

Program

Sunday, May 13, 2018

- 17:00 – 21:00 Registration
- from 18:30 *BUFFET SUPPER / Informal get together*
- 20:00 – 21:00 **Welcome lecture** **Linking the international system of units
Joachim Ullrich** **to fundamental constants**

Monday, May 14, 2018

- 08:00 *BREAKFAST*
- 08:45 – 09:00 Scientific organizers **Opening and welcome**
- 09:00 – 09:45 Jean-Philippe Uzan **Fundamental constants, gravitation and
cosmology - recent developments**
- 09:45 – 10:30 Christof Wetterich **Are fundamental constants constant?**
- 10:30 – 11:00 *COFFEE BREAK*
- 11:00 – 11:45 Yurii Dumin **Is the cosmological Lambda-term a new
fundamental constant?**
- 11:45 – 12:30 Vincenzo Salzano **Measuring the speed of light with
cosmological observations**
- 12:30 **Conference Photo** (in the foyer of the lecture hall)
- 12:40 *LUNCH*

Program

Monday, May 14, 2018

14:00 – 14:45	Marianna Safronova	The search for variation of fundamental constants with atomic systems
14:45 – 15:30	Ekkehard Peik	Search for variations of the fine structure constant with atomic clocks
15:30 – 16:00	<i>COFFEE BREAK</i>	
16:00 – 16:45	Mikhail Kozlov	Time variation of fundamental constants: Searches via microwave and infrared spectroscopy in space
16:45 – 17:30	Wim Ubachs	Physics beyond the Standard Model from hydrogen molecules
17:30 – 19:00	Poster session I	
19:00	<i>DINNER</i>	

Program

Tuesday, May 15, 2018

08:00	BREAKFAST	
09:00 – 09:45	Jun Ye	Optical atomic clock based on quantum matter
09:45 – 10:30	Hidetoshi Katori	Connecting optical lattice clocks at 10^{-18} uncertainty
10:30 – 11:00	COFFEE BREAK	
11:00 – 11:45	David Hume	Precision measurements with trapped-ion optical clocks at NIST
11:45 – 12:30	Gesine Grosche	Frequency comparison and dissemination via interferometric optical fibre links
12:30	LUNCH	
14:00 – 14:45	Peter Thirolf	Towards a test bench for time variation of fundamental constants: What do we know about the elusive ^{229}Th isomer?
14:45 – 15:30	Robert Alexander Müller	Hyperfine structure of doubly charged ^{229}Th and the excitation of its nuclear clock isomer
15:30 – 16:00	COFFEE BREAK	
16:00 – 16:45	Andrey Volotka	Nuclear excitation in the two-photon decay of highly charged ions
16:45 – 17:30	Rima Schüssler	High-precision mass measurements with PENTATRAP
17:30 – 19:00	Discussion	
19:00	DINNER	

Program

Wednesday, May 16, 2018

08:00	BREAKFAST	
09:00 – 09:45	Stefan Ulmer	High-precision comparisons of the fundamental properties of protons and antiprotons at BASE
09:45 – 10:30	Stefan Eriksson	Spectroscopy of antihydrogen in the ALPHA experiment
10:30 – 11:00	COFFEE BREAK	
11:00 – 11:45	Masaki Hori	Antiproton-to-electron mass ratio determined by laser spectroscopy of antiprotonic helium
11:45 – 12:30	Tanya Zelevinsky	Precision spectroscopy and EDMs with cold molecules
12:30	LUNCH	
14:00 – 17:30	Excursion (leisurely hike in the vicinity)	
17:30 – 19:00	Poster session II	
19:00	DINNER	
20:00 – 21:00	Evening lecture Terry Quinn	From artefacts to atoms - from the old to the new SI

Program

Thursday, May 17, 2018

08:00	BREAKFAST	
09:00 – 09:45	Barry Wood	Final measurements of the Planck constant
09:45 – 10:30	Holger Mueller	Measurement of the fine structure constant as test of the standard model
10:30 – 11:00	COFFEE BREAK	
11:00 – 11:45	Vladimir Yerokhin	QED theory of the Lamb shift of hydrogen and hydrogen-like ions for Rydberg constant and proton radius
11:45 – 12:30	Sven Sturm	The magnetic moment of highly charged ions: Test of strong field QED and access to fundamental constants
12:30	LUNCH	
14:00	Helmholtz Prize Ceremony	
	Klaus von Klitzing	Quantum Hall effect and fundamental constants
16:30	RECEPTION	
17:45	Start to the shipping pier (about 20 minutes walk)	
	JOINT DINNER on board cruising by the boat “MS Moby Dick” on the river Rhine	

Program

Friday, May 18, 2018

08:00	BREAKFAST	
09:00 – 09:45	Randolf Pohl	Laser spectroscopy of muonic atoms - Nuclear physics and fundamental constants
09:45 – 10:30	Francois Nez	Hydrogen 1S-3S spectroscopy with a cw laser
10:30 – 11:00	COFFEE BREAK	
11:00 – 11:45	Natalia Oreshkina	Hyperfine splitting in simple ions for the search of the variation of fundamental constants
11:45 – 12:30	José Crespo López- Urrutia	Highly charged ions for fundamental studies
12:30 – 12:45	Scientific organizers	Poster awards, summary and closing remarks
12:45	LUNCH	

End of the seminar and FAREWELL COFFEE / Departure

Please note that there will be **no** dinner at the Physikzentrum on Friday evening for participants leaving the next morning.