

Jefferson Lab Program Advisory Committee 41

Science Topic: 1 [] 2 [] 3 [] 4G [] 4T [] 5 [] 6 [x]
[The PAC has distributed experiments by six science categories, but has split science category 4 into two parts: related to GPDs (4G) and to TMDs (4T)]

Experiment Number: E12-13-008

Experiment Title: Measuring the Charged Pion Polarizability in the $\gamma \gamma \rightarrow \pi^+\pi^-$ Reaction

Spokespersons: R. Miskimen, D. Lawrence, E. Smith

Rating: A-

Days: 25

Hall: D

PAC #: PAC40

Run Group #: -

Run Group Days: -

Stage I/II: Stage I experiment [x] Stage II experiment []

[List here if a Stage I (resources need to be identified/obtained) or a Stage II (resources are essentially available) experiment]

Equipment and Beam Requirements:

[For "Description" list any equipment needs beyond foreseen CD-4B base equipment (i.e. HRS, CLAS12, HMS/SHMS, GlueX), beam specification needs beyond the day-0 beam parameters, infrastructure needs beyond what is already available, and any further assumptions, line by line. For "Year Complete" list the year in which the requirement is expected to be complete]

<i>Description</i>	<i>Year Complete</i>
a. Coherent Peak at 5.5-6GeV	2015
b. 50 nA on a 20um diamond radiator	2015
c. Solid target	2016
d. New muon detector downstream of the FCAL (assuming funding is available)	Q1 2018
e.	

Concerns or Equipment Conflicts:

[There may be cases where spokespersons have special worries about beam or cryogenic need compatibility with experiments in other Halls, or foreseen incompatibilities with other equipment (requiring removal of spectrometer magnets or detectors). Please list such concerns here, line by line]

Description

- a. Space downstream of FCAL is constrained and any interference between a new muon detector and existing apparatus must be resolved.
- b.
- c.
- d.
- e.

Specific Experiment Requirements:

[List here a tabular form of the running conditions of the experiment with the required energies and PAC days. Explicitly indicate here also, for instance, if the experiment requires non-standard energy (no multiple of 2.2 GeV/pass), or list specific torus magnet values and polarity, with the associated PAC approved days. In the end, we need to be able to cross-correlate this table to your high-level science goals and Hall/run group compatibility.]

<i>Experiment Requirement</i>	<i>PAC days</i>
a. Calibration of muon chambers, testing new electronics	5 days
b. Production data	20 days
c.	
d.	