Jefferson Lab
EXPLORING THE NATURE OF MATTER

U.S. DEPARTMENT OF ENERGY

PAC 44 - Edit A Search for Hybrid Baryons in Hall B with CLAS12

Editing Proposal

Note: This page is for editting Proposal - A Search for Hybrid Baryons in Hall B with CLAS12
The deadline to complete this proposal is: 06/06/2016 08:00 AM EDT

If you need to create a new proposal click here

This proposal can not be modified because it was submitted.

Proposal Cover Sheet(PAC 44)

Proposal Type
New Run Group Proposal

Current Status: Submitted

Toggle(Expand/Collapse) Content

Basic Information

Title *
A Search for Hybrid Baryons in Hall B with CLAS12

Other Run Group Titles
Indicate the other proposal titles in this group
Add Other Proposal

- **Proposal Title** *
  Nucleon Resonance Structure Studies Via Exclusive KY Electroproduction at 6.6 GeV and 8.8 GeV
  Remove
- **Proposal Title** *
  Deeply Virtual Compton Scattering with CLAS12 at 6.6 GeV and 8.8 GeV
  Remove

Days Requested for Approval
100

Experiment Halls *
A ☐
B ☑
C ☐
D ☐
Acc ☐
Inj ☐
LERF ☐

Proposal Physics Goals:

Indicate any Experiments that have physics goals similar to those in your proposal.

Approved, Conditionally Approved, and/or Deferred Experiment(s) or proposals.

E12-06-108A, E12-09-003

Collaboration-Approved Proposals:
If you will be running in parallel with an approved experiment, please indicate the experiment number

none

Key Experiment Parameters

List Beam Energies and Beam Days: (e.g. 30 Days at 11 GeV, 20 Days at 8 GeV)

50 days at 6.6 GeV, 50 days at 8.8 GeV

List Range of Beam Currents: (e.g. 10-60 mA)

1-200 nA

Indicate Major Apparatus: (e.g. CLAS12 & RICH, GLUEX, SHMS, HMS, SBS, SOLID)

CLAS12 & FT & RICH & MM

Contact Us

Spokespersons

Add Spokeperson

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After saving, this email address will automatically receive an email that will provide information on how to update this proposal if needed before the deadline.

Author List

As of PAC 43, the author list section was added and should include the full first name, last name, institution, and author type of each author. Please select the CSV file that contains the authors list. Any author with the same first name, last name, and institution will be ignored.
File Format

Click here to view a sample file

Accepted extensions list:

- *.csv*
- *.txt*

Browse... No file selected.

Clear

Proposal's Authors List

This section contains the saved proposal's authors.

Remove All Authors

First Name	Last name	Institution	Author Type
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Annalisa	D'Angelo	Universita di Roma Tor Vergata	Contact Person

Lab Resources List

List below significant resources - both in equipment and human - that you are requesting from Jefferson Lab in support of mounting and executing the proposed experiment. Do not include items that will be routinely supplied to all running experiments such as the base equipment for the hall and technical support for routine operation, installation, and maintenance.

Major Installations

Equipment

None beyond standard Hall B

Support Structures

None beyond standard Hall B

Data Aquisition/Reduction

Support Structures

JLab computer farm, Hall B DAQ, MSS for data storage, work disk space for cooking and analysis, standard Hall B online/offine computing

Software

Standard Hall B DAQ for online, standard calibration, cooking, and analysis software and support for Hall B data reduction, analysis, and simulation, CLAS12 database

Major Equipment

Magnets

CLAS12 torus and solenoid, standard beamline magnets including the Hall B photon tagger for beam tuning and Moller polarimeter

Power Supplies

Standard supplies for Hall B operation of CLAS12 and beamline elements

Targets

Unpolarized liquid-hydrogen target, 5-cm long, standard Hall B configuration

Detectors

CLAS12, MM, FT, CND, RICH, Tagger, beamline

Electronics

Standard for Hall B and CLAS12, including Moeller polarimeter

Computer Hardware

Standard for Hall B online, JLab computer farm, MSS, and work disk storage

Other Resources

None beyond standard Hall B

Beam Requirement List

Hall Liaison:

Volker Burkert (burker

List all combinations of anticipated targets and beam considerations required to execute the experiment. (This list will form the primary basis for the Radiation Safety Assessment Document (RSAD) calculations that must be performed for each experiment.) support for routine operation, installation, and maintenance.

Beam Requirements: + Add Beam Requirement

	Beam Energy(MeV)	Mean Beam Current(μA)	Polarization and Other Requirements	Est Beam-On Time(hours)
Remove	6600	0.1	polarized beam	1200

Remove	8800	0.1	polarized beam	1200

Hazard Identification Checklist

Check all items for which there is an anticipated need.

Cryogenics | Electrical Equipment | Radioactive Materials | Pressure Vessels | Special Target Materials | Flammable | Drift Container | Other Target Materials | Vacuum Vessels | Radioactive Sources | Large Mech. Structures | Lasers | Hazardous Materials | General

- [ ] **Beamline Magnets**
- [x] **Analysis Magnets**
- [ ] **Target Magnets**

Type Torus, solenoid

Flow Rate standard

Capacity standard

Computing Requirement List

Silo/Mass Storage (Tape)

MSS, work disk space, standard Hall B online DAQ storage

Amount of Simulated Data Expected

4 PB

Amount of Raw Data Expected(TB)

4 PB

Amount of Processed Data Expected(TB)

0.5 pB

Online Storage Disk Required (TB)

500 TB

Imported Data Expected from Offsite Institution

0

Exported Data Expected to Offsite Locations

50 TB

Computing

Simulation Requirements(SPEC CINT 2000hrs)

140,000 hours

Production(Replay, Analysis, Cooking) Requirements (SPEC CINT 2000hrs)

60,000 hours

Other Requirements
Please add any additional information that will be useful for JLab's IT Division regarding unique configurations or that may require additional resources and/or coordination. Please indicate if possible what fraction of these resources will be provided by collaborating institutions and how much is expected to be provided by JLab.

JLab will provide MSS, disk space for data processing/cooking, disk space for DSTs. DSTs will be made available for offsite copying and analysis.

Assumed Resource Requirements
Use this section to provide any information regarding the assumed requirements for the resources needed.

Standard Hall B requirements

Attachments

1. Hybrid_Baryon_PAC44.pdf