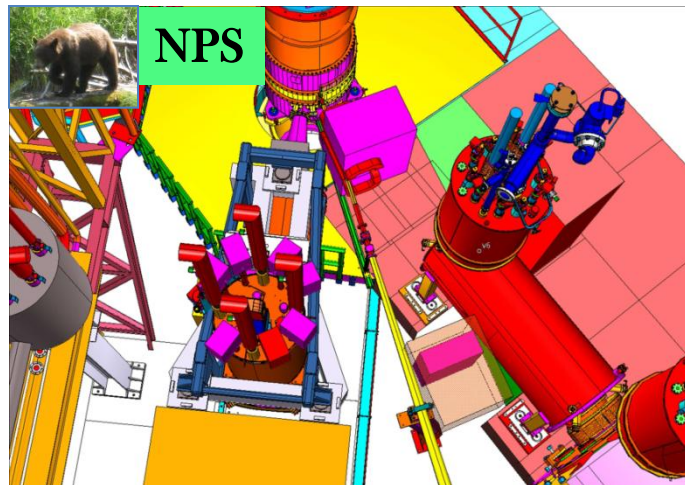


NPS Collaboration Meeting

JLab, Newport News, VA

14 November 2013

T. Horn



Outline

- Welcome
- Where we are
- Where we want to go
- How we get there

Welcome!

Thank you for attending!

Where we are

- ❑ Summer 2013 – three proposals and one LOI submitted to PAC40
 - Excl. DVCS and π^0 cross section – *approved with A rating*
 - SIDIS π^0 – *approved with A-*
 - RCS – deferred, but positive comments for coming back
 - LOI – positive comments and suggestions to combine efforts with RCS
- } Same Run Group
- ❑ Initial NPS design drawings, component design, e.g., active HV bases, completed
 - ❑ Preparations for NSF/MRI funding application ongoing

Where we want to go

Develop and carry out a program with neutral final states in Hall C using a neutral particle spectrometer (NPS), e.g.,

- Measure the energy dependence of the DVCS cross section to disentangle the interference term
- Measure the relative L/T cross section in exclusive π^0 production – access to transversity/ordinary GPDs
- Measure the basic SIDIS cross section to validate the SIDIS theoretical framework at JLab energies
- RCS measurement to constrain the CFF and perhaps also TPE effects in elastic e-p scattering
- Exclusive π^0 photoproduction at large energies to probe transition from meson-nucleon degrees of freedom
- Additional experiments with, e.g., polarized targets

How we get there (1)

- Develop a strategy for funding and building the NPS
 - NSF, DOE, and/or European funding opportunities
 - How should the overall plan be structured?
 - What is the timing?
 - How should costs be shared?
 - Spectrometer design and integration in Hall C
- Develop the experimental program further, e.g., RCS
- Work through this process as a collaboration and with JLab

How we get there (2)

Goals of this meeting

- Make plans for RCS re-submission at the PAC next year
- Formulate a plan for NPS Funding and how we should move ahead with it
- Begin discussion of future experiments with NPS

The time between 4:00-6:00 pm time block is for discussion of the last two items

Morning Agenda

RCS Planning

9:00 – 9:20 – Welcome and Plans for the Day

9:20 – 10:00 – RCS Theory I – Nikolay Kivel

10:00 – 10:40 – RCS Theory II – Christian Weiss

10:40 – 11:00 Break

11:00 – 11:20 – RCS Update – David Hamilton

11:20 – 11:40 – Excl. π^0 Photoprod. Update – Dipangkar Dutta

11:40 – 12:10 – Discussion

Afternoon Agenda

NPS and Physics Program Discussion

1:30 – 1:45 – Hall C View on the NPS – Steve Wood

1:45 – 2:15 – NPS Design – Mike Fowler

2:15 – 2:45 – PbWO_4 and PbF_2 crystals – Arthur Mkrtchyan

2:45 – 3:15 – DAQ plans in HC and NPS – Brad Sawatzky

3:15 – 3:45 – fADCs: Status and Opportunities – Chris Cuevas

3:45 – 4:00 Break

4:00 – 5:00 – Future Program Development and Funding

5:00 – 6:00 – Future NPS experiments