

International Workshop: Probing Fundamental Symmetries and Interactions with UCN

Monday 11 April 2016 - Friday 15 April 2016

**JGU Mainz, Germany - Waldthausen Castle
Programme**

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Monday 11 April 2016

n-EDM I - (09:00-12:15)

time	[id] title	presenter
09:00	[75] Vice-president JGU Mainz (W. Hofmeister)	
09:10	[76] Workshop Organizer (Werner Heil)	
09:20	[1] Electric dipole moments: a look beyond the Standard Model	RAMSEY-MUSOLF, Michael
10:00	[2] Searches for the EDM of the neutron	KIRCH, Klaus
10:40	Coffee break	
11:00	[77] Nucleon charges and probing novel CP violation via neutron EDM	GUPTA, Rajan
11:25	[78] Search for the EDM of the neutron at PSI	BONDAR, Vira
11:50	[80] New effort to develop an nEDM experiment at LANL	ITO, Takeyasu

n-EDM - II - (14:00-16:20)

time	[id] title	presenter
14:00	[81] Present status and future prospects of nEDM experiment of PNPI-ILL-PTI collaboration	SEREBROV, Anatoly
14:25	[82] Cryogenic magnetic shielding R&D for nEDM at SNS	SLUTSKY, Simon
14:50	[83] An apparatus for studying UCN storage time at cryogenic temperatures for the SNS nEDM experiment	TANG, Zhaowen
15:15	[84] Measurement cells of the SNS nEDM experiment	LEUNG, Kent
15:35	[85] The new magnetic field optimisation procedure of the nEDM experiment at PSI	WURSTEN, Elise
15:55	[86] Simulations for the nEDM@PSI project - The MCUCN and STARucn codes	ZSIGMOND, Geza

n-EDM/magnetometry and instrumentation - (16:50-18:35)

Dedicated talks for technical, instrumentation, systematic details

time	[id] title	presenter
16:50	[87] Studies of perturbations of Larmor precession	GOLUB, Robert
17:15	[88] Magnetometry for next generation nEDM experiments	BISON, Georg
17:35	[89] High sensitivity Cs sensors for magnetic field measurements in the nEDM experiment	KASPRZAK, Malgorzata
17:55	[90] A Potassium magnetometry based current source for nEDM	KOSS, Peter
18:15	[91] Precise measurements and shimming of magnetic field gradients in the low field regime	ALLMENDINGER, Fabian

Tuesday 12 April 2016

n-lifetime I - (09:00-10:20)

time	[id] title	presenter
09:00	[3] Cosmological constraints on the neutron lifetime	SALVATI, Laura
09:40	[4] Review of neutron lifetime experiments	SEREBROV, Anatoly

N-lifetime II - (10:50-12:30)

time	[id] title	presenter
10:50	[5] UCNtau: A precision neutron lifetime measurement using a magneto-gravitational trap	LIU, Chen-Yu
11:30	[92] Status of neutron lifetime experiment UCN magneto-gravitational trap made of permanent magnets	EZHOV, Victor
12:00	[93] The neutron lifetime experiment tSPECT	BECK, Marcus

n-lifetime II - (14:00-16:05)

time	[id] title	presenter
14:00	[94] The neutron lifetime experiment PENeLOPE	SCHREYER, Wolfgang
14:25	[95] Self-triggering readout system for the neutron lifetime experiment PENeLOPE	GAISBAUER, Dominic
14:50	[96] Measurement of neutron lifetime with pulsed cold neutron beams at J-PARC: Experimental apparatus and method	IEKI, Sei
15:15	[97] Measurement of neutron lifetime with pulsed cold neutron beams at J-PARC: Analysis and Result	SUMI, Naoyuki
15:40	[98] Leptoquarks and other new flavor violating currents in the lifetime and beta decay spectrum of UCN	HICKERSON, Kevin

n-lifetime/systematics - (16:35-18:35)

Dedicated talks for technical, instrumentation, systematic details

time	[id] title	presenter
16:35	[99] Neutron conversion and cascaded cooling in paramagnetic systems for a high-flux source of VCN	ZIMMER, Oliver
17:00	[100] The experimental density of states and UCN loss coefficients of fluoropolymers at low temperatures	POKOTILOVSKI, Yuri
17:25	[101] Investigation of perfluorinated methylene oxide oligomers (PFMO) for UCN storage	DUESING, Christian
17:45	[102] Advanced UCN hardware for future experiments with ultracold neutrons	LAUER, Thorsten
18:10	[103] Development of high position resolution neutron detector using fine-grained nuclear emulsion	NAGANAWA, Naotaka

Wednesday 13 April 2016

Quantum bouncing, mirror matter, exotic couplings I - (09:00-10:20)

time	[id] title	presenter
09:00	[6] qBOUNCE - realization of a quantum bouncing ball gravity spectrometer	ABELE, Hartmut
09:40	[104] Neutrons as a window to parallel world	BEREZHIANI, Zurab

Quantum bouncing, mirror matter, exotic couplings II - (10:40-12:40)

time	[id] title	presenter
10:40	[105] Neutron-mirror neutron regeneration experiment	BEREZHIANI, Zurab
11:05	[106] Experiment on search for neutron-antineutron oscillations using a projected UCN source at the WWR-M reactor	FOMIN, Alexey
11:30	[107] Tests of the weak equivalence principle with UCNs	FRANK, Alexander
11:55	[108] The neutron charge experiment in Mainz	SIEMENSEN, Christian
12:20	[109] Diffraction of UCN by a moving grating and TOF Fourier spectrometry as the basis for gravity experiments	KULIN, German

Visit Mainz and TRIGA - (14:00-19:00)

Dinner (social event) - (19:00-22:00)

with wine tasting and after dinner speach

Thursday 14 April 2016

Decay correlations I - (09:00-10:20)

time	[id] title	presenter
09:00	[7] Neutron decay correlations in the standard model and beyond	DUBBERS, Dirk
09:40	[8] Physics beyond the standard model from neutron beta decay correlations at LANSCE	BROUSSARD, Leah

Decay correlations II - (10:50-12:30)

time	[id] title	presenter
10:50	[9] Probing non-standard charged-current interactions: from UCN to the LHC	GONZALES-ALONSO, Martin
11:30	[10] The proton electron radiation channel experiment (PERC)	MÄRKISCH, Bastian
12:00	[110] The aSPECT experiment - an overview and latest results	WUNDERLE, Alexander

Decay correlations III and UCN-sources I - (14:00-15:55)

time	[id] title	presenter
14:00	[111] NoMoS: Beyond the standard model physics in neutron decay	KONRAD, Gertrud
14:25	[112] Impact of the transverse electron polarization related neutron beta decay correlations in the LHC era	BODEK, Kazimierz
14:50	[113] A cold neutron beam facility for particle physics at the ESS	MÄRKISCH, Bastian
15:15	[114] A brief overview of ultracold neutron source development and some points of personal interest	YOUNG, Albert

UCN-sources II - (16:25-18:25)

Dedicated talks for technical, instrumentation, systematic details

time	[id] title	presenter
16:25	[115] The ultracold and very cold neutron facility PF2 at ILL in Grenoble, France	GELTENBORT, Peter
16:50	[116] The ultracold neutron facility at the Paul Scherrer Institute	LAUSS, Bernhard
17:15	[117] Sources for ultracold neutrons: a world-wide comparison	RIES, Dieter
17:35	[118] Upgrades to the ultracold neutron source at Los Alamos Neutron Science Center	PATTIE, Robert
18:00	[119] Status of the UCN source at beamport D of the research reactor TRIGA Mainz	SOBOLEV, Iurii

Friday 15 April 2016

UCN-sources III - (09:00-10:30)

Invited speakers

time	[id] title	presenter
09:00	[11] Neutron EDM Measurement with Spallation UCN Source of He-II	MASUDA, Yasuhiro
09:30	[12] Design and results of cryogenic commissioning tests of the PULSTAR UCN source	KOROBKINA, Ekaterina
10:00	[120] Ultracold neutrons at the FRM II	FREI, Andreas

UCN-sources IV - (10:50-12:30)

time	[id] title	presenter
10:50	[121] UCN source with superfluid helium at WWR-M reactor	LYAMKIN, Vitaliy
11:15	[122] Irradiation effects on solid Deuterium	WLOKKA, Stephan
11:40	[123] A new ultracold neutron source at the TRIGA Mainz	HOLLERING, Alexander
12:05	[124] Concluding remarks	BECK, Marcus

End of workshop - (14:00-14:30)