

PAC 37 CALL FOR PROPOSALS: 12 GeV SCIENCE AND THE CONTINUATION OF THE ASSIGNMENT OF SCIENTIFIC PRIORITIES

October 6, 2010

PAC37 will continue the annual call for 12 GeV science proposals. As in the recent past, the criterion for approval of new proposals will be that the proposal represents "high quality physics that, based on what we know today, is highly likely to be of sufficient scientific merit that it will be included in *the top half of the priority list to be established for the first 5 years of 12 GeV operations.*" ***The deadline for submission of proposals is Wednesday, December 1, 2010.***

In addition to considering new proposals (in all categories), PAC37 will continue the process of assigning scientific priority and beam time to previously-approved and conditionally approved proposals by considering proposals in Category 6: "Low-energy tests of the Standard Model and Fundamental Symmetries". ***Updates to PAC37 for previously approved and conditionally approved proposals in Category 6 must be submitted no later than Wednesday, December 1, 2010.***

Proposals and updates for PAC37 should be submitted electronically using the instructions at http://www.jlab.org/exp_prog/PACpage/instructions.html

Detailed information on the process for proposal submission is available at http://www.jlab.org/exp_prog/PACpage/Guidelines.html. Note that some details of the submission process have changed; please read the guidelines with care. Note that we no longer require identification of a contribution to construction of the base equipment in the 12 GeV upgrade. However you are encouraged to provide such identification as appropriate and this information may be useful to the PAC. Note also that experiments may be proposed that use either significant new ancillary equipment or major new apparatus. The proposal submission guidelines provide more details about the additional information required of such proposals.

Conditionally approved proposals in Category 6 MUST return for review at this PAC or be considered as withdrawn. There will be a 30 minute presentation for the updated proposal in the first portion of the PAC meeting. Following the public presentation session the PAC will continue its discussions in closed session, and at least one spokesperson should be available either in person or by phone for 24 hours after the public session to answer questions as the PAC's discussion progresses. If approved, the proposal will be considered for rating along with the other approved proposals in the grading session

Grading session

New proposals in previously rated science categories will, if approved, receive their scientific rating and beam time allocation at this PAC. There will be a grading session to assign scientific ratings and beamtime allocations for all proposals approved at this PAC (other than those in Category 4), and for previously-approved proposals in Category 6. New proposals for Category 4 will be

reviewed for approval, but will not receive their scientific rating and beamtime allocation until a future PAC (see below).

For the grading session, the documents to be provided by previously-approved proposals in Category 6 include:

1. A brief written update (a few pages to 10 pages maximum) summarizing:
 - the scientific case for the proposal (emphasizing developments since the written proposal that are relevant) and
 - technical progress toward realizing the experiment. *If there have been any significant changes in the plans for the technical realization of the measurement in the proposal, these must be presented in sufficient detail that the JLab Technical Advisory Committee (TAC) can consider the changes with care. The 10 page limit will be relaxed in this case, and the proponents given sufficient space to provide technical details at the level of their initial proposal submission.*

The updates are due on **December 1, 2010** and will be sent to the PAC ahead of time. The PAC members assigned as primary readers will contact the spokesperson with any questions (or a statement that there are no questions) at least 1 week before the PAC meeting.

2. A set of three slides to be shown in the "open" portion of the grading session, with content as follows:
 - The first slide should summarize the scientific case for the experiment.
 - The second should summarize the anticipated data and its projected accuracy (e.g. range of relevant variables covered and the statistical and systematic errors anticipated at the nominal beam request).
 - The third slide can be anything else the collaboration would like to add that they feel is relevant.

The slides will be due on or before Wednesday, January 5 (the middle of the week before the PAC meeting).

The "open" session for previously-approved proposals in category 6 will begin with an overview/summary talk by a rapporteur. This will be a 45 minute talk summarizing the physics of the category, discussing each of the approved and conditionally approved proposals in the context of this category, and addressing how the proposals complement/supplement/overlap each other. At the PAC meeting the prioritization session will begin with the rapporteur's summary followed by a presentation of the sets of three slides for all experiments in the category under review. *Spokespersons of each experiment undergoing the prioritization review are asked to suggest knowledgeable scientists who they would recommend as rapporteurs for the*

category of their proposal by Monday, October 18. The rapporteur would, ideally, have no conflict of interest as a member of one or a few of the proposals in the category, or, alternately could be involved in all of them. We will identify the rapporteur well before the PAC meeting and ask them to provide all spokespersons with copies of their intended viewgraphs prior to the presentation so that spokespersons will have the opportunity for constructive criticism. The talk will, however, in the end, represent the rapporteur's judgment and thoughts. Following this public session the PAC will continue its discussions in closed session. At least one spokesperson should be available either in person or by phone for 24 hours after the public session to answer questions as the PAC's discussion progresses.

Note that experiments in Category 6 that were conditionally approved at previous PACs will not be included in the public presentation session with the rapporteur as they will have had the opportunity to make a full "standard" presentation to this PAC as part of the review of their conditional approval status.

The results of the PAC's deliberations will become public as follows: the list of scientific ratings and beam time allocations will be provided to the Hall Leaders at the PAC closeout and then distributed to spokespersons within 24 hours. The final written PAC report will be posted on the JLab website and the user community notified by email as usual.

Completion of the Scientific Prioritization and Beamtime Allocation Process at Future PACs

Following PAC37, the rating process will have been completed for proposals in five of the six categories. It is anticipated that the final remaining category (4) will be rated at PAC38. All proposals coming to future PACs will be then be rated and given beam time allocations at the PAC to which they are submitted.

Conditionally Approved Proposals

The rule for newly conditionally approved 12 GeV proposals is that they must return for approval at one of the next 2 consecutive PAC meetings following the PAC at which they were conditionally approved.

Note: Conditionally approved proposals in Category 6 MUST return for review at this PAC or be considered as withdrawn. Conditionally approved proposals in Category 4 may wait until PAC38 unless they were approved at PAC35 or earlier.

Prioritization of Run Groups

There are a large number of experiments (currently only in Hall B) that have been organized into "run groups". Run groups include multiple experiments that can take data simultaneously on different and/or related physics using the same detector, target, and beam conditions. In addition to the individual experiment ratings reviews discussed above for the experiments within the run groups, we will carry out a review of the run groups themselves to establish their overall scientific priority. This will be done in a PAC session roughly one year before CLAS12 starts taking data. If similar situations evolve in the other halls we will do a similar "overall scientific priority" assignment to the run groups that evolve there.

Appendix: The Scientific Categories for 12 GeV Proposals

1. **The Hadron spectra as probes of QCD (rated)**
(GluEx and heavy baryon and meson spectroscopy)
2. **The transverse structure of the hadrons (rated)**
(Elastic and transition Form Factors)
3. **The longitudinal structure of the hadrons (rated)**
(Unpolarized and polarized parton distribution functions)
4. **The 3D structure of the hadrons (unrated)**
(Generalized Parton Distributions and Transverse Momentum Distributions)
5. **Hadrons and cold nuclear matter (rated)**
(Medium modification of the nucleons, quark hadronization, N-N correlations, hypernuclear spectroscopy, few-body experiments)
6. **Low-energy tests of the Standard Model and Fundamental Symmetries (to be rated at PAC37)**
(Møller, PVDIS, PRIMEX,.....)