

Hadron Spectroscopy Working Group - I

Bluejeans link for off line attendees: <https://bluejeans.com/245508558>

Convener: Dr. Marco Battaglieri (INFN-GE)

Location: L102-104

08:40 **HSWG business 20'**


Speaker: Dr. Marco Battaglieri (INFN-GE)

09:00 **JPAC update 20'**

Speaker: Dr. Miguel Albaladejo (JLab)

09:20 **Kaon Photoproduction and the Lambda Weak Decay Parameter 20'**

Speaker: David Ireland (University of Glasgow)

Material: [Slides](#) 

09:40 **Measurement of polarization observables for Lambda hyperon 20'**

Speaker: Mr. Shankar Adhikari (Florida International University)

Material: [Slides](#) 

Hadron Spectroscopy Working Group - II

Convener: Dr. Marco Battaglieri (INFN-GE)

Location: L102-104

10:30 **Analysis of sources of dark noise from quart PMTs in JLab Hall B CLAS12 HTCC 20'**

Speaker: Isabella Illari (GWU)

Material: [Slides](#) 

10:50 **Beam Asymmetry for photoproduced omega mesons off bound protons in deuterons 20'**

Speaker: Olga Cortes (Idaho State University)

Material: [Slides](#) 

11:10 **n p -> d pi0 from g12 data 20'**

Speaker: Ken Hicks (Ohio University)

11:30 **Application of Machine Learning to pi0 photoproduction from CLAS/g9a 20'**

Speaker: Mr. Kim Chan (George Washington University)

Material: [Slides](#) 

11:50 **Analysis review status 30'**

Speaker: Dr. Marco Battaglieri (INFN-GE)

12:20 **Discussion 10'**

HSWG
CLAS Collaboration Meeting
JLab, Nov 15 2018

**+ HS/Deep/Nuclear
CLAS12 analyses
joint session**

Agenda

- * CLAS6 data analysis + CLAS12 calibration effort
- * Status of ongoing analysis (update from previous collaboration meeting)
- * Dedicated (joint) session for CLAS12

Talks

- * Over all CLAS contributions, HSWG-related are 27% in 2018
- * Election of HSWG representatives in the CSC
 - A.d'Angelo (currently CSC chair)
 - L.Guo
- * Many thanks to Eugene and Stefan for serving in the CSC
- * JSA-TFC \$20k request for 2019

CLAS12-related Activities

- * Bi-weekly HSWG meeting focused on Low-Q2 specific needs:
 - FT Calibration (in coordination with the CALCOM and FirstExperiment)
 - MesonExTrigger studies
 - pld task force
 - review the status of current analysis (similar to Fall '18 DNP preparation)
- * Meeting on Tuesday at 11:00 (JLab-time) every other week
- * All groups are encouraged to look at the data (low/high level) to check calibration, possible issues, ...
- * List of ongoing analysis on HSWG wiki page

For discussion

- * Analysis framework
 - MesoneX framework (D.Glazier presentation)
 - alternatives?
- * Analysis tools validation (in coordination with other WG)
 - simple in a shared analysis frame
 - or ?
- * Analysis review optimization (strengthening the FEAR committee)
 - nominate two HSWG observers
 - nominate a reviewer for each analysis as link between with FEAR

Reaction	CLAS running period	Principal Investigator(s)	Graduate Student	Adviser(s)	Contact person(s)	Status
$\gamma^* p \rightarrow \pi^0 p$ and eta p	RG-A	Andrea Bianconi, Luca Venturelli			mailto:andrea.bianconi@unibs.it	
Q^2 -dependent cross sections for $\gamma^* p \rightarrow \pi^+ \pi^- p$ at $Q^2 > 2 \text{ GeV}^2$	RG-A	Krishna Neupane		Ralf Gothe		Underway
$\gamma^* p \rightarrow \pi^+ \pi^- p$	RG-A	Adam Thornton		Derek Glazier		Underway
3pi	RG-A	Derek Glazier		Derek Glazier		No Signal Yet
rho beam asymmetry	RG-A	Michael Dugger		Michael Dugger		Underway
Survey of photoproduced cascade states	RG-A	Michael Dugger		Michael Dugger		No Signal Yet
survey of Cascade and Omega baryons	RG-A	Nicholas Zachariou		Nicholas Zachariou		Underway
Omega- cross section	RG-A	Will Phelps				Underway
Inclusive and elastic cross section studies	RG-A	Nikolay Markov			Nikolay Markov	Under way
Single pion electroproduction in the resonance region	RG-A	Nikolay Markov			Nikolay Markov	Under way
Single pion exclusive structure functions at $Q^2 > 5 \text{ GeV}^2$	RG-A	Evgeny Isupov			Evgeny Isupov	Under way
$\gamma^* p \rightarrow \pi^+ \pi^- p$ cross sections at $Q^2 > 5 \text{ GeV}^2$	RG-A	Evgeny Golovach			Evgeny Golovach	Under way
Exclusive Two K-short electroproduction cross sections	RG-A	Ken Hicks			Ken Hicks	Just started
N* structure: KY cross section, pol. transfer at $Q^2 > 1 \text{ GeV}^2$	RG-A	Daniel S. Carman			Daniel S. Carman	Under way
Extraction of the nucleon resonance electroexcitation amplitude from $\gamma^* p \rightarrow \pi^+ \pi^- p$ electroproduction off protons with the CLAS12.	RG-A	Viktor Mokeev			Viktor Mokeev	Under way
Evaluation of the resonant contribution into inclusive structure functions.	RG-A	Astrid Hiller Blin			Astrid Hiller Blin	Under way
eta.pi	RG-A	Carlos Salgado		Carlos Salgado		Did not start Yet (in January)
J/psi photoproduction near threshold	RG-A	Stepan Stepanya	Joseph Newton	Nathan Baltzell, Rafayel Paremuzyan, Valery Kubarovsky		Analysis started
η' and ω decays					Susan Schadmand	Did not start yet

- * CLAS12 data analysis
- * List on HSWG wiki (https://www.jlab.org/Hall-B/secure/hadron/wiki/index.php/CLAS12_Analysis_projects)
- * Keep it updated

WG Reviews status

Released

Polarization Observables in (Vector-)Meson Photoproduction (FROST)

PI: V. Crede

RC: K. Livingston (Chair), V. Mokeev

Status: started on , I round done

New since last meeting

WG Reviews status

In progress

Measurement of the G Double-Polarisation Observable in Positive Pion Photoproduction

PI: L.Zana

RC: S.Strauch (Chair), P.Cole, D.Sokhan

Status: 1 round of comments sent on August, waiting for the response

Vector-Meson Photoproduction decaying to Multitrack-Final States using CLAS-g12 Data

PI: Z.Akbar

RC: John Price (Chair), Susan Schadmand , Eugene Pasyuk

Status: started on Jan 1, progressing, the committee received the author's response, NEED TO GIVE FEEDBACK ASAP

WG Reviews status

In progress

Exclusive π^- Electroproduction off the Neutron in Deuterium in the Resonance Region

PI: Y. Tian

RC: Nikolay Markov (Chair), Mikhail Bashkanov, Eugene Isupov

Status: 1st round in August, waiting for response from PI, response received, 2nd round in preparation

Dalitz Plot Analysis of $\eta' \rightarrow \eta \pi \pi$ – from CLAS g12 Data Set

PI: S. Ghosh

RC: V. Crede (chair), A. Rizzo, E. Pasyuk

Status: Started in July'17; first round of comments on Sept 17: no response from the PI since then.

Scarce communication with the review committee. Is the analysis dead ?????

Polarization Observables T and F in the $\vec{p}(\gamma, \pi^0)p$ Reaction

PI: H. Jiang

RC: Barry Ritchie (Chair), Volker Crede, Bryan McKinnon

Status: the group is working on major issue, new Analysis Note expected by the end of the month

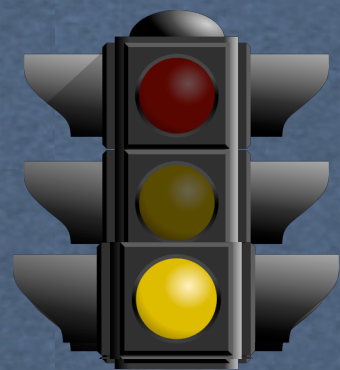
Photoproduction of the 3π mesons in the reaction $\gamma p \rightarrow \pi^+ \pi^+ \pi^- n$ with

CLAS detector at 6 GeV/c²

PI: P. Eugenio

RC: D. Glazier (chair), A. Filippi, M. Dugger

Status: 2nd round, response received, almost done



WG Reviews status

~~Pentaquark search in $g l 0$ by using the MMSA method~~

~~PI: Kenneth Hicks et al.
RC: Stepan Stepanyan (Chair), Lei Guo, Bryan McKinnon
Started Aug 2015
Status: NO progress~~

~~Radiative decay of η' to $\pi^+ \pi^- \gamma$ from $g l l$ data set~~

~~PI: G. Mbianda Njengeu
RC: R. Schumacher, S. Schadmand, A. Celentano
Status: no response in many months ??????~~

~~KLambda and KSigma from FROST~~

~~PI: N. Walforf et al.
RC: S. Strauch, M. Holtrop, P. Mattione,
Started May 2015
1 round of comments in May 2015, waiting for a revised Status:
stalled for a long while, now it seems to be resurrected,
unfortunately NO, no news ...
Should we give the analysis to another group?~~

~~Spin observables in η meson photoproduction on the proton from FROST data~~

~~PI: R. Tucker (ArizonaU) et al.
RC: K. Livingston, J. Price, Xiangdong Wei
Started July 2016
Status: on-hold, still on-hold but authors are alive, paused for a while, still on-hold, ...~~

~~Exclusive Photo-Production Measurement of $K^+ \Sigma^{*-}$ off Quasi-Free Neutrons in Deuterium~~

~~PI: H. Lu (SCU) et al.
RC: N. Zachariou, M. Dugger, D. MacGregor
Started in 2012 (!)
Status: ??????????????~~

Actions

- * Remove these analyses from the list of active analyses
- * Share this information to the whole HSWG to see if any resources could be allocated to continue (assuming full collaboration from the former PI!)