, J.:
Gamma-ray Halos around Pulsars: introduction
Aharonian, F.:
Gamma-ray Halos around Pulsars: closing remarks

Online, PETRA IV Workshop - Soft Matter, Health, and Life Science (30.10.2020)
Cattaneo, L.:
Studies on ultrafast dynamics of liquid crystals

Online, Pittsburgh, USA, Phenomenology 2020 Symposium (05.05.2020)
Goertz, F.:
A Natural Composite Higgs via Universal Boundary Conditions.

Online, Portland, USA, DAMOP Meeting of the American Physical Society (01.06.-05.06.2020)
Blaum, K.:
Precision nuclear physics experiments using AMO techniques.

Online, PPC 2020, University of Oklahoma, USA (18.05.-22.05.2020)
Jana, S.:
Neutrino NSI: Complementarity Between LHC and Oscillation Experiments.

Online, Prague, Czech Republic, AVA school on precision studies, (25.03.2020)
Sturm, S.:
Testing strong-field QED.

Online, Prague, Czech Republic, ICHEP 2020 (28.07.2020)
Khan, A.:
Why matter effects are important for medium baseline reactor neutrino experiments.

Online, Princeton Center for Theoretical Science, Understanding the Most Energetic Cosmic Accelerators: Advances in Theory and Simulation, 28-30 October 2020
Reville, B.:
Cosmic-ray transport near sources revisited
Giacinti, G.:
Electron acceleration in the Crab Nebula

Online, Quantum Battles in Attoscience (01.07.-03.07.2020)
Moshammer, R.:
What is "Time" in Photoionization – in Strong and Weak Fields?

Online, Sao Paulo, 3rd Dark Matter Workshop in Sao Paulo 2020 (02.12.-04.12.2020)
Wolf, T:
Latest progress of the XENON experiment.

Online, Science@FELs (14.09.-16.09.2020)
Pfeifer, T.:
Transmitting the change: From watching to steering electron dynamics with intense FEL fields

Online, SCRAM workshop on potential applications of coherent-elastic neutrino-nuclear scattering (CEvNS) (29.07.2020)
Lindner, M.:
The CONUS experiment.

Online, Sydney, Australia, Gordon Godfrey Workshop on Astroparticle Physics (30.11.-04.12.2020)
Aharonian, F.:
Extreme Particle Accelerators

Online, University of Pittsburgh, Phenomenology 2020 Symposium (04.05.-06.05.2020)
Jana, S.:
Neutrino NSI: Complementarity between LHC and Oscillation Experiments.
Trautner, A.:
Gauged neutrino self-interactions and the Hubble tension.

Online, XII Jornadas CPAN, Spain (22.10.2020)
Palacio, J.:
Search for New Physics with Electronic-Recoil Events in XENON1T.

Paris, France, online conference on Cosmic Rays and Neutrinos in the Multi-Messenger Era (7.-11.12.2020)
Aharonian, F.:
UHE domain of gamma-ray astronomy: specifics and major objectives

Prague, Czech Republic (28.07.-06.08.2020)
Jana, S.:
Non-Standard Interactions in Radiative Neutrino Mass Models.

Qui Nhon, Vietnam, TMEX, Plenary talk at 16th Rencontres du Vietnam "Theory meeting experiment: Particle astrophysics and Cosmology" (05.-11.01.2020)
Ruiz-Velasco, E.:
The H.E.S.S. detection of GRB 180720B deep in the afterglow phase and other news

Riezlern, Austria, 41st EAS Tagung "Extreme Atomic Systems" (26.01.–31.01.2020)
Ott, C.:
Nonlinear driving of resonant transitions in atoms with intense XUV light
Rupprecht, P.:
Transient absorption on SF6 – An insight into electron-vibrational coupling dynamics

Riezlern, Kleinwalsertal, Austria, 41st meeting on Extreme Atomic Systems (EAS) (27.01.-30.01.2020)
Lentrodt, D.:
Ab initio few-mode theory for open quantum systems.
Oreshkina, N. S.:
Skyrme-type nuclear interaction for high-precision atomic calculations.
Yerokhin, V. A.:
Tests of bound-state QED in Lamb shift and magnetic moments of few-electron ions.

Ringberg Castle, Ringberg workshop on science with FELs (13.02.-19.02.2020)
Moshammer, R.:
AMO at FELs: Breakout Discussion

Ringberg, Germany, Tagungsstätte Schloss Ringberg, 11th Ringberg Meeting on Science with FELs (09.02. – 13.02.2020)
Ott, C.:
The nonlinear response of atomic transitions to intense XUV light

Rome, Italy, online Workshop “Multimessenger high energy astrophysics in the era of LHAASO” (27.-29.07.2020)
Hinton, J.:
The SWGO experiment

Shanghai, China, The 22nd International Conference on Ultrafast Phenomena, Online Event (16.11.–19.11.2020)
Rupprecht, P.:
Electron-vibrational coupling dynamics in SF6

Snowbird, Utah, USA, 50th Winter Colloquium on the Physics of Quantum Electronics (PQE-2020) (05.01.-10.01.2020)
Evers, J.:
Towards fast adaptive resonant X-ray optics.
Pálffy-Buß, A.:
Nuclear transitions for quantum control and metrology.

Snowbird, Utah, USA, The 50th Winter Colloquium on the Physics of Quantum Electronics (PQE-2020) (05.01. – 10.01.2020)
Ott, C.:
Strongly driving resonant transitions with intense XUV pulses.

Trento, Italy, Determination of the absolute electron (anti-)neutrino mass (10.02.-14.02.2020)
Rodejohann, W.:
Conference Summary Talk.

Villingen, Switzerland, Paul Scherrer Institute, 5th FELs OF EUROPE Conference on FEL Photon Diagnostics, Instrumentation and Beamline Design, Online Event (26.10.–28.10.2020)
Ott, C.:
Resolving spectro-temporal dynamics with all-XUV-optical FEL transient absorption spectroscopy.

Virtual workshop, PHYSTAT-Flavour 2020 (19.-21.10.2020)
Schmelling, M.:
Using sWeights to disentangle signal and background

At Other Institutes

Aharonian, F.:

Nature's Extreme Accelerators
Barcelona, Spain, ICCUB Colloquium, University of Barcelona (20.02.2020)
Exploring the non-thermal Universe with atmospheric Cherenkov telescopes
Nanjing, China, Astronomy Colloquium, Nanjing University (14.01.2020)

Akhmedov, E.:

Coherent scattering and macroscopic coherence: Implications for neutrino, Dark Matter and axion detection.
Valencia, Spain, IFIC Seminar (06.10.2020)

Blaum, K.:

Physics with Penning traps towards the precision limit.
Kolloquium, Max-Planck-Institut für Gravitationsphysik (Albert-Einstein-Institut)
Potsdam-Golm, Germany (31.01.2020)
Precision Mass Measurements for Nuclear and Neutrino Physics Studies.
Online Seminar within the Seminar on Precision Physics and Fundamental Symmetries (16.04.2020)
Gefangen auf Ewigkeit - Vom Elektron und Proton zum kosmischen Antimaterie-Rätsel.
Öffentlicher Abendvortrag, Heidelberger Life-Science Lab des Deutschen Krebsforschungszentrums (DKFZ, Heidelberg) (24.01.2020)
Gefangen auf Ewigkeit - Das kosmische Antimaterie-Rätsel.
Öffentlicher Abendvortrag, Sternwarte Radebeul (05.03.2020)
Von Elektron und Proton zum kosmischen Antimaterie-Rätsel.
Astronomischer Online-Vortrag über den YouTube-Kanal des Hauses der Astronomie, Heidelberg (09.07.2020)

Cakir, H.:

Quantum Electrodynamic Theory of Few-Electron Highly Charged Ions.
Heidelberg, Germany, Institute for Theoretical Physics, Heidelberg University, Group Seminar (19.05.2020)

Di Piazza, A.:

Modern tests of vacuum-polarization effects in strong laser fields.
Livermore, California, USA, Lawrence Livermore National Laboratory, High Energy Density Science Seminar (05.03.2020)
Limitations of the locally-constant-field approximation at low and high energies.
Berkeley, California, USA, Lawrence Berkeley National Laboratory, Internal Seminar of the BELLA collaborations (02.03.2020)
Modern Tests of Quantum Electrodynamics in the High-Intensity Regime.
Santa Barbara, California, USA, University of California, Physics Colloquium (25.02.2020)

Dorn, A.:

Electron Impact Ionization of Atoms, Molecules and Clusters
Colloquium (online), Indian Society for Atomic and Molecular Physics (22.10.2020)
CFEL Seminar Hamburg, (16.12.2020)
A Scientist in Fundamental Research: Professional Career and Working Life
Seminar (online) des Arbeitskreises „junge Deutsche Physikalische Gesellschaft“ (18.11.2020)

Hinton, J. A.:

HAWC (High-Altitude Water Cherenkov Observatory)
Erlangen, Germany, ECAP Seminar (16.01.2020)

Jana, S.:

Lepton anomalous magnetic moments: roadmap to new physics.
Online, The University of Glasgow, UK (11.11.2020)
Neutrino Magnetic Moment-Mass Conundrum in the Light of Recent Experiments.
Online, The University of Delaware, USA (29.10.2020)
Dark matter assisted lepton anomalous magnetic moments and neutrino masses.
Online, Center for Neutrino Physics, Virginia Tech University, USA (14.10.2020)
Neutrino as a gateway to new physics.
Online, Sydney-CPPC Seminar, Sydney Consortium for Particle Physics and Cosmology, Australia (11.06.2020)
Online, Particle and Astroparticle Theory Seminar, Max-Planck-Institut für Kernphysik, Heidelberg, Germany (08.06.2020)
The Hubble tension and a renormalizable model of gauged neutrino self-interactions.
Online, Center for Neutrino Physics, Virginia Tech University, USA (20.05.2020)

Keitel, C. H.:

High-energy quantum physics with extremely intense laser pulses (online).
Edinburgh, Scotland, United Kingdom, University of Edinburgh, Higgs Colloquium (07.08.2020)

Khan, A.:

Neutrinos and the recent observations at the dark matter experiments.
Online, PPP Theory Seminar, University of Kansas, USA (17.11.2020)

Kreckel, H.:
Astrochemistry at the Cryogenic Storage Ring.
Kolloquium (Virtual), Bar Ilan University, Ramat Gan, Israel (27.04.2020)

Lindner, M.:
The XENON1T excess, interpretations and implications.
Online, XXVI Christmas Workshop at the Institute of Theoretical Physics in Madrid (16.12.2020)
Online, Universität Oxford, UK (03.11.2020)
Theoretical interpretations and implications of the XENON1T excess.
Online, Universität Bonn (30.11.2020)
The XENON1T excess, theoretical interpretations and implications.
Online, Universität Würzburg, Germany (05.11.2020)
The XENON1T excess, interpretations and implications for other experiments.
Online, ATLAS-Dark Matter Seminar, University of Cambridge (17.09.2020)
Hunting dark matter particles.
Online, Colloquium at Institute of Physics (IOP), Bhubaneswar, India, (16.09.2020)
Hunting Dark Matter.
Colloquium at Johannesburg University, South Africa (06.03.2020)

Marrodán Undagoitia, T.:
Excess electronic recoil events in XENON1T.
Online seminar, University of Bristol (UK) (12.2020)
Enlightening the dark: direct dark matter searches with XENON.
Online, Physics colloquium at York University, Toronto (Canada) (10.2020)
The XENON experiment: recent results and future prospects.
Online seminar at CEA, Saclay (France) (09.2020)
Observation of excess electronic recoil events in XENON1T.
Online seminar at CCAPP, Ohio State University, Ohio (US) (07.2020)
Der Dunklen Materie auf der Spur: Die Suche mit dem XENON Detektor.
Online, Physikalisches Kolloquium, Hochschule Mannheim (Germany) (06.2020)

Novotny, O.:
Measuremenst at the Cryogenic Storage Ring (CSR)
AP-seminar, GSI, Darmstadt, Germany (22.01.2020)

Pálffy-Buß, A.:
Light-matter interaction from atomic nuclei to chiral molecules.
Kassel, Germany, University of Kassel, Physics Seminar (30.01.2020)

Rodejohann, W.:
How to tell a particle from its antiparticle.
Online seminar, CPPC Sydney, Australia (01.10.2020)
Lepton Number Violation.
Online seminar, Weizmann Institute, Israel (25.06.2020)

Schwenk, A.:
From nuclei to stars - The strong interaction in the universe.
Kolloquium, Universität Münster, Münster, Germany (23.01.2020)
Online Kolloquium, Goethe Universität Frankfurt (09.12.2020)
Challenges in nuclear structure theory.
Online FRIB Theory Alliance Nuclear Physics Dialogues (25.08.2020)

Shaisultanov, R.:
Spin Effects in External Electromagnetic Fields and the Quasiclassical Operator Approach.
Jena, Germany, Helmholtz Institute Jena, Institute's Seminar (05.02.2020)

Tamburini, M.:
Near-field-CTR-based self-focusing in beam-multifoil collisions: towards solid-density beams, extremely-dense gamma-ray pulses, and laserless SFQED (online).
Menlo Park, California, USA, Facility for Advanced Accelerator Experimental Test (FACET-II), FACET-II Program Advisory Committee (PAC) Meeting (27.10.2020)

Trautner, A.:

Systematic construction of basis invariants.
Online, Imperial College London, Hanany group quiver meeting (11.12.20)

A fully basis invariant Symmetry Map of the 2HDM.
Online, CFTP Lisbon, Seminar (04.11.20)

Neutrino self-interactions, the Hubble tension and XENON1T.
Online, University of Delaware Seminar (01.10.20)

Neutrino self-interactions.
Karlsruhe, Germany, Karlsruhe Institute of Technology, Particle theory seminar (20.07.20)

The Hubble tension and a renormalizable model of gauged neutrino self-interactions.
Online, Virginia Tech Journal Club (20.05.20)
Online, CERN Particle Theory Virtual Coffee seminar (07.05.20)

Wolf, T.:

The low energy excess in XENON1T and its implications.
Seminar at Virginia tech (07.2020)
Seminar at MPIK, June 2020 (06.2020)

Public Talks

Ott, C.:

Mit ultraschnellen Laserblitzen die Bewegung in Materie verstehen und kontrollieren lernen
Heidelberg, jDPG Wochenendseminar zum Thema “Zeit“, Online Event (21.11.2020)

Pfeifer, T.:

Eine Reise zum Ursprung der Bewegung: Mit starken Lasern unterwegs zu unglaublich kurzen Zeiten—Gefangen im Atom, und doch extrem schnell und gesprächig: Elektronen antworten auf unsere Fragen
Heidelberg, Germany, MPIK Physik am Samstagmorgen (19.01.2020)

Invited Talks 2021

At Conferences and Symposia

Aspen, USA, Center for Physics Workshop “Dark Matter from the Laboratory to the Cosmos” (25.07.-29.08.2021)
Trautner, A.:
Baryon Transport and Fermi Condensation.

Aspen, USA, Center for Physics, Workshop: “Nu Intersections: Neutrino Physics at a Crossroad” (29.08.-19.09.2021)
Trautner, A.:
Neutrino self-interactions, the Hubble tension and XENON1T.

Bergen, Norway, DISCRETE 2021 (29.11.-03.12.2021)
Jana, S.:
Horizontal Symmetry and Large Neutrino Magnetic Moments.
Trautner, A.:
Anatomy of a top-down approach to discrete and modular flavor symmetry.

Blois, France, in person plenary talk at 32nd Rencontres de Blois (17.-22.10.2021)
Ruiz-Velasco, E.:
Recent TeV GRB measurements

Capri, Italy, European Conference on Laboratory Astrophysics (26.09.-01.10.2021)
Kreckel, H.:
Merged beams studies of astrochemical reactions at the Cryogenic Storage Ring.

Darmstadt, Germany, 18th Topical Workshop of the Stored Particles Atomic Physics Research Collaboration SPARC (06.09.-09.09.2021)
Harman, Z.:
Open Questions in the Atomic Structure of Few-Electron HCIs.

Dresden, Germany, Atomic Summer Camp 2021 (26.07.–30.07.2021)
Ott, C.:
The nonlinear optical response of atoms to intense XUV light.
Rupprecht, P.:
Multi-electron interaction control in molecules using ultrashort laser pulses.
Borisova, G.D.:
The role of initial-state electron correlation for strong-field ionization.
Straub, M.:
A shot to shot XUV photon spectrometer for the FLASH2 Reaction Microscope.

Garching, Germany, Maier-Leibnitz-Kolloquium, TUM-LMU (18.11.2021)
Crespo López-Urrutia, J. R.:
Cold highly charged ions for fundamental physics studies from the visible to the x-ray domain

Hamburg, Germany, DESY Theory Workshop 2021, "Bright ideas for a dark universe" (21.09.-24.09.2021)
Fabian, S.:
Dark Matter and Electroweak Phase Transition in the Inert Doublet Model.
Jana, S.:
Neutrino Magnetic Moment-Mass Conundrum in the Light of Recent Experiments.

Heidelberg, Germany, Internal CRC1225 ISOQUANT Workshop (06.10.-08.10.2021)
Di Piazza, A.:
Strong-field QED in intense laser beams and highly-charged ions.

Heidelberg, Germany, Kaffeepalaver at Max-Planck-Institut für Kernphysik (04.11.2021)
Bally, A.:
Minimal SU (6) Grand Gauge-Higgs unification.

Kaiserslautern, Germany, DPG Fall Meeting SMuK, SYAW: Awards Symposium (01.09.2021)
Herkenhoff, J.:
Digital manipulation of single ions for high-precision mass spectrometry.

Mainz, Germany, European Conference on Trapped Ions, hybrid ECTI 2021 (22.-26.11.2021)
Eliseev, S.:
The PENTATRAP experiment.
Novotný, O.:
Reaction studies with internally cold molecular ions in the CSR storage ring.

Online, 12th International Particle Accelerator Conference, Brazil (24.-28.05.2021)
von Hahn, R.:
The Interstellar Space in an Electrostatic Cryogenic Storage Ring.

Online, 29th Annual International Laser Physics Workshop (LPHYS'21) (19.07.-23.07.2021)
Di Piazza, A.:
WKB Electron Wave Functions in a Tightly Focused Laser Beam (Seminar 9).
Evers, J.:
Fast Adaptive Resonant X-Ray Optics (Seminar 1).
Gong, Z.:
Retrieving Transient Magnetic Fields of Ultrarelativistic Laser Plasma via Ejected Electron Polarization (Seminar 9).
Hatsagortsyan, K. Z.:
Reconciling Conflicting Approaches for the Tunneling Time Delay in Strong Field Ionization (Seminar 2).
He, P.-L.:
Coulomb Effects in the Nondipole Sub-Barrier Dynamics in Strong-Field Ionization (Seminar 2).
Keitel, C. H.:
High Quality X-Ray and Gamma-Ray Sources (Seminar 1).
Lyu, Q.:
High-brilliance ultra-narrow-band x-rays via electron radiation in colliding laser pulses (Seminar 9).
Pálffy-Buß, A.:
Towards a Nuclear Clock with 229Th (Seminar 1).
Tamburini, M.:
Laboratory-Based Intense Gamma-Ray and Lepton Beams for Strong-Field QED and Laboratory Astrophysics (Seminar 9).

Online, 47th European Physical Society Conference on Plasma Physics (EPS Plasma 2021) (21.06.-25.06.2021)
Keitel, C. H.:
Extremely high-intensity laser interactions: from fundamental quantum systems to quantum plasma simulations and experimental confirmations (plenary talk).

Online, 4th Extremely High Intensity Laser Physics Conference (ExHILP 2021) (13.09.-17.09.2021)
Podszus, T.:
First-order strong-field QED processes including the damping of particle states.

Online, 52nd Annual Meeting of the APS Division of Atomic, Molecular and Optical Physics (DAMOP) (31.05.-04.06.2021)
Pálffy-Buß, A.:
Electronic bridge processes in the 229mTh isomer.

Online, 52nd Annual Meeting of the APS Division of Atomic, Molecular and Optical Physics 2021 (DAMOP), Online Event (31.05.–04.06.2021)
Borisova, G.D.:
Strong-field ionization of FEL-prepared doubly excited states in the helium atom.
Hartmann, M.:
Extracting and launching sub-cycle attosecond dynamics through strong-field ionization.
Rupprecht, P.:
Multi-electron interaction control in molecules using ultrashort laser pulses.
Ott, C.:
Nonlinear light-matter interaction with intense XUV free-electron lasers.

Online, 5th Asia Pacific Conference on Plasma Physics (26.09.-01.10.2021)
Gong, Z.:
Retrieving ultrastrong plasma magnetic fields via ejected electron polarization.

Online, 744. Wilhelm and Else Heraeus seminar, Towards Storage Ring Electric Dipole Moment Measurements. (29.-31.03.2021)
Grieser, M.:
The Cryogenic Storage Ring CSR.

Online, American Association for the Advancement of Science (AAAS) annual meeting 2021 (08.02.201)
Novotný, O.:
Molecules in Outer Space: Understanding the Very First Molecule in the Universe.

Online, Annual Theory Meeting: Quantum Physics, Quantum Information and Quantum Technologies (17.02.-19.02.2021)
Pálffy-Buß, A.:
Nuclear transitions for quantum control and metrology.

Online, Attochem Webinar, (22.10.2021)
Cattaneo, L.:
Looking at liquid crystals in the ultrafast time scale

Online, Bergen, Norway, DISCRETE 2020/21, Plenary talk (29.11.-03.12.2021)
Lindner, M.:
The status of direct dark matter searches and the implications for theory double beta decays.

Online, Berlin, Germany, Highlight talk at ICRC2021, 37th International Cosmic Ray Conference (12.-.23.07.2021)
Hinton, J.:
The Southern Wide-field Gamma-ray Observatory: Status and Prospects

Online, Berlin, Germany, Victor F Hess Memorial Lecture, public lecture at ICRC2021, 37th International Cosmic Ray Conference (12.-.23.07.2021)
Hofmann, W.:
Abenteuer Astroteilchenphysik: Energiereiche Teilchen aus dem Kosmos

Online, Chengdu, China, TeVPA 2021 Conference, Oct 5-29 2021
Giacinti, G.:
Origin of the very high energy gamma-ray emission from the Crab pulsar wind nebula
Science with the Southern Wide-Field Gamma-ray Observatory
Simulations of the TeV-PeV cosmic-ray anisotropy

Online, CLEO USA, May 2021
Cattaneo, L.:
Attosecond photoionization dynamics in model diatomic molecules

Online, COHERENT annual collaboration meeting, USA (06.05.2021)
Khan, A.:
CP-violating and CC-NSI in COHERENT.

Online, conference on "Opportunities & challenges of cavity-based X-ray free-electron lasers" (24.03.-26.03.2021)
Evers, J.:
Nuclear quantum optics with cavity-based X-ray FELs.

Online, DMS Workshop on Quantum Interaction of Distant Objects & Applications of Optically Connected Atoms and Nanoparticles, mQ-net, Czek Republic (online, 21.10.-22.10.2021)
Dijck,E.:
Cold highly charged ions for frequency metrology in the extreme ultraviolet

Online, DPG Meeting of the Atomic, Molecular, Plasma Physics and Quantum Optics Section (20.09.-24.09.2021)
Evers, J.:
Towards fast adaptive resonant x-ray optics.

Online, DPG Spring Meeting SAMOP 2021 (24.09.2021)
Novotný, O.:
Reaction studies with internally cold molecular ions in a storage ring.

Online, ELI Beamlines User Conference 2021 (20.10.-21.10.2021)
Keitel, C. H.:
Exploring extreme-field physics with colliding electron and laser beams.

Online, Faraday Discussions: Time-resolved imaging of photo-induced dynamics (01.02.-04.02.2021)
Pfeifer, T.:
XUV pump XUV probe transient absorption spectroscopy at FELs

Online, First GAMALO Theory Meeting, October 1 2021
Giacinti, G.:
Gamma-ray halos as novel probes of the interstellar turbulence

Online, Hannover, Germany, QUTIF International Conference 2021, Online Event (22.02. – 25.02.2021)
Rupprecht, P.:
Controlling multi-electron interaction in molecules with ultrashort laser pulses.

Online, Heidelberg, Germany, AMQP Ring Lecture (08.06.2021)
Sturm, S.:
Testing the Standard Model with Highly Charged Ions in Penning Traps.

Online, Heidelberg, Germany, SFB1225 lunch seminar (24.03.2021)
Sturm, S.:
Testing the Standard Model with Highly Charged Ions in Penning Traps.

Online, Hsinchu, Taiwan, NTHU/NCTS winter school on high-energy astrophysics (18.-22.01.2021)
Surajbali, P.:
Observing Large-Scale Structures in the Gamma-Ray Sky

Online, International Conference on the Applications of the Mössbauer effect (ICAME 2021) (05.09.-10.09.2021)
Lentrodt, D.:
Progress in the Theory of X-ray Quantum Optics with Mössbauer Nuclei.

Online, International Physics School on Muon Dipole Moments and Hadronic Effects in memoriam Simon Eidelman (01.09.2021)
Blaum, K.:
Atomic Physics Precision Experiments.

Online, International Symposium of JSPS Core-to-Core program DMNet (25.03.2021)
Lindner, M.:
Dark Matter Search Activities - a wider Perspective.

Online, International Workshop "Shapes and Dynamics of Atomic Nuclei: Contemporary Aspects" (SDANCA-21) (16.09.-18.09.2021)
Pálffy-Buß, A.:
Nuclear structure and coupling to the atomic shell in the 229mTh isomer.

Online, IRN Neutrino meeting, France (10.06.2021)
Khan, A.:
Charged current NSI and new CP-violating effects in CEvNS.

Online, Isolde Physics Meeting (04.02.2021)
Schweiger, C.:
High-precision mass measurements for neutrino physics with PENTATRAP.

Online, Japan, Kashiwa dark matter symposium (11.2021)
Marrodán Undagoitia, T.:
WIMP dark matter and rare event searches in liquid rare-gas detectors.

Online, Kaiserslautern, Germany, DPG Fall Meeting (SAMOP) (20.09.2021)
Sailer, T.:
Coupled ions in a Penning trap for ultra-precise g-factor differences.

Online, L'Aquila, Italy, IAU symposium #363 "Neutron Star Astrophysics at the Crossroads" (29.11.-03.12.2021)
Aharonian, F.:
Ground-based γ-ray observations of nonthermal high-energy phenomena linked to neutron stars

Online, LCLS User's meeting (19.09. -24.09.2021)
Pfeifer, T.:
Emerging AMO opportunities at high repetition rate x-ray FELs: Ultrafast atomic&molecular quantum dynamics measured by multi-messenger electron/ion/photon coincidence spectroscopy

Online, Les Houches, France, Winter school on Physics with Trapped Charged Particles (25.01- 05.02.2021)
Heiße, F.:
Mass spectroscopy.

Online, Lisbon, Portugal, Particles and Nuclei' conference 2021 (05.09.2021)
Goertz, F.:
Lepton Flavor in Composite Higgs Models.

Online, LPHYS21 (19.07.-23.07.2021)
Pfeifer, T.:
Controlling the electro-optical response of atoms by intense lasers: Time-resolved emergence of the Rydberg series and the laser-driven continuum threshold

Online, Madrid, Spain, XFEL Workshop: Scientific Opportunities for the Spanish Community at XFELs, IMDEA Nanoscience Institute, (10.06.-11.06.2021)
Crespo López-Urrutia, J. R.:
X-ray laser spectroscopy applications to astrophysics and theory benchmarking

Online, Magnificent CEvNS Workshop (06.10.-07.10.2021)
Buck, C.:
Recent results of the CONUS experiment.

Online, Montpellier, CFRCOS-3 Workshop, May 5-7 2021
Giacinti, G.:
Electron Acceleration in Pulsar Wind Nebulae

Online, Moscow, Russia, Lomonosov Conference 2021 (19.08.-25.08.2021)
Jana, S.:
Non-Standard Interactions in Radiative Neutrino Mass Models.

Online, MPA Summer School (13.09.-17.09.2021)
Tada, A.:
Fundamental Interactions in Particle, Hadron, and Nuclear Physics.

Online, Munich, Germany, 2021 Conference on Lasers and Electro-Optics/Europe – European Quantum Electronics Virtual Conferences (CLEO/Europe-EQEC 2021), Online Event (21.06. – 25.6.2021)
Rupprecht, P.:
A wavelength-tunable few-cycle, millijoule-level short-wavelength infrared source for strong-field XAS/ATAS.

Online, Nagoya, Japan, International Symposium of JSPS Core-to-Core program "DMNet" (24.-25.03.2021)
Hinton, J.:
The CTA and SWGO projects and potential for Dark Matter searches

Online, Netzwerk Teilchenwelt (28.06.2021)
Lindner, M.:
Die Jagd nach Dunkler Materie.

Online, Neutrino Telescopes (25.02.2021)
Terliuk, A.:
Potential of neutrino physics with DARWIN.

Online, Novel movements for clocks and sensors (International online workshop, 20.09.-22.09.2021)
Crespo López-Urrutia, J. R.:
Forbidden transitions in the extreme ultraviolet for future clocks

Online, Orsay, France, The Paris-Saclay AstroParticle Symposium 2021, October 19 2021
Giacinti, G.:
Theoretical interpretation of the TeV-PeV cosmic-ray anisotropy

Online, Ottawa, Ontario, Canada, 6th International Symposium on Intense Field, Short Wavelength Atomic and Molecular Processes (ISWAMP 2021), Online Event (14.07. – 16.07.2021)
Ott, C.:
Atomic resonances in intense XUV electric fields.

Online, Padova, Italy, MAGIC collaboration meeting (14.-18.06.2021)
Aharonian, F.:
Physics of PeVatrons in the context of LHAASO results

Online, Paris, France, Cosmological Frontiers of Fundamental Physics Triangular Conference (25.05-28.05.2021)
Akhmedov, E.:
Relic neutrino detection through angular correlations in inverse beta-decay.

Online, Potsdam, Germany, Ultrafast Dynamic Imaging of Matter Conference 2021 (UFDIM), Online Event (05.09. – 09.09.2021)
Ott, C.:
Resonant x-ray light-matter interaction for probing and controlling ultrafast molecular dynamics

Online, Princeton, Max Planck Princeton Centre – 2021 Annual Meeting, 19-26 January 2021
Reville, B.:
Revisiting Particle Acceleration at Relativistic Shocks

Online, Rome, Italy, 16th Marcel Grossmann Meeting – MG16 (05.-10.07.2021)
Ruiz-Velasco, E.:
VHE observations of GRB 190829A with H.E.S.S.

Online, Rome, Italy, Plenary talk at 16th Marcel Grossmann Meeting – MG16 (05.-10.07.2021)
Hinton, J.:
The Southern Wide-field Gamma-ray Observatory

Online, Sabancı University, EG, Zewail City of Science and Technology and Faculty of Engineering and Natural Sciences, BSM-2021 Conference (30.03.2021)
Jana, S.:
Neutrino NSI: Complementarities Between LHC and Oscillation Experiments.

Online, San Diego, LIDINE Conference 2021 (14.09.-17.09.2021)
Hötzsch, L.:
Improved quality tests of R11410-21 photomultiplier tubes.
Jörg, F.:
Characterization of alpha and beta interactions in liquid xenon.

Online, Santander, Spain, Dark Matter 2021 (09.2021)
Marrodán Undagoitia, T.:
Overview of dark-matter direct searches,: from the smallest to the largest scales.

Online, Schenefeld (bei Hamburg), Germany, EU-XFEL Workshop on 1D-imaging soft X-ray Spectroscopy at SQS, Online Event (21.10.2021)
Ott, C.:
Absorption response of resonant atomic electron transitions to intense XUV electric fields

Online, Science on Attosecond to Few-Femtosecond Time Scales at Future Free-Electron Lasers (28.06.-30.06.2021)
Pfeifer, T.:
Introduction to Session: X-ray–matter interaction

Online, Sixteenth Marcel Grossmann Meeting (MG16) (05.07.-10.07.2021)
Tamburini, M.:
Laboratory-based intense gamma-ray and lepton beams for strong-field QED and laboratory astrophysics.

Online, The First EuCAPT Annual Symposium (07.05.2021)
Lindner, M.:
Low-Energy Neutrinos: Outlook.

Online, The Particles and Nuclei International Conference (PANIC 2021) (05.09.-10.09.2021)
Lindner, M.:
Neutrinoless double beta decays.

Online, The Schwinger Effect and Strong Field Workshop (18.01.-29.01.2021)
Di Piazza, A.:
QED in intense background fields: Foundations.
QED in intense background fields: Modern applications.

Online, Tokyo, Japan, Kavli IPMU Workshop on "Particle Acceleration in Solar Flares and the Plasma Universe" (15.-19.11.2021)
Aharonian, F.:
Extreme Particle Accelerators

Online, TU Dortmund, DPG Spring meeting 2021 (01.03.-04.03.2021)
Jörg, F.:
Production and characterization of a 226Ra implanted stainless steel radon source.
Hötzsch, L.:
PMT afterpulse studies in XENONnT.
Cichon, D.:
Measuring xenon scintillation light transmission through PTFE.
Wolf, T:
Neutrinoless double beta-decay status and prospects in XENON.

Online, TU Dortmund, Germany, DPG-Frühjahrstagungen (Spring Meeting of the Matter and Cosmos Section (SMuK)) (15.03-19.03.2021)
Fabian, S.:
Dark Matter and nature of Electroweak Phase Transition in the Inert Doublet Model.
Palacio, J.:
XENONnT 222Rn Budget.
Rink, T.:
The CONUS experiment - SM and BSM opportunities with recent and future data.

Online, University Hamburg & DESY Hamburg, Conference EPS-HEP 2021 (28.07.2021)
Goertz, F.:
Unification of Gauge Symmetries... including their breaking.

Online, Valencia, Spain, TAUP 2021 conference (08.2021)
Marrodán Undagoitia, T.:
DARWIN - a future dark matter and neutrino physics observatory.

Online, Venice, Italy, XIX International Workshop on Neutrino Telescopes (18.-26.02.2021)
Aharonian, F.:
Gamma Rays

Online, WavemiX 2021 (13.01.-15.01.2021)
Pfeifer, T.:
Coherence effects in gas-phase nonlinear spectroscopy with SASE-FELs

Online, Winter School on Physics with Trapped Charged Particles 2020 (25.01.-05.02.2021)
Oreshkina, N. S.:
Highly charged ions in traps I: Hyperfine splitting and g factor.
Highly charged ions in traps II: Atomic clocks and VFC.

Online, Young Scientist Symposium 2021 (14.10.2021)
Cattaneo, L.:
Time Resolved THz Dynamics in Liquid Crystals

Online, Zagreb, Croatia (06.07.-08.07.2021), 52nd Conference of the European Group on Atomic Systems (EGAS),
Rehbehn, N.-H.:
Sensitivity to new physics of isotope-shift studies using forbidden optical transitions of highly charged Ca ions

Online, Zaragoza, Spain, COST Action CA18108 Workshop, University of Zaragoza (17.06.2021)
Aharonian, F.:
PeVatrons: theory

Paris, France, GDR Deep Underground Physics plenary meeting 2021 (29.11.-01.12.2021)
Jana, S.:
Correlating Muon g 2 Anomaly with Neutrino Magnetic Moments.

Pittsburgh, USA, PHENO 2021 (26.05.2021)
Jana, S.:
Neutrino Magnetic Moments and Muon g 2 Anomaly.

Prague, Czech Republic, EuCAPT Astroneutrino Theory Workshop 2021 (20.09.-01.10.2021)
Jana, S.:
Large Neutrino Magnetic Moment in the Light of Recent Experiments.
Trautner, A.:
Cosmic Neutrino Background: Neutrino self-interactions and condensation (3x1 hour plenary lecture).

Rome, Italy, European Optical Society Annual Meeting 2021 (13.09.–17.09.2021)
Rupprecht, P.:
Wavelength-tunable few-cycle pulses with millijoule-level pulse energies in the short-wavelength IR for ultrafast control of molecular dynamics

Sardinia, Italy, workshop INTEGRAL: towards the third decade of X- and Gamma-ray observations (11.-15.10.2021)
Aharonian, F.:
Galactic Plane sources at TeV and PeV

Szeged, Hungary, ELI ALPS 8th User Workshop (08.11.-09.11.2021)
Moshammer, R.:
AMO Experiments with XUV Radiation, and Prospects at ELI-ALPS

At Other Institutes

Aharonian, F.:
PeVatrons
Online, Zeuthen, Germany, Astroparticle Seminar DESY (21.05.2021)
Extreme Particle Accelerators
Online, Copenhagen, Denmark, Joint Theory Seminars, Niels Bohr Institute (27.05.2021)
Galactic PeVatrons
Online, Munich, Germany, "Multimessenger Astronomy" seminar series, TUM (29.06.2021)

Akhmedov, E.:
Nuclear fusion catalyzed by doubly charged scalars: Implications for energy production.
Online, Karlsruhe, Germany, KIT BSM Seminar (29.10.2021)

Bally, A.:
Flavor of SU(6) Gauge-Higgs GUT.
Online, Karlsruhe, Germany, KIT (12.2021)
Minimal SU(6) Grand Gauge-Higgs unification.
Online, Seminar at the University of Glasgow (06.2021)

Blaum, K.:
Precision Tests of Fundamental Interactions and Their Symmetries using Exotic Ions in Penning Traps.
Online Colloquium of the Israel Physics Society, Heidelberg/Rehovot (04.01.2021)
Online MIT Physics Colloquium Talk, Massachusetts Institute of Technology, Cambridge, USA (18.11.2021)
Precision mass measurements for nuclear and neutrino physics studies.
Scientific colloquium webinar hosted by the Centre Etudes Nucléaires de Bordeaux Gradignan (CENBG) (26.04.2021)

Cattaneo, L.:
Liquid crystals meet THz spectroscopy and more...
Online, Ruhr-Universität Bochum, Laser Colloquium (29.11.2021)

Di Piazza, A.:
Radiation reaction in classical and quantum electrodynamics (online).
Morelia, Mexico, Michoacan State University, Physics Colloquium (25.06.2021)
Rochester, New York, USA, University of Rochester, Physics Colloquium (20.04.2021)
A modern look into the oldest problem in electrodynamics: radiation reaction from classical to quantum electrodynamics (online).
Tucson, Arizona, USA, University of Arizona, Arizona Colloquium (05.02.2021)
Testing strong-field quantum electrodynamics with high-power lasers (online).
Rochester, New York, USA, Laboratory for Laser Energetics (LLE), LLE Seminar (03.02.2021)

Diekmann, O.:
Tailoring artificial few-level systems for x-ray quantum optics (online).
Vienna, Austria, Vienna University of Technology (TU Wien), Group Seminar (06.07.2021)

Dorn, A.:
Ionization dynamics of weakly bound atomic and molecular dimers
Universität Düsseldorf, Institutsseminar (17.12.2021)

Eliseev, S.:
High-precision Penning-trap mass spectrometry with (not only) PENTATRAP.
Online Seminar on Precision Physics and Fundamental Symmetries, CERN, Switzerland (6.05.2021)

Evers, J.:
Nuclear quantum optics: From pulse shaping to coherent control at hard x-ray energies (online).
European Synchrotron Radiation Facility, ESRF Webinar (30.04.2021)

Goertz, F.:
Lüscher Lectures: Physics Beyond the Standard Model.
Dillingen, Germany, Academy for Teacher Training and Personnel Management (07.10.2021)
Unification of Gauge Symmetries... including their breaking.
Online, Theorie-Palaver at Mainz University (18.05.2021)
Dark Matter and Baryogenesis with an Inert Doublet.
Online, Ljubljana, Slovenia, Joint FMF-JSI high energy physics seminar (03.03.2021)

Harman, Z.:
Precision physics with highly charged ions (online).
Sharjah, United Arab Emirates, American University of Sharjah, Physics Seminar (28.04.2021)

Jana, S.:

Muon anomalous magnetic moment: roadmap to new physics.
Online, Center for Neutrino Physics, Virginia Tech University, USA (19.05.2021)
Confronting Neutrino Properties with Experiments.
Online, Instituto de Física Gleb Wataghin – UNICAMP, Brazil (23.03.2021)

Keitel, C. H.:

Nonperturbative quantum electrodynamic theory in strong electromagnetic fields (online).
Heidelberg, Germany, Heidelberg University, CRC 1225 Lunch Seminar (13.04.2021)

Kreckel, H.:

Astrochemistry at the Cryogenic Storage Ring.
Online Kolloquium DFG Sonderforschungsbereich 956, Köln/Bonn (13.12.2021)

Lindner, M.:

Conformal extensions of the Standard Model.
Online, INFN Tor Vergata, Rome, Italy, Majorana-Raychaudhuri seminar, (18.11.2021)

Maneschg, W:

Coherent elastic neutrino nucleus scattering and new physics search with CONUS.
Kaffeepalaver at the Max-Planck-Institut für Kernphysik, Heidelberg, Germany (14.10.2021)

Marrodán Undagoitia, T.:

Enlightening the dark: direct searches for dark matter.
Online, International Summer Science School, MPIK, Heidelberg, (07.2021)
Die dunkle Seite des Kosmos: die experimentelle Suche nach dem Unsichtbaren.
Online, International Summer Science School, MPIK Kuratorium, Heidelberg (06.2021)
Overview of R&D activities for future large LXe TPCs.
Online, Workshop on the next-generation liquid xenon detector for dark matter and other rare events (04.2021)

Oreshkina, N. S.:

Exotic HCIs (online).
Saint Petersburg, Russia, Physics Department of Saint-Petersburg State University, Seminar of Quantum Mechanics Division (26.11.2021)

Ott, C.:

Resonant absorption in molecules: Probing ultrafast dynamics and its laser control
Center for Free-Electron Laser Science (DESY, Hamburg), CFEL Molecular and Ultrafast Science Seminar (04.02.2021)

Pálffy-Buß, A.:

Photonic devices for x-ray quantum control (online).
Würzburg, Germany, University of Würzburg, Physics Seminar (15.02.2021)

Pfeifer, T.:

Listening to the ultrafast chat of two excited electrons- and asking them some quick Physics questions
Online, University of Georgia State University, USA Physics Colloquium (21.01.2021)
Modifying the electronic response with lasers: From double excitation in He and two-electron entanglement in H2 to multi-electron exchange interaction in SF6
Online, Max-Born Institute (MBI), Berlin, Germany, Colloquium (22.09.2021)

Podszus, T.:

High-energy behavior and first-order processes of strong-field QED (online).
Düsseldorf, Germany, Heinrich Heine Universität Düsseldorf, Group Seminar (16.07.2021)

Ruiz-Velasco, E.:

GRBs with HAWC and H.E.S.S.: Deteccion de destellos de rayos gamma a las mas altas energias con telescopios Cherenkov
Mexico City, Mexico, Seminario Angel Dacal at IFUNAM-Mexico (12.10.2021)

Schwenk, A.:

From nuclei to stars - The strong interaction in the universe.
Online IOP Nuclear Physics Group Colloquium (02.06.2021)
Online Kolloquium, Universität Mainz (30.11.2021)
Nuclear physics of dark matter direct detection.
Online ISAPP Vienna School (07.-08.07.2021)
Constraining neutron-rich matter from nuclear theory, astrophysics and heavy-ion collisions.
Online CBM Collaboration Meeting (27.09.2021)

Sen, M.:

What can we learn from the future observation of the diffuse SN neutrino background?
Online, Zeuthen, Germany, DESY (08.11.2021)

Constraining keV sterile neutrino dark matter through lab and cosmo surveys.
Heidelberg, Germany, MPIK-ITP seminar (09.10.2021)

Surajbali, P.:

Unravelling Gigantic Structures in the Gamma-ray Sky
Online, Greenweech, London, Royal Observatory Think Space Lectures Series (31.03.2021)

Trautner, A.:

Vector-like fourth-family models for muon anomalies (online).
Online, Karlsruhe Institute of Technology, Germany, Particle theory seminar (14.06.2021)

Wiesinger, M.:

Sympathetic Cooling of Single Protons (and Antiprotons).
Online SMI Seminar on fundamental interactions and symmetries, Stefan Meyer Institut, Österreichische Akademie der Wissenschaften, Wien, Österreich (23.06.2021)

Invited Talks 2022

At Conferences and Symposia

Anacapri, Italy, Neutrinos, Flavour and Beyond Meeting (11.06.-17.06.2022)
Jana, S.:
Neutrino magnetic moments and non-standard interactions.

Asheville, NC, USA, NDM 22 Conference (17.05.2022)
Schwenk, A.:
Chiral effective field theory for dark matter direct detection.

Aspen, USA, Center for Physics Workshop "Searching for New Physics from the Nuclear to the LHC Scale and Beyond" (29.08.-18.09.22)
Trautner, A.:
Muon g-2: spinning anticipations of physics beyond the Standard Model.

Assergi, Italy, LNGS, ICRM-LLRMT Conference 2022 (02.05.-06.05.2022)
Jörg, F.:
Production and characterization of a ^{222}Rn-emanating stainless steel source.

Assisi, Italy, 13th International Conference on Relativistic Effects in Heavy-Element Chemistry and Physics (REHE 2020-2022) (26.09.-30.09.2022)
Keitel, C. H.:
Extreme field calculations for Penning ion traps and EBITs and corresponding strong laser field scenarios (invited extended lecture).

Athens, Greece, COSPAR, X- and gamma-ray Counterparts of New Transients in the Multimessenger Era (20.-22.07.2022)
Aharonian, F.:
Messengers of Cosmic Ray Acceleration

Bad Honnef, Germany, 766. WE-Heraeus Seminar (10.05.2022)
Eliseev, S.:
Ultra-precise mass-ratio spectrometry with PENTATRAP for various aspects of fundamental physics.

Bad Honnef, Germany, 766. WE-Heraeus-Seminar, High-Precision Measurements and Searches for New Physics (09.05.-13.05.2022)
Crespo López-Urrutia, J. R.:
Extreme-ultraviolet frequency combs and highly charged ions

Bad Honnef, Germany, Physikzentrum Bad Honnef, Hybrid 738. WE-Heraeus-Seminar "New Frontiers at Heavy Ion Storage Rings: From Atomic Collisions to Many-Body Systems" (23.06.2022)
Gamer, L.:
MOCCA: a 4-kilo-pixel microcalorimeter detector for CSR.
Novotný, O.:
The Cryogenic Storage Ring CSR.

Bad Honnef, Physikzentrum, Germany, 762nd WE-Heraeus Seminar "Diffraction Limited Synchrotron Light Sources and Next Generation Free Electron Lasers" (07.03.-11.03.2022)
Pfeifer, T.:
Listening to, and directing, electrons on the atomic level to understand quantum dynamics from attoseconds to femtoseconds, and beyond

Bad Honnef, Physikzentrum, Germany, QUTIF Final Colloquium (29.08.-01.09.2022)
Pfeifer, T.:
Measuring&Steering One, Two, and Many electrons in Combinations of Intense NIR&XUV LASER Fields

Bad Honnef, Physikzentrum, Heraeus-Seminar on "New Frontiers at Heavy Ion Storage Rings" (20.06.-24.06.2022)
Moshammer, R.:
Prospects of the CSR Reaction-Microscope for In-Ring Electron and Ion Spectroscopy

Baden-Baden, Germany, DISCRETE 2022 conference (07.11.-11.11.22)
Depta, P. F.:
Dark Matter from Exponential Growth: Pandemic Dark Matter.
Trautner, A.:
Modular flavor symmetries from the top down (plenary).

Barcelona, Spain, Gamma2022, 7th Heidelberg International Symposium on High Energy Gamma-Ray Astronomy (04.-08.07.2022)
Hinton, J.:
Status of SWGO Project

Bergen, Norway, Halo Week 2022 (11.07.2022)
Blaum, K.:
Precision Penning-trap mass spectrometry.

Berlin, Germany, Falling Walls Science Summit 2022 (08.11.2022)
Schmidt, V.:
Panel discussion within the Wilhelm and Else Heraeus Symposium for Breakthroughs in Physical Sciences.

Berlin, Germany, Internat. Workshop on GRBs at VHE, Harnackhaus (15.-18.05.2022)
Aharonian, F.:
Exploring very high-energy-gamma-rays from GRBs
Hinton, J.:
GRB physics with SWGO
Ruiz-Velasco, E.:
HESS GRB detections
GRB programme of SWGO

Berlin, Harnack-Haus GRB Workshop 2022, 16-18 May, 2022
Kirk, J. G.:
Particle acceleration at ultrarelativistic perpendicular shocks
TeV photons from GRBs - birth of magnetar?
Huang, Z.-Q.:
Revisiting particle acceleration at ultrarelativistic shocks

Berlin, Harnack-Haus, Hybrid "100 Years of Nuclear Isomers" Workshop (02.05.2022)
Blaum, K.:
On the trail of low-lying isomeric states by Penning-trap mass spectrometry.

Bologna (Italy), ICHEP2022 (07.2022)
Marrodán Undagoitia, T.:
Astrophysical searches for dark matter.

Bonn, Germany, BCTP Bethe Forum “Modular Flavor Symmetries” (02.05.-06.05.22)
Trautner, A.:
CP and other Outer Automorphisms of Modular Flavor Symmetries (plenary).

Braunschweig, Germany, Kick-off Meeting consortium 21GRD02 BIOSPHERE project (7.11. – 8.11.2022)
Dorn, A.
Molecular processes affecting ozone depletion and atmospheric dynamics

Brussels, Belgium, Dark Matters 2022 (30.11.-02.12.2022)
Herms, J.:
Minimal Realization of Light Thermal Dark Matter.

Brussels, Belgium, The 2022 International Workshop on Baryon and Lepton Number Violation (BLV2022) (05.08.-08.08.2022)
Fabian, S.:
Baryogenesis and Dark Matter with an Inert Doublet.

Capri, Italy, MITP Workshop: “Neutrinos, Flavour, and Beyond” (06.06.-17.06.22)
Sen, M.:
Probing neutrino masses at early redshift.
Trautner, A.:
Baryon transport and Fermi condensation.

Cracow Polish-German WE-Heraeus-Seminar, 7-10 November 2022
Reville, B.:
Particle acceleration at ultrarelativistic shocks

Cracow, Poland, Polish-German WE-Heraeus Seminar: The Variable Multi-Messenger Sky (07.-10.11.2022)
Hinton, J.:
Transients with H.E.S.S.
Hofmann, W.:
The Variable Multi-Messenger Sky: Opportunities, Challenges, Tools

Diez, Germany, jDPG Theo-Workshop (06.01.-09.01.2022)
Tada, A.:
Effektive Feldtheorien in der Physik.

Dresden, Germany, International Workshop on QED Laser Plasmas (qlasp22) (26.09.-30.09.2022)
Gong, Z.:
Deciphering electron acceleration dynamics of ultrarelativistic plasma via polarization pattern of emitted gamma-photons.
Keitel, C. H.:
Extreme-field QED with electron beams, relativistic quantum plasmas and strong laser pulses.
Tamburini, M.:
SFQEDtoolkit: a high-performance library for the accurate modeling of strong-field QED processes in PIC and Monte Carlo codes (online).

Dresden, MPI für Physik komplexer Systeme, International Workshop on Atomic Physics (28.11.-02.12.2022)
Moshammer, R.:
HHG and FEL based Experiments on Molecular Fragmentation

Eisenach, Germany, HITRAP Workshop 2022 (17.07.-20.07.2022)
Harman, Z.:
Strong-field QED and beyond in highly charged ions.
Oreshkina, N. S.:
Theoretical predictions of the structure of heavy muonic atoms and searching for an elephant in the room.

Elba Island, Italy, XVIII Vulcano Workshop on Frontier Objects in Astrophysics and Particle Physics (25.09.-01.10.2022)
Olivera-Nieto, L.:
Highlights from Gamma Ray Atmospheric Cherenkov Telescopes

Erice, Sicily, Italy, 58th International School of Subnuclear Physics (2022) - Gravity and Matter in the Subnuclear World (15.06.-24.06.2022)
Doering, C.:
Gravitational wave induced baryon acoustic oscillations.
Lindner, M.:
Status and perspectives of direct detection of dark matter.

Frascati, Italy, 36th European Conference on Laser Interaction with Matter (19.09.-23.09.2022)
Gong, Z.:
Ultra-relativistic spin-polarized plasma driven by high-intensity laser pulses.

Geneva, Switzerland, Isolde Physics Workshop and Users Meeting, 2022 (30.11.-02.12.2022)
Schweiger, C.:
Direct high-precision determination of the electron capture Q-value in 163-Ho.

Glashütten, Germany, 8th International Conference on Trapped Charged Particles and Fundamental Physics (TCP 2022) (25.09.-30.09.2022)
Pálffy-Buß, A.:
Electronic bridge processes with the Th nuclear clock transition

Glashütten, Germany, Trapped charged particles conference (26.09.2022)
Eliseev, S.:
High-precision Penning-trap experiment PENTATRAP.

Grindelwald, Switzerland, MUST 2022 International Conference on Molecular Ultrafast Science and Technology, (07.06.-10.06.2022)
Cattaneo, L.:
An ultrafast twist on liquid crystals

Hamburg, DESY, FLASH2 Beamline Review Meeting (04.10.2022)
Moshammer, R.:
Break-up of Di-Iodo-Methane

Hamburg, Germany, DESY Theory Workshop 2022 (27.09.-30.09.2022)
Chung, Y.:
Alternatives to Top-partner scenarios.
Depta, P. F.:
A new life for sterile neutrino dark matter after the pandemic.

Hamburg, Germany, FLASH/DESY, FLASH: FL26 beamline and REMI instrument evaluation (05.10.2022)
Ott, C.:
Differential measurement of electron ejection after two-photon two-electron excitation of helium – Benchmarking a fundamental process of nonlinear light-matter interaction.
Magunia, A.:
FEL-induced dissociation of oxygen molecules probed by high harmonics (HHG) in XUV-pump–XUV-probe transient absorption spectroscopy.

Hannover, Germany, International Conference QSNP (05.10.2022)
Blaum, K.:
Precision Tests of Fundamental Interactions and Their Symmetries using Exotic Ions in Penning Traps.

Heidelberg, Germany, A Workshop on Atomic Data (03.10.-07.10.2022)
Oreshkina, N. S.:
Astrophysical line diagnosis requires non-linear dynamical atomic modeling.

Heidelberg, Germany, DMNet International Symposium (14.09.-18.09.2022)
Marrodán Undagoitia, T.:
Review dark matter direct detection,

Heidelberg, Germany, Hybrid HighRR workshop "Vistas on Detector Physics" (13.09.2022)
Gamer, L.:
MOCCA: a 4-kilo-pixel microcalorimeter detector for the Cryogenic Storage Ring CSR.

Heidelberg, Germany, jDPG (08.2022)
Marrodán Undagoitia, T.:
Der Dunklen Materie auf der Spur.

Heidelberg, Germany, Max-Planck-Institut für Kernphysik, Elektronik-Entwicklertreffen der Max-Planck-Gesellschaft (07.-09.11.2022)
Novotný, O.:
Cryogenic Storage Ring.

Heidelberg, Germany, MPIK, 27th International Symposium on Particles, Strings, and Cosmology (PASCOS) (25.07.-29.07.2022)
Angelescu, A.:
Minimal SU(6) Gauge-Higgs Grand Unification.
Centelles Chuliá, S.:
The inverse seesaw family.
Doering, C.:
Gravitational wave induced baryon acoustic oscillations.
Fabian, S.:
Electroweak Baryogenesis and Dark Matter with an Inert Doublet.
Jaramillo, C.:
Reviving the keV neutrino: a novel production mechanism for sterile neutrino dark matter.
Pastor Gutierrez, A.:
The Asymptotically Safe Standard Model: From quantum gravity to dynamical chiral symmetry breaking.
Rink, T.:
Novel constraints on neutrino physics beyond the standard model from the CONUS experiment.
Tada, A. M.:
Z2 Non-Restoration and Composite Higgs: Singlet-Assisted Baryogenesis w/o Topological Defects.
Terliuk, A.:
XENONnT: First electronic recoil results from Science Run 0.
Weber, S.:
Evolution of coupling constants in SU(6) Gauge-Higgs Grand Unification.

Heidelberg, Germany, QUTIF-Network-Meeting (group Prof. Anne Harth): Multi-Sideband-RABBITT (23.06.2022)
Ott, C.:
Ultrafast absorption spectroscopy: Controlling attosecond and femtosecond dynamics in helium.

Heidelberg, Germany, University Heidelberg, Germany, "Pizza Seminar" (03.03.2022)
Sailer, T.:
Measurements of the isotope-shift of the g-factor and BSM implications.

Heidelberg, Germany, University of HD, workshop on Puzzles of the Galactic Center, SFB 881 - "The Milky Way System" (05.-07.09.2022)
Hinton, J.:
Non-thermal astrophysics in the GC region

Heidelberg, The 2nd DMNet International Symposium, 13-15 September 2022
Reville, B.:
Galactic Centre - astrophysical foregrounds, DM distribution

HiRadMat – FIREBALL collaboration meeting, 26-27 September, 2022
Reville, B.:
GRBs and High-Energy Astrophysics

IRCC-AFP Meeting 2022, 24-28 October 2022
Reville, B.:
Particle acceleration at ultrarelativistic shocks

Jülich, Germany, Forschungszentrum Jülich, Festkolloquium zu Ehren von Prof. Dr. Hans Stöher (17.10.2022)
Blaum, K.:
Precision Tests of Fundamental Interactions and Their Symmetries using Exotic Ions in Penning Traps.

Kingston, ON, Canada, Plenary talk at TeVPA (08.-12.08.2022)
Mohrmann, L.:
Measurements of Galactic γ-ray Sources with Imaging Atmospheric Cherenkov Telescopes

La Thuile, Italy, 56th Rencontres de Moriond - Electroweak Interactions & Unified Theories (12.03.-19.03.2022)
Sen, M.:
Constraining pseudo-Dirac neutrinos from a future galactic supernova.
Rink, T.:
Coherent elastic neutrino-nucleus scattering - First constraints / observations and future potential.

Lisbon, HEDLA 2022, 23-27 May 2022
Reville, B.:
Proton acceleration in laser driven turbulent plasmas – insight from astrophysics

Lisbon, Portugal, CFTP, 9th Workshop on Flavour Symmetries and Consequences in Accelerators and Cosmology (FLASY) (27.06-01.07.2022)
Centelles Chuliá, S.:
Absolute neutrino mass scale and dark matter stability from flavour symmetry.
Jana, S.:
Correlating Charged Lepton g - 2 with Neutrino Magnetic Moments.
Lindner, M.:
Flavour seesaw and phenomenological consequences.
Trautner, A.:
Modular Flavor Symmetries and CP, from the top down (plenary).

London, UK, AttoFEL (27.06. – 30.06.2022)
Magunia, A.:
FEL-induced dissociation of oxygen molecules probed by high harmonics (HHG) in XUV pump–XUV-probe transient absorption spectroscopy.

London, University College London (UCL), UK, AttoFEL 2022 international conference (27.06.-30.06.2022)
Pfeifer, T.:
Fundamental electronic&internuclear quantum dynamics probed and steered by intense LASER&FEL fields

London, University College London UCL, UK, Atto-FEL conference 2022 (27.06.-30.06.2022)
Moshammer, R.:
HHG and FEL based Experiments on Molecular Fragmentation

Lund, Sweden, Fysikdagarna (16.06.2022)
Schwenk, A.:
FAIR and strong interaction matter in the universe.

Mainz, Germany, School of QuCoLiMa (TRR 306) Basics (04.04.-06.04.2022)
Evers, J.:
Classical light, quantum light and correlations (invited short lecture).

Mainz, Germany, Workshop „Towards the Next Fundamental Scale of Nature“ (18.07.2022)
Goertz, F.:
Unification of Gauge Symmetries... including their breaking.

Málaga, Spain, XVI Iberian Joint Meeting on Atomic and Molecular Physics (21.09.-23.09.2022)
Crespo López-Urrutia, J. R.:
From the core of the Sun to optical clocks: Highly charged ions as ultimate atomic matter

Matsue, Japan, 20th International Conference on the Physics of Highly Charged Ions (HCI'2022) (29.08.-03.09.2022)
Oreshkina, N. S.:
Theoretical predictions of the structure of heavy muonic atoms.

Mola di Bari, 12th International Conference on Atomic and Molecular Data and Their Applications (ICAMDATA 12), (27.09.2022)
Kreckel H.:
Atomic and Molecular Physics at the Cryogenic Storage Ring.

Montréal, Canada, 23rd International Conference on Ultrafast Phenomena (18.07. – 22.07.2022)
Rupprecht, P.:
Femtometer-precision vibrational metrology in molecules with TR-XAS

München, Germany, MIAPP2022 Antinuclei in the Cosmos? (07.02.-04.03.2022)
Herms, J.:
Antideuterons from Dark Matter in face of antiprotons.

Munich, Germany, Max-Planck-Institut für Physik, Conference on “Current Topics in Astroparticle Physics'' (09.11.-11.11.2022)
Lindner, M.:
The CONUS experiment and future potential of coherent neutrino scattering.

New Delhi, India, Workshop on Physics with Trapped Charged Particle (WPTCP 2022) (27.10.-28.10.2022)
Sikora, B.:
QED theory of the bound-electron g-factor and the ground-state hyperfine splitting in hydrogen-like ions.

Online, 30th Annual International Laser Physics Workshop (LPHYS'22) (18.07.-22.07.2022)
Beyer, K. A.:
Light-Shining-Through-Wall Axion Detection Experiments with a Stimulating Laser (Seminar 9).
Evers, J.:
Inverse Design Approach to X-Ray Cavity Quantum Optics with Mössbauer Nuclei (Seminar 1).
Gong, Z.:
Deciphering in situ Electron Dynamics of Ultrarelativistic Plasma via Polarization Pattern of Emitted Gamma-Photons (Seminar 9).
He, P.-L.:
Nondipole Time Delay and Double-Slit Interference in Tunneling Ionization (Seminar 2).
Klaiber, M.:
Sub-Barrier Recollisions and the Tunnel Exit Time Delay in Strong-Field Ionization (Seminar 2).
Lv, Q.:
New class of violation of local constant field approximation in ultrashort laser pulse (Seminar 9).
Oreshkina, N. S.:
A resolution of the long-standing x-ray puzzle of astrophysically relevant highly charged ions (Seminar 1).
Pálffy-Buß, A.:
Excitation mechanisms for the 229Th nuclear clock transition (Seminar 1).
Tamburini, M.:
Observing light-by-light scattering in vacuum with an asymmetric photon collider (Seminar 9).

Online, 51st Winter Colloquium on the Physics of Quantum Electronics (PQE-2022) (10.01.-14.01.2022)
Evers, J.:
Inverse design of artificial few-level systems with Mössbauer nuclei in x-ray cavities.

Online, 6th Asia Pacific Conference on Plasma Physics (09.10.-14.10.2022)
Gong, Z.:
Deciphering in situ electron dynamics of ultrarelativistic plasma via polarization pattern of emitted gamma-photons.

Online, AttoFridays 2022 (06.03.2022)
Cattaneo, L.:
Liquid crystals meet THz spectroscopy and more...

Online, Austin, USA, EUV Litho, Inc. Source Workshop Austin, USA (27.10.2022)
Botz, M.:
Experimental Determination of Relative Electron Collisional Excitation Cross Sections of Highly Charged Tin in an EBIT

Online, Berlin, Germany, DESY Zeuthen, 2nd int. HONEST workshop on PeVatrons and their environments (29.11.-01.12.2022)
Aharonian, F.:
On the localization of Cosmic Ray PeVatrons inside extended UHE gamma-ray sources
Hinton, J.:
Surveys: Future
Mohrmann, L.:
Morphological studies of star clusters using Imaging Atmospheric Cherenkov Telescopes

Online, Bloomington, Indiana University, Indiana, USA, Online Talk at Ninth Meeting on CPT and Lorentz Symmetry CPT'22 (20.05.2022)
Blaum, K.:
Precision Measurements of Fundamental Atomic Properties using Highly Charged Ions in Penning Traps.

Online, conference on Physics in Intense Fields (PIF22) (29.08.-02.09.2022)
Di Piazza, A.:
Nonlinear Compton scattering and nonlinear Breit-Wheeler pair production including the damping of particle states.

Online, Cracow, Poland, 28th Cracow Epiphany Conference on Recent Advances in Astroparticle Physics (10.-14.01.2022)
Aharonian, F.:
Stellar Clusters as Major contributors to Galactic Cosmic Rays
Hofmann, W.:
TeV Gamma-Ray Astronomy

Online, Cracow., XXVIII Cracow Epiphany Conference on Recent Advances in Particle Astrophysics (10-14 January 2022)
Reville, B.:
Probing particle acceleration at relativistic shocks with GRBs

Online, DANCE Machine Learning Workshop 2022
Terliuk, A.:
Convolutional neural network for S2 position reconstruction.

Online, DPG Spring Meeting of the Atomic, Molecular, Quantum Optics and Photonics Section (SAMOP) (14.03.-18.03.2022)
Wu, Y.:
Isomer depletion via nuclear excitation by electron capture with electron vortex beams.

Online, ELI-Beamlines Round Table meeting (30.03.2022)
Keitel, C. H.:
Exploring extreme-field physics with colliding electron and laser beams.

Online, Erlangen, DPG Spring Meeting SAMOP (14.-18.03.2022)
Kreckel, H.:
Molecular Astrophysics at the Cryogenic Storage Ring.
Schmidt, V.:
Isochronous mass spectrometry and beam purification in an electrostatic storage ring.
Rau, S.:
Precision Mass Measurements of the Deuteron's Atomic Mass.
Schweiger, C.:
Direct high-precision determination of the electron capture Q-value in 163-Ho.

Online, Erlangen, Germany, Frühjahrstagung DPG 2022 (16.03.2022)
Crespo López-Urrutia, J. R.:
Synchrotron radiation experiments with highly charged ions

Online, Erlangen, Germany, SAMOP DPG Frühjahrstagung, Online Event (14.03.–18.03.2022)
Ott, C.:
AKjDPG Tutorial: Ultrafast Light-Matter Interaction: Measuring and controlling quantum dynamics with attosecond and femtosecond flashes of light.

Online, European XFEL Users' Meeting, Satellite meeting: The SXP instrument at the European XFEL: Status and perspectives (24.01.2022)
Crespo López-Urrutia, J. R.:
Highly Charged Ions research at SXP

Online, Feebly Interacting Sectors Impact on Cosmology and Astrophysics (FISICA) 2022 (07.03.2022)
Sen, M.:
Constraining pseudo-Dirac neutrinos from a future galactic supernova.

Online, Heidelberg, Germany, DPG Spring Meeting of the Matter and Cosmos Section (SMuK) (21.03.-25.03.2022)
Cichon, D.:
Measuring the liquid xenon scintillation pulse shape and its electric field dependence.
Dias, M.:
Higher-Dimensional Operators in the Inert Doublet Model: Dark Matter and CP Violation.
Fabian, S.:
Electroweak Baryogenesis in the Inert Doublet Model.
Hammann, R.:
Towards an automated krypton assay in xenon at the ppq level.
Hötzsch, L.:
Current status of the XENONnT dark matter search experiment.
Piotter, M.:
Coating techniques for radon mitigation in liquid xenon detectors.
Rink, T.:
Novel constraints on neutrino physics beyond the standard model from the CONUS experiment.
Tada, A.:
Z2 Non-Restoration and Composite Higgs: Singlet-Assisted Baryogenesis w/o Topological Defects.

Online, HONEST2 – Pevatrons and their Environments, 29 Nov – 01 Dec 2022
Reville, B.:
Maximum energy in SNR shocks

Online, International Conference on Ultrahigh Intensity Lasers (ICUIL 2022) (19.09.-23.09.2022)
Di Piazza, A.:
Strong-field QED in the presence of tightly focused intense laser fields.

Online, International Meeting on Effective Pathways to New Physics, IOP Bhubaneswar, India (07.02.-12.02.2022)
Jana, S.:
Neutrino as a Pathway to New Physics.

Online, Karlsruhe, Germany, 14th Terascale detector workshop (02.2022)
Marrodán Undagoitia, T.:
The future LXe observatory DARWIN.

Online, LCLS Review meeting (14.02.-16.02.2022)
Pfeifer, T.:
Some ideas on the future of X-ray FELs: Emerging AMO science opportunities on femto- to attosecond timescales, from small to extended quantum systems

Online, Lisbon, Portugal, CFTP (02.02.2022)
Lindner, M.:
Old and new ideas about the flavour structures of quarks and leptons.

Online, LPHYS22 (18.07.-22.07.2022)
Pfeifer, T.:
Understanding Spectral Shapes from Atoms to Molecules: LASER Control of two and many electrons

Online, Manchester, UK, Lepton Photon 2022 (01.2022)
Marrodán Undagoitia, T.:
Dark matter direct detection experiments.

Online, Matsue, Japan, 20th International Conference on the Physics of Highly Charged Ions (HCI 2022), (30.08.2022)
Blaum, K.:
Precision Measurements of Fundamental Atomic Properties using Highly Charged Ions in Penning Traps.

Online, Paris, INTERCOS workshop, 02. 03. 2022
Vieu, T.:
Can superbubbles accelerate PeV protons?

Online, Physics of Quantum Electronics (PQE) (10.01. -14.01.2022)
Pfeifer, T.:
Time-resolved emergence of a Rydberg series and a laser-driven continuum threshold

Online, Seoul, Neutrino 2022 conference (30.05.-04.06.2022)
Buck, C.:
Optimized scintillators for future neutrino experiments.
Wolf T:
Neutrino physics with Dark Matter detectors.

Online, The 5th International Conference on Matter and Radiation at Extremes (ICMRE2022) (07.06.-09.06.2022)
Keitel, C. H.:
Extreme-field physics with electron beams, relativistic plasmas and strong laser pulses (plenary talk).

Online, University of Maryland, College Park, USA, “Rabi-Fest conference” (20.10.-21.10.2022)
Lindner, M.:
Conformal Extensions of the Standard Model.

Orlando (FL), USA, 8th International Conference on Attosecond Science and Technology (11.07. – 15.07.2022)
Rupprecht, P.:
Control of electronic exchange inside a molecule with ultrafast laser pulses

Orsay, France, Invisibles 2022 Workshop (20.06.-24.06.2022)
Guida, M.:
Towards the First Results of XENONnT: 37Ar Calibration.
Klett, S.:
Flavor Seesaw.

Ostuni, Italy, NOW 2022 Neutrino Oscillation Workshop (04.09.-11.09.2022)
Akhmedov, E.:
Neutrino magnetic moments and solar electron aniteneutrinos.
Buck, C.:
CEvNS studies at nuclear reactors with CONUS.

Paris, France, 24th International Conference From the Planck Scale to the Electroweak Scale (PLANCK 2022) (30.05.-03.06.2022)
Centelles Chuliá, S.:
Natural axion model from flavour.
Depta, P. F.:
Dark Matter from Exponential Growth.
Doering, C.:
Gravitational wave induced baryon acoustic oscillations.
Klett, S.:
Generating the Weak Scale by Vector-like Quark Condensation.

Paris, France, EMMI Workshop "Accurate relativistic treatment of multi-electron atoms and applications to Super-Heavy elements" (24.10.-26.10.2022)
Oreshkina, N. S.:
Theory of heavy muonic atoms.

Paris-Saclay Campus, France, International School on Ultrafast X-ray Science 2022 (10.10. – 14.10.2022)
Ott, C.:
Probing and controlling resonant transitions in atoms and molecules with intense XUV FELs

Pitlochry, Scotland, ISMD2022, 51st International Symposium on Multiparticle Dynamics (31.07.-05.08.2022)
Schmelling, M.:
Sub-TeV hadronic interaction model differences and their impact on air showers

Prague, Czech Republic, 31st TEXAS Symposium on Relativistic Astrophysics (12.-16.09.2022)
Aharonian, F.:
Probing Cosmic Ray Accelerators with high energy gamma-rays

Prague, Czech Republic, ELI User Meeting (02.11.-04.11.2022)
Di Piazza, A.:
Strong-field QED physics at ELBA.
Keitel, C. H.:
Extreme field quantum physics in intense laser electron beam collisions (online).

PSI, Villigen, Switzerland, Muonic Atoms at PSI'2022 (14.10.-15.10.2022)
Oreshkina, N. S.:
Theory of heavy muonic atoms and access to the nuclear properties.

Riezlern, Kleinwalsertal, Austria, 42nd meeting on Extreme Atomic Systems (EAS) (13.02.-18.02.2022)
He, P.-L.:
Nondipole time delay and double-slit interference in tunneling ionization.
Oreshkina, N. S.:
"Photon-bridge" effect in the new-physics contributions to the energy levels in simple ions.

Rome, Italy, VIII International Conference RICAP-22 (06.-09.09.2022)
Aharonian, F.:
Multimessenger Signals from PeVatrons
Conte, F. + Tuffs, R.:
Gamma-gamma absorption in the Galactic Center

São Paulo, Brazil, Workshop on the Nature of Dark Matter, ICTP-SAIFR (02.11.-04.11.2022)
Lindner, M.:
Direct Dark Matter Detection and New XENONnT Results.

Seattle, WA, USA, INT Workshop Neutron-rich matter on heaven and earth (22.07.2022)
Schwenk, A.:
Equation of state developments for nuclear matter.

Seattle, WA, USA, INT Workshop R-process and EOS after LIGO/Virgo, Virtual (24.05.2022)
Schwenk, A.:
New equation of state developments for neutron star matter and for finite temperature.

Smithfield (RI), Bryant University, USA, Multiphoton Processes (Gordon Research Conference) (12.06. – 17.06.2022)
Ott, C.:
Discussion Leader on "Multidimensional Imaging of Chemical Dynamics"

St. Louis, Missouri, USA, 15th International Conference on Interconnections between Particle Physics and Cosmology (PPC 2022) (06.06.-10.06.2022)
Jana, S.:
Electromagnetic Properties of Neutrinos.
Carlos Jaramillo:
New production mechanism for keV neutrino dark matter.

Stockholm, Sweden, MD Gas COST Action Working Group 1 Meeting (25.08.2022)
Paul, D.:
Electron-ion merged beams experiments in a cryogenic storage ring - achievements, challenges.

Vienna, Austria, 14th International Conference on the Identification of Dark Matter (IDM 2022) (18.07.-22.07.2022)
Depta, P. F.:
Dark Matter from Exponential Growth.

Vienna, Austria, Identification of Dark Matter 2022 (18.06.-22.06.2022)
Wolf T:
Laboratory limits on the annihilation or decay of dark matter particles.

Villigen, Switzerland, Physics of fundamental symmetries and interactions (19.10.2022)
Eliseev, S.:
High-precision Penning-trap experiment PENTATRAP.

Vilnius, Lithuania, ECAMP14 (27.06. – 01.07.2022)
Ott, C.:
All-XUV-Optical Nonlinear Absorption Spectroscopy with Free-Electron Lasers

Warsaw, Poland, LIDINE 2022 (23.09.2022)
Terliuk, A.:
The DARWIN observatory: Physics potential for Dark Matter and beyond.

Wien, Austria, 8th International Symposium on Symmetries in Subatomic Physics (29.08.-02.09.2022)
Sturm, S.:
Penning trap precision experiments for fundamental physics.

Zürich, Switzerland, LF(U)V Workshop (04.07.-06.07.2022)
Chung, Y.:
Connecting the B anomalies with the Hierarchy problem.

At Other Institutes

Aharonian, F.:

On perspectives of Ground-based gamma ray astronomy
Merate, Italy, seminar at L'Osservatorio Astronomico di Brera (16.06.2022)
Exploring the nonthermal Universe with TeV and PeV gamma-rays
Turin, Italy, Theory Colloquium, Physics Department of the University of Turin (20.06.2022)
The Physics and Astrophysics of Extreme Particle Accelerators
Online, Heidelberg, Germany, HJAC, Heidelberg Joint Astronomical Colloquium (15.02.2022)
Century-old Mystery of Galactic Cosmic Rays
Rome, Italy, Frontiers and Controversies in Astrophysics colloquium, University of Sapienza (02.03.2022)

Angelescu, A.:

Minimal SU(6) Gauge-Higgs Grand Unication or How to Unify Gauge Interactions with Their Breaking Sector.
ITP Heidelberg, Germany, Teilchentee (21.07.2022)
ICCUB, Barcelona (30.06.2022)

Benso, C.:

Sterile neutrino dark matter in non-standard scenarios.
Philadelphia, Pennsylvania (USA), Department of Physics at Temple University, Special Seminar (02.06.2022)
Blacksburg, Virginia (USA), Virginia Tech., Center for Neutrino Physics Seminar (25.05.2022)
Torino, Italy, Department of Physics at University of Torino, Journal Club (22.04.2022)

Blaum, K.:

Precision Tests of Fundamental Interactions and Their Symmetries using Exotic Ions in Penning Traps.
General ILL webinar hosted by the Institut Laue-Langevin, Grenoble, France (13.04.2022)
General Seminar, Kastler–Brossel Laboratory, Paris, France (15.06.2022)
30 Jahre Wissenschaft an der GSI - Vom Ursprung der Elemente über Tumortherapie mit Ionenstrahlen zur Zukunftsanlage FAIR, Festvortrag.
Sonderkolloquium "Forschung an GSI und FAIR – von früheren Erfolgen und in die vielversprechende Zukunft", GSI Helmholzzentrum für Schwerionenforschung, Darmstadt, Germany (01.07.2022)
"Stern-Gerlach in the modern age" – Precision experiments with stored ions.
Kolloquiumsvortrag zum 100-jährigen Stern-Gerlach Jubiläum, Physikalisches Kolloquium, Universität Stuttgart, Germany (05.07.2022)
Precision mass measurements for nuclear and neutrino physics studies and for tests of fundamental symmetries.
IJColloquium, Paris-Saclay University, France (08.09.2022)
Was ist Gold?
Öffentlicher Abendvortrag, Deutsch-Amerikanisches Institut Heidelberg (30.10.2022)
Gefangen auf Ewigkeit - Das kosmische Antimaterie-Rätsel.
Karl-Schwarzschild-Vortrag, Physikalischer Verein, Frankfurt am Main (02.11.2022)

Cattaneo, L.:

An ultrafast twist on liquid crystals
Politecnico di Milano, Italy, Seminar at the Physics Department, Laser Colloquium (19.05.2022)

Cheng, T.:

Neutrino Decoherence: from microscope to macroscopic.
KIT, Karlsruhe, Gemany (19.07.2022)

Chung, Y.:

Connecting the B anomalies with the Hierarchy problem.
JGU Mainz, Germany, MITP Scientific Program Flavor at the Crossroads (28.04.2022)
National Taiwan University, Taiwan, Particle Physics Journal Club (21.03.2022)

Depta, P. F.:

Dark Matter from Exponential Growth.
Online, DESY and University Hamburg, Quantum Universe Annual Meeting 2022 (30.03.2022)

Di Piazza, A.:

Modern Tests of Quantum Electrodynamics in the High-Intensity Regime.
Storrs, Connecticut, USA, University of Connecticut, Physics Colloquium (14.10.2022)
Strong-field QED effects within the LCFA and beyond the plane-wave approximation.
Magurele, Romania, Extreme Light Infrastructure - Nuclear Physics (ELI-NP), ELI-NP Seminar (05.10.2022)
Strong-field QED effects within the LCFA and beyond the plane-wave approximation (online).
Dresden, Germany, Helmholtz-Zentrum Dresden - Rossendorf e.V., Worldline Colloquium (12.07.2022)
WKB electron wave functions in a tightly focused laser beam (online).
Düsseldorf, Germany, University of Düsseldorf, Group seminar (17.06.2022)

Eliseev, S.:

High-precision Penning trap mass spectrometry in general and the PENTATRAP experiment in particular.
Online experimental nuclear physics seminar at the university of Edinburgh, Scotland (28.02.2022)

Giacinti, G.:

Extended gamma-ray emissions and cosmic-ray anisotropy as novel probes of the interstellar turbulence
Online, Tsung Dao Lee Institute, June 4, 2020
Electron acceleration in pulsar wind nebulae
Online, DESY, University of Hamburg, Astroparticle Physics Seminar, Jan 2022

Harman, Z.:

Strong-field QED and beyond in highly charged ions.
Heidelberg, Germany, Heidelberg University, ISOQUANT general lunch seminar (26.04.2022)

Herms, J.:

Light thermal Dark Matter enabled by a second Higgs.
Online, INFN Salerno & Indian Statistical Institute, Majorana-Raychaudhuri Seminar (28.10.2022)
Online, Instituto de Fisica "Gleb Wataghin", Campinas State University, Seminários do Departamento de Raios Cósmicos e Cronologia (24.08.2022)
Minimal realisation of light thermal Dark Matter.
Online, Universidad Antonio Narino, El Journal Club más Sabroso (26.04.2022)

Hinton, J.:

TeV to PeV Photon Astronomy: Motivations and Next Steps
Garching b. München, TUM, Seminar (21.11.2022)
PeVatrons – Detection Techniques and Observations
Online, The Extreme Non-Thermal Universe: CDY Initiative (09.03.2022)

Huang, Z.Q.:

The implications of TeV detected GRB afterglows for acceleration at relativistic shocks
Online, DESY, Zeuthen, Dec 1, 2021

Jana, S.:

Neutrino as a Gateway to New Physics
Online, IIT Bombay, India (24.06.2022)
Light from the Neutrinos.
University of California, Irvine, USA (01.04.2022)
Online, The University of Glasgow, UK (08.02.2022)
How neutrinos interact with light?
University of California, San Diego, USA (29.03.2022)

Keitel, C. H.:

High-energy quantum physics with extreme laser pulses.
Freiburg, Germany, University of Freiburg, Physics Colloquium (07.11.2022)

Khan, A.:

General Neutrino Interaction: An Overview.
Online, The Institute of Theoretical Physics of the Wrocław University (13.12.2022)

Kreckel, H.:

Molecular physics in heavy ion storage rings: from magnetic to electrostatic, from room temperature to cryogenic.
Online, GSI Darmstadt, Germany, AP Seminar (06.07.2022)
Molecular Astrophysics at the Cryogenic Storage Ring.
Astronomisches Kolloquium, Universität Heidelberg (15.11.2022)

Lyu, Q.:

Strong-field QED effect in laser-matter interactions (online).
Beijing, China, Graduate School of China Academy of Engineering Physics, GSCAEP seminar (02.12.2022)

Marrodán Undagoitia, T.:

Enlightening the dark: the search for dark matter with XENON.
Universität Mainz, Physics Summer Program (09.2022)
Online, Heidelberg University, 4EU+ project SYTY (01.2022)
Die Jagd nach Dunkler Materie.
Bach Gymnasium, Mannheim, Leistungskurs (06.2022)

Novotný, O.:

Electron cooling at ultralow energies.
Accelerator seminar, GSI, Darmstadt, Germany (24.11.2022)

Ott, C.:

All-XUV-optical nonlinear light-matter interaction with free-electron lasers.
Atto Fridays, Online Seminar Series, Spring 2022 (25.03.2022)
Control of resonant absorption in atoms and molecules with intense XUV electric fields.
SLAC (Stanford, CA, USA), Photon Science Seminar at SLAC (08.06.2022)
Site-specific and state-resolved coherent quantum control of atoms and molecules (Vorstellungsvortrag im Rahmen der Habilitation)
Universität Heidelberg, Special Seminar in CQD Colloquium (30.11.2022)

Pastor Gutierrez, A.:

Towards non-perturbative new physics and their landscapes.
Online, Fundamental Particle Physics Group, Universidade Federal de Minas Gerais, Brazil (29.11.22)
The Asymptotically Safe Standard Model: From quantum gravity to dynamical chiral symmetry breaking.
Online, Asymptotic Safety seminar (21.11.2022)
UV completion of extradimensional Yang-Mills theory for Gauge-Higgs unification.
Online, Asymptotic Safety seminar (17.10.2022)

Pfeifer, T.:

Watching and directing, electrons on the atomic level to understand quantum dynamics from attoseconds to femtoseconds, and beyond
Online, EuXFEL, Hamburg/Schenefeld, Germany, EuXFEL Science Seminar (19.04.2022)

Reville, B.:

Particle acceleration at shocks – limits and laboratories
University College Dublin, Feb 27, 2020
Limits on Particle Acceleration at Astrophysical Shocks
Online, Tsung Dao Lee Institute, July 2, 2020
Galactic sources of very high energy particles
Online, DESY, Zeuthen, Nov 20, 2020
Signatures of particle acceleration at ultrarelativistic shocks
Online, University of Calabria, Feb 11, 2021
Insights on HE astrophysical processes from the laboratory
Online, DESY, University of Hamburg, Astroparticle Physics Seminar, July 1, 2021
Extremely shocking limits – the maximum energy particles at astrophysical shock
Online, Journal of Plasma Physics Colloquium, May 5, 2022

Rezacek, J.:

Unified Emergence of Energy Scales and Cosmic Inflation.
University of Nottingham, United Kingdom, Particle Cosmology Seminar (12.03.2021)

Rupprecht, P.:

From femtosecond to femtometers - controlling quantum dynamics in molecules with table-top (TR-)XAS
SLAC (Stanford, CA, USA), Special Seminar (26.07.2022)
From femtosecond to femtometers - controlling quantum dynamics in molecules using transient absorption spectroscopy
Berkeley University (CA, USA), Special Seminar (28.07.2022)
From femtoseconds to femtometers – controlling quantum dynamics in molecules using core-level transient absorption spectroscopy
Ohio State University (OH, USA), Institute for Optical Science Seminar (01.09.2022)
From femtoseconds to femtometers – controlling quantum dynamics in molecules using table-top x-ray absorption spectroscopy
Freiburg University (Germany), RTG DynCAM Seminar (08.11.2022)

Schwenk, A.:

Chiral effective field theory for dark matter direct detection.
Colloquium, Donostia International Physics Center, San Sebastian, Spain (27.07.2022)

Sen, M.:

Going beyond a galactic supernova to hunt for new physics.
HEP Seminars at Unicamp, Campinas, Brazil (01.09.2022)
Constraining keV sterile neutrino dark matter through lab, astro and cosmo surveys.
Max-Planck Institut fuer Physik, Munich (03.05.2022)
Neutrino Theories Extended Workshop (NuTs) in IFT, Madrid (04.05.2022)
Supernovae as probes of soft lepton number violation.
IFIC Valencia (05.03.2022)

Sturm, S.:

Penning trap experiments for fundamental atomic physics.
Physics Seminar ETH Zürich, Zürich, Switzerland (14.10.2022)

Tada, A. M.:

Z2 Non-Restoration and Composite Higgs: Singlet-Assisted Baryogenesis w/o Topological Defects.
Online, Journal Club Particle and Cosmology Division of Universidade Federal de Minas Gerais (17.11.2022)
Heidelberg, Germany, ITP Heidelberg Strongly Correlated Systems Group Seminar (11.05.2022)

Tamburini, M.:

E-332 FY22 Progress and Plans for FY23 (online).
Menlo Park, California, USA, Facility for Advanced Accelerator Experimental Test (FACET-II), FACET-II Program Advisory Committee (PAC) Meeting (25.10.2022)
Challenges in modelling strong-field QED experiments.
Menlo Park, California, USA, SLAC National Accelerator Laboratory, E-320 collaboration meeting (21.07.2022)

Trautner, A.:

Gauged neutrino self-interactions, the Hubble tension and XENONnT (online).
Online, South Korea, APCTP Particle theory seminar (04.08.22)
Symmetries of Symmetries in particle physics (online).
Online, Humboldt Universitaet zu Berlin, Seminar on Algebra, Particles, and Quantum theory (28.02.22)

Tsirou, M.:

The flaring behaviour of the Crab pulsar wind nebula in high-energy gamma-rays: signatures originating from lepton acceleration in pulsar winds (?)
Online, LUTH, Observetoire de Paris, 09.12.2021

Valuev, I. A.:

Muonic fine-structure anomalies: evidence against the main suspect.
Mainz, Germany, Helmholtz Institute Mainz, Budker Group Meeting (17.06.2022)

Vieu, T.:

Massive star cluster origin for the galactic cosmic ray population at very-high energies
Online, Paris, École normale supérieure, 24. 11. 2022