08:30 - 10:30

Hadron Spectroscopy Working Group

Remote connection: https://bluejeans.com/681949276

Convener: Marco Battaglieri (INFN-GE)

Location: CEBAF Center (L102)

08:30 **Hadron Spectroscopy Working Group Business** *20'*
Speaker: Dr. Marco Battaglieri (INFN-GE)

08:50 **JPAC activity update** *20'*
Speaker: Jannes Nys (Ghent University)

09:10 **Event generator for exclusive Npi and KY electroproduction at Q^2 up to 12 GeV^2** *20'*
Speaker: Mr. Valerii Klimenko (Moscow State University)
Material: **Slides**

09:30 **Analysis of eta->pi+pi-pi0 with CLAS6** *20'*
Speaker: Mr. Daniel Lersch (Juelich Research Center)

09:50 **K+Sigma- E observable from g14** *20'*
Speaker: Dr. Nicholas Zachariou (University of Edinburgh)
Material: **Slides**

10:10 **Lambda-Nucleon Scattering with g12** *20'*
Speaker: Joey Rowley (Ohio University)
Material: **Slides**

HSWG

CLAS Collaboration Meeting
JLab, March 8 2018

11:00 - 12:30

Hadron Spectroscopy Working Group

Remote connection: https://bluejeans.com/681949276

Convener: Marco Battaglieri (INFN-GE)

11:00 **A Study of Lambda(1520) photoproduction** *20'*
Speaker: Mr. Utsav Shrestha (Ohio University)
Material: **Slides**

11:20 **Polarization Observables from Strangeness Photoproduction on g9a** *20'*
Speaker: Dr. Stuart Fegan (GWU)

11:40 **Polarization Observables T and F in the gamma p to p pi0 reaction (g9b)** *20'*
Speaker: Mr. Hao Jiang (University of South Carolina)
Material: **Slides**

12:00 **Analysis Reviews status** *30'*
Speaker: Dr. Marco Battaglieri (INFN-GE)

Agenda

- ✳ CLAS6 data analysis
- ✳ Status of ongoing analysis (update from previous collaboration meeting)
- ✳ Dedicated (joint) session for CLAS12

Activities

- ✳ A lot of activity around Engineering run + RG-A preparation/analysis
- ✳ All groups are encouraged to look at the data (low/high level) to check calibration, possible issues,
- ✳ CLAS12 data analysys are needed to optimize fall run conditions (luminosity, acceptance, trigger efficiency, …)
- ✳ 13/4 analysis/new
- ✳ Any CLAS6 analysis ready for review has to give a presentation to the HSWG?
- ✳ CLAS6 analysis ready for a plenary talk next time
- ✳ Strengthen the collaboration with JPAC

Talks

- ✳ Over all CLAS contributions, HSWG-related are 34 (2017)%
- ✳ Regular interactions with the CSC
- ✳ REMINDER: Communicate talks and proceedings to the CSC
- ✳ JSA-TFC funds $15k allocated for 2018

JPAC activity update

Jannes Nys

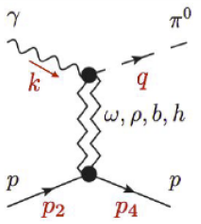
GHENT UNIVERSITY fwo GW Jefferson Lab

Overview

- Various reactions
- Predictions at JLab energies (photoproduction)
- Two **main questions** about the production process:
  - Which exchanges dominate at JLab energies?
  - Are these processes factorizable?

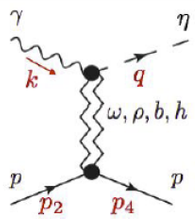
$$\gamma N \to \pi^{(0,\pm)} N \qquad \gamma N \to \pi\Delta \qquad \gamma N \to \omega N$$
$$\gamma N \to \eta N \qquad\qquad\qquad \gamma N \to \rho^0 N$$
$$\gamma N \to \phi N$$

- Unitary models for PWA of exotic channels

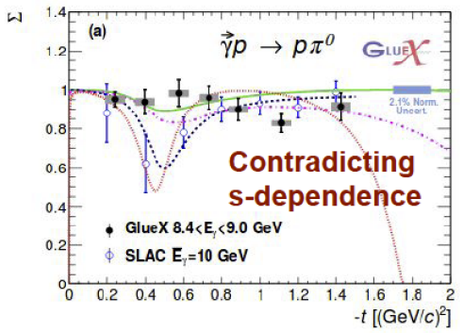


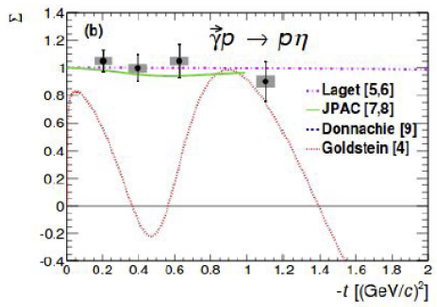
$\gamma N \to \pi^0 N$

$\gamma N \to \eta N$



- Beam asymmetry is sensitive to **naturality**: natural exchanges dominate!

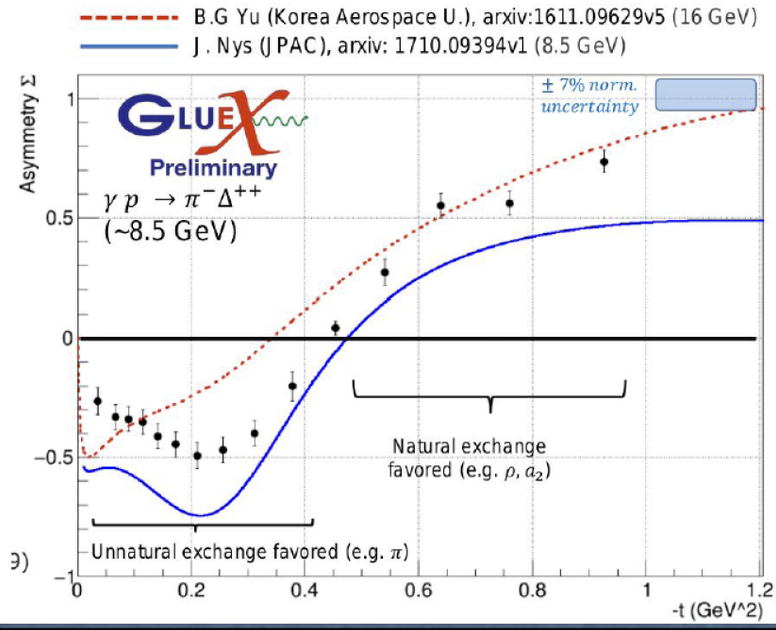




[V. Mathieu *et al.*, PRD92 (2015) 074013] [DATA: GlueX, PRC95 (2017) 042201] [J.N. *et al.*, PRD95 (2017) 034014]

$\gamma N \to \pi\Delta$ charge exchange

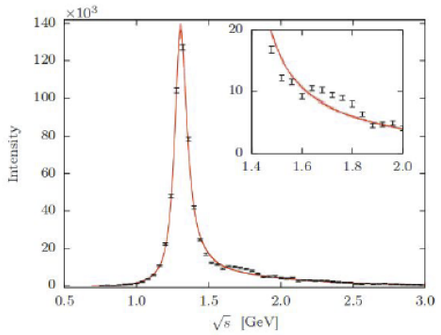
- Comparison to preliminary GlueX data @ 8.5 GeV (J.Zarling, DNP 2017)



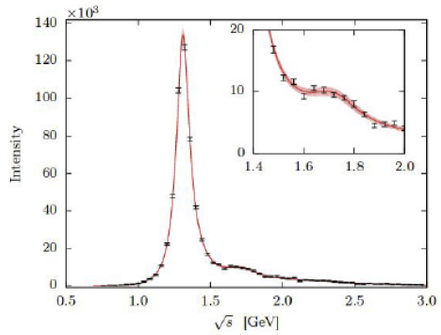
Partial-wave analysis: ηπ

$m(a_2) = (1307 \pm 1 \pm 6)$ MeV,
$\Gamma(a_2) = (112 \pm 1 \pm 8)$ MeV,

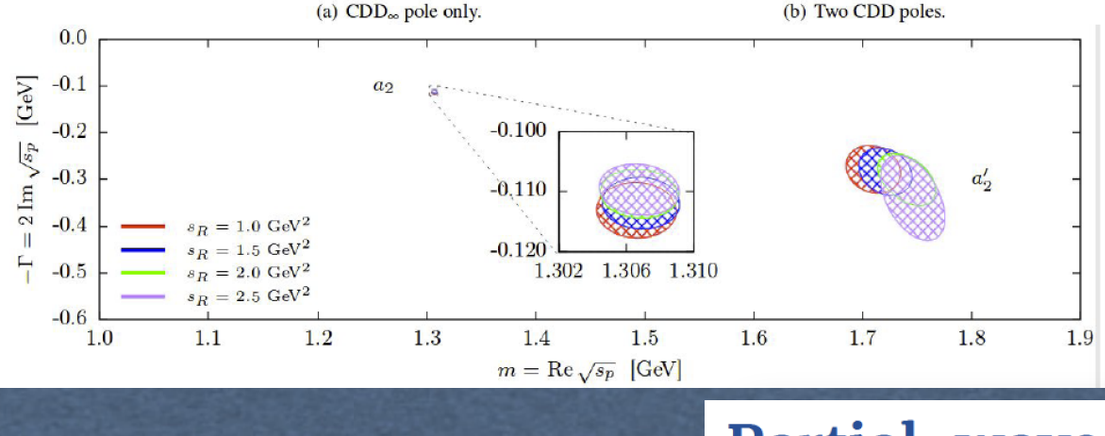
$m(a_2') = (1720 \pm 10 \pm 60)$ MeV
$\Gamma(a_2') = (280 \pm 10 \pm 70)$ MeV



(a) CDD_∞ pole only.



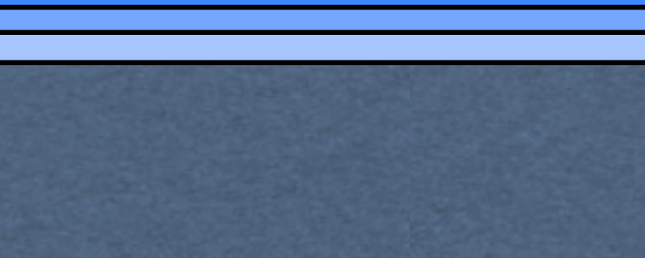
(b) Two CDD poles.



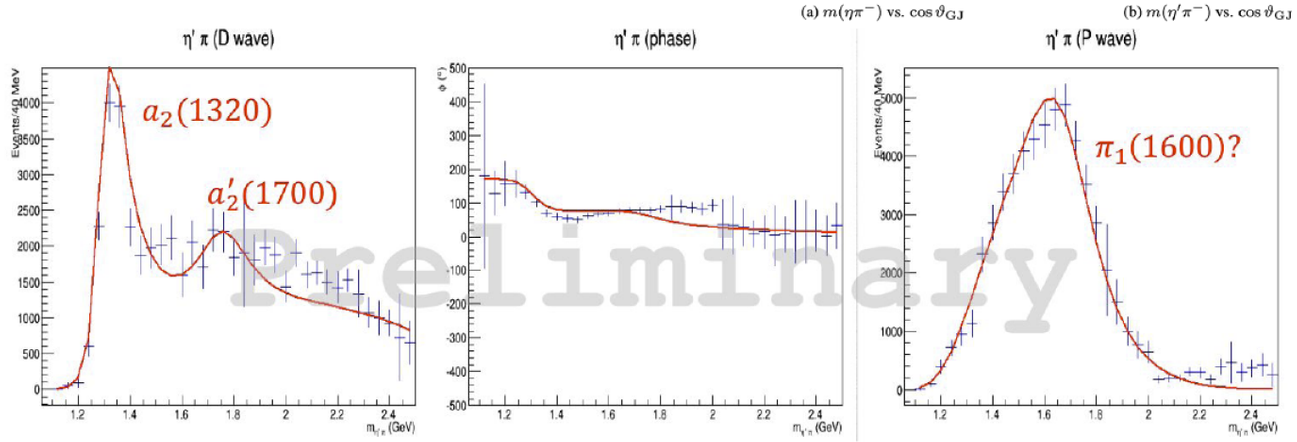
Partial-wave analysis: $\eta^{(\prime)}\pi$

[DATA: COMPASS, PLB (2015) 303]

- Ongoing analysis for
  - Coupled channels: ηπ and η'π
  - P (**exotic**) and D waves



(a) $m(\eta\pi^-)$ vs. $\cos\vartheta_{GJ}$ (b) $m(\eta'\pi^-)$ vs. $\cos\vartheta_{GJ}$



[A.Pilloni *et al.*, in preparation]

Basic for the event generator development

CLAS provided detailed cross section information for the exclusive channels: $p\pi^0$, $n\pi^+$, $K^+\Lambda$, $K^+\Sigma^0$ at Q^2<5-6 GeV^2 and W<3.0 GeV

Data can be found in the CLAS physics DB http://clas.sinp.msu.ru/jlab/

The new CLAS12 detector extends the kinematic coverage W < 4.5 GeV and $5 < Q^2 < 12$ GeV^2. This region remains almost unexplored in exclusive electroproduction. Evaluation of the CLAS12 efficiency and experiment modeling require the realistic event generators at this kinematics.

Developed EGs are based on interpolation ($Q^2 < 5$ GeV^2) of the CLAS data on exclusive differential cross sections and extrapolation ($Q^2 > 5$ GeV^2) of fully integrated cross sections.

Event generator for exclusive $p\pi^0$, $n\pi^+$, $K^+\Lambda$, $K^+\Sigma^0$ electroproduction at Q^2 up to 12 GeV^2

V. Klimenko, Moscow State University

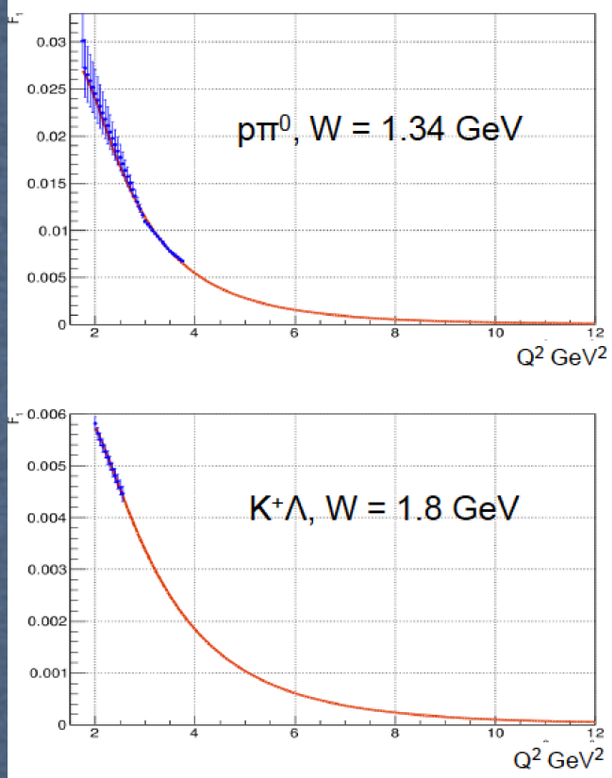
Extrapolation of the fully integrated cross sections

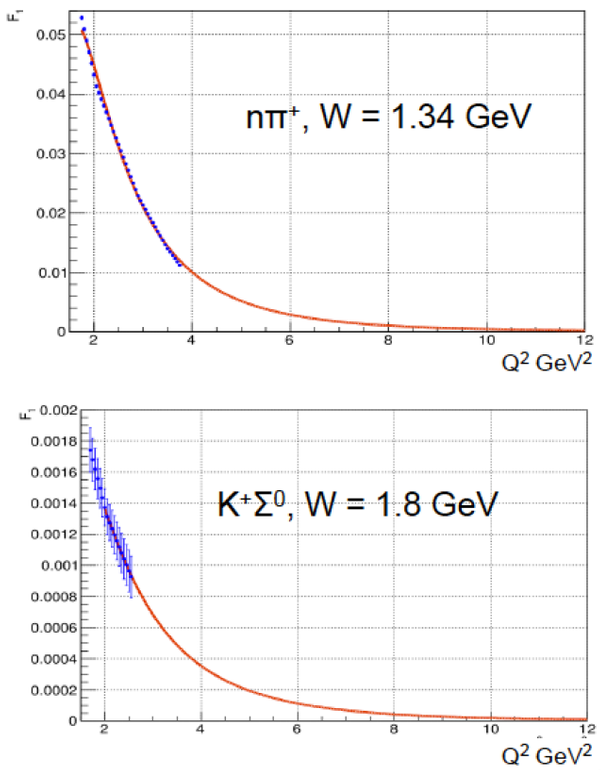
Exclusive channel contributions to inclusive structure functions F_1 and F_2 were evaluated from the integrated cross section:

In spirit of the operator product expansion:

$$F_{1,2}(W,Q^2) = C_0 + \sum_\tau C_\tau \left(\frac{\Lambda^2_{QCD}}{Q^2}\right)^{\tau/2}$$

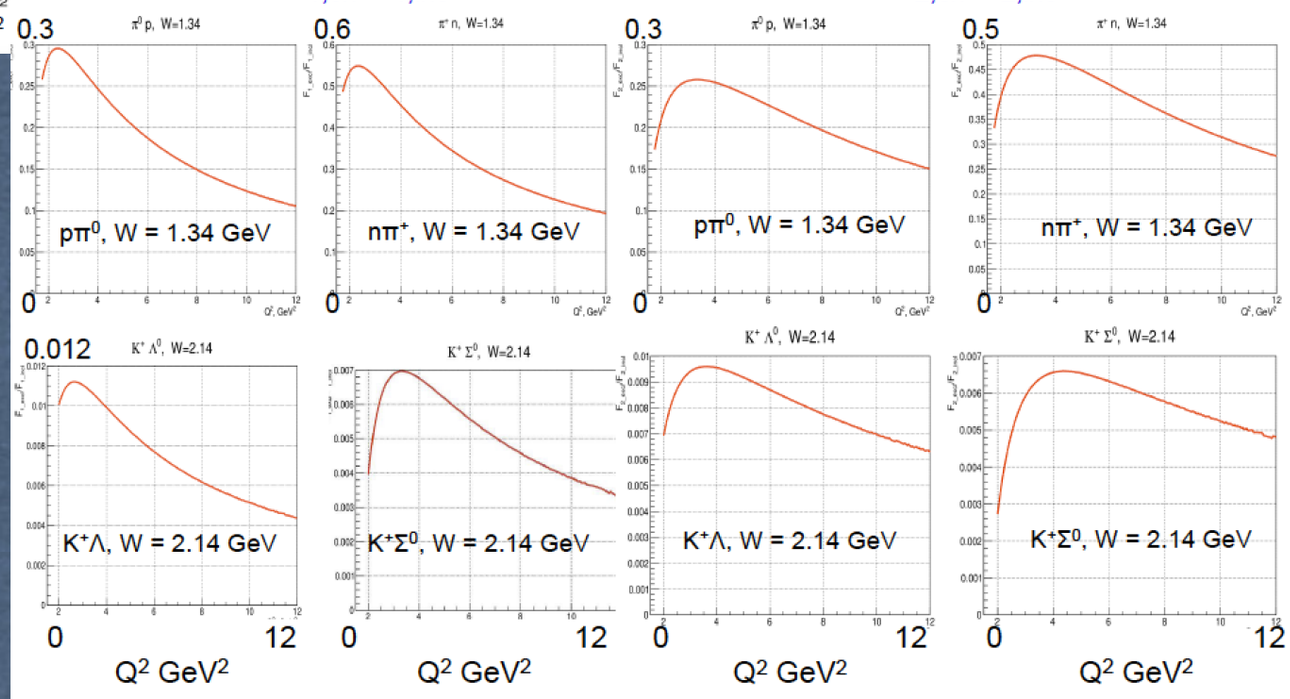
Fit of the exclusive contributions $F_{1,ch}$ into inclusive $F_{1,\,inc}$ structure function and their extrapolation at 5 GeV^2< Q^2 < 12 GeV^2





Constraints from inclusive structure functions

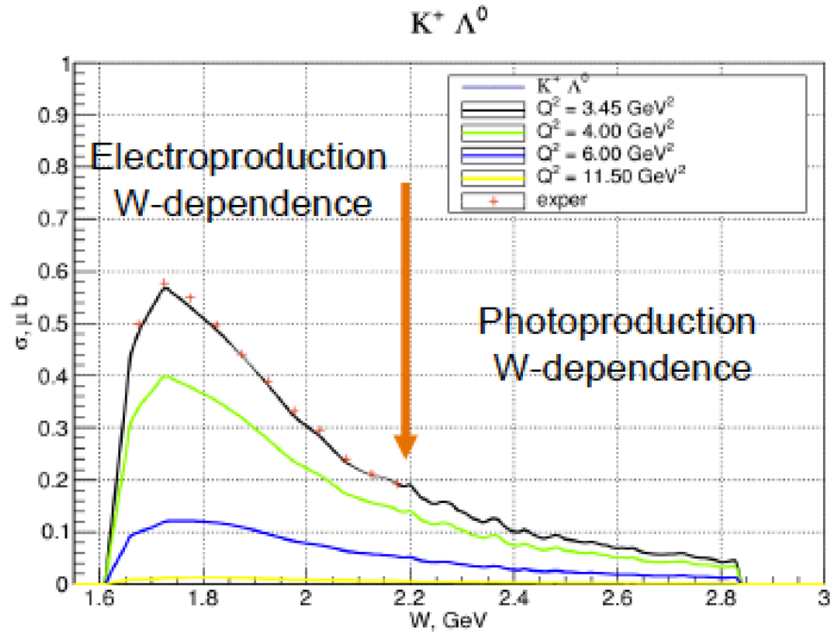
$F_{1,ch}/F_{1,inc}$ $F_{2,ch}/F_{2,inc}$

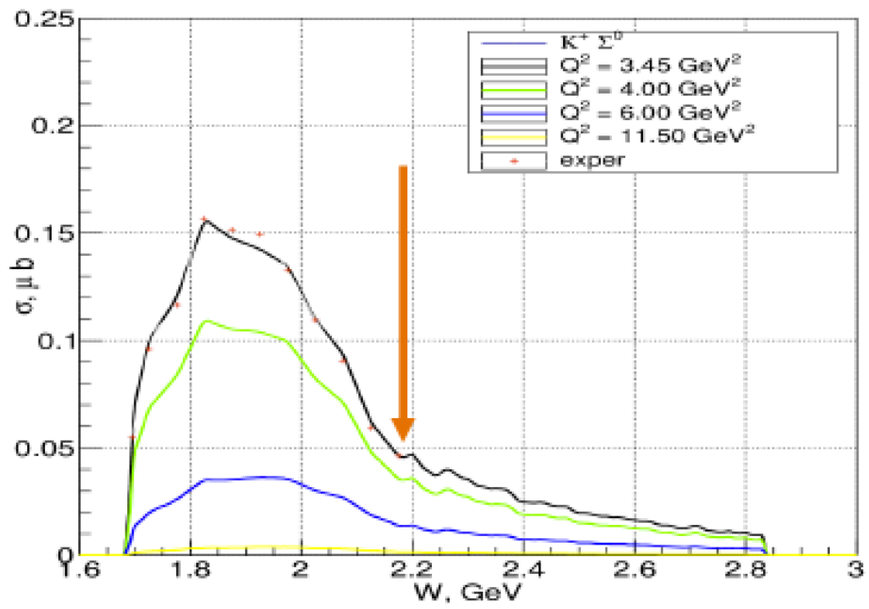


Extrapolation of the exclusive electroproduction cross sections into the W regions where th are not available

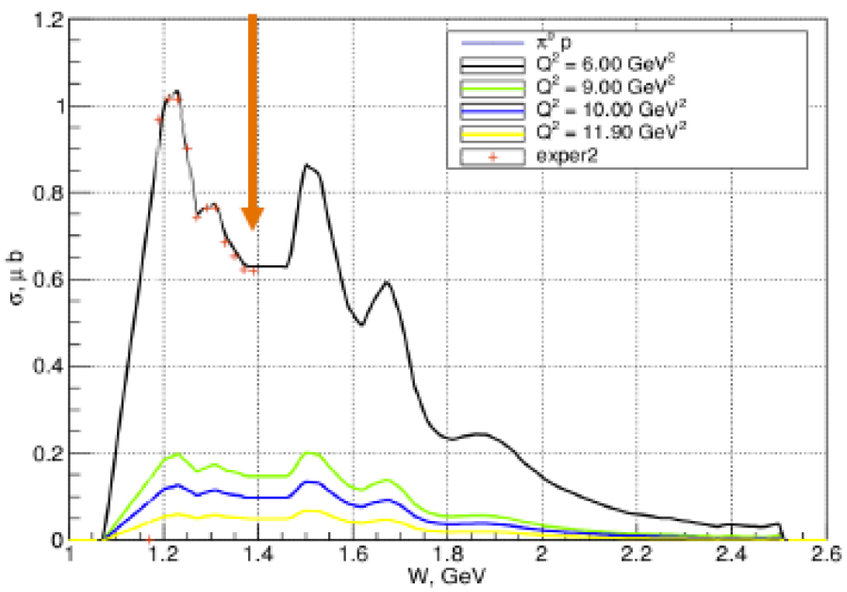
$$\sigma_{ch}(W,Q^2) = \sigma_{ch}(W_{\max},Q^2)\frac{\sigma_{ch,ph}(W,Q^2=0)}{\sigma_{ch,ph}(W_{\max},Q^2=0)}$$

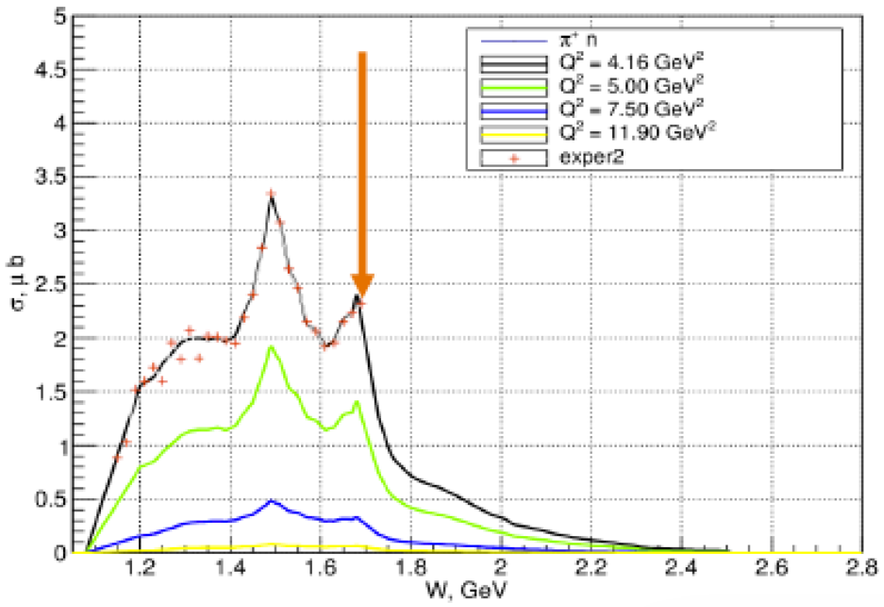
Extrapolation is based on W-dependence of the photoproduction data





1. p





Update on the Dalitz Plot Analysis of: $\eta \to \pi^+\pi^-\pi^0$ with the CLAS6 g12 Data Set

Daniel Lersch

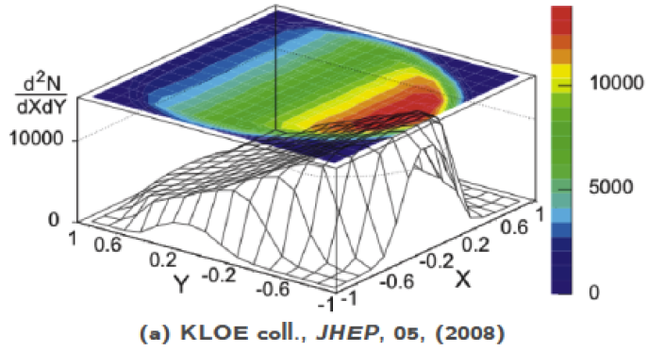
- Decay $\eta \to \pi^+\pi^-\pi^0$ is G-violating $\Rightarrow$ Forbidden to first order
- Decay is driven by isospin breaking part of strong interaction
  $\Rightarrow$ C is conserved
- Decay width: $\Gamma \propto Q^{-4}$
  with: $Q^2 = \left(\frac{m_s}{m_d}\right)^2 \times \left[1 - \left(\frac{m_u}{m_d}\right)^2\right]^{-1}$

$\Rightarrow$ **Determine decay width Γ $\Rightarrow$ Access to quark mass ratio**

$\Downarrow$

a) Measure $\Gamma(\eta \to \pi^+\pi^-\pi^0)$, e.g. via $\frac{\Gamma(\eta\to\pi^+\pi^-\pi^0)}{\Gamma(\eta\to\gamma\gamma)}$
b) Dalitz Plot Analysis

Dalitz Plot Analysis of $\eta \to \pi^+\pi^-\pi^0$



(a) KLOE coll., *JHEP*, 05, (2008)

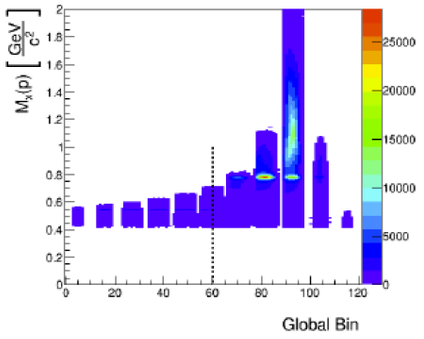
Dimensionless Dalitz Plot Variables:

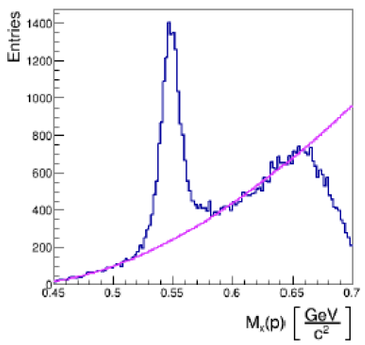
$$X = \sqrt{3}\frac{T_{\pi^+} - T_{\pi^-}}{T_{\pi^+} + T_{\pi^-} + T_{\pi^0}}$$

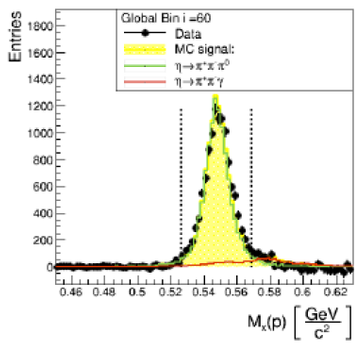
$$Y = 3\frac{T_{\pi^0}}{T_{\pi^+} + T_{\pi^-} + T_{\pi^0}} - 1$$

- Describe three body decay by two variables (here: X and Y)
- Complete information about decay dynamics
- Parameterise decay width Γ:
  $\frac{d^2\Gamma}{dXdY} \propto (1 + aY + bY^2 + cX + dX^2 + eXY + fY^3 + gX^2Y + ...)$
- $c \neq 0$ and $e \neq 0$:
  i) Imply C-violation
  ii) Cause asymmetries within the Dalitz Plot
- Compare Dalitz Plot parameters a,b,d,f from experiment and theory

Background Handling and Determination of $N^0(\eta \to \pi^+\pi^-\pi^0)$





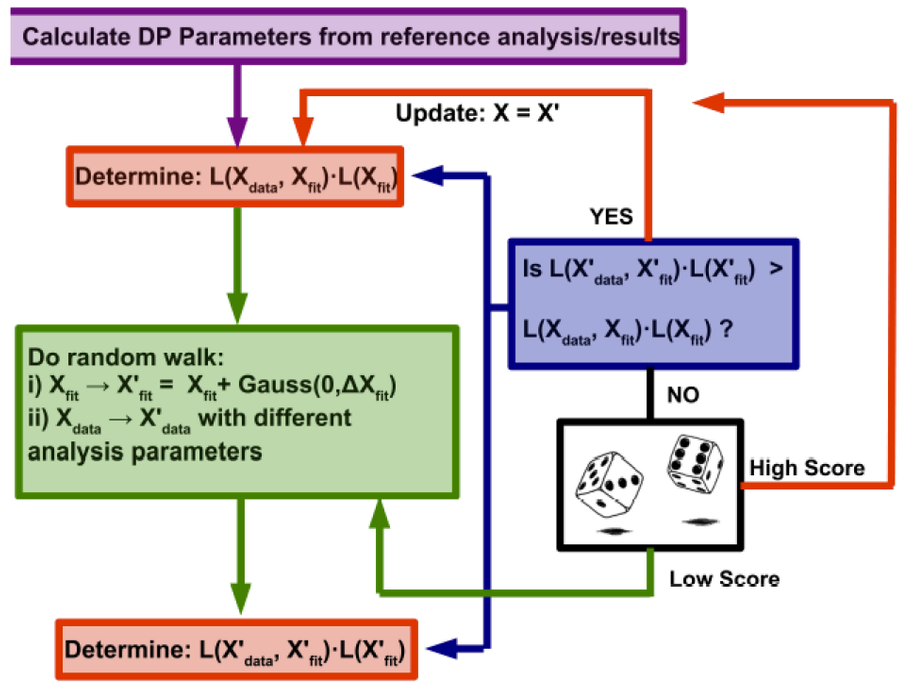


- Correct for background for each Global Bin i
- Determination of $N^0(\eta \to \pi^+\pi^-\pi^0)$:
  $N^0(\eta \to \pi^+\pi^-\pi^0)[i] = N^{fit}(\eta \to \pi^+\pi^-\pi^0)[i]/\epsilon[i]$, with: Efficiency $\epsilon[i]$
- Fit resulting distribution with: Norm $\times (1 + aY + bY + cX + dX^2 + eXY + fY^3)$

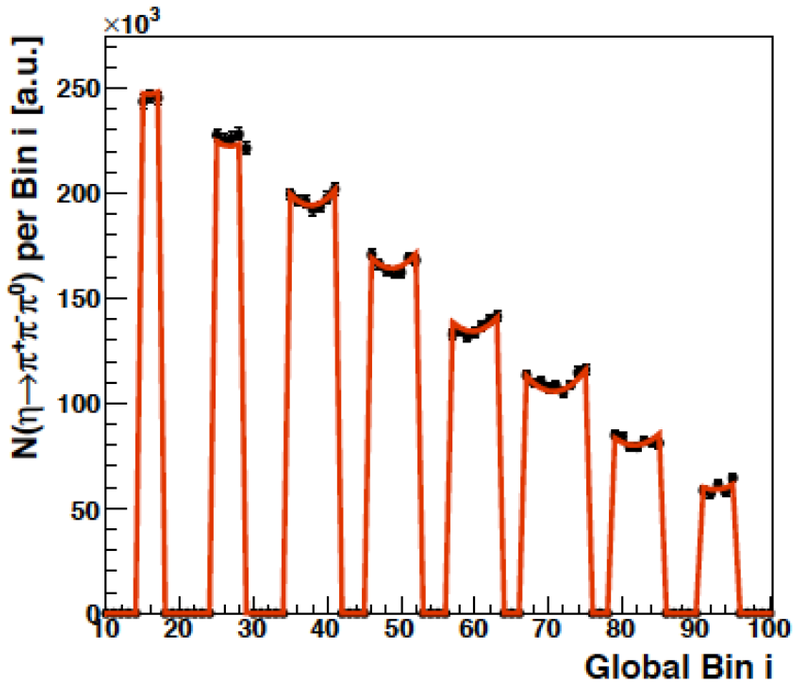
- Total systematic error now: $\lesssim 13\%$
- Correlations have been taken care of

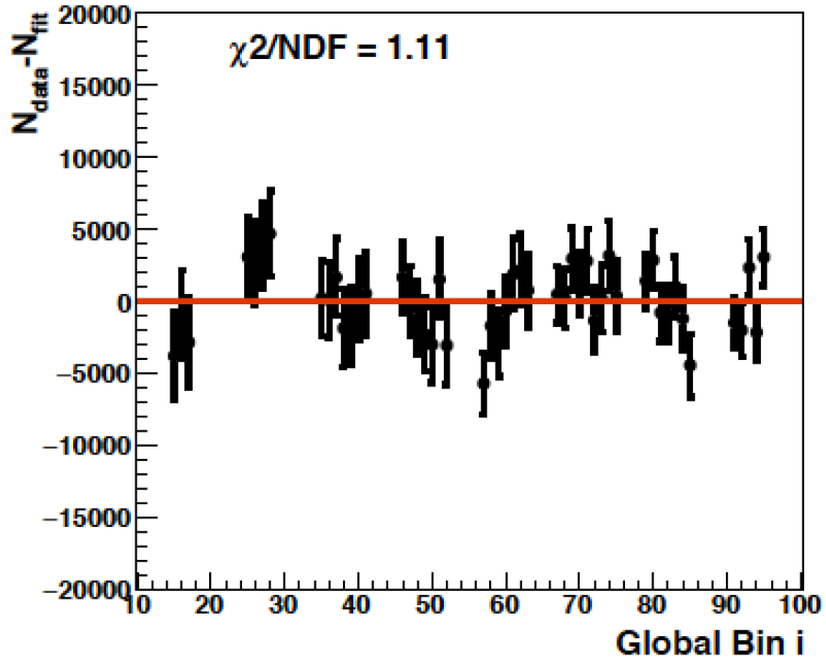
Updated Random Walk Analysis

- Approach: Random walk around different cut resutls
- Use reference analysis for comparison $\Leftrightarrow$ Consistency within analysis
- No bias from other experiments



Dalitz Plot Parameter for $\eta \to \pi^+\pi^-\pi^0$





Parameter	-a	b	c	d	f
KLOE(08)	$1.090(5)(^{+8}_{-19})$	0.124(6)(10)	0.0	$0.057(6)(^{+7}_{-16})$	0.14(1)(2)
WASA	1.144(18)	0.219(19)(47)	0.0	0.086(18)(15)	0.115(37)
KLOE(16)	1.104(5)(2)	$0.142(3)(^{+5}_{-4})$	0.0	$0.073(3)(^{+4}_{-3})$	$0.154(6)(^{+4}_{-5})$
G12	1.102(20)(13)	0.127(18)(5)	0.011(7)(7)	0.106(19)(5)	0.248(45)(10)

- Parameter e is 0
- Dalitz Plot Asymmetry $A = \frac{N^+ - N^-}{N^+ + N^-} = (0.9 \pm 2.9) \cdot 10^{-3}$
- Systematic uncertainties determined via random walk analysis

Determination of double polarization observable E for

$$\gamma d \to K^+\Sigma^-(p)$$

Nicholas Zachariou

University of Edinburgh

Determination of E

$$\begin{aligned}\frac{d\sigma}{dt} &= \left(\frac{d\sigma}{dt}\right)_0 [1 - P_{lin}\Sigma\cos(2\phi) \\ &+P_x(-P_{lin}\mathbb{H}\sin(2\phi) + P_\odot\mathbb{F}) \\ &+P_y(\mathbb{T} - P_{lin}\mathbb{P}\cos(2\phi)) \\ &+P_z(P_{lin}\mathbb{G}\sin(2\phi) - P_\odot\mathbb{E})],\end{aligned}$$

$$\boxed{\frac{d\sigma}{dt} = \left(\frac{d\sigma}{dt}\right)_0 [1 - P_z P_\odot \mathbb{E}].}$$

$$\begin{aligned}Y^{\rightrightarrows} &\sim cF^{\rightrightarrows}[1 - |P_z||P_\odot|\mathbb{E})]A(\Omega, p, ...) \\ Y^{\rightleftarrows} &\sim cF^{\rightleftarrows}[1 + |P_z||P_\odot|\mathbb{E})]A(\Omega, p, ...)\end{aligned}$$

$$P_\odot = P_{el}\frac{4x - x^2}{4 - 4x + 3x^2}, \text{ with } x = \frac{E\gamma}{E_{el}}$$

Method 1

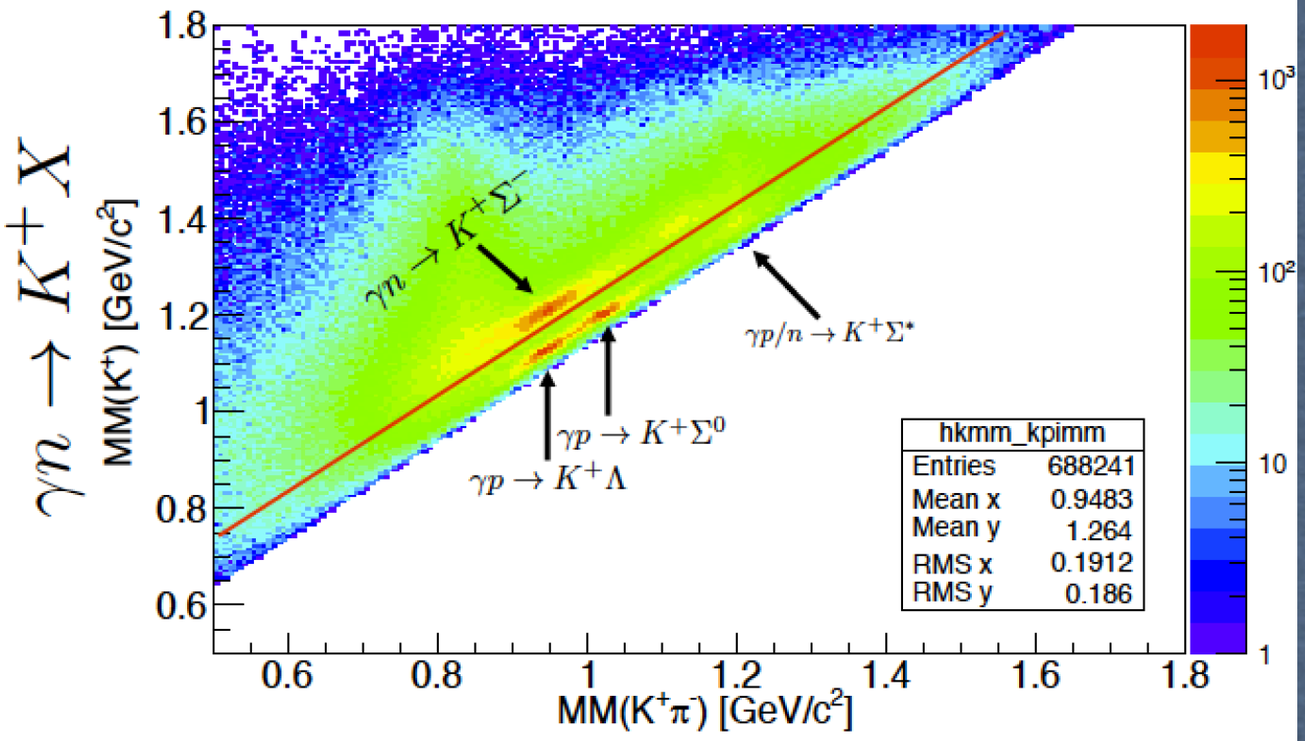
$$\mathbb{E} = \frac{1}{|P_z||P_\odot|}\frac{Y^{\rightleftarrows} - Y^{\rightrightarrows}}{Y^{\rightleftarrows} + Y^{\rightrightarrows}}.$$

$$\sigma_{\mathbb{E}} = \frac{2}{|P_z||P_\odot|}\sqrt{\frac{Y^{\rightleftarrows}Y^{\rightrightarrows}}{(Y^{\rightleftarrows} + Y^{\rightrightarrows})^3}}.$$

Method 2

$$\log L = b + \sum_{i=1}^{Y^{\rightrightarrows}} \log(1 - |P_z^i||P_\odot^i|\mathbb{E}) + \sum_{i=1}^{Y^{\rightleftarrows}} \log(1 + |P_z^i||P_\odot^i|\mathbb{E})$$

Analysis: Reaction reconstruction



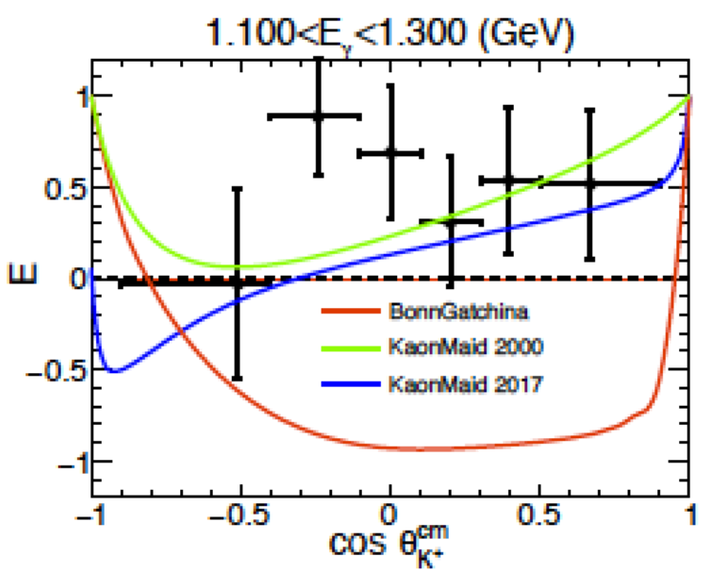
Systematic studies

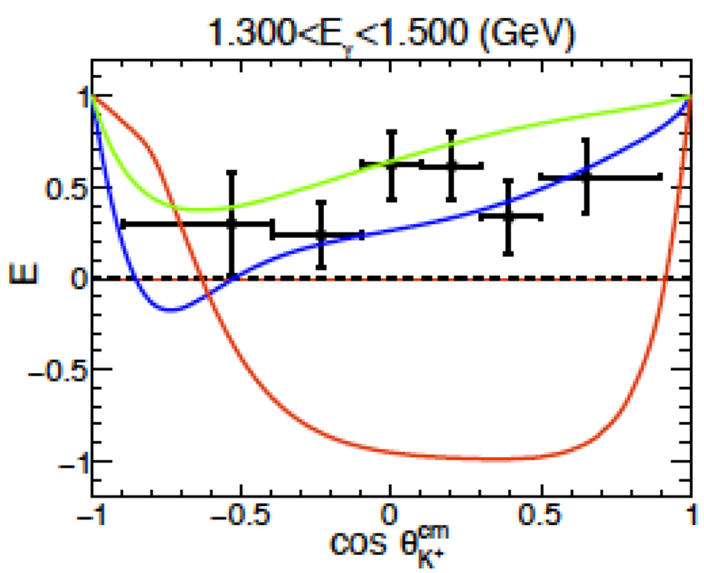
Estimation of systematic uncertainties:

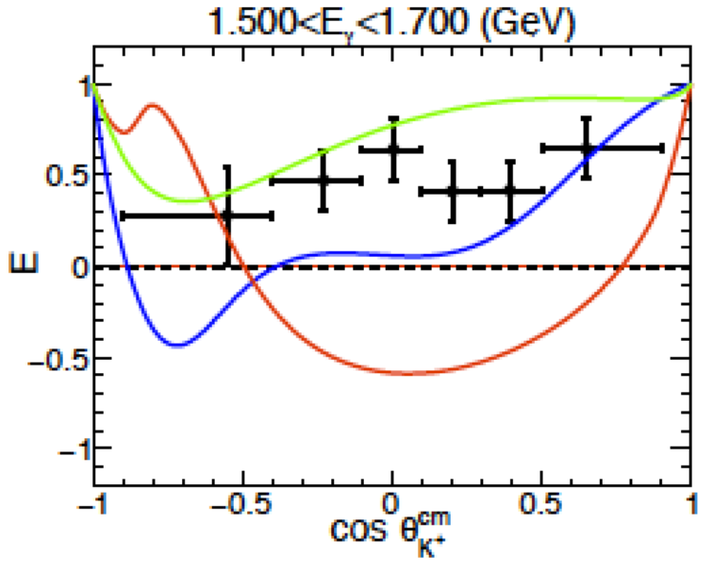
- Variation of nominal cuts
- Comparison between extracted observables
- Difference and spread of difference reflects *upper estimate* of systematic uncertainty

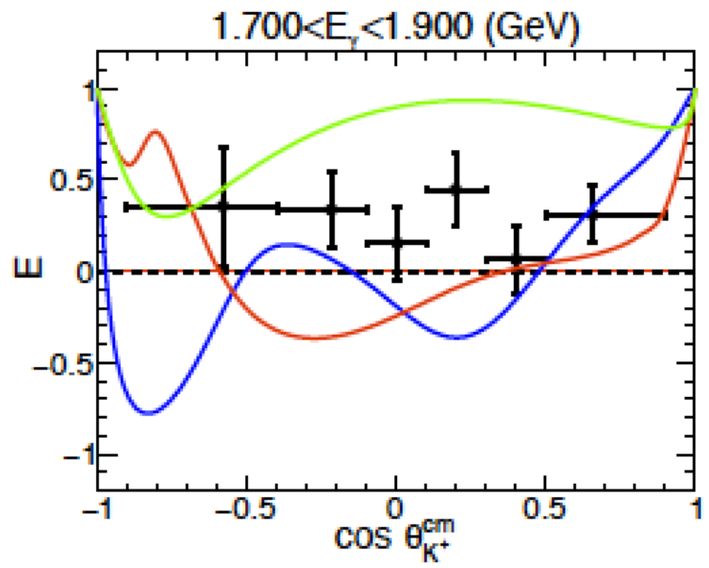
Source	σ^{sys}
Kaon PID	0.013
Pion PID	0.024
Photon Selection	0.06
Particle Misidentification	0.005
Λ/Σ^0 separation	0.055
Kaon decayed events	0.048
Σ^* background subtraction	0.047
z-vertex cut	0.025
Fiducial cuts	0.029
Method of extraction observable	0.005
Total Absolute Systematic	**0.11**
Target Polarization	6%
Photon Polarization	3.4%
Empty target subtraction	1.0%
Total Scale Systematic	**6.9%**

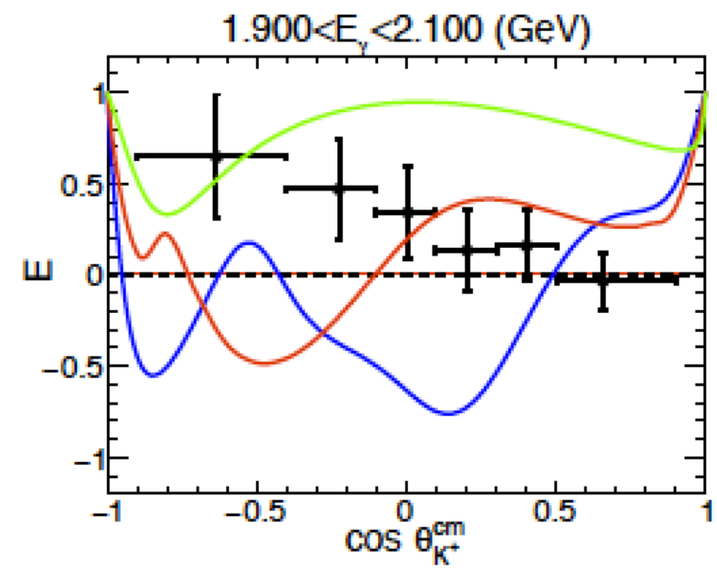
Results

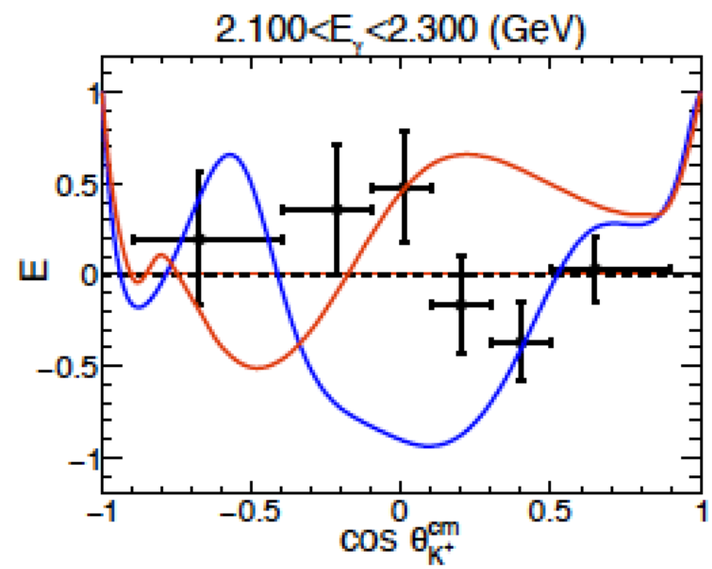

1.100<E_γ<1.300 (GeV)
BonnGatchina
KaonMaid 2000
KaonMaid 2017
E
cos θ^cm_K+


1.300<E_γ<1.500 (GeV)
E
cos θ^cm_K+


1.500<E_γ<1.700 (GeV)
E
cos θ^cm_K+


1.700<E_γ<1.900 (GeV)
E
cos θ^cm_K+


1.900<E_γ<2.100 (GeV)
E
cos θ^cm_K+


2.100<E_γ<2.300 (GeV)
E
cos θ^cm_K+

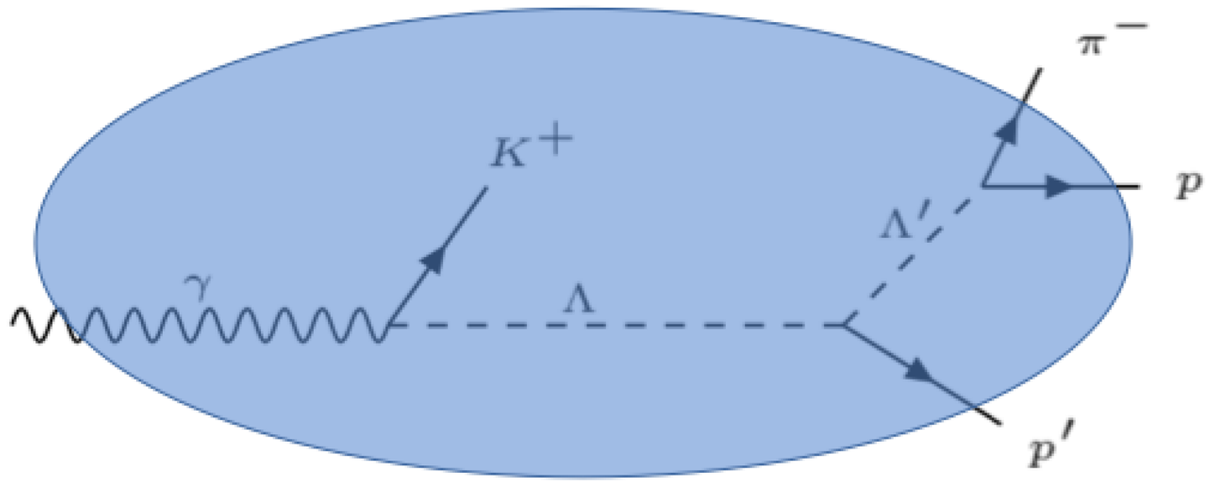
Preliminary Lambda-Nucleon Scattering with g12

Joey Rowley

Kenneth Hicks

John Price

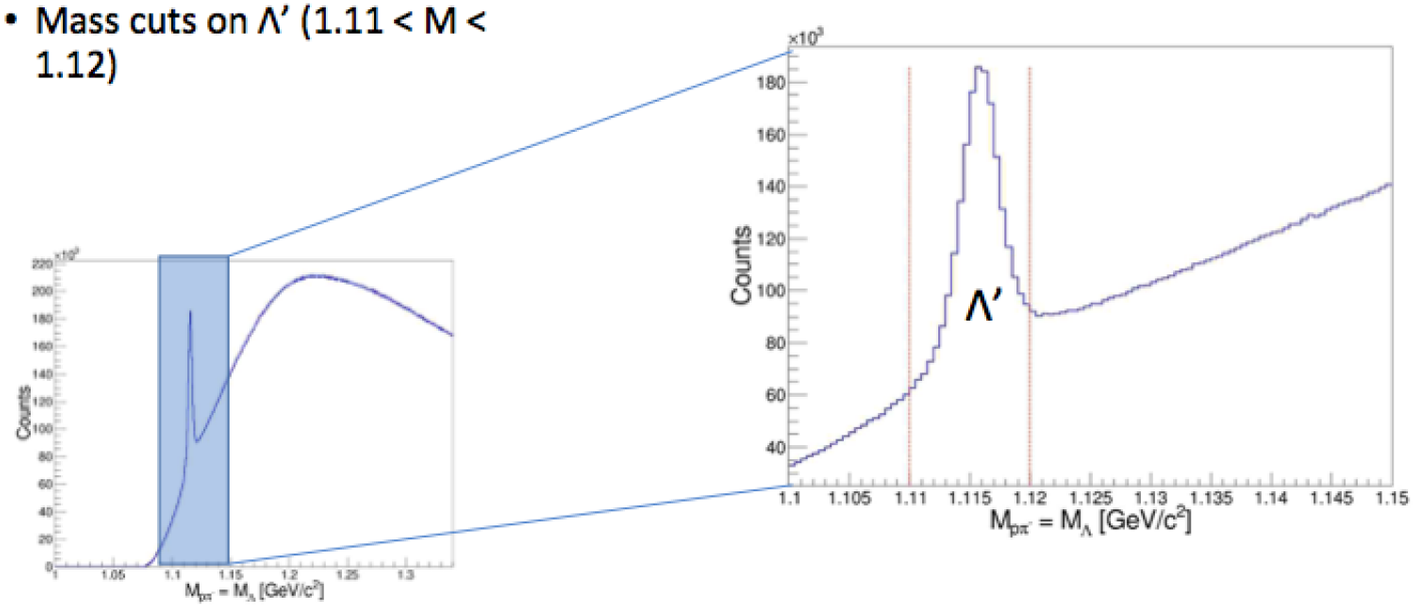
Reaction



- $p,p\uparrow'$,$\pi\uparrow-$ detected
- $\Lambda p\uparrow'$ scatter elastically

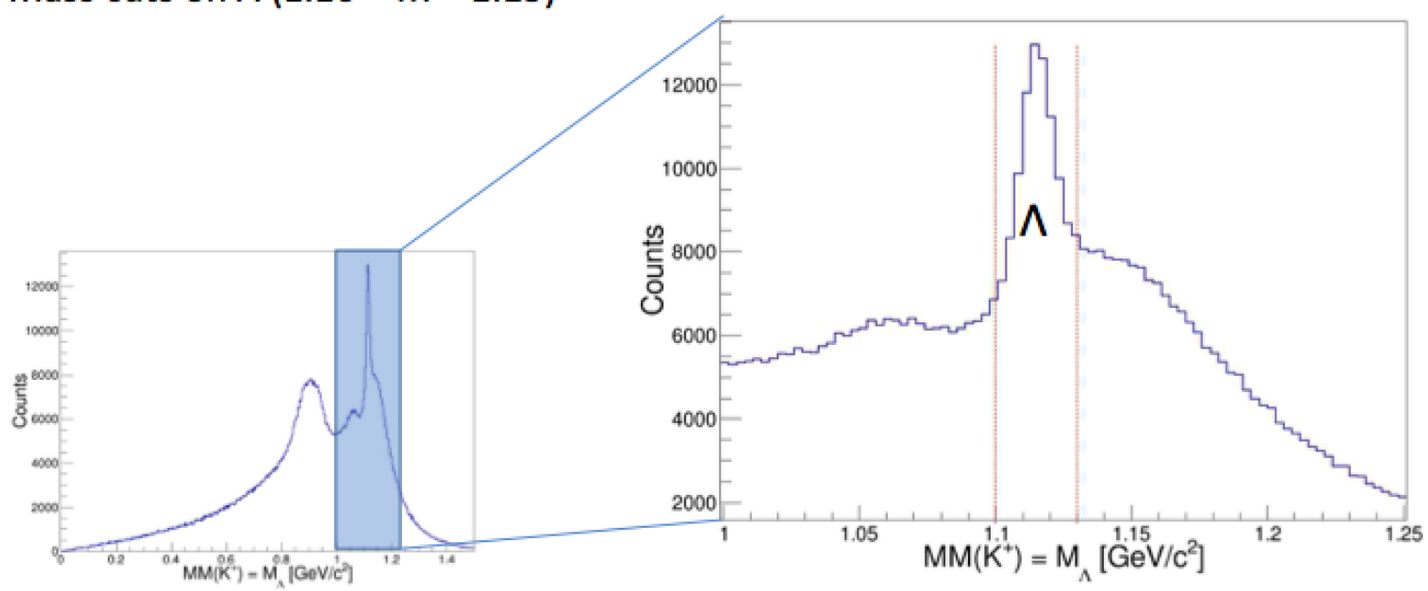
Cuts

- Mass cuts on Λ′ (1.11 < M < 1.12)

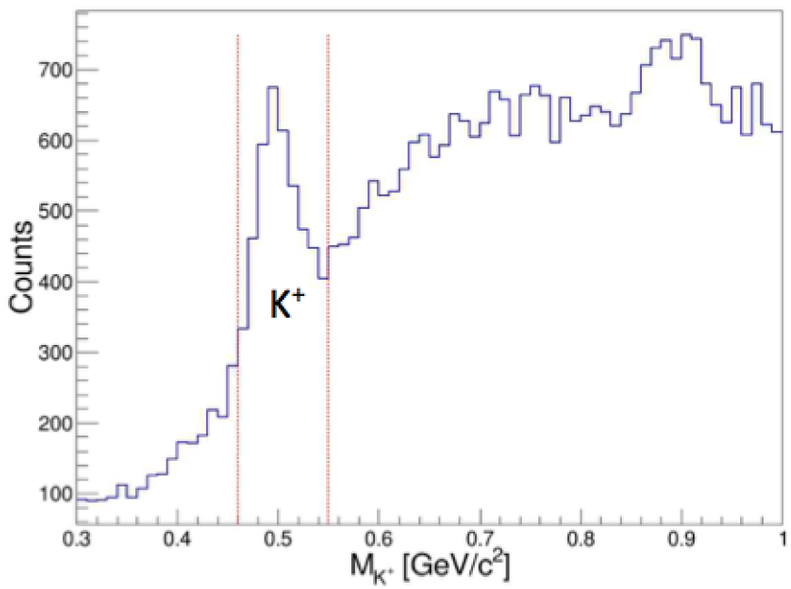


Cuts

- Mass cuts on Λ (1.10 < M < 1.13)



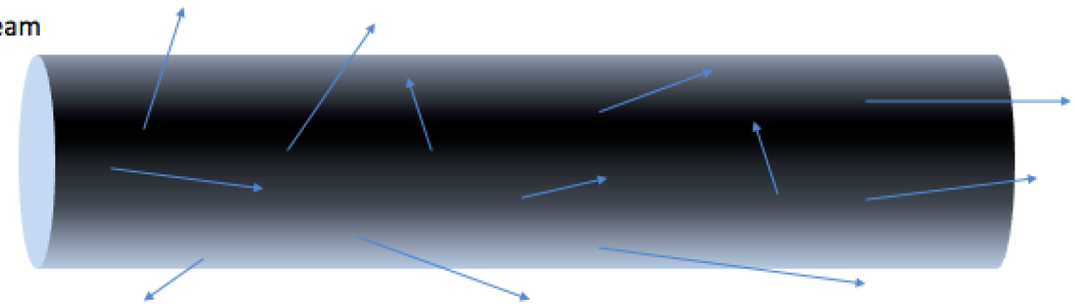
Integrated K+



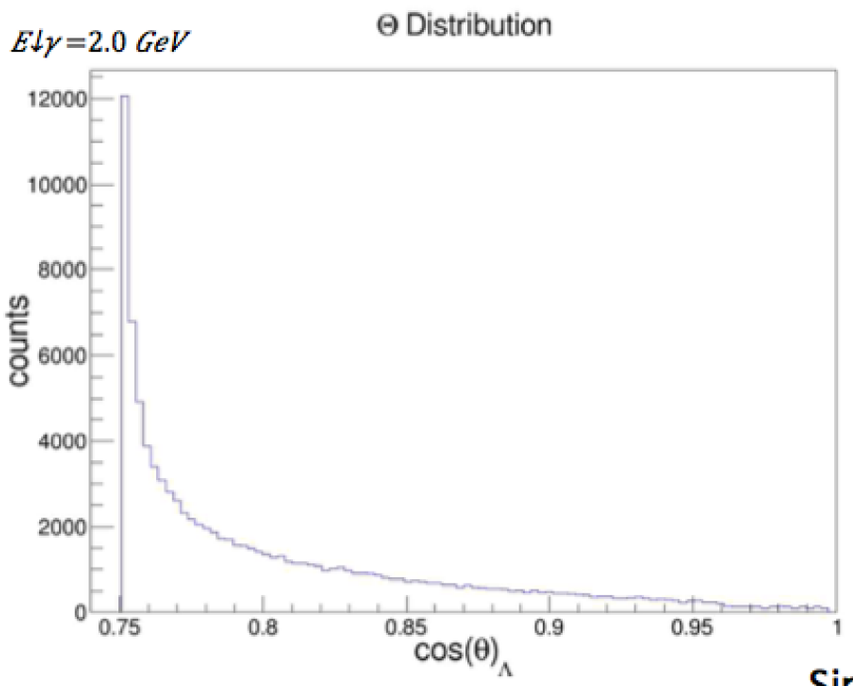
Luminosity

Photon Beam

Λ Beam



Luminosity Correction



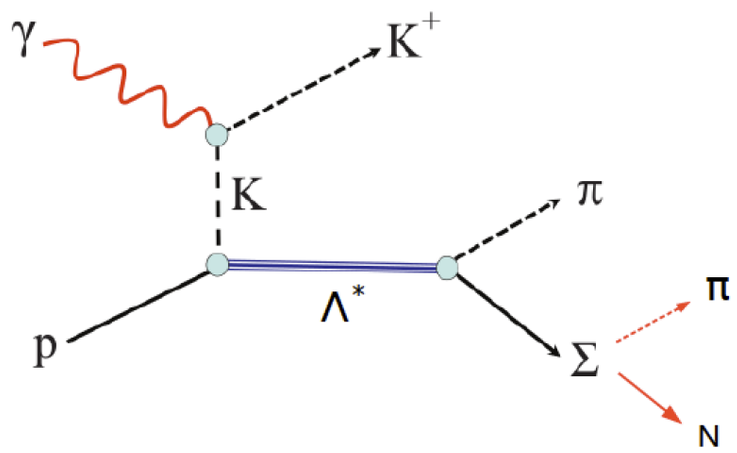
- Uniform t-distribution
- Kinematic limit (for this energy) at 0.75
- $p\downarrow\Lambda$ depends on θ

Simulation

A Study of Λ(1520) Photoproduction

U. Shrestha, T. Chetry and K. Hicks
Ohio University

Motivation



$\gamma + p \rightarrow K^+ + \Lambda^*$

$\Lambda^* \rightarrow \Sigma^+ + \pi^-$

$\Lambda^* \rightarrow \Sigma^- + \pi^+$

Particle	J^P	Overall status	$N\overline{K}$	$\Lambda\pi$	$\Sigma\pi$	Other channels
$\Lambda(1116)$	$1/2+$	****		F		$N\pi$(weakly)
$\Lambda(1405)$	$1/2-$	****	****	o	****	
$\Lambda(1520)$	$3/2-$	****	****	r	****	$\Lambda\pi\pi, \Lambda\gamma$
$\Lambda(1600)$	$1/2+$	***	***	b	**	
$\Lambda(1670)$	$1/2-$	****	****	i	****	$\Lambda\eta$
$\Lambda(1690)$	$3/2-$	****	****	d	****	$\Lambda\pi\pi, \Sigma\pi\pi$

PID

$$\gamma + p \rightarrow K^+ + \Lambda(1520)$$

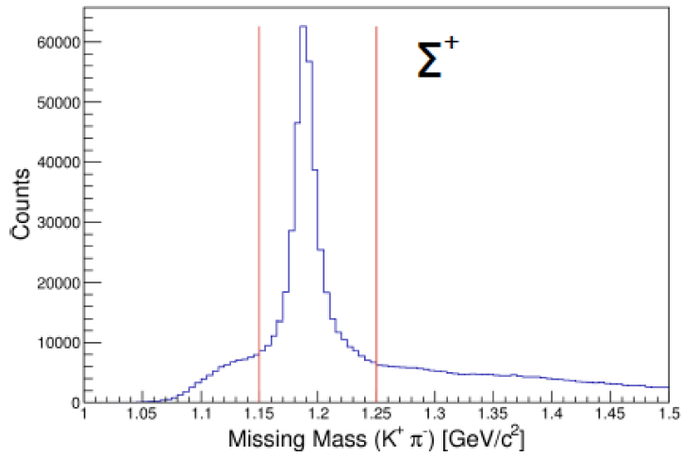
~14% ~14%

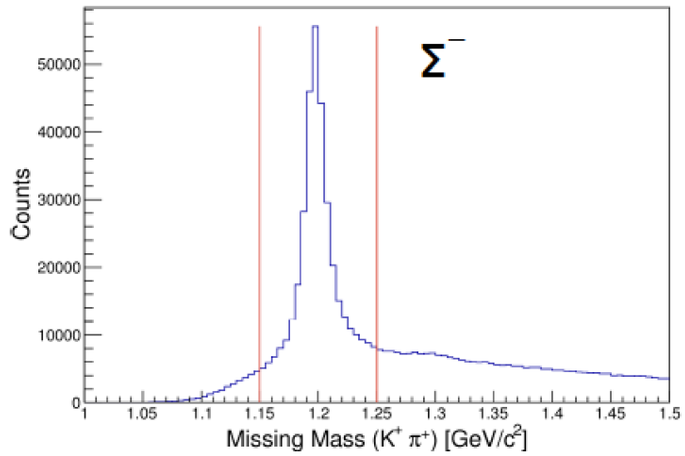
$$\Sigma^+ + \pi^- \qquad \Sigma^- + \pi^+$$

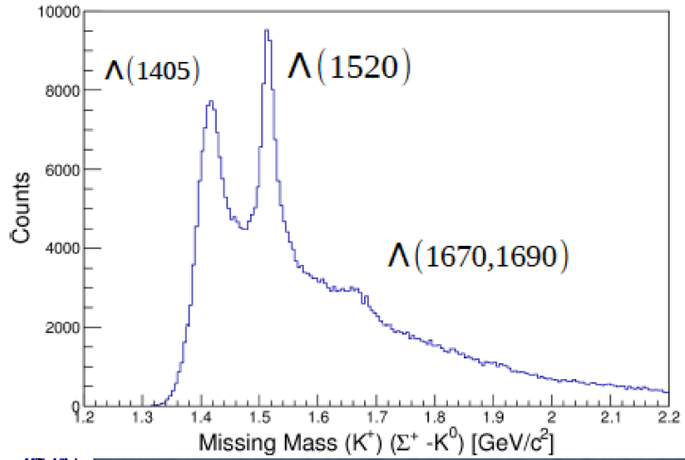
~48% ~100%

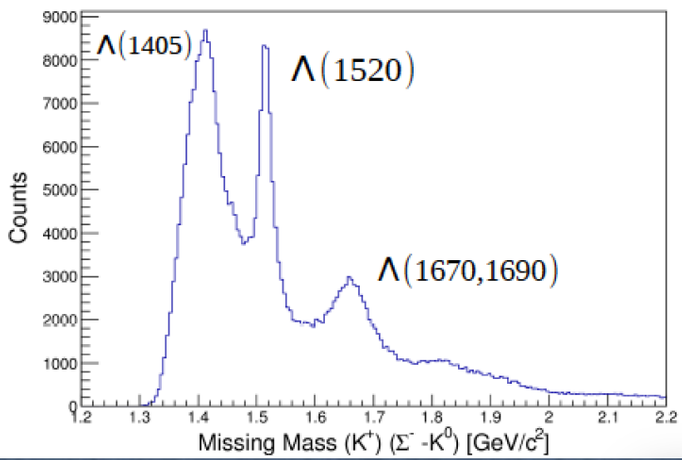
$$n + \pi^+ \qquad n + \pi^-$$

Cuts

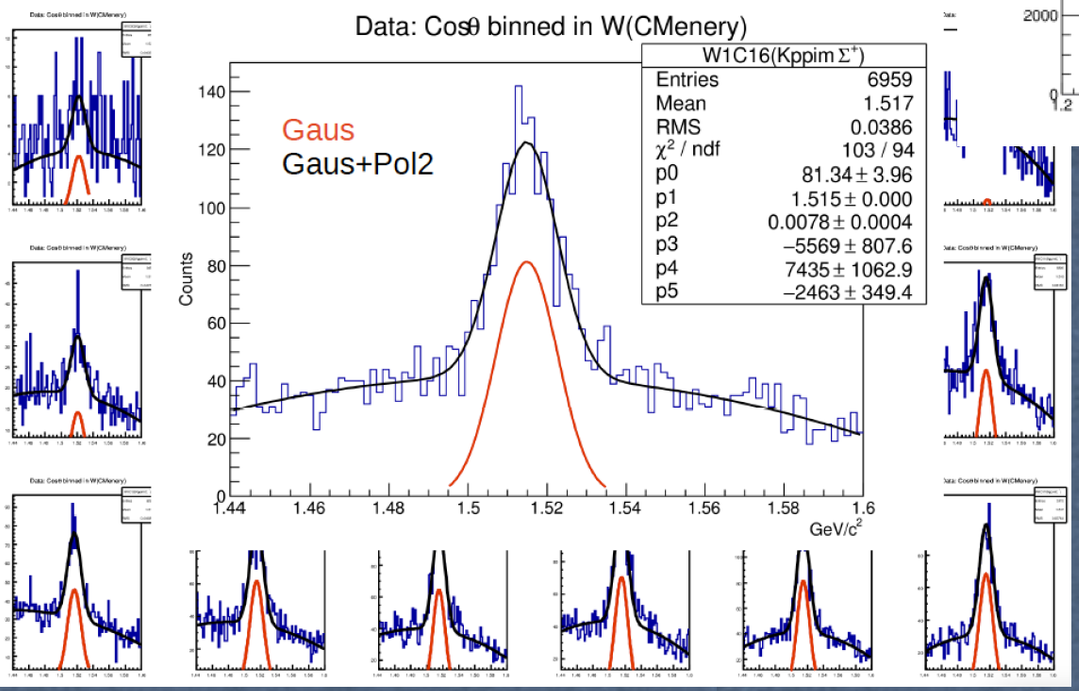




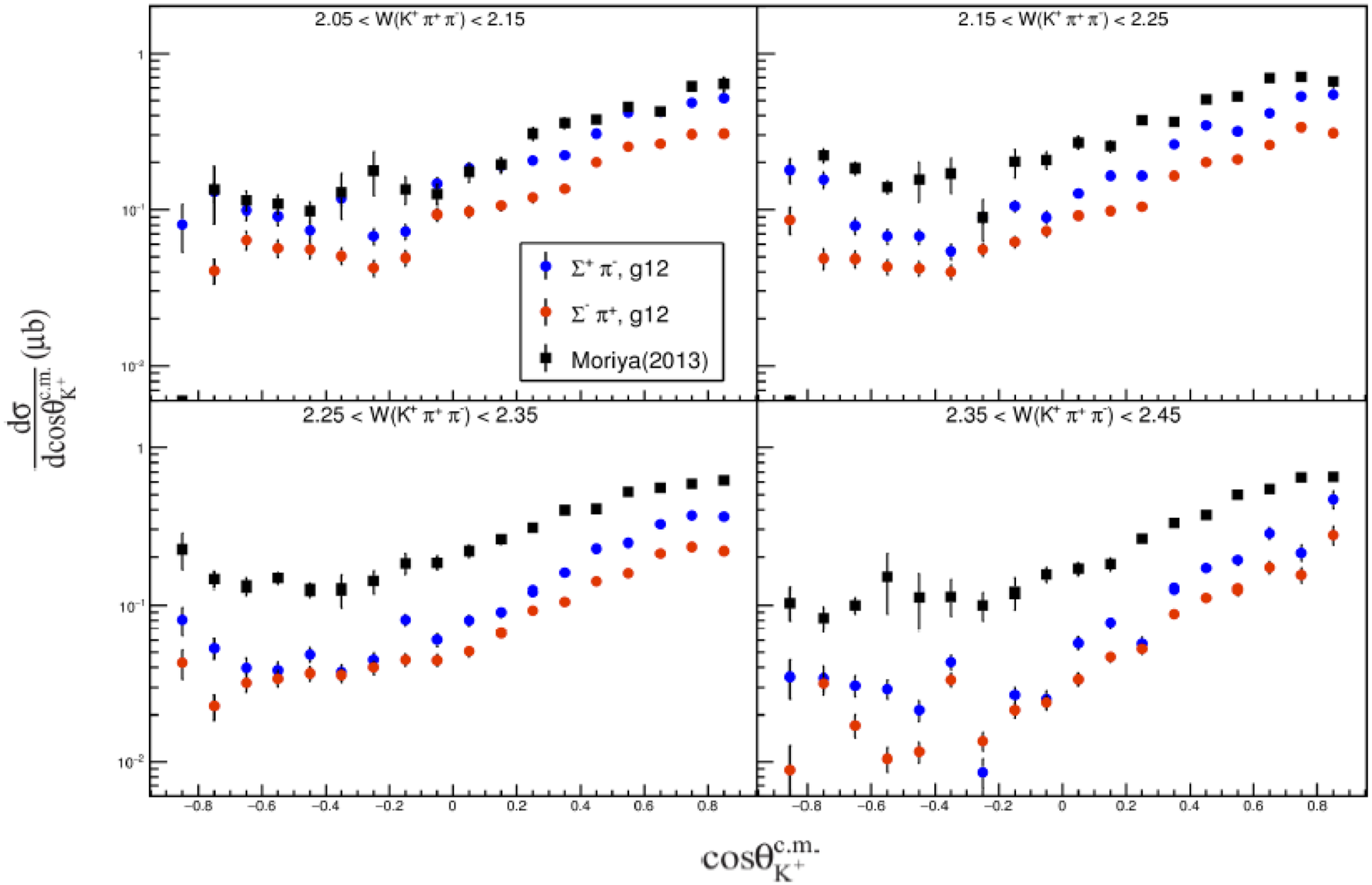




Yield Extraction & Fit



Differential Cross-section (Comparison)



Very Preliminary!!!

Stuart Fegan

George Washington University

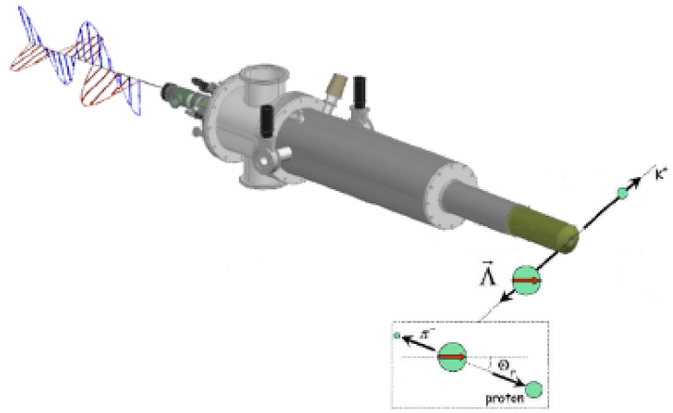
March 8th, 2018

- Looking for polarisation observables on strangeness photoproduction

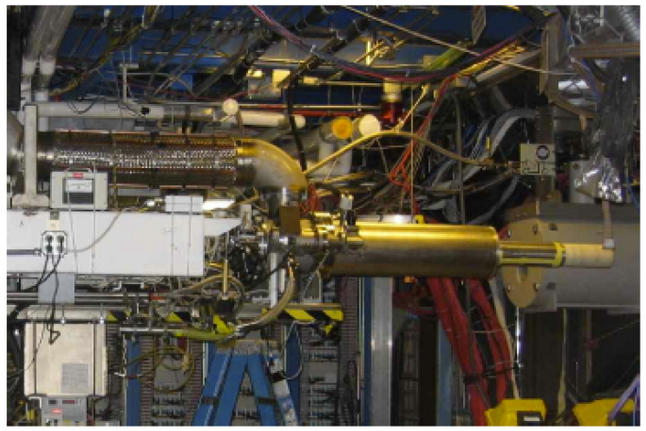
$$\gamma p \to K^+\Lambda \to K^+ p\pi^- \text{ (focus of this talk)}$$
$$\gamma p \to K^+\Sigma \to K^+\Lambda\gamma \to K^+ p\pi^-\gamma$$

- 16 observables in all, arising from the scattering amplitudes of the interaction

- "Single": σ, Σ, P, T
- Beam-Target: E, F, G, H
- Beam-Recoil: O_X, O_Z, C_X, C_Z
- Target-Recoil: T_X, T_Z, L_X, L_Z



- Data from g9a run period: November 2007 to February 2008
- Linearly and circularly polarised photon beams on a longitudinally polarised target



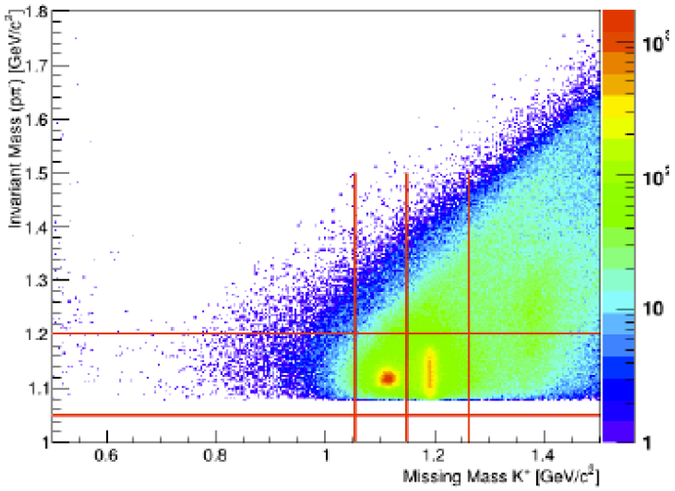
- Linpol data from g9a: 9 coherent peak settings spanning energy range 0.7 to 2.3 GeV
- In this case, the reduced cross section can be expressed as:

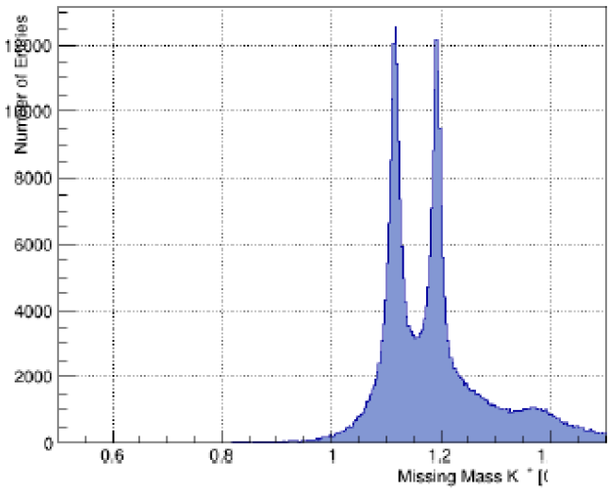
$$\frac{d\sigma}{d\Omega} = \sigma_0\{1 - P_{lin}\Sigma cos(2\phi) + P_z(P_{lin}Gsin(2\phi))\}$$

- Looking for two channels:

$$\gamma p \to K^+ \Lambda \to K^+ p \pi^-$$
$$\gamma p \to K^+ \Sigma \to K^+ \Lambda \gamma \to K^+ p \pi^- \gamma$$

- Non exclusive selection, reconstructing pion from detected proton and kaon
- Lambda (and Sigma) hyperons identified via kaon missing mass and proton pion invariant mass

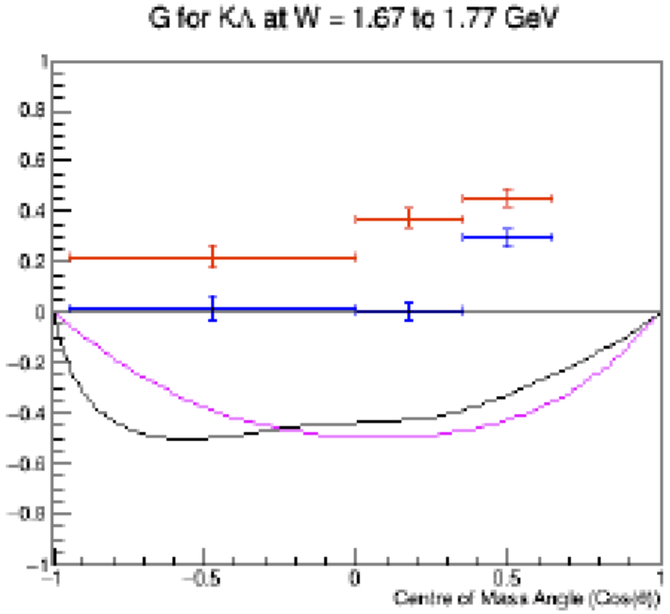


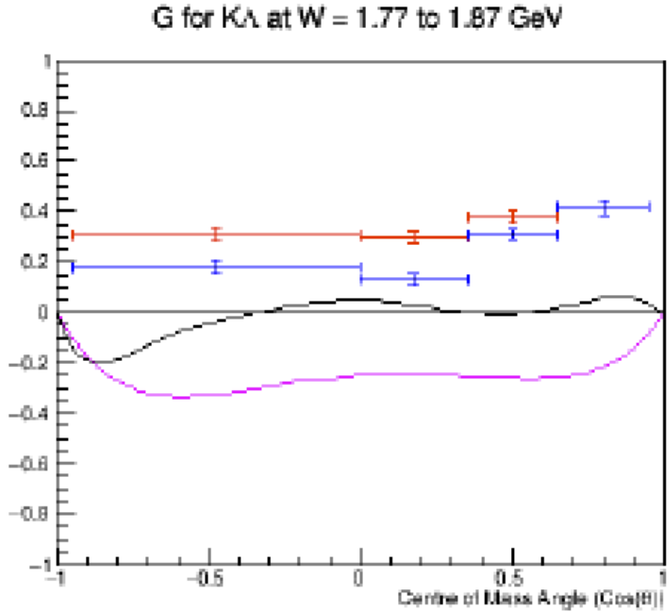


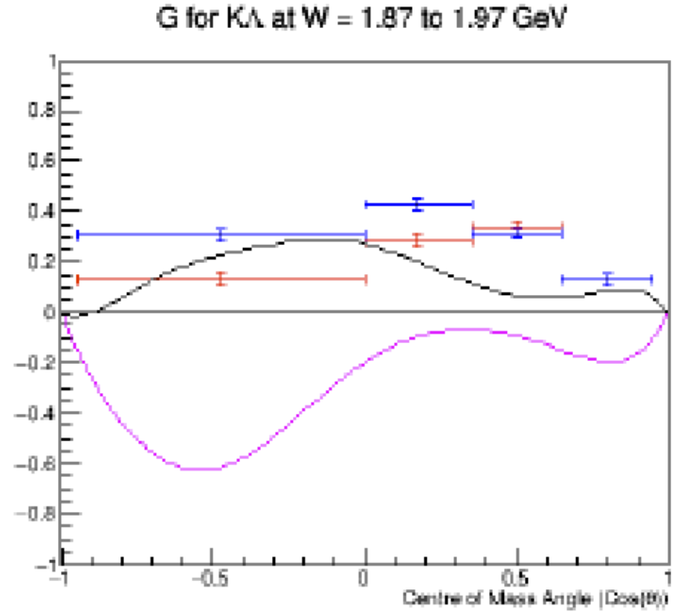
- Recall that on a linpol beam and a longitudinally polarised target:

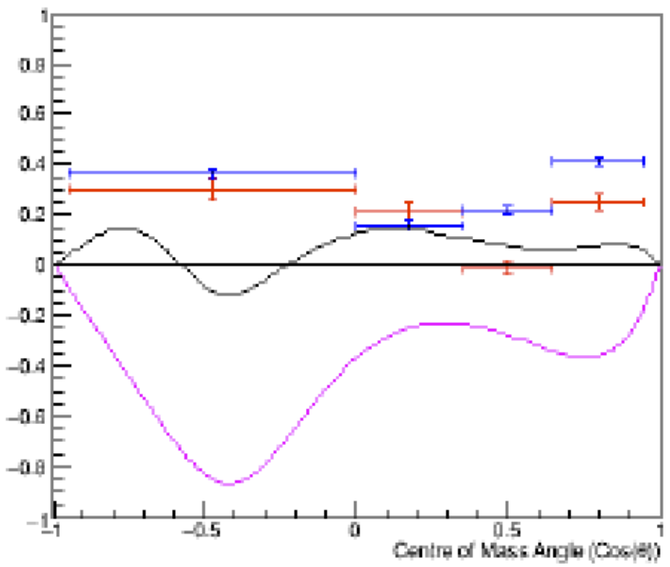
$$\frac{d\sigma}{d\Omega} = \sigma_0\{1 - P_{lin}\Sigma cos(2\phi) + P_z(P_{lin}Gsin(2\phi))\}$$

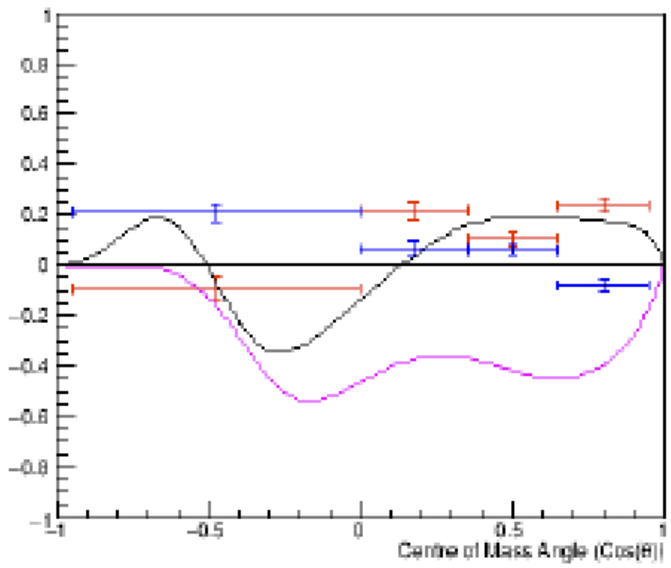
- A $\cos(2\phi) + \sin(2\phi)$ fit to a PARA/PERP asymmetry can be used to extract Σ and G for each state of target polarisation

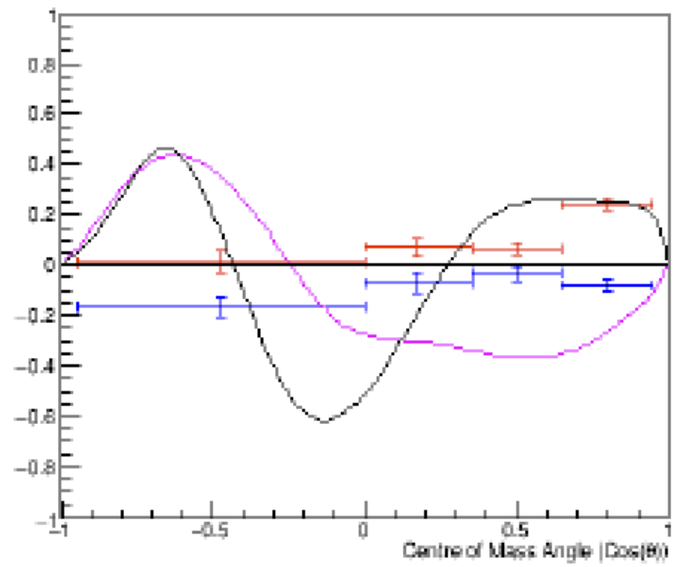

G for KΛ at W = 1.67 to 1.77 GeV
Centre of Mass Angle (Cos(θ))


G for KΛ at W = 1.77 to 1.87 GeV
Centre of Mass Angle (Cos(θ))


G for KΛ at W = 1.87 to 1.97 GeV
Centre of Mass Angle (Cos(θ))


G for KΛ at W = 1.97 to 2.06 GeV
Centre of Mass Angle (Cos(θ))


G for KΛ at W = 2.06 to 2.15 GeV
Centre of Mass Angle (Cos(θ))


G for KΛ at W = 2.15 to 2.24 GeV
Centre of Mass Angle (Cos(θ))

Polarization Observables T and F in the $\gamma p \to \pi^0 p$ Reaction

Hao Jiang

The g9b experiment

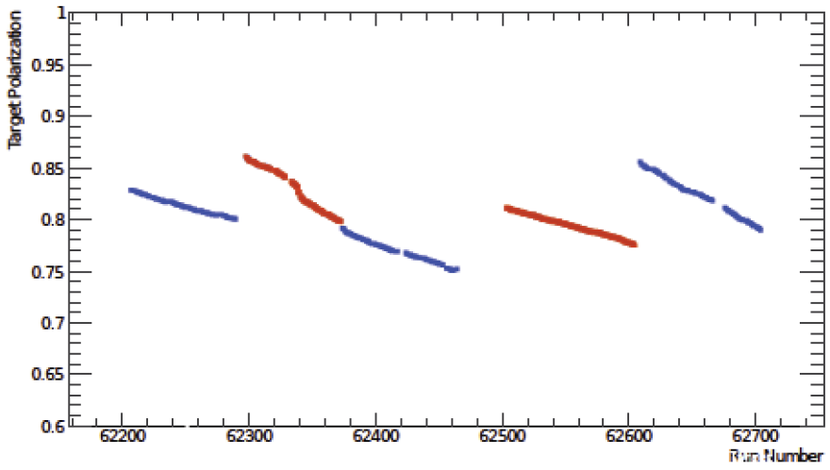
The g9b Experimental data were taken between March 2010 and August 2010 in sets of ten run groups. Only the first five run groups were used In this analysis.

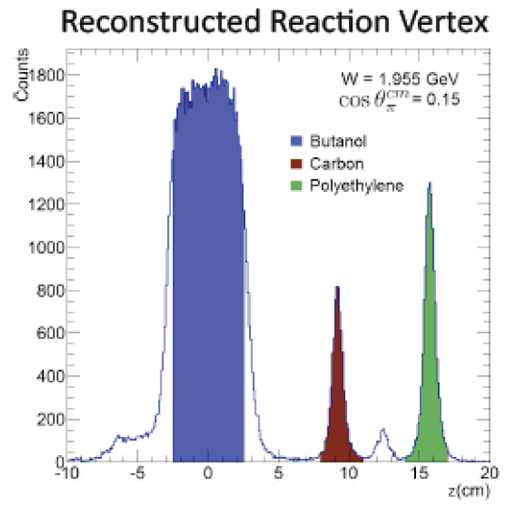
Group	Run range	E_e (GeV)	Events	f (Hz)	Target pol.	Field
1	62207 - 62289	3.082	723.1 M	240	.83 - .80 (+)	(+)
2	62298 - 62372	3.082	894.9 M	240	.86 - .80 (−)	(+)
3	62374 - 62464	3.082	1129.7 M	240 or 30	.79 - .75 (+)	(+)
4	62504 - 62604	3.082	1307.1 M	240	.81 - .76 (−)	(−)
5	62609 - 62704	3.082	972.6 M	240 or 30	.85 - .79 (+)	(−)
	runs not used in this analysis					
6	63508 - 63525	2.266	138.2 M	943	.77 - .58 (+)	(+)
7	63529 - 63542	2.266	166.8 M	240 or 943	.56 - .57 (−)	(−)
8	63543 - 63564	2.266	321.7 M	943	.74 - .61 (+)	(+)
9	63566 - 63581	2.266	249.6 M	943	.70 - .64 (−)	(−)
10	63582 - 63598	2.266	242.3 M	240	.48 - .46 (+)	(+)

$$\frac{d\sigma}{d\Omega} = \frac{d\sigma_0}{d\Omega}(1 + P_t P_\gamma F \cos\varphi + P_t T \sin\varphi)$$

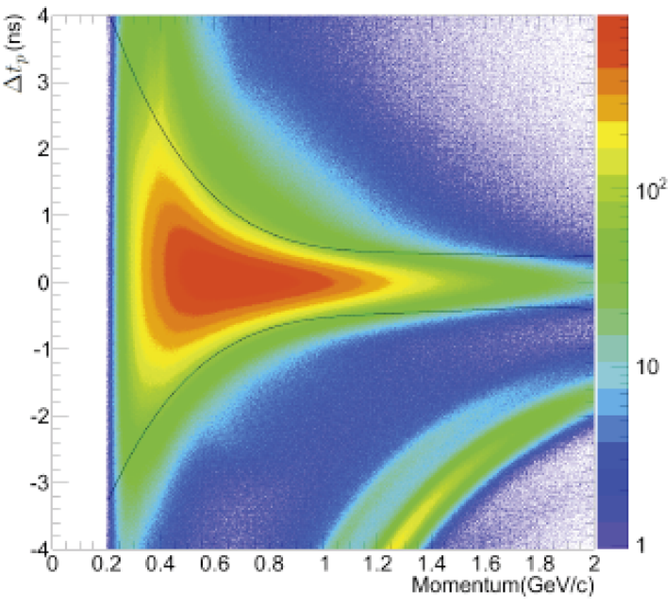
	Photon beam		
	unpolarized	circularly polarized	linearly polarized
Target			
unpolarized	$d\sigma/d\Omega$	—	Σ
longitudinally	—	E	G
transversely	T	F	H, P

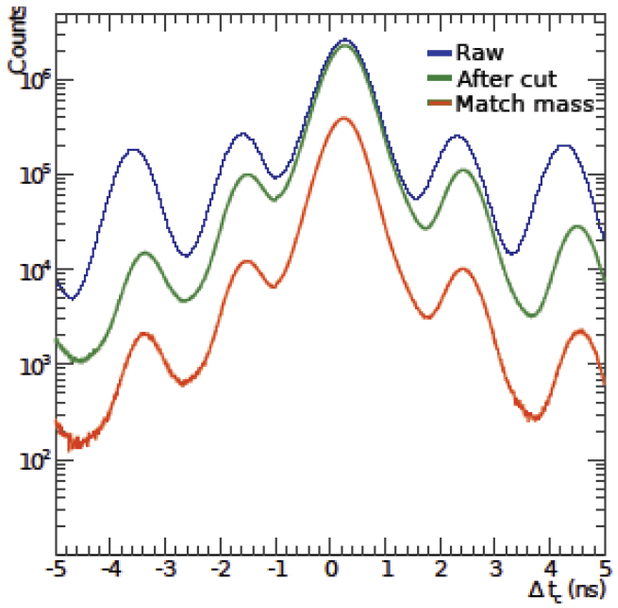
FROST Target





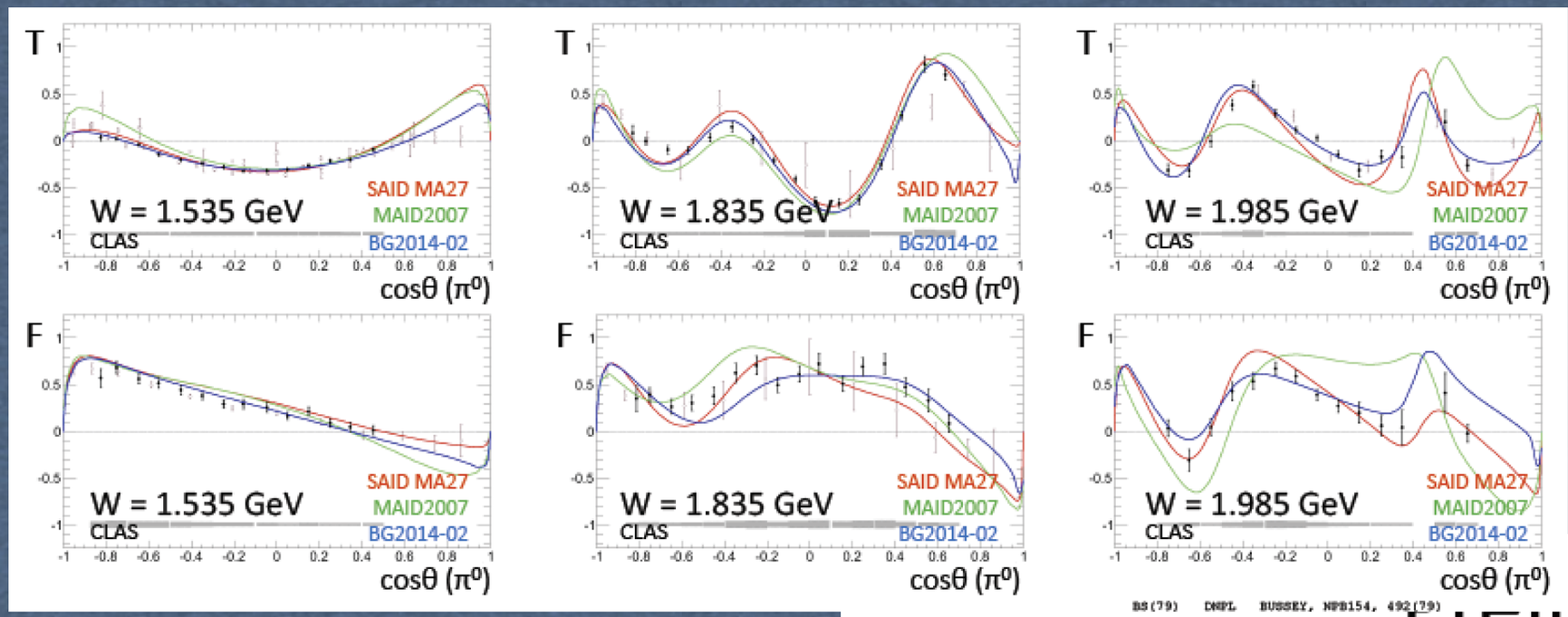
Proton Identification and Photon Selection





Systematic Uncertainties

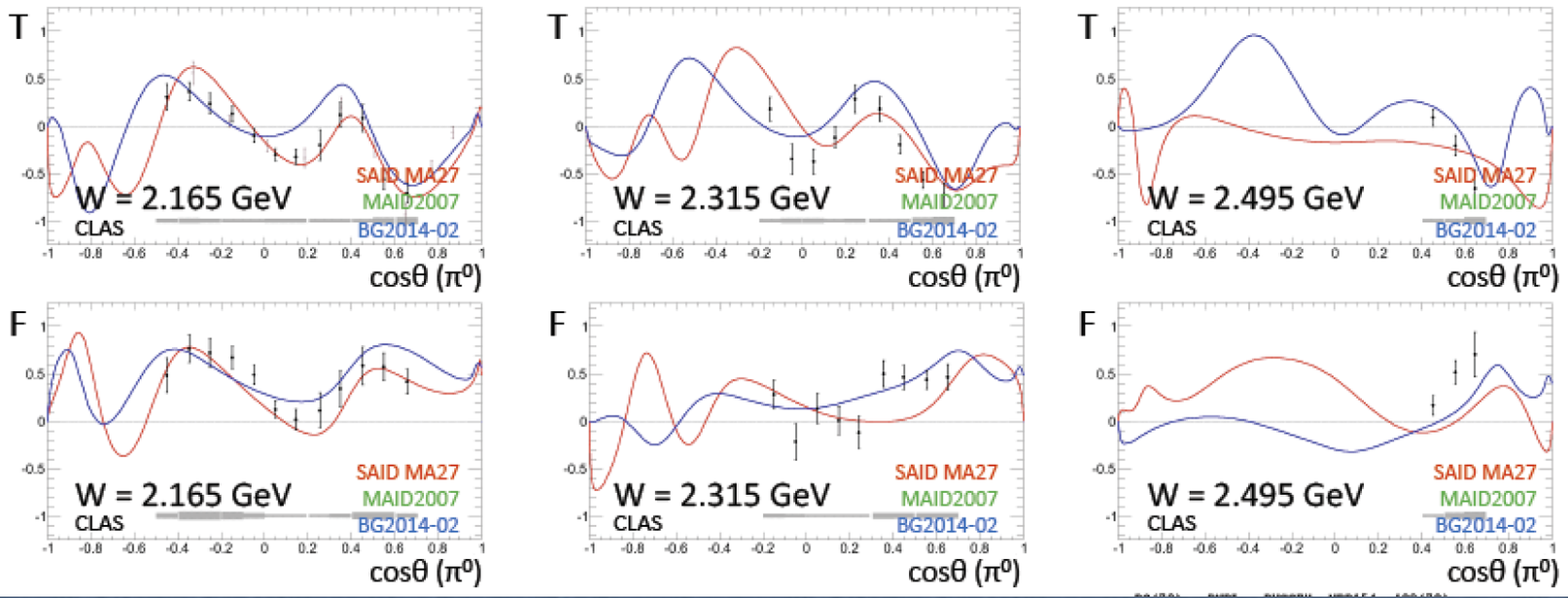
Item	$\sigma(T)$	$\sigma(F)$
Beam-Charge asymmetry	—	0.2%
Degree of beam polarization	—	3%
Degree of target polarization	4%	4%
Target-polarization orientation φ_0	< 0.001	< 0.001
Accidental background	2%	2%
Proton misidentification	2%	2%
Background subtraction	± 0.012	± 0.015
Run-group acceptance changes	± 0.015	—
Total	$4.9\% \pm 0.019$	$5.7\% \pm 0.015$



Preliminary

Observables T and F in $\gamma p \rightarrow \pi^0 p$

Observables were extracted for 37 bins in W from 1.43 GeV to 2.54 GeV.



WG Reviews status

Released

Gamma n --> K Y from g14
PI:R.Schumacher
RC:W.Briscoe (Chair), B.McKinnon , A.DAngelo

2pi Electroproduction from e16
PI:A.Trivedi
RC: Philip Cole (Chair), Daria Sokhan , Victor Mokeev
Status: started on Oct , 1 round in 1 month, response on Feb 1, APPROVED

WG Reviews status

New since last meeting

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, I round almost done

Determination of E double polarization observable for the reaction gn—>K+Sigma- from g14

PI: N.Zachariou
RC: Annalisa DAngelo (Chair), Michael Dugger , Maurik Holtrop
Status: started on Nov 9, I round in ~2 months, quick response from the PI, II round close to be distributed

Search for Csi* Photoproduction from Threshold to 3.3 GeV

PI: K.Hicks
RC: David Ireland (Chair), Carlos Salgado , Yordanka Ilieva
Status: started on Oct 15, I round in 1 month, waiting for PI response

WG Reviews status

In progress

Photoproduction of the 3π mesons in the reaction $\gamma p \rightarrow \pi+\pi+\pi-n$ with CLAS detector at 6 GeV/c

PI:P.Eugenio

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

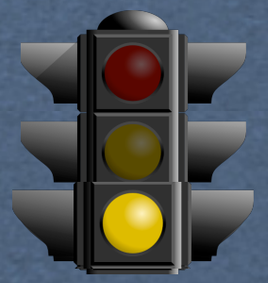
Status: 2nd round, response received, almost done

Dalitz Plot Analysis of eta' to 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. Is the analysis dead ?????



Exclusive pi- 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 ???

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

PI:H.Jiang

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

Status: no info received from March; presentation at the HSWG ????

WG Reviews status

Radiative decay of eta' to pi+ pi- gamma from g11 data set

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

Spin observables in eta meson photoproduction on the proton from FROST data

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

Measurement of Sigma in pi- photoproduction on the neutron from the g13b dataseta

PI: D.Sokhan (GlasgowU) et al.
RC: Eugene Pasyuk (Chair), Nicholas Zachariou , Paul Mattione
Started Jul 2016
Status: waiting for comment from author, ????

Pentaquark search in g10 by using the MMSA method

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

KLambda and KSigma from FROST

PI: N.Walforf et al.
RC: S.Strauch, M.Holtrop, P.Mattione,
Started May 2015
I 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 …

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: ?????????????

CLAS Working Groups Joint Session

14:30 - 16:00 **CLAS WGs Joint Session: CLAS12 physics and analyses**

Remote connection: https://bluejeans.com/825591695

Conveners: Dr. Marco Battaglieri (INFN-GE), Mr. Marco Contalbrigo (INFN Ferrara), Dr. Michael Wood (Canisius College), Latifa Elouadrhiri (Jefferson Lab)

Location: CEBAF Center (F113)

14:30 **First look at CLAS12 data from online and offline data processing** *30'*
Speaker: Francois-Xavier Girod (JLab)

15:00 **Analysis of elastic scattering at 2.2 GeV** *20'*
Speaker: Nick Markov (University of Connecticut)

15:20 **CLAS12 kinematic corrections** *20'*
Speakers: Joshua Artem Tan, Stefan Diehl

15:40 **Discussion** *20'*

16:00 - 16:30 Coffee Break

16:30 - 18:10 **CLAS WGs Joint Session: CLAS12 physics and analyses**

Remote connection: https://bluejeans.com/825591695

Conveners: Dr. Marco Battaglieri (INFN-GE), Mr. Marco Contalbrigo (INFN Ferrara), Dr. Michael Wood (Canisius College), Latifa Elouadrhiri (Jefferson Lab)

16:30 **Normalized electron yields** *20'*
Speaker: Andrey Kim (UCONN)

16:50 **First look at DIS and SIDIS** *20'*
Speaker: Dr. Harut Avagyan (Jefferson Lab)

17:10 **Analysis of low-q, quasi-real processes** *20'*
Speaker: Dr. Derek Glazier (University of Glasgow)

17:30 **Analysis of ep->eppi0 from CLAS12 2.2 GeV data and comparison with CLAS e1e** *20'*
Speaker: Ken Hicks (Ohio University)

17:50 **Discussion** *20'*