

		TITLE: <u>ES&H Manual</u>
DOCUMENT ID:	3310 Appendix T2 Operational Safety Procedure Form	

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<input checked="" type="checkbox"/> OSP		<input type="checkbox"/> TOSP	
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***Attach the Task Hazard Analysis (THA) related to this procedure**

Issue Date:		Expiration Date:	
(No more than three years from Issue Date except TOSP which is three months from issue date)			
Title:	Testing a Prototype Cherenkov Detector in Hall A		
Location:	Hall A		
Risk classification <small>(See ESH&Q Manual Chapter 3210 Appendix T3 Risk Code Assignment.)</small>	Without mitigation measures (3 or 4):		
	With mitigation measures in place (0, 1, or 2):		
Document Owner(s):	Bogdan Wojtsekhowski	Date:	11/16/2011

Supplemental Technical Validations:

Hazard Reviewed (per ES&H Manual 2410-T1):	Subject Matter Experts Signature:	Date:
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Approval Signatures:	Print	Signature	Date:
Division Safety Officer:	_____	_____	_____
Department or Group Head:	_____	_____	_____
Safety Warden of Area:	_____	_____	_____
Other Approval(s):	_____	_____	_____

Document History:

Revision:	Reason for revision or update:	Serial number of superseded document

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Purpose of the Procedure	
We propose to install a prototype gas Cherenkov detector in Hall A during the upcoming run period from November 2011-May 2012. The information gained from this test will allow us to pursue a full detector design for a Cherenkov detector to be used in the BigBite spectrometer with the upgraded beam energy.	
Scope – include operations, people, and/or areas where procedure applies	
This project will be managed by Prof. Todd Averett, College of William and Mary and Bogdan Wojtsekhowski, Jefferson Lab Hall A. The detector will be placed in a location on the beam left side in Hall A at a scattering angle of approximately 55 degrees. Distance from the pivot to the detector can be varied from approximately 5-20 meters. The detector will be mounted on top of a movable platform, approximately 8-10 feet above ground level. Access to the detector will be by movable, locking stairs. Personnel will not work directly on the platform. Assistance with this project will be provided primarily by the above-mentioned physicists, and a post doc and graduate students for the College of William and Mary.	
Description of the Facility: (include floor plans and layout of a typical experiment or operation)	
See attached layout and description above.	
Authority and Responsibility:	
4.1 Who has authority to implement/terminate	
	Todd Averett, Bogdan Wojtsekhowski
4.2 Who is responsible for key tasks	
	Todd Averett, Bogdan Wojtsekhowski

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DOCUMENT ID: **3310 Appendix T2**
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Who analyzes the special or unusual hazards (See [ES&H Manual Chapter 3210 Appendix T1 Work Planning, Control, and Authorization Procedure](#))

Ed Folts, Rob Wines, Bogdan Wojtsekhowski, Todd Averett , Robert Michaels

Personal and environmental hazard controls including:

6.1 Shielding

Shielding for one rack of electronics is requested if possible. We have been advised that this is unlikely and will locate our electronics further away from the interaction point if necessary to reduce radiation problems to the DAQ system.

6.2 Interlocks

None needed.

Other

Monitoring systems

Remote monitoring of the detectors, high voltage and electronics can be done from the Hall A counting house via computer.

Ventilation

None especially needed. System will contain approximately 10 cubic feet of either CO₂ or C₄F₈O at atmospheric pressure. These gases are non-flammable and non-toxic. They have been used previously in Hall A in significantly larger quantity by previous detectors without special provisions for ventilation or safety concerns.

List of safety equipment (i.e: personal protective equipment or special tools)

TITLE: **ES&H Manual**

DOCUMENT ID: **3310 Appendix T2**
Operational Safety Procedure Form

Serial Number:

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Rolling stairway needed for safe access to detector stand. Detector will need to be safely strapped or secured to the top of the support stand as needed.
Associated administrative procedures
None specific
Operating guidelines
None specific
Notification of Affected Personnel (How and Who)
List of steps required to execute the procedure from start to finish.
Fabricate top plate for pedestal. Design is approved by Jefferson Lab and will be made from ½” thick aluminum plate. The detector and triggers, weighing approximately 500lbs will be placed on platform using Hall A crane and secured according to Hall A requirements. Straps are proposed for securing. A single electronics rack will be rolled next to the stand and detector phototubes connected by signal and HV cables. Operation of detector will commence and will be done in a parasitic manner so not to disturb or impact the approved experimental program. Data will be collected and analyzed throughout the entire period. Detector will be removed after the test is completed. It will be surveyed and returned to William and Mary afterwards.
Back out procedures, i.e., steps necessary to restore the equipment/area to a safe level.
Removal of physical system from Hall A floor.
Special environmental control requirements:
None

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Environmental Impacts (See EMP-04 Project/Activity/Experiment Environmental Review)
Greenhouse gases, CO2, C4F8O
Abatement Steps – Secondary Containment, or Special Packaging requirements
Training requirements
Personnel associated with this project will need required training to enter Hall A. Safety training for proper access to the installed detector via rolling stairs is needed.
Unusual/Emergency procedures e.g., Injury, Fire, Loss of power
None
Instrument calibration requirements, e.g., safety system/device recertification, RF probe calibration
None
Inspection schedules
None
References/Associated Documentation
See attached project description submitted to hall leader Robert Michaels
List of Records Generated (Include Location / Review and Approved procedure)

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Authorized/Trained Individuals

Print Name/Signature	Date
Todd Averett	
Bogdan Wojtsekhowski	
Huan Yao	
Melissa Cummings	
Vincent Sulkosky	
Eric Jensen	
Christine McLean	
Albert Shahinyan	

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ISSUING AUTHORITY	APPENDIX AUTHOR	APPROVAL DATE	EFFECTIVE DATE	EXPIRATION DATE	REV.	
ESH&Q Division	Harry Fanning	10/05/09	01/01/10	10/05012	0	

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