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EUROPEAN CENTRE FOR THEORETICAL STUDIES
IN NUCLEAR PHYSICS AND RELATED AREAS

Trento, ITALY

International Workshop on Hadronic Atoms and Kaonic Nuclei
solved puzzles, open problems and future challenges
in theory and experiment

Trento, 12 - 16 October, 2009

Organized by

Catalina Curceanu (Petrascu) - LNF-INFN, Frascati (Italy)

Carlo Guaraldo - LNF-INFN, Frascati (Italy)

Paul Kienle – TU München (Germany)

Johann Marton – SMI, Vienna (Austria)

Wolfram Weise - TU München (Germany)

Monday 12 October

Morning Session

Antikaon interactions with nucleon and nuclei (chair P. Kienle)

9:00 – 9:45	REGISTRATION	
9:45 – 10:00	C. Curceanu	<i>Welcome address</i>
10:00 – 10:30	W. Weise	<i>“Antikaon Interactions with Nucleons and Nuclei”</i>
10:30	<i>Coffee break</i>	
11:00 – 11:30	S. Wycech	<i>“Extraction of the K^-N subthreshold amplitudes from K-mesic atoms”</i>
11:30 – 12:00	N. Shevchenko	<i>“$\bar{K}N \rightarrow \pi\Sigma$ interaction and $\bar{K}NN \rightarrow \pi N\Sigma$ quasi-bound state”</i>
12:00 – 12:30	S. Piano	<i>“Recent results on K^- absorption at rest on few nucleon systems with FINUDA”</i>
13:00	<i>Lunch</i>	

Afternoon Session

$\Lambda(1405)$ measurements and studies (chair S.Wycech)

15:30 – 16:00	Y. Akaishi	<i>“Single-pole nature of $\Lambda(1405)$ and structure of K^-pp bound state”</i>
16:30 – 17:00	E. Epple	<i>“Studies and measurement of the $\Lambda(1405)$ in $p+p$ collisions at 3.5 GeV with HADES”</i>
16:00	<i>Coffee break</i>	
16:30 – 17:00	P.Aslanian	<i>“The nature of $\Lambda(1405)$”</i>

Dinner at Patelli restaurant (downtown)

Tuesday 13 October

Morning Session

Kaonic atoms (chair J. Marton)

9:30 – 10:00	E. Friedman	<i>“Many facets of the kaonic atoms puzzle”</i>
10:00 – 10:30	T. Ishiwatari	<i>“Kaonic ^4He X-ray measurement with SIDDHARTA”</i>
10:30	<i>coffee break</i>	
11:00 – 11:30	A. Romero	<i>“SIDDHARTA recent results”</i>
11:30 – 12:00	M. Sato	<i>“Precision spectroscopy on kaonic ^3He X-rays”</i>

Atomic physics (chair J. Marton)

12:00 – 12:30	F. Fayfman	<i>“Quantum-classical calculations of cascade transitions in hadronic hydrogen atoms”</i>
12:30 – 13:00	S. Kalantari	<i>“Analysis of cascade dynamics and X-ray yields for K^-p and K^-d atoms by Monte Carlo method”</i>
13:00	<i>Lunch</i>	

Afternoon Session

Antikaons interactions with nucleons and nuclei ((chair E. Friedman)

15:00 – 15:30	A. Cieply	<i>“Chiral Model of $\bar{K}N$ interaction”</i>
15:30 – 16:00	J. Donovan	<i>“Faddeev calculation of K^-d scattering length”</i>
16:00	<i>Coffee break</i>	
16:30 – 17:00	A. Ivanov	<i>“P-scattering length of K^-d scattering as solution of Faddeev equation”</i>
17:00	Free discussion on the future of workshops on low-energy physics with strangeness	

Dinner at La Baracca restaurant (in front of Villa Tambosi)

Wednesday 14 October

Morning Session

Strangeness in nuclei (chair M. Iwasaki)

9:30 – 10:00	N. Hermann	<i>“Status of the search for kaonic clusters in heavy ions collisions with FOPI”</i>
10:00 – 10:30	P. Salvini	<i>“High strangeness production in antiproton annihilation on few-nucleon systems”</i>
10:30	<i>coffee break</i>	
11:00 – 11:30	O. Vazquez Doce	<i>“Analysis of the K-He interactions in the KLOE drift chamber”</i>
11:30 – 12:00	A. Scordo	<i>“The trigger system for the AMADEUS experiment”</i>

Hypernuclei production (chair M. Iwasaki)

12:00 – 12:30	D. Gazda	<i>“Multikaonic hypernuclei”</i>
12:30 – 13:00	V. Krejcirik	<i>“Λ-hypernuclear production in $(K^- \text{stop}, \pi)$ reactions: calculation with the chiral $N(K^-, \pi)$ Λ-amplitude”</i>
13:00	<i>Lunch</i>	

Afternoon Session

Future experiments

14:30 – 15:00	M. Iwasaki	<i>“RIKEN J-PARC center and its physics objectives”</i>
15:00 – 15:30	H. Ota	<i>“Preparation of the J-PARC E15 experiment”</i>
16:30 – 17:00	L. Fabbietti	<i>“Future experiments with pion beams at GSI”</i>
16:00	<i>Coffee break</i>	
16:30 – 17:00	V. Magas	<i>“The in-flight $^{12}\text{C}(K^-, p)$ reaction at KEK”</i>
17:00	Special Session	

Buffet at Villa Tambosi

Thursday 15 October

Morning Session

**Policy of the hadron physics community towards the Framework Programs of EU
(chair W. Weise)**

9:30 – 10:00	C. Guaraldo	<i>“The HadronPhysics2 project and beyond”</i>
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**Session dedicated to Low Energy Antikaon Nucleon Nuclei Studies
LEANNIS Work Package in the HadronPhysics2 Project of FP7**

10:00 – 10:30	J. Marton	<i>“LEANNIS: a liason between theory and experiment in antikaon physics”</i>
10:30	Coffee break	
11:00 – 11:30	P. Kienle	<i>“Double Antikaon Production in Nuclei by Stopped Antiproton Annihilation”</i>
11:30 – 12:00	J. Zmeskal	<i>“The AMADEUS experiment”</i>
12:00 – 12:30	T. Yamazaki	<i>“Where is the K^-p quasi-bound state located, strongly bound or weakly bound? Experimental discrimination between $\Lambda(1405)$ and $\Lambda(1420)$”</i>
12:30 – 13:00	T. Suzuki	<i>“The investigation of $\Lambda(1405)$ state in the stopped K^- reactions on deuterium”</i>
13:00	Lunch	

AfternoonSession

Free or visit to FBK-irst Centre for scientific and technological research

Social dinner at Orso Grigio restaurant (downtown)

Friday 16 October

K^- nuclear bound states (chair C. Guaraldo)

9:30 – 10:00	O. Hartmann	<i>“Search for a K^-pp bound state with FOPI”</i>
10:00 – 10:30	J. Mares	<i>“Dynamical calculation of kaonic nuclei”</i>
10:30	<i>coffee break</i>	
11:00 – 11:30	T. Yamazaki	<i>“The most fundamental kaonic cluster K^-pp: indication from the DISTO experiment”</i>
11:30 – 13:00	Round Table	<i>Chair A. Gal</i> <i>Status and search for K^- nuclear bound states</i>
13:00	<i>Closure and Lunch</i>	

Dinner at Alla Mostra restaurant – pizzeria (downtown)