Jefferson Lab
Thomas Jefferson National Accelerator Facility

Jefferson Lab PAC 42
Proposal Cover Sheet

Experimental Hall:	**C**
Days Requested for Approval:	**39.1**

This document must be received by close of business Monday, May 6, 2013 at:

Jefferson Lab
Mail Stop 12B
12000 Jefferson Ave.
Newport News, Va
23606

Proposal Title:

Tensor Asymmetry Azz in the x>1 Region

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.
E12-13-011

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

Key Experimental Parameters

List Beam Energies and Beam Days: (e.g. 30 Days at 11 GeV, 20 Days at 8 GeV)
25 days at 8.8 GeV, 3.75 days at 6.6 GeV, 1.25 days at 2.2 GeV

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

Indicate Major Apparatus: (e.g. CLAS12 & RICH, GLUEX, SHMS, HMS, SBS, SOLID)
JLab/UVa DNP Target, SHMS, HMS

Contact person:

Name :	Elena Long
Institution :	University of New Hampshire
Address :	9 Library Way

Spokespersons:

1. Elena Long
2. Karl Slifer
3. Patricia Solvignon
4. Donal Day
5. Dustin Keller

Address :	DeMerritt Hall, Room 322
City, State, ZIP/Country :	Durham, NH, 03824
Phone :	603-862-5312
Fax :	
Email :	ellie@jlab.org

6. Douglas Higinbotham
7.
8.

Contact person:

Recipient Date :	6/1/2014
By :	

LAB RESOURCES LIST

Jlab Proposal No. : Date

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 item 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 (either your equip. or new equip requested from JLab)

JLab/UVa DNP Target

New Support Structures

Data Acquisition/ Reduction

New Support Structures

New Software

Major Equipment

Magnets :

Power Supplies:

Targets:

JLab/UVa DNP Target

Detectors:

Electronics:

Computer Hardware:

Other:

Slow Raster

Other:

BEAM REQUIREMENTS LIST

Jlab Proposal No. : | **Date :**

Hall: C | **Anticipated Run Date** | **PAC Approved Days:**

Spokesperson: Elena Long | **Phone:** 603-862-5312

Email: ellie@jlab.org | **Hall Liaison:**

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.)

Condition No.	Beam Energy (MeV)	Mean Beam Current (μA)	Polarization and Other Special Requirements (e.g. time structure)	Target Material (use multiple rows for complex targets - e.g. w/windows)	Material Thickness (mg/cm^2)	Est. Beam-On Time for cond. No. (hours)
1	8800	0.09	Unpolarized	ND3	300	600
2	8800	0.09	Unpolarized	Carbon	300	6
3	6600	0.09	Unpolarized	ND3	300	90
4	6600	0.09	Unpolarized	Carbon	300	6
5	2200	0.09	Unpolarized	ND3	300	30
6	2200	0.09	Unpolarized	Carbon	300	6

The beam energies, E_{Beam}, available are: $E_{Beam} = N \times E_{Linac}$ where N = 1, 2, 3, 4, or 5. E_{Linac} = 800 MeV, i.e, available E_{Beam} are 800, 1600, 2400, 3200 and 4000 MeV. Other energies should be arranged with the hall leader before listing.

HAZARD IDENTIFICATION CHECKLIST

Jlab Proposal No. : _____ **Date :** _____

Check all items for which there is an anticipated need.

Cryogenics
- ☐ beamline magnets
- ☐ analysis magnets
- ☐ target magnets

type: Superconducting
flow rate: 5 l/hr
capacity: 10 l

Electrical Equipment
- ☐ cryo/electrical devices
- ☐ capacitor banks
- ☐ high voltage
- ☐ exposed equipment

Radioactive/Hazardous Materials
List any radioactive or hazardous/toxic materials planned for use:

Pressure Vessels
- ☐ inside diameter
- ☐ operating pressure
- ☐ window material
- ☐ window thickness

Flammable Gas or Liquids
type:
flow rate:
capacity:

Drift Containers
type:
flow rate:
capacity:

Other Target Materials
- ☐ Beryllium (Be)
- ☐ Lithium (Li)
- ☐ Mercury (Hg)
- ☐ Lead (Pb)
- ☐ Tungsten (W)
- ☐ Uranium (U)
- ☐ *Helium (^{3}He)
- ☐ Other (List below)

1,ND3

Special Target Materials
- ☐ *Helium (^{3}He)
- ☐ Deuterium

Vacuum Vessels
- ☐ inside diameter
- ☐ operating pressure
- ☐ window material
- ☐ window thickness

Radioactive Sources
- ☐ permanent installation
- ☐ temporary use

type:
strength:

Large Mech. Structure/System
- ☐ lisfting devices
- ☐ motion controllers
- ☐ scaffolding or
- ☐ elevated platforms

Lasers
type:
wattage:
class:

Installation:
- ☐ permanent
- ☐ temporary

Use:
- ☐ calibration

Hazardous Materials
- ☐ cyanide plating materials
- ☐ scintillation oil (from)
- ☐ PCB's
- ☐ methane
- ☐ TMAE
- ☐ TEA
- ☐ photographic developers
- ☐ other (list below)

General

Experiment Class
- ☐ Base Equipment
- ☐ Temp. Mod. to Base Equip.
- ☐ Permanent Mod to Base Equipment
- ☐ Major New Apparatus

Other:

☐ alignment		

Data:

Proposal Title: Tensor Asymmetry Azz in the x>1 Region

Spokesperson: Elena Long **Experimental Hall:**

Raw Data Expected

Silo/Mass Storage (Tape): 2T

Amount of Simulated Data Expected (TB):

Amount of Raw Data Expected (TB) 2

Amount of Processed Data Expected: 1

Online Storage (Disk) Required (TB): 1

Imported Data Expected from Offsite Institutions:

Exported Data Expected to Offsite Locations:

Computing:

Simulation Requirements (SPEC CINT2000 hrs):

Production (Replay, Analysis, Cooking) Requirements (SPEC CINT2000 hrs):

Other Requirements

Please add any additional information that will be useful for JLab's Information Technology group 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.