

ASTRA: Advances and open problems in low-energy nuclear and hadronic STRAnge physics

ECT*, Trento
23-27 October 2017

Organizers:

Catalina Curceanu – LNF–INFN, Frascati (Italy)
Emiko Hiyama – Kyushu Univ./RIKEN (Japan)
Johann Marton – SMI, Vienna (Austria)
Josef Pochodzalla – Univ. Mainz and HIM (Germany)
Isaac Vidaña - INFN Catania (Italy)

Scientific program

Monday, 23 October:

9:00 – 9:45 Registration
9:45 – 10:15 Welcome

Chair: Johann Marton

10:15 – 10:45 Ales Cieply, Dynamically generated hadronic states in the meson-nucleon coupled-channels interactions

10:50 – 11:20 Coffee Break

11:20 – 11:50 Mikhail Barabanov, Study of heavy states with hidden charm and strangeness in $p\bar{p}$ annihilation and pp collisions

11:55 – 12:25 Jaroslava Hrtankova, K^- - nuclear states, their binding energies and widths

12:30 – 14:30 LUNCH

Chair: Alessandra Filippi

14:30 - 15:00 Horst Lenske, Hypernuclear production by antiprotons

15:05 – 15:35 Petr Vesely, Mean Field Description of Hypernuclei from Chiral NN and ΛN potentials

15:40 – 16:10 Coffee break

16:10 – 16:40 Benjamin Doenigus, Production of (anti-)nuclei in small systems measured with ALICE at the LHC

Tuesday, 24 October

Chair: Josef Pochodzalla

9:30 – 10:00 Omar Benhar, Extracting Hypernuclear Properties from the $(e,e'K)$ Cross Section

10:05 – 10:35 Toshiyuki Gogami, Precise spectroscopy of potassium-40,48 Lambda hypernuclei at JeffersonLab

10:40 – 11:10 Coffee break

11:10 – 11:40 Alessandro Feliciello, The puzzle of the 3HL and the 4HL lifetimes

11:45 – 12:15 Sho Nagao, An experimental approach to the hypertriton puzzle with hypernuclear (electro-)photo production

12:20 – 12:50 Yuichi Toyama, Experimental Design of a direct lifetime measurement for hypertriton at ELPH

12:55– 15:40 LUNCH (including skype for IAC HYP conf)

Chair: Emiko Hiyama

15:40 – 16:10 Hirokazu Tamura, Prospects for Hypernuclear Studies at J-PARC K1.1 Beam Line

16:15 – 16:45 Coffee break

16:45 – 17:20 Fuminori Sakuma, $K\bar{n}$ bound state search at J-PARC E15

17:20 – 17:55 Eli Friedman, Multi-nucleon vs. single-nucleon absorption of K^-

Wednesday, 25 October

Chair: Santoshi N. Nakamura

9:30 – 10:00 Patrick Achenbach, Future precision measurements of the hypertriton mass

10:05 – 10:35 Liguang Tang, Study Lambda-n interaction by investigating the Lambda- nn resonance

10:40 – 11:10 Jan Pokorny, Three-Body Forces in Hypernuclear Mean-Field Model

11:15 – 11:35 Coffee break

11:35 – 12:05 Hans-Josef Schulze, Skyrme forces for hypernuclei

12:10 – 12:40 Bernhard Hohlweger, Understanding Lambda Nucleon interaction from Proton Proton Collisions at LHC

12:45 – 13:15 Steffen Maurus, Lambda-Proton correlation and strangeness production in pion-nucleus reactions

13:15 – 14:30 LUNCH

Free afternoon

Thursday, 26 October

Chair: Jiri Mares

9:30 – 10:00 Avraham Gal, Pion assisted dibaryons: the $d^*(2380)$.

10:05 – 10:35 Francesco Pederiva, Progress in the Quantum Monte Carlo calculations for medium mass hypernuclei

10:40 – 11:10 Isaac Vidana, A short walk through the physics of neutron stars

10:10 – 11:40 Coffee break

11:40 – 12:10 Hajime Togashi, Variational calculation for the nuclear equation of state and hyperon mixing in the supernova core

12:15 – 12:45 Wolfram Weise, Lambda-nuclear interaction and hyperon puzzle in neutron stars

12:55 – 14:30 LUNCH

Chair: Eli Friedman

14:30 – 15:00 Raffaele Del Grande, K^0 multi-nucleon absorption processes and bound state search by AMADEUS

15:05 – 15:35 Kristian Piscicchia, Low energy capture of negative kaons on light nuclei: hyperon resonances and multi-nucleon absorption processes

15:35 – 16:05 Diana Sirghi, From SIDDHARTA to SIDDHARTA-2

16:05 – 16:30 Coffee break

16:30 – 17:00 Johann Zmeskal, t.b.c

17:05 – 17:35 Alessandro Scordo, Development of a high precision X-ray spectrometer for diffused sources with HAPG crystals in the 2-20 keV range: the VOXES experiment

Friday, 27 October

Chair: Catalina Curceanu

9:30-10:00 Petr Bydzovsky, Electroproduction of p-shell hypernuclei

10:05 – 10:35 Stefano Piano, Production of (anti-)hypernuclei with ALICE at the LHC

10:40 – 11:10 Coffee break

11:10 – 11:40 Florin Sirghi, t.b.c.

11:45 – 12:15 Martin Schaefer, Ab initio calculations of eta-nuclear quasi-bound states

12:15 – 12:35 Carina Tripl, SDD tests for kaonic helium and kaonic deuterium at J-PARC

13:35 – 13:00 CLOSURE

LUNCH