HYP2018 Scientific Program and Schedule

Sunday, June 24, 2018

Registration begins at 16:00 until 20:00.
Welcome reception at conference site from 18:00 to 20:00.

The Plenary and Topical Sessions

Monday, June 25, 2018

8:00 – 8:30  Continued registration
8:30 – 8:40  Liguang Tang (chair and local organizer), “Opening remark on HYP2018”
8:40 – 9:05  Robert McKeown (JLab deputy director for science), “Welcome address”.
9:05 – 9:15  Prof. John Millener, “Special memory on Prof. Dr. Robert Chrien”.
9:15 – 10:00  Prof. Avraham Gal, “Old and New Problems in Strangeness Nuclear Physics”.
10:00 – 10:20  Break

Session chair:  Prof. Benjamin Gibson
10:20 – 10:55  Prof. Takashi Inoue, “Hyperon forces from QCD on lattice and their applications”.
10:55 – 11:30  Prof. Zohren Davoudi, “From quantum chromodynamics to hypernuclear interactions”.
11:30 – 12:05  Prof. Thomas A. Rijken, “Extended-soft-core Baryon-Baryon model ESC16”.
12:05 – 14:00  Lunch break

Session chair:  Prof. Tullio Bressani
14:00 – 14:35  Prof. John Price, “A proton elastic scattering in CLAS”.
14:35 – 15:10  Prof. Laura Fabbriatti, “Femtoscopy in pp and pA collisions at GeV and TeV energies as a tool to shed light on the hyperon puzzle”.
15:10 – 15:45  Prof. Benjamin Gibson, “Determine the unknown \( \Lambda n \) interaction”.
15:45 – 16:05  Break

Topical Session 1:  Neutral Baryonic Systems with Strangeness  
(Conveners: Profs. Josef Pochozalla and Emiko Hiyama)
16:05 – 16:25  Prof. Josef Pochozalla, “Introduction on neutral baryonic systems”.
16:25 – 16:45  Prof. Humberto Garcilazo, “Neutral Baryonic Systems with Strangeness”.
16:45 – 17:05  Prof. Emiko Hiyama, “Calculations on \( \Xi nn \) and \( \Xi nnn \) systems”.
17:05 – 17:25  Prof. Susumu Shimoura, “Tetraneutron system populated by double-charge exchange reactions using RI beam”.
17:25 – 17:45  Dr. Jaume Carbonell, “On the possible existence of three and four neutron resonances”.
17:45 – 18:05  Open discussions

19:00 – 21:00  Conference reception at Marriot Hotel (taking ferry to Norfolk side)
Tuesday, June 26, 2018

7:45 – 8:15  Open
Session chair: Prof. Alessandro Feliciello
8:15 – 8:50  Prof. Koji Miwa, “Σ-p scattering experiment at J-PARC – results of commissioning run”.
8:50 – 9:25  Dr. Natalie Walford, “Recent Measurements of Hyperon Photoproduction Spin Observables in CLAS”.
9:25 – 10:00 Prof. Reinhard Schumacher, “Photoproduction of Λ-Anti-Λ Pairs at GlueX”.
10:00 – 10:20 Break
Session chair: Prof. Avraham Gal
10:20 – 10:55 Dr. Jiangming Yao, “Beyond relativistic mean-field approaches to deformed hypernuclei”.
10:55 – 11:30 Dr. Han-Josef Schulze, “Skyrme forces for Lambda and Cascade hypernuclei”.
11:30 – 12:05 Prof. Isaac Vidana, “Single-particle spectral function of the $^1\Lambda$ hyperon in finite nuclei”.
12:05 – 14:00 Lunch break
Session chair: Prof. Tomofumi Nagae
14:00 – 14:35 Dr. Takeshi Koike, “Gamma-ray spectroscopy of single Λ-hypernuclei at J-PARC: The results and future”.
14:35 – 15:10 Prof. Satoshi N. Nakamura, “Spectroscopy of electro-produced hypernuclei at JLab”.
15:10 – 15:45 Prof. Jiri Mares, “Studies of Kbar Nuclear Bound States”.
15:45 – 16:05 Break
Topical Session 2: Charge Symmetry Breaking (Conveners: Profs. Elena Botta and Patrick Achenbach)
16:05 – 16:20 Prof. Elena Botta, “Charge Symmetry Breaking in s- and p-shell Λ-hypernuclei: An updated review”.
16:35 – 16:55 Dr. Daniel Gazda, “CSB ab initio calculations of Charge symmetry breaking in light hypernuclei”.
16:55 – 17:15 Dr. Andreas Nogga, “Charge-symmetry breaking in light hypernuclei based on chiral and similarity renormalization group-evolved interactions”.
17:15 – 17:35 Dr. Takeshi Yamamoto, “Future gamma-ray spectroscopic experiment (J-PARC E63) on $^4\Lambda$H”.
17:35 – 17:55 Dr. Toshiyuki Gogami, “Latest results from JLab on $^7\Lambda$He and $^{10}\Lambda$Be”.
17:55 – 18:15 Dr. Masahiro Yoshimoto, “Studies for charge symmetry breaking effect in hypernuclei with nuclear emulsion”.
18:15 – 18:30 Prof. Patrick Achenbach, “Reflections on Charge Symmetry Breaking”.


**Wednesday, June 27, 2018**

7:45 – 8:15  Open  
**Session chair:**  Prof. Jiri Mares  
8:15 – 8:50  Prof. Petr Bydzovsky, “Electroproduction of p-shell hypernuclei in DWIA”.  
8:50 – 9:25  Prof. Toshio Motoba, “Multi-configuration calculation of heavinuclear photoproduction spectra to shed light on new capability”.  
9:25 – 10:00 Prof. Emiko Hiyama, “Structure of light p-shell Ξ hypernuclei”.  

10:00 – 10:20  Break  
**Session chair:**  Prof. Satoshi N. Nakamura  
10:20 – 10:55  Prof. Tomofumi Nagae, “Observation of a Ξ bound state in the $^{12}$C(K, K$^+)$X reaction at 1.8 GeV/c”.  
11:30 – 12:05 Dr. Takehiko Saito, “Present and future hypernuclear spectroscopy with heavy ion beam”.  
12:05 – 14:00  Lunch break  
**Session chair:**  Prof. Josef Pochozalla  
14:00 – 14:35  Prof. Isaac Upsal, “Global polarization of Lambda hyperons in Au+Au Collisions at RHIC”.  
14:35 – 15:10  Prof. Benjamin Dönigus, “Highlights of the production of anti-(hyper-)nuclei and exotica with ALICE at the LHC”.  
15:10 – 15:45 Dr. Akinobu Dote, “Fully coupled-channel study of K$^+$pp resonance in a chiral SU(3)-based $\bar{K}N$ potential”.  
15:45 – 16:05  Break  
15:45 – 17:30  **Poster Session**  
18:30  **Boat excursion-dinner:**  Spirit of Norfolk

**Thursday, June 28, 2018**

**Parallel Sessions**  
**See detailed parallel session schedule**
Friday, June 29, 2018

7:45 – 8:15  Open

**Session chair:** Prof. Makoto Oka

8:15 – 8:50  Prof. Robert Roth, “Ab Initio Hypernuclear Structure Theory”.

8:50 – 9:25  Dr. Diego Lonardoni, “Strangeness in nuclei and neutron stars: many-body forces and the hyperon puzzle”.

9:25 – 10:00  Dr. Stefano Gandolfi, “The EOS of neutron matter, and the effect of Lambda hyperons to neutron star structure”.

10:00 – 10:20  Break

**Session chair:** Prof. Liguang Tang

10:20 – 10:55  Prof. Alessandro Feliciello, “Study of the (π, K^0) reaction on nuclei at J-PARC”.

10:55 – 11:30  Prof. Masahiko Iwasaki, “A quest for the “Kpp” bound state via ^3He(K^−, n) reaction, J-PARC E1 experiment”.

11:30 – 12:05  Prof. Kristian Piscicchia, “Low Energy Antikaon-nucleon/nuclei interaction studies by AMADEUS”.

12:05 – 14:00  Lunch break

**Session chair:** Prof. Àngels Ramos

14:00 – 14:35  Dr. Jinhui Chen, “Precise measurement on hypertriton and anti-hypertriton mass and lifetime with the STAR Heavy Flavor Tracker”.

14:35 – 15:10  Prof. Gastao Krein, “Charmed hypernuclei and charmed mesons and baryons in nuclear matter”.

15:10 – 15:45  Prof. Bing Song Zou, “Hadron spectroscopy from production and decay of \( \Lambda_c \) and \( \Lambda_b \)”.

15:45 – 16:05  Break

**Session chair:** Prof. Reinhard Schumacher

16:05 – 16:45  Prof. Hirokazu Tamura, **Summary**.

16:45 – 17:00  Prof. Liguang Tang, Closing remarks.
The Parallel Session A Program and Schedule

Thursday, June 28, 2018

7:45 – 8:15  Open

**Session A1  Session chair: Prof. Joerg Reinhold**

8:15 – 8:45  Dr. Tongtong Cao, “Determination of Polarization Observables for Final-State Interactions in the Reaction $\gamma d \rightarrow K^\pm \Lambda n$”.

8:45 – 9:15  Dr. Thomas Jude, “Strangeness photoproduction at extremely forward angles at the BGO-OD experiment”.

9:15 – 9:45  Dr. Sho Nagao, “Feasibility of lifetime measurements on hyperhydrogens with the photon beams”.

9:45 – 10:15  Dr. Florian Hauenstein, “Polarization Observables and $p\Lambda$ Scattering Length Measured in the $p\Lambda \rightarrow pK^+\Lambda$ Reaction”.

10:15 – 10:35  Break

10:35 – 11:05  Prof. Hiroyuki Fujioka, “$\Lambda\Lambda$H production experiment by use of $^7\Lambda\Lambda$H production and decay at J-PARC”.

11:05 – 11:35  Prof. Franco Garibaldi, “Studying $\Lambda$ interactions in nuclear matter with the $^{208}\text{Pb}(e, e'K)^{208}\Lambda\text{Tl}$ reaction”.

11:35 – 12:05  Prof. Chhanda Samanta, “Binding, bonding and charge symmetry breaking in $\Lambda$-hypermolecules”.

12:05 – 13:45  Lunch break

**Session A2  Session chair: Dr. Hans-Josef Schulze**

13:45 – 14:15  Dr. Hidekatsu Nemura, “Hyperon-nucleon interaction from lattice QCD at $(m_s, m_K) \approx (146, 525) \text{ MeV}$”.

14:15 – 14:45  Dr. Jaroslava Hrtankova, “$\Lambda$ - matter: stable or unstable? 

14:45 – 15:15  Dr. Carlos Granados, “Hyperon transition form factors”.

15:15 – 15:45  Prof. Igor Filikhin, “Isospin Given Charge Formalism for Three-Body Nuclear Systems”.

15:45 – 16:05  Break

16:05 – 16:35  Dr. Alexander Botvina, “Formation of hypernuclei in relativistic ion, hadron and lepton collision”.

16:35 – 17:05  Prof. Liguang Tang, “Lifetime of medium-heavy hypernuclei – Jlab E02-017 experiment”.

17:05 – 17:35  Dr. Jacek Biernat, “Hypron structure with BESIII”.
The Parallel Session B Program and Schedule  
Thursday, June 28, 2018

7:45 – 8:15 Open

Session B1  
Session chair:  Prof. Pete Markowitz

8:15 – 8:45  Dr. Hajime Togashi, “Hyperon equation of state for core-collapse simulations based on the variational many-body theory”.
8:45 – 9:15  Dr. Isaac Vidana, “Do hyperons exist in the neutron star interior”.
9:15 – 9:45  Dr. Lorenzo Contessi, “BΛ(ΛHe) from short range effective theory”.
9:45 – 10:15 Prof. Àngels Ramos, “The constraining effect of isospin filtering reactions in the S = -1 sector”.

10:15 – 10:35 Break

10:35 – 11:05 Dr. Jean-christophe David, “Production of strange particles and hypernuclei in nuclear reactions at a few GeV”.
11:05 – 11:35 Dr. Philipp Gubler, “Mesons with charm and strangeness in nuclear matter”.
11:35 – 12:05 Prof. Luis Trevisan, “The Isospin strange asymmetry from the chiral effective theory”.

12:05 – 13:45 Lunch break

Session B2  
Session chair:  Prof. Guido Maria Urciuoli

14:15 – 14:45 Dr. Kiyoshi Tanida, “Possibility of a new narrow Λ’ resonance near the Λη threshold”.
14:45 – 15:15 Dr. Yudai Ichikawa, “K and nucleus system studied by \(^{12}\text{C}(K^-, p)\) spectrum”.
15:15 – 15:45 Dr. Jinhui Chen, “Search for the N-Ω bound state with the STAR detector at RHIC”.

15:45 – 16:05 Break

16:05 – 16:35 Dr. Hidemitsu Asano, “Spectroscopic study of the Λ(1405) resonance via the d(K-,n) reaction at J-PARC”.
16:35 – 17:05 Dr. Ramona Lea, “Studying the strong interaction for meson-baryon with femtoscopy in pp collisions with ALICE”.
17:05 – 17:35 Dr. Kiyoshi Tanida, “Exotic and Conventional Quarkonium Physics Prospects at Belle II”.
**HYP2018 Scientific Program and Schedule**

**Poster Presentations, Wednesday, June 27, 2018**

**15:45 – 18:05**

**Bishnu Pandey**, “Determining the unknown Λ-n interaction by investigating the Λnn resonance – JLab E12-17-003”

**Dimitar Mihaylov**, “Baryon-baryon femtoscopy in pp and p-A collisions”.

**Shin Hyung Kim**, “Development of the Hyperon Spectrometer for Hadron Physics Experiments at J-PARC”.

**Kosuke Itabashi**, “Design of a target system for Λ hypernuclear spectroscopy at JLab”.

**Manami Fujita**, “Ξ− atom X-ray Spectroscopy (J-PARC E07)”.

**Hiroyuki Ekawa**, “Search for double hypernuclei with a hybrid emulsion method at J-PARC”.

**Shuhei Hayakawa**, “Status of double hypernuclei experiment with hybrid emulsion method at J-PARC”.

**Takuya Nanamura**, “High-resolution spectroscopic study of the Ξ-hypernuclei with S2S spectrometer”.

**Yuichi Toyama**, “Developments of a detector system for decay pions from light hypernuclei”.

**Schafer Martin**, “On high-density Λ* matter”.

**Sachio Iwasaki**, “Hadronic Paschen-Back effect in charmonium”.

**Michael Bölting**, “Status of the Hypernuclei and Hyperatom setup at PANDA”.

**Michael Bölting**, “Continuation of high-precision hypernuclear mass measurements at MAMI”.

**Noraim Nunez**, “Observation of Λ-p elastic scattering in the CLAS detector”

**Luis Trevisan**, “The Nucleon Strange asymmetry from the nonextensive statistics”.

**Jesmin Nazeer** (Hampton University), “Development of a GEM telescope”

**Angel Christopher** (Hampton University), “GEANT4 simulation for a LHe-TPC thick-GEM based target”.

**Thir Gautam** (Hampton University), “Precision Measurement of the Proton Elastic Cross-Section at High Q2”.

**Debaditya Biswas** (Hampton University), "New Physics Search with the TREK/E36 experiment at J-PARC"