

Program of the PSI2010 Workshop
October 11-14, 2010
Paul Scherrer Institut

Sunday, 10 October 2010

17:00 to 19:00 Registration at the Hotel zur Therme* in Bad Zurzach

18:00 to 19:00 Welcome Apéro

*The Kurhotel is now Hotel zur Therme

Monday, 11 October 2010 | Morning program

09:00 to 09:20 Welcome		
09:00	K. Kirch	Organizational & Welcome
09:10	J. Mesot	Welcome
09:15	K. Clausen	Welcome
12	09:20 to 10:40 Session I Chair: B. Filippone	
09:20	D. Wyler	How to look at low energy precision physics in the era of LHC
09:50	G. Marshall	Final results for the muon decay parameters from TWIST
10:10	S. Mihara	Muon physics programs at J-PARC
10:40 to 11:00 Coffee		
15	11:00 to 12:50 Session II Chair: M. Daum	
11:00	T. Soldner	Particle physics experiments with slow neutrons
11:30	V. Ezhov	UCN magnetic trapping and neutron lifetime measurements
11:50	R. Picker	PENELOPE, on the way towards a new precise neutron lifetime measurement
12:10	A. Fomin	The neutron lifetime from a new evaluation of UCN storage experiments
12:30	P. Geltenbort	Commercial water hoses to transport ultracold and very cold neutrons and their application in a recent neutron lifetime experiment
12:50 to 14:30 Lunch at OASE		
21	14:30 to 16:10 Session III Chair: B. Bernstein	
14:30	R. Lehnert	Spacetime-symmetry violations: Motivations, phenomenology, and tests
15:00	M. Romalis	Experimental search for violation of Lorentz symmetry
15:30	W. Heil	Probing Lorentz invariance in $^3\text{He}/^{129}\text{Xe}$ clock comparison experiments
15:50	S. Hoedl	A torsion pendulum based axion search
16:10 to 16:30 Coffee		
25	16:30 to 18:00 Session IV Chair: P. Geltenbort	
16:30	A. Saunders	An ultracold neutron user facility at Los Alamos National Lab
16:45	T. Lauer	Final performance of the pulsed superthermal UCN sources at the TRIGA Mainz
17:00	B. Blau	Status of the ultracold neutron source at PSI
17:15	H. Shimizu	Production of UCN at J-PARC
17:30	A. Frei	The ultracold neutron source at the FRM-II
17:45	A. Zakharov	Preparation of facilities for fundamental research with ultracold neutrons at PNPI

Monday, 11 October 2010 | Evening program

19:15 Concert at the Reformierte Kirche in Bad Zurzach (see map)

Concert in D-major for four trumpets, drums and organ

Georg Philipp Telemann (1681 – 1767)

Fugue in G-minor for four trumpets

Johann Sebastian Bach (1685 – 1750)

Passacaglia in E-minor op. 156 Nr. 11 (from “Zwölf Characterstücke für die Orgel” op. 156)

Josef Gabriel Rheinberger (1839 – 1901)

Fanfare for St. Edmundsbury, 1959, for three trumpets

Benjamin Britten (1913 – 1976)

Quadrophonia for four trumpets

Eckhard Kopetzki (1968)

Passacaglia (2008)

Siegmond Schmidt (b. 1939)

Denn Er hat seinen Engeln befohlen über Dir, from “Elias”, for four trumpets, drums and organ

Felix Mendelssohn-Bartholdy (1809 - 1847); adapted by J. v. d. Wöste

Passacaglia in D-major for organ

Dietrich Buxtehude (um 1637 – 1707)

Canon for four trumpets and organ

Johann Pachelbel (1653 – 1706)

Simon Altmeier, Freiburg (D)	Trumpet
Hans-Peter Buck, Stuttgart (D)	Trumpet
Johannes Knoblauch, Stuttgart (D)	Trumpet
Eckhard Kopetzi, Waldshut-Tiengen (D) /Bad Zurzach (CH)	Trumpet
Martin Ritt, Lauchringen (D)	Kettledrums
Matthias Wamser, Rheinfelden (CH)	Pipe organ

Tuesday, 12 October 2010

31	09:00 to 10:30 Session I		Chair: M. Pohl
	09:00	G. Colangelo	Hadronic physics and precision experiments
	09:30	P.-R. Kettle	In search of $\mu \rightarrow e\gamma$: The MEG experiment status and latest results
	10:00	D. Pocanic	Results and opportunities in pion and muon decay
10:30 to 10:50 Coffee			
34	10:50 to 12:50 Session II		Chair: H. Shimizu
	10:50	V. Gudkov	Symmetry violations in few-body reactions: old and new approaches
	11:10	B. Märkisch	Beta asymmetry measurement in neutron decay
	11:30	K. Bodek	R-correlation in neutron decay: search for scalar and tensor couplings in weak interactions
	11:50	G. Konrad	aSPECT: Measurement of the proton spectrum in neutron decay
	12:10	A. Young	UCNA: A high precision measurement of the axial form factor of the nucleon using ultracold neutrons
	12:30	S. Gardner	Tracing remnants of the baryon vector current anomaly in neutron radiative β -decay
12:50 to 14:30 Lunch at OASE			
41	14:30 to 15:25 Session III		Chair: G. Marshall
	14:30	V. Tishchenko	Precision measurement of the positive muon lifetime by the MuLan collaboration
	14:55	L. Marcucci	Muon capture on light nuclei
15:25 to 15:45 Coffee			
43	15:45 to 16:55 Session IV		Chair: N. Severijns
	15:45	P. Winter	Muon capture at PSI
	16:10	E. Sánchez	Muon lifetime measurement with the FAST detector at PSI
	16:35	A. Sato	MuSIC: A new DC muon beamline at RCNP
17:00 to 19:00 Poster session and Apéro in the auditorium foyer			

Wednesday, 13 October 2010

09:00 to 10:30 Session I			Chair: M. Ramsey-Musolf	46
09:00	P. Paradisi	Lepton flavor violation and CP violation in SUSY		
09:30	A. Franck	Interaction of electromagnetic and matter-waves with linear accelerating matter		
09:50	V. Voronin	Eotvosh type experiment with cold neutrons		
10:10	A. Serebrov	Trap with ultracold neutrons as a detector of dark matter particles with long-range forces		
10:30 to 10:50 Coffee				
10:50 to 12:40 Session II			Chair: P. Kammel	51
10:50	R. Pohl	The Lamb shift in muonic hydrogen		
11:10	K. Pachucki	Analysis of discrepancy between the electronic and muonic hydrogen Lamb shift		
11:40	D. Gotta	Pionic hydrogen		
12:00	B. Juhasz	Measurement of the ground-state hyperfine splitting of antihydrogen		
12:20	A. Olin	Towards antihydrogen spectroscopy at ALPHA		
12:40 to 14:30 Lunch at OASE				
14:30 to 16:20 Session III			Chair: K. Bodek	58
14:30	M. Ramsey-Musolf	EDM searches and their cosmological implications		
15:00	P. Harris	The CryoEDM Experiment at ILL		
15:30	B. Heckel	Recent results from a search for the permanent electric dipole moment of mercury atoms		
16:00	B. Sauer	Measuring the electron electric dipole moment in YbF		
16:20 to 16:40 Coffee				
16:40 to 18:20 Session IV			Chair: W. Heil	63
16:40	Y. Masuda	EDM project at KEK-RCNP and TRIUMF		
17:00	H. Abele	Test of gravitation with quantum objects		
17:20	F. Wauters	Precision measurements of the β -asymmetry parameter in nuclear β -decay as a probe for tensor-type weak currents		
17:40	M. Breitenfeldt	WITCH: A precision experiment for weak interaction studies		
18:00	X. Fléhard	Measurement of the β - ν angular correlation in the decay of trapped ${}^6\text{He}^+$ ions		
19:00 Conference dinner at the Trotte in Villigen				

Thursday, 14 October 2010

68	09:00 to 10:40 Session I		Chair: P. Harris
	09:00	C. Curceanu	Experimental tests of quantum mechanics (Pauli exclusion principle and spontaneous collapse model)
	09:20	M. Doser	Measuring the fall of antihydrogen: the AEGIS experiment at CERN
	09:40	V. Fedorov	A search for nEDM and new constraints on short-range "pseudo-magnetic" interaction of neutron with matter using new effects in neutron optics of noncentrosymmetric crystals
	10:00	T. Chupp	Noble gas EDM measurements and noble gas magnetometry
	10:20	T. Inoue	Experimental search for ^{129}Xe atomic EDM with nuclear spin maser technique
10:40 to 11:00 Coffee			
74	11:00 - 13:00 Session II		Chair: U. Straumann
	11:00	H. Van der Graaf	Si-gas detectors
	11:30	B. Bernstein	A new high-sensitivity nuon-to-electron conversion search at Fermilab
	12:00	D. Taquq	Ultraslow muonium for a muon beam of ultrahigh quality
	12:20	A. Schöning	A novel $\mu \rightarrow 3e$ experiment
	12:40	J. Khriplovich	Can CP-violation be observed in heavy-ion collisions?
13:00 to 14:30 Lunch at OASE			
79	14:30 to 16:20 Session III		Chair: R. Lehnert
	14:30	D. Hertzog	The new g-2 and muon EDM experiment at Fermilab
	15:00	T. Ruppell	A large muon electric dipole moment from flavor?
	15:20	G. Onderwater	Search for EDMs using storage rings
	15:40	T. Ito	Search for a neutron EDM at SNS
	16:00	S. Rocca	The search for the neutron electric dipole moment at the Paul Scherrer Institute
16:20 Concluding remarks			
16:30 to 17:00 Coffee			
17:00 to 19:00 Tour of the PSI facilities			