

Frontiers in hadron and nuclear physics with strangeness and charm

ECT*, Trento
19-23 October 2015

Organizers:

Kai-Thomas Brinkmann – Univ. Giessen (Germany)
Catalina Curceanu – LNF–INFN, Frascati (Italy)
Johann Marton – SMI, Vienna (Austria)
Ulf-G. Meißner – Univ. Bonn & FZ Jülich (Germany)
Bing-Song Zou – ITP/CAS (China)

Scientific program

Monday, 19 October:

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

Chair: Johann Marton

10:15 – 10:45 Jia Y., NNLO QCD corrections to quarkonium production and decay

10:50 – 11:20 Coffee Break

11:20 – 11:50 Martinez H., Phenomenology of the heavy quarkonium electric dipole transitions

11:55 – 12:25 Williams R., Heavy quarkonia from Dyson-Schwinger equations

12:30 – 14:30 LUNCH

Chair: Eli Friedman

14:30 - 15:00 Filippi A., Strangeonium states: present status, open problems and future perspectives

15:05 – 15:35 Matulewicz T., Influence of $\phi(1020)$ meson production in nucleus – nucleus collisions on antikaon spectrum

15:40 – 16:10 Haas J., Hadronic contribution to the muon $g-2$ and quark flavour

16:15 – 16:40 Coffee break

16:40 – 17:10 Sirghi D., Kaonic helium 3 and 4 results from SIDDHARTA

17:15 . 17:45 Ohnishi S., $L(1405)$ resonance and the $K_{\text{minus}} d \rightarrow \pi \text{Sigma } n$ reaction

Evening event: Welcome buffet at ECT* (7 pm) - tbc

Tuesday, 20 October

Chair: Kai-Thomas Brinkmann

9:30 – 10:00 Cieply A., $K\bar{N}$ and $\pi\Sigma$ interactions in nuclear matter including the p-wave

10:05 – 10:35 Vesely P., Mean Field and Beyond Mean Field Description of Nuclei and Hypernuclei

10:40 – 11:10 Coffee break

11:10 – 11:40 Petschauer S., Hyperons in nuclear matter from SU(3) chiral effective theory

11:45 – 12:15 Gal A., Charge symmetry breaking in hypernuclei

12:20 – 12:50 Tamura H., Hypernuclei physics at J-PARC

12:55– 14:30 LUNCH

Chair: Avraham Gal

14:30 – 15:00 Del Grande R., K- multinuclear absorption studies in hyperon interactions by AMADEUS

15:35 – 16:05 Piscicchia K., Low-energy K- nucleon/nuclei hadronic interactions studies by AMADEUS

16:05 – 16:30 Coffee break

16:30 – 17:00 Pederiva F., Isospin dependence of the hyperon-nucleon interaction: theoretical perspectives and link to the experiments

17:05 – 17:35 Guaraldo C., The new project HadronPhysicsHorizon

Wednesday, 21 October

Chair: Tamura Hirokazu

9:30 – 10:00 Friedman E., Low-energy K^+ nuclear interactions revisited

10:05 – 10:35 Cargnelli M., Feasibility of experiments on kaons scattering at DAFNE

10:40 – 11:10 Hyodo T., Recent studies of $L(1405)$

11:15 – 11:35 Coffee break

11:35 – 12:05 Zmeskal J., Light kaonic atoms: experimental results

12:10 – 12:40 Berucci C., Kaonic deuterium in SIDDHARTA2 (t.b.c.)

12:45 – 13:15 Okada S., Hadronic atom x-ray spectroscopy with cryogenic detectors

13:15 – 14:30 LUNCH

Free afternoon

Thursday, 22 October

Chair: Slawomir Wycech

9:30 – 10:00 Muenzer R., PWA of Strangeness production in p+p reaction

10:05 – 10:35 Hrtankova J., Interaction of antiprotons with nuclei

10:40 – 11:10 Coffee break

11:10 – 11:40 Ohnishi H., Recent results of the experiment to search for $\bar{K}NN$ bound state via the in-flight $^3\text{He}(K^-,N)$ reactions at J-PARC

11:45 – 12:15 Curceanu C., Future perspectives for AMADEUS

12:20 – 12:50 Meißner U.-G., Musings about pentaquarks

12:55 – 14:30 LUNCH

Chair: Johann Zmeskal

14:30 – 15:30 ECT* Colloquium: Laura Fabbietti: Understanding neutron stars with terrestrial experiments

15:35 – 16:05 Merafina M., Macro dark matter selfgravitating halos around galaxies

16:05 – 16:30 Coffee break

16:30 – 17:00 Mares J., AntiK-N interaction in the nuclear medium and antiK-nuclear quasi-bound states

8 pm, Social Dinner (place to be announced)

Friday, 23 October

Chair: Catalina Curceanu

9:30-10:00 Fabbietti L., Femtoscopy in elementary reactions to study the hyperon-nucleon interaction

10:05 – 10:35 Ikeda Y., Structure of $Z_c(3900)$ from lattice QCD

10:40 – 11:10 Coffee break

11:10 – 11:40 Zhao Q., The nature of heavy pentaquark states and their production mechanisms

11:45 – 12:15 Zou B.-S., Hadron Spectroscopy from Strangeness to Charm and Beauty

12:20 – 12:50 Barabanov M., Perspective study of exotics and Baryons with charm and strangeness

12:55 – 13:15 CLOSURE

LUNCH