

Nuclear Physics Working Group Report

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October 6, 2017

Presentations

Since June 2017 meeting, there were 17 presentations.

Invited - 4 (2 approved)

Contributed - 2 (2 approved)

General - 10 (3 notified)

Poster - 1 (1 notified)

Reviews and Publications

Ultrafast nucleons in asymmetric nuclei by M. Deur et al. has moved to ad hoc review.

5 other analysis reviews open. No new analysis reviews.

Submitted to PRL: First Exclusive Measurement of Deeply Virtual Compton Scattering off ^4He : Toward the 3D Tomography of Nuclei by M. Hattawy et al.

PAC45 Results

Proposal/LOI	Title	Contact	Status
PR12-17-006	Electrons for Neutrinos: Addressing Critical Neutrino-Nucleus Issues	O. Hen	C2
PR12-17-012	Partonic Structure of Light Nuclei	Z.-E. Meziani	A-
PR12-17-012A	Tagged EMC Measurements on Light Nuclei	R. Dupre	A-
PR12-17-012B	Spectator-Tagged Deeply Virtual Compton Scattering on Light Nuclei	W. Armstrong	A-
LOI 12-17-001	Study of J/ψ Photoproduction off deuteron	Y. Ilieva	Endorsed
LOI 12-17-002	Search for a ϕ -N Bound State at Hall B	H. Gao	Endorsed

Agenda

14:30 - 16:00

Nuclear Physics Working Group

Convener: Dr. Michael Wood (Canisius College)

Location: CEBAF Center (A110)

14:30 **Nuclear Physics Working Group business 15'**

Material:

Slides



14:45 **Drift Chamber Tracking for CLAS12 25'**

Speaker: Latif Kabir (Mississippi State University)

Material:

Slides



15:10 **NPWG Involvement in First CLAS12 Data Taking 30'**

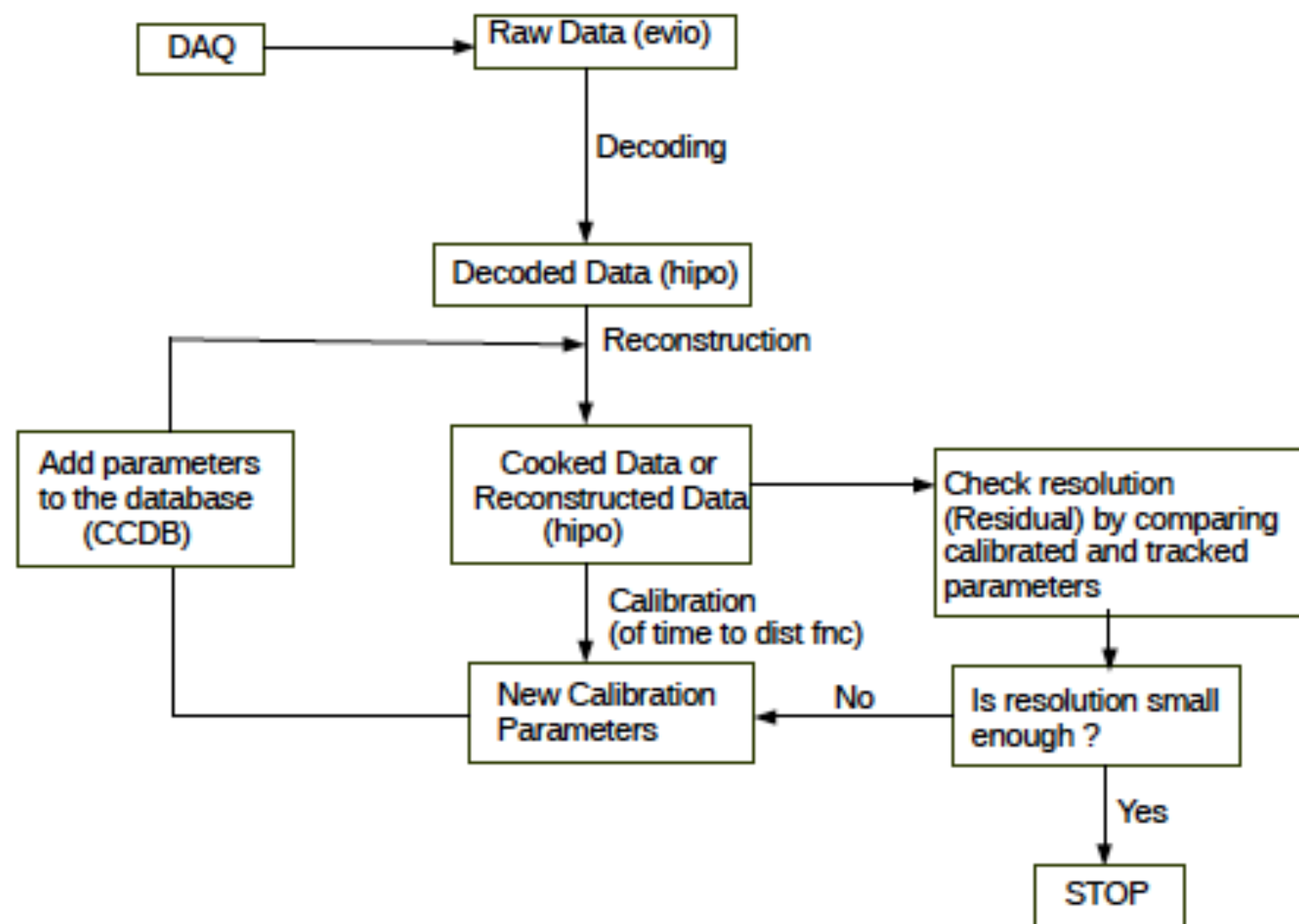
Speaker: Dr. Michael Wood (Canisius College)

Material:

Slides

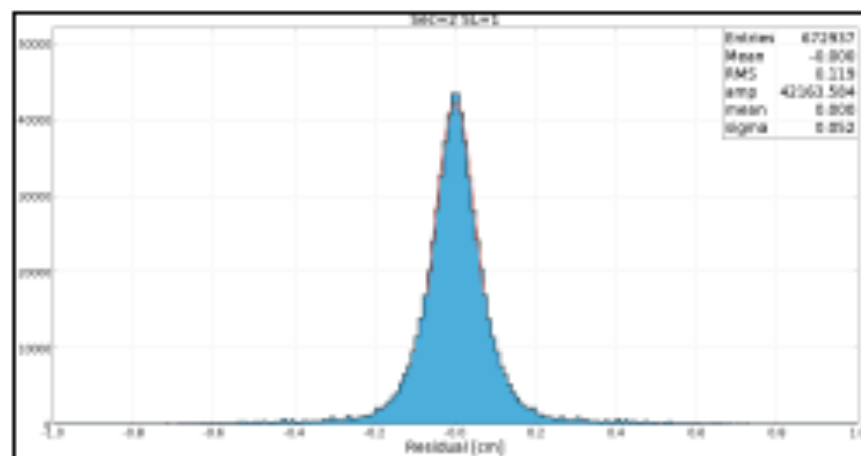


DC Calibration Flow Chart

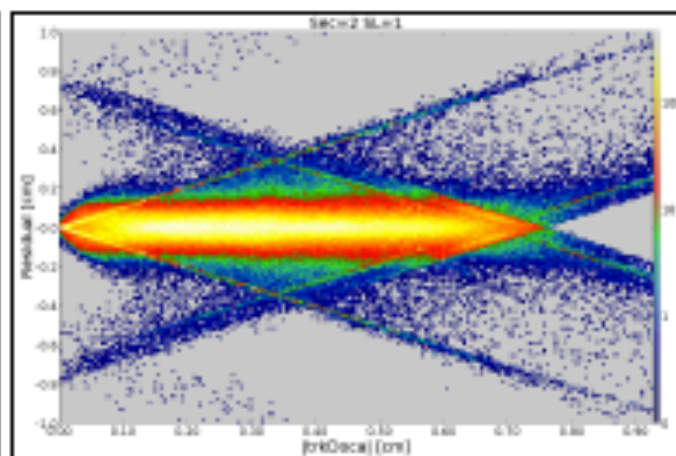


KPP Data Calibration for Sector = 2 Superlayer = 1

Before
 $\sigma = 0.052$ cm

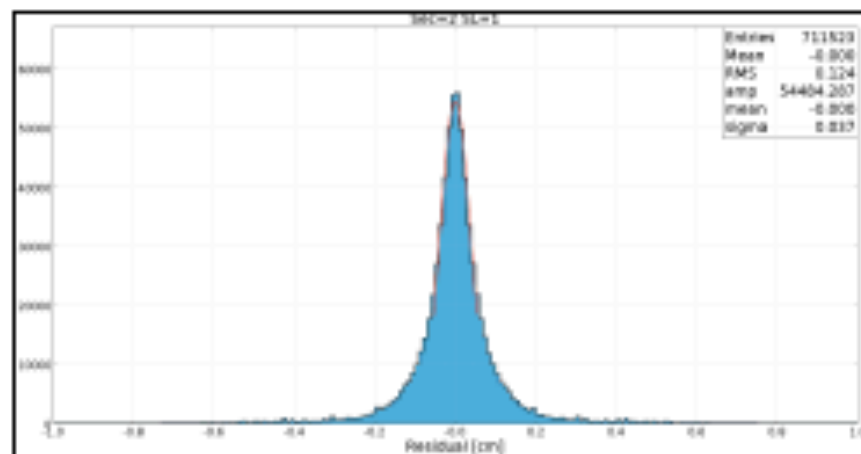


(a) Residual distribution

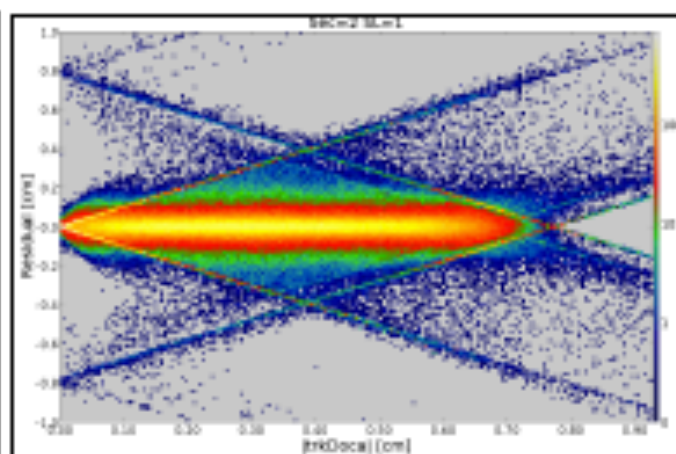


(b) Residual vs trkDoca

After
 $\sigma = 0.037$ cm



(a) Residual distribution



(b) Residual vs trkDoca

NPWG and the Start of CLAS12 Running

I put out a call to NPWG members to get feedback on their involvement with the first experiment.

Unlike Run Groups A and B, almost all NP Run Groups (D, F, G, and L) are stand alone experiments. Moreover, these runs are years away.

I want to gather information on

- What is the involvement (service, analysis, ...)?
- Is the focus on CLAS6 analyses until NP runs?
- Thoughts on a common analysis framework?

Responses:

- Miss. State U. - (L. Kabir) DC calibration and monitoring. He will be DC expert for first experiment.
- ANL - (S. Johnston) SVT reconstruction.