

# Synopsis of the Daily Program

Monday, March 18, 2013

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			<b>SYED</b>
<b>Plenary Talks</b>			
09:00	E 415	PV I	Prospects for Superconducting Qubits •David DiVincenzo
09:45	E 415	PV II	Spectroscopic signatures of quantum-coherent energy transfer •Elisabetta Collini
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			<b>SYED</b>
<b>Invited Talks</b>			
11:00	E 415	SYED 1.1	Signatures of vibronic and vibrational coherences in electronic 2D-spectra of monomers and aggregates Franz Milota, Tomas Mancal, Harald F. Kauffmann, •Jürgen Hauer
11:30	E 415	SYED 1.2	Beatings in Electronic 2D Spectroscopy •Tõnu Pullerits
12:00	E 415	SYED 1.3	Resonant 2D Raman Spectroscopy •Tiago Buckup, Jan Philip Kraack, Marcus Motzkus
12:30	E 415	SYED 1.4	Coherent Two-Dimensional Electronic Spectroscopy With Triggered Exchange •Patrick Nuernberger, Stefan Ruetzel, Martin Kullmann, Johannes Buback, Tobias Brixner
14:00	E 415	SYED 2.1	Two-dimensional UV and visible spectroscopy of biological systems •Majed Chergui, Gerald Auböck, Cristina Consani, Roberto Monni, André El Haddad, Frank van Mourik
14:30	E 415	SYED 2.2	Ultrabroad 2D-UV spectroscopy: from coherent internal conversion in pyrene towards exciton dynamics in DNA •Igor Pugliesi, Nils Krebs, Eberhard Riedle
15:00	E 415	SYED 2.3	Multidimensional XUV-NIR spectroscopy of electronic dynamics in small quantum systems •Christian Ott, Andreas Kaldun, Kristina Meyer, Philipp Raith, Martin Laux, Alexander Blättermann, Thomas Ding, Thomas Pfeifer
15:30	E 415	SYED 2.4	Correlated Two-electron Wave-Packets in Helium •Javier Madronero
<b>Sessions</b>			
11:00	E 415	SYED 1	Electronic 2D Spectroscopy from Small to Large Systems I
14:00	E 415	SYED 2	Electronic 2D Spectroscopy from Small to Large Systems II

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## Monday, March 18, 2013

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**A****Prize Talk, Invited Talks**

11:00	B 305	A 1.1	Dynamics of Ultra-cold Atoms in Optical Lattices •Sandro Wimberger
14:00	B 305	A 5.1	Taming light waves: Attosecond triggering and clocking of electronic processes •Eleftherios Goulielmakis (Laureate Gustav-Hertz-Prize)
16:30	B 305	A 9.1	Attosecond physics at a nanoscale metal tip •Peter Hommelhoff, Michael Krüger, Michael Förster, Sebastian Thomas, Lothar Maisenbacher, Peter Dombi, Johannes Hoffrogge, Jakob Hammer, Dominik Ehberger, John Breuer, Georg Wachter, Christoph Lemell, Joachim Burgdörfer
16:30	B 302	A 11.1	Spectra of cold molecular ions from hot helium nanodroplets •Marcel Drabbels

**Sessions**

11:00	B 305	A 1	Ultra-cold atoms, ions and BEC I (with Q)
11:00	B 302	A 2	Precision spectroscopy of atoms and ions I (with Q)
11:00	F 128	A 3	Precision measurements and metrology I (with Q)
11:00	F 102	A 4	Cluster (with MO)
14:00	B 305	A 5	Attosecond physics
14:00	F 428	A 6	Ultra-cold atoms, ions and BEC II (with Q)
14:00	B 302	A 7	Interaction with VUV and X-ray light I
14:00	F 128	A 8	Precision measurements and metrology II (with Q)
16:30	B 305	A 9	Interaction with strong or short laser pulses I
16:30	F 428	A 10	Precision spectroscopy of atoms and ions II (with Q)
16:30	B 302	A 11	Atomic clusters I (with MO)
16:30	E 415	A 12	Ultracold plasmas and Rydberg atoms (with Q)

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**MO****Invited Talk**

14:00	F 102	MO 4.1	Quantum Molecular Dynamics studied with the Multiconfiguration Time-Dependent Hartree (MCTDH) method •Hans-Dieter Meyer
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**Sessions**

11:00	F 102	MO 1	Cluster
11:00	F 107	MO 2	Electronic Spectroscopy I
11:00	E 415	MO 3	SYED: Electronic 2D Spectroscopy from Small to Large Systems I
14:00	F 102	MO 4	Quantum Chemistry and Molecular Dynamics I
14:00	F 107	MO 5	Cold Molecules I
14:00	E 415	MO 6	SYED: Electronic 2D Spectroscopy from Small to Large Systems II
16:30	F 102	MO 7	Femtosecond Spectroscopy I: Electronic 2D Spectroscopy (contributed for SYED in MO)
16:30	F 107	MO 8	Spectroscopy in He-Droplets
16:30	B 302	MO 9	Atomic clusters I (with A)

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## Monday, March 18, 2013

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MS

### Invited Talks

11:00	F 442	MS 1.1	Reducing nuclear physics uncertainties in r-process models using high-precision mass measurements of highly charged, neutron-rich Rb and Sr ions •Vanessa V. Simon
14:00	F 442	MS 2.1	The application of high-precision atomic masses in neutrino physics •Szilard Nagy
16:30	F 442	MS 3.1	Erzeugung polyanionischer Cluster in Ionenfallen •Franklin Martinez, Steffi Bandelow, Gerrit Marx, Lutz Schweikhard

### Sessions

11:00	F 442	MS 1	Precision Mass Spectrometry and Fundamental Applications I
14:00	F 442	MS 2	Precision Mass Spectrometry and Fundamental Applications II
16:30	F 442	MS 3	Ion Trap and FT-ICR-MS, Molecules, Clusters and Reactions

### Sessions

11:00	F 142	Q 1	Micromechanical oscillators I
11:00	F 128	Q 2	Precision measurements and metrology I
11:00	E 001	Q 3	Quantum gases: Interaction effects I
11:00	F 342	Q 4	Quantum information: Quantum communication I
11:00	E 214	Q 5	Quantum information: Atoms and ions I
11:00	A 310	Q 6	Ultra-cold atoms and molecules
11:00	B 305	Q 7	Ultra-cold atoms, ions and BEC I (with A)
14:00	F 142	Q 8	Micromechanical oscillators II
14:00	A 310	Q 9	Photonics I
14:00	F 128	Q 10	Precision measurements and metrology II
14:00	F 342	Q 11	Quantum effects: QED
14:00	E 001	Q 12	Quantum gases: Bosons I
14:00	E 214	Q 13	Quantum information: Concepts and methods I
14:00	F 428	Q 14	Ultra-cold atoms, ions and BEC II (with A)
16:30	F 142	Q 15	Matter-wave optics
16:30	A 310	Q 16	Photonics II
16:30	F 342	Q 17	Quantum effects: Interference and correlations
16:30	E 001	Q 18	Quantum gases: Mixtures, spinor gases, disorder effects
16:30	E 214	Q 19	Quantum information: Quantum computers
16:30	E 415	Q 20	Ultracold plasmas and Rydberg atoms
18:30	F 303	Q 21	DFG funding programs

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19:30 Mensa

**Welcome Evening (Entrance for registered participants only)**

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## Tuesday, March 19, 2013

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### Plenary Talks

09:00	E 415	PV III	Testing quantum gravity speculations with classical experiments •Eric Adelberger
09:45	E 415	PV IV	How quantum coherence assists photosynthetic light harvesting •Klaus Schulten

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### SYQG

### Invited Talks

11:00	E 415	SYQG 1.1	Does time exist in quantum gravity? •Claus Kiefer
11:30	E 415	SYQG 1.2	How Attractive is the Moon for Relativity? •Jürgen Müller, Liliane Biskupek, Enrico Mai, Franz Hofmann
12:00	E 415	SYQG 1.3	Interferometry with Bose-Einstein condensates in microgravity •Ernst Rasel
12:30	E 415	SYQG 1.4	Relativistic effects in atom and neutron interferometry •Wolfgang Schleich

### Sessions

11:00	E 415	SYQG 1	Quantum meets gravity and metrology I
14:30	E 415	SYQG 2	Quantum meets gravity and metrology II

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### A

### Invited Talks

11:00	B 305	A 15.1	X-ray laser spectroscopy with trapped highly charged ions •Sven Bernitt
14:00	B 302	A 17.1	Ultrafast dynamics in molecular systems and clusters •Maria Krikunova, Theophilos Maltezopoulos, Philipp Wessels, Ulrike Frühling, Marek Wieland, Markus Drescher, Alaa Al-Shemmary, Nikola Stojanovic, Maria Müller, Jan P. Müller, Bernd Schütte, Thomas Möller
14:00	B 305	A 18.1	Der g-Faktor des gebundenen Elektrons – Test des Standardmodells und Zugang zu fundamentalen Konstanten •Sven Sturm, Florian Köhler, Anke Wagner, Zoltan Harman, Jacek Zatorski, Wolfgang Quint, Günter Werth, Christoph H. Keitel, Klaus Blaum

### Sessions

11:00	E 415	A 13	Quantum meets gravity and metrology I
11:00	B 302	A 14	Ultra-cold atoms, ions and BEC III (with Q)
11:00	B 305	A 15	Precision spectroscopy of atoms and ions III (with Q)
11:00	F 428	A 16	Photoionization
14:00	B 302	A 17	Interaction with strong or short laser pulses II
14:00	B 305	A 18	Precision spectroscopy of atoms and ions IV (with Q)
14:00	F 428	A 19	Interaction with VUV and X-ray light II
16:00	Empore LH	A 20	Poster: Precision spectroscopy of atoms and ions (with Q)
16:00	Empore LH	A 21	Poster: Photoionization
16:00	Empore LH	A 22	Poster: Interaction with strong or short laser pulses

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## Tuesday, March 19, 2013

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MO

### Invited Talks

- 11:00 F 102 MO 10.1 Revealing coherent nuclear wavepacket dynamics in biological photoreceptors  
Matz Liebel, •Philipp Kukura
- 14:00 F 102 MO 12.1 Strong Field Molecular Ionization  
•Thomas Weinacht
- 15:00 F 102 MO 12.4 Photoelectron angular distributions of chiral molecules from multi-photon ionization  
•Matthias Wollenhaupt, Christian Lux, Vanessa Brandenstein, Cristian Sarpe, Thomas Baumert

### Sessions

- 11:00 F 102 MO 10 Femtosecond Spectroscopy II
- 11:00 F 107 MO 11 Infrared and Microwave Spectroscopy
- 14:00 F 102 MO 12 Femtosecond Spectroscopy III
- 14:00 F 107 MO 13 Quantum Chemistry and Molecular Dynamics II
- 16:00 Empore LH MO 14 Poster 1: Cluster, Femtosecond Spectroscopy

- 12:30 F 102 Annual General Meeting of the Molecular Physics Division

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MS

### Invited Talks

- 11:00 F 442 MS 4.1 Surface Analysis with ToF-SIMS and Laser-SNMS: Possibilities and Limitations  
•Heinrich F. Arlinghaus
- 14:00 F 442 MS 5.1 The ISOLDE Laser Ion Source and Trap (LIST): Towards Pure Ion Beams  
•Daniel Fink, Klaus Blaum, Richard Catheral, Valentin Fedosseev, Alexander Gottberg, Tobias Kron, Bruce Marsh, Sven Richter, Ralf Erik Rossel, Sebastian Rothe, Thierry Stora, Klaus Wendt

### Sessions

- 11:00 F 442 MS 4 Resonance Ionisation MS, ICPMS and others I
- 14:00 F 442 MS 5 Resonance Ionisation MS, ICPMS and others II

- 12:00 F 442 Annual General Meeting of the Mass Spectrometry Division

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Q

### Sessions

- 11:00 F 142 Q 22 Laser development: Solid state lasers I
- 11:00 E 001 Q 23 Quantum gases: Interaction effects II
- 11:00 A 310 Q 24 Quantum information: Atoms and ions II
- 11:00 E 214 Q 25 Quantum information: Quantum communication II
- 11:00 B 302 Q 26 Ultra-cold atoms, ions and BEC III (with A)
- 11:00 F 342 Q 27 Ultrashort laser pulses: Generation I
- 13:00 F 342 Q 28 Fachverbandssitzung Quantenoptik
- 14:00 F 342 Q 29 Photonics III
- 14:00 F 128 Q 30 Quantum effects
- 14:00 E 001 Q 31 Quantum gases: Optical lattices I
- 14:00 A 310 Q 32 Quantum information: Atoms and ions III
- 14:00 E 214 Q 33 Quantum information: Concepts and methods II

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## Tuesday, March 19, 2013

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14:00	F 142	Q 34	Ultrashort laser pulses: Applications	Q
16:00	Empore LH	Q 35	Poster I	
13:00	F 342		Annual General Meeting of the Quantum Optics and Photonics Division	
09:00	Lichthof		Exhibition of Scientific Instruments and Literature	

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## Wednesday, March 20, 2013

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09:00	E 415	PV V	<b>Plenary Talks, Evening Talk</b> One, two, three, many: Exploring quantum systems one atom at a time •Selim Jochim
09:45	E 415	PV VI	Imaging attosecond multi-electron dynamics •Misha Ivanov
			<b>SYAD</b>
11:00	E 415	SYAD 1.1	<b>Invited Talks</b> Photonic Quantum Computing •Stefanie Barz
11:30	E 415	SYAD 1.2	Comparative Studies on some Blackcurrant Odorants and Fruit Esters using a Combination of Microwave Spectroscopy and Quantum Chemical Calculations •Halima Mouhib
12:00	E 415	SYAD 1.3	The Standard Model under Extreme Conditions: The g-Factor of Highly Charged Ions •Sven Sturm
12:30	E 415	SYAD 1.4	Entanglement and Interference of Identical Particles •Malte Christopher Tichy
11:00	E 415	SYAD 1	<b>Session</b> SAMOP Dissertation-Prize 2013
			<b>SYUD</b>
14:00	E 415	SYUD 1.1	<b>Invited Talks</b> Electron emission from nanospheres in strong, few-cycle laser fields •Matthias Kling, Frederik Süßmann, Sergey Zherebtsov, Johannes Stierle, Jürgen Plenge, Eckart Rühl, Lennart Seifert, Thomas Fennel
14:30	E 415	SYUD 1.2	Ultrafast dynamics of gas-phase anions •Jan R. R. Verlet
15:00	E 415	SYUD 1.3	Attosecond Larmor Clock for Ionization •Olga Smirnova, Jivesh Kaushal, Ingo Barth, Misha Ivanov

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## Wednesday, March 20, 2013

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SYUD

15:30 E 415 SYUD 1.4 Clusters in intense x-ray pulses  
•Christoph Bostedt

14:00 E 415 SYUD 1 **Session**  
Visualizing Ultrafast Dynamics in atoms, molecules, and clusters

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A

14:00 B 302 A 26.1 **Invited Talk**  
Dipolar Physics with Ultracold Atomic Magnets  
•Ferlandino Francesca

**Sessions**  
11:00 E 415 A 23 SAMOP Dissertation-Prize 2013  
11:00 F 428 A 24 Ultra-cold atoms, ions and BEC IV (with Q)  
11:00 B 302 A 25 Precision spectroscopy of atoms and ions V (with Q)  
14:00 B 302 A 26 Ultra-cold atoms, ions and BEC V (with Q)  
14:00 E 415 A 27 Visualizing Ultrafast Dynamics in atoms, molecules, and clusters  
14:00 E 001 A 28 Precision measurements and metrology III (with Q)  
16:00 Empore LH A 29 Poster: Ultra-cold atoms, ions and BEC (with Q)  
16:00 Empore LH A 30 Poster: Interaction with VUV and X-ray light

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MO

11:00 F 102 MO 15.1 **Invited Talk**  
Lasing in Nitrogen Gas Induced by Femtosecond Filamentation  
•Andrius Baltuska, Daniil Kartashov, Jens Möhring, Skirmantas Ališauskas, Giedrius Andriukaitis, Stefan Hässler, Audrius Pugžlys, Aleksei Zheltikov, Markus Motzkus, Misha Ivanov, Olga Smirnova

**Sessions**  
11:00 F 102 MO 15 Femtosecond Spectroscopy IV  
11:00 F 107 MO 16 Cold Molecules II  
14:00 E 415 MO 17 SYUD: Visualizing Ultrafast Dynamics in atoms, molecules, and clusters  
14:00 F 102 MO 18 Experimental Techniques  
16:00 Empore LH MO 19 Poster 2: Biomolecules, Cold Molecules, Experimental Techniques, Various Topics

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MS

11:00 F 442 MS 6.1 **Invited Talks**  
Recent results in mass measurements of short-lived nuclides at CSRe-Lanzhou  
•Yuhu Zhang, Hushan Xu, Yuri Litvinov

14:00 F 442 MS 7.1 Beschleuniger-Massenspektrometrie mit C-14 – eine Erfolgsgeschichte mit vielen Facetten  
•Bernd Kromer

**Sessions**  
11:00 F 442 MS 6 Ion Storage Rings and Precision Mass Spectrometry  
14:00 F 442 MS 7 Accelerator Mass Spectrometry and Applications I  
16:00 Empore LH MS 8 Poster

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Wednesday, March 20, 2013

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Q

**Sessions**

11:00	F 428	Q 36	Ultra-cold atoms, ions and BEC IV (with A)
14:00	F 142	Q 37	Laser applications: Spectroscopy
14:00	E 001	Q 38	Precision measurements and metrology III
14:00	F 342	Q 39	Quantum effects: Light scattering and propagation
14:00	A 310	Q 40	Quantum gases: Optical lattices II
14:00	E 214	Q 41	Quantum information: Concepts and methods III
14:00	B 302	Q 42	Ultra-cold atoms, ions and BEC V (with A)
16:00	Empore LH	Q 43	Poster II

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09:00	Lichthof	Exhibition of Scientific Instruments and Literature
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20:00	E 415	PV VII	<b>Public Evening Talk (Entrance free)</b> Die neue Vermessung der Welt – mit Quanten und Relativität •Jürgen Müller
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## Thursday, March 21, 2013

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### Plenary Talks

09:00	E 415	PV VIII	Capturing Reaction Intermediates with Cryogenic Ion Spectroscopy •Mark Johnson
09:45	E 415	PV IX	Entanglement, Interference and Tunneling – Multiparticle Coincidence Experiments of Molecular Fragmentation •Reinhard Dörner, Lothar Schmidt, Till Jahnke, Markus Schöffler, Jian Wu

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### SYCD

### Invited Talks

11:00	E 415	SYCD 1.1	Ultralong range ICD in the He dimer, resonant Auger – ICD cascade processes •Till Jahnke
11:30	E 415	SYCD 1.2	Inter-atomic Coulombic decay in endohedral fullerenes Narges Bahmanpour, •Vitali Averbukh
12:00	E 415	SYCD 1.3	ICD-like decays in aqueous electrolytes •Gunnar Öhrwall, Niklas Ottosson, Olle Björneholm
12:30	E 415	SYCD 1.4	Intermolecular Coulomb decay at heterogeneous interfaces •Thomas Orlando, Gregory Grieves

### Session

11:00	E 415	SYCD 1	Interatomic and Intermolecular Coulombic Decay
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### A

### Invited Talks

14:00	B 302	A 34.1	Interatomic Coulombic decay following electronic excitations •Kirill Gokhberg
14:00	F 428	A 36.1	Size selective vibrational spectroscopy of strongly bound neutral clusters •Andre Fielicke

### Sessions

11:00	E 415	A 31	Interatomic and Intermolecular Coulombic Decay
11:00	B 305	A 32	Ultra-cold atoms, ions and BEC VI (with Q)
11:00	B 302	A 33	Interaction with strong or short laser pulses III
14:00	B 302	A 34	SYCD Interatomic and intermolecular Coulombic decay (contributed for SYCD in A, MO)
14:00	B 305	A 35	Ultra-cold atoms, ions and BEC VII (with Q)
14:00	F 428	A 36	Atomic clusters II (with MO)
14:00	F 128	A 37	Precision measurements and metrology IV (with Q)
16:00	Empore LH	A 38	Poster: Atomic clusters (with MO)
16:00	Empore LH	A 39	Poster: Atomic systems in external fields
16:00	Empore LH	A 40	Poster: Ultra-cold plasmas and Rydberg systems (with Q)
16:00	Empore LH	A 41	Poster: Electron scattering and recombination
16:00	Empore LH	A 42	Poster: Attosecond physics
13:30	B 305		Annual General Meeting of the Atomic Physics Division

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## Thursday, March 21, 2013

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MO

			<b>Invited Talks</b>
14:00	F 102	MO 23.1	Ultrafast Dynamics of Electronic Excitations in Organic Materials and Structures •Stefan Lochbrunner, Henning Marciniak, Franziska Fennel, Steffen Wolter
15:30	F 102	MO 23.6	Noise-Induced Förster Resonant Energy Transfer between Orthogonal Dipoles in Photoexcited Molecules •Peter Nalbach, Igor Pugliesi, Heinz Langhals, Michael Thorwart
			<b>Sessions</b>
11:00	E 415	MO 20	SYCD: Interatomic and Intermolecular Coulombic Decay
11:00	F 102	MO 21	Femtosecond Spectroscopy V
11:00	F 107	MO 22	Biomolecules
14:00	F 102	MO 23	Femtosecond Spectroscopy VI
14:00	F 428	MO 24	Atomic clusters II (with A)
14:00	B 302	MO 25	Interatomic and intermolecular Coulombic decay (contributed for SYCD in A, MO)
14:00	F 107	MO 26	Electronic Spectroscopy II
16:00	Empore LH	MO 27	Poster 3: Collisions, Electronic Spectroscopy, Energy Transfer, Quantum Chemistry, Molecular Dynamics, Photochemistry, Spectroscopy in He-Droplets

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MS

			<b>Invited Talk</b>
11:00	F 442	MS 9.1	Extending the measuring capabilities of AMS •Robin Golser, Oliver Forstner, Walter Kutschera, Martin Martschini, Alfred Priller, Stephan Winkler
			<b>Sessions</b>
11:00	F 442	MS 9	Accelerator Mass Spectrometry and Applications II
14:00	F 442	MS 10	Accelerator Mass Spectrometry and Applications III

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Q

			<b>Sessions</b>
11:00	F 128	Q 44	Laser development: Solid state lasers II
11:00	F 342	Q 45	Quantum gases: Bosons II
11:00	E 001	Q 46	Quantum information: Concepts and methods IV
11:00	B 305	Q 47	Ultra-cold atoms, ions and BEC VI (with A)
11:00	A 310	Q 48	Ultracold atoms: Traps and cooling
11:00	F 142	Q 49	Ultrashort laser pulses: Generation II
14:00	F 142	Q 50	Laser applications
14:00	F 128	Q 51	Precision measurements and metrology IV
14:00	F 342	Q 52	Quantum gases: Fermions
14:00	A 310	Q 53	Quantum information: Atoms and ions IV
14:00	E 001	Q 54	Quantum information: Photons and nonclassical light I
14:00	B 305	Q 55	Ultra-cold atoms, ions and BEC VII (with A)
16:00	Empore LH	Q 56	Poster III

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09:00 Lichthof Exhibition of Scientific Instruments and Literature

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## Friday, March 22, 2013

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### Plenary Talks

09:00	E 415	PV X	Efficient coupling of single photons and single molecules •Vahid Sandoghdar
09:45	E 415	PV XI	100 Years of Mass Spectrometry: From Thomson to Modern Methods and Applications •Lutz Schweikhard

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## SYMS

### Invited Talks

11:00	E 415	SYMS 1.1	MS for environmental and radiochemical applications •Clemens Walther
11:30	E 415	SYMS 1.2	Modern nuclear mass models •Stephane Goriely
12:00	E 415	SYMS 1.3	High-accuracy mass measurements for nuclear astrophysics •Susanne Kreim
12:30	E 415	SYMS 1.4	Storage ring mass and lifetime measurements •Fritz Bosch
14:00	E 415	SYMS 2.1	Search for resonant double-electron capture •Sergey Eliseev, Klaus Blaum, Michael Block, Christian Droese, Dmitriy Nesterenko, Yuri Novikov, Enrique Minaya Ramirez, Christian Roux, Lutz Schweikhard, Kay Zuber
14:30	E 415	SYMS 2.2	Towards accurate T-3He Q-value •Tommi Eronen, Martin Höcker, Jochen Ketter, Sebastian Streubel, Robert S. Van Dyck, Klaus Blaum
15:00	E 415	SYMS 2.3	The Avogadro constant and a new definition of the kilogram •Peter Becker
15:30	E 415	SYMS 2.4	Dating human DNA with the <sup>14</sup> C bomb peak •Walter Kutschera, Jakob Liebl, Peter Steier
16:00	E 415	SYMS 2.5	Resonance ionization mass spectrometry •Klaus Wendt

### Sessions

11:00	E 415	SYMS 1	100 Years of Mass Spectrometry 1
14:00	E 415	SYMS 2	100 Years of Mass Spectrometry 2

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## Friday, March 22, 2013

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**A****Invited Talks**

11:00	B 305	A 43.1	Accurate, stable, transportable: lattice clocks at PTB •Christian Lisdat, Stephan Falke, Nathan Lemke, Thomas Middelmann, Stefan Vogt, Sebastian Häfner, Uwe Sterr
11:00	B 302	A 45.1	Attosecond time-resolved high-resolution spectroscopy of two-electron dynamics in helium, and impulsive control of light •Thomas Pfeifer

**Sessions**

11:00	B 305	A 43	Precision spectroscopy of atoms and ions VI (with Q)
11:00	E 415	A 44	100 Years of Mass Spectrometry 1
11:00	B 302	A 45	Atomic systems in external fields I
11:00	F 428	A 46	Ultra-cold plasmas and Rydberg systems (with Q)
11:00	E 001	A 47	Precision measurements and metrology V (with Q)
11:00	F 142	A 48	Ultra-cold atoms: Manipulation and detection (with Q)
14:00	E 415	A 49	100 Years of Mass Spectrometry 2
14:00	B 302	A 50	Atomic systems in external fields II
14:00	E 001	A 51	Precision measurements and metrology VI (with Q)

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**MO****Invited Talk**

11:00	F 102	MO 28.1	Combined IR/IR/UV spectroscopy to analyze structures and proton transfer reactions in different electronic states •Markus Gerhards
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**Sessions**

11:00	F 102	MO 28	Photochemistry
11:00	F 107	MO 29	Collisions and Energy Transfer

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**Q****Sessions**

11:00	F 128	Q 57	Laser development: Nonlinear effects
11:00	E 001	Q 58	Precision measurements and metrology V
11:00	F 342	Q 59	Quantum gases: Optical lattices III
11:00	A 310	Q 60	Quantum effects: Entanglement and decoherence I
11:00	E 214	Q 61	Quantum information: Atoms and ions V
11:00	F 142	Q 62	Ultracold atoms: Manipulation and detection
14:00	F 128	Q 63	Photonics IV
14:00	E 001	Q 64	Precision measurements and metrology VI
14:00	F 342	Q 65	Quantum gases: Bosons III
14:00	A 310	Q 66	Quantum effects: Entanglement and decoherence II
14:00	E 214	Q 67	Quantum information: Concepts and methods V
14:00	F 142	Q 68	Quantum information: Photons and nonclassical light II

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