



THOMAS JEFFERSON NATIONAL ACCELERATOR FACILITY

# BEAM REQUEST

User Liaison Office, CEBAF CENTER, Rm. C110

The information requested on the attached forms will be used to facilitate the preparations, installation, running, and de-installation of your experiment. If there are any questions about completing the Beam Request for your experiment, contact the appropriate Hall Leader.

**Please be sure to complete all blanks on all forms as required. If additional sheets are necessary, please number them separately. Once the Beam Request Form is completed, have it signed by the Hall Leader for your experiment, then return it to the User Liaison Office, CEBAF CENTER, Room C110, by the date indicated in the current “Call for Scheduling.” The last sheet, Radiation Budget Form, must be completed and provided to Pavel Degtiarenko at least two weeks in advance of the current “Call for Scheduling” deadline.**

Once your experiment has been scheduled, it will be necessary to complete the EH&S review requirements. These requirements include the following:

- Experiment Safety Assessment Document (ESAD)
- Radiation Safety Assessment Document (RSAD)
- Conduct of Operations (COO) Document

For experiments using simple targets and the “base equipment” in the halls, a standard version of the ESAD is required; the RSAD will be completed by the RadCon Group using information provided in the Beam Request about details of your experiment and the radiation budget calculated by Pavel Degtiarenko. For experiments requiring modification of the base equipment or major new equipment, the procedures and documents required are outlined in the document, “The Experiment Review Process at Jefferson Lab,” available online at [http://www.jlab.org/exp\\_prog/experiments/exp\\_sched.html](http://www.jlab.org/exp_prog/experiments/exp_sched.html)

There is a standard COO for each hall that only needs minor editing to describe experiment-specific issues. Spokesmen should adopt these standard COOs for uniformity of policies and practices from experiment to experiment. These hall standard COOs are available from the hall leaders. Spokesmen desiring a special COO for their particular experiment must provide it to the Physics Division EH&S Officer at least one month prior to the running of the experiment for review by the Technical Advisory Committee. Information on the required contents of the COO is available in the document, “Conduct of Operations for Jefferson Lab Experiments,” available online at [http://www.jlab.org/user\\_resources/PFX/NP-PFX/conduct.html](http://www.jlab.org/user_resources/PFX/NP-PFX/conduct.html)

If you have general questions, please contact Sue Ewing at 757-269-7687 or [ewing@jlab.org](mailto:ewing@jlab.org). Should you need to replace any of these pages, they are available on the web at [http://www.jlab.org/exp\\_prog/experiments/beam\\_req.html](http://www.jlab.org/exp_prog/experiments/beam_req.html)



# Jefferson Lab Beam Request

Experiment #: \_\_\_\_\_ Date: \_\_\_\_\_

Spokesperson: \_\_\_\_\_

1. Fill in the attached Proposed Commissioning and Run Schedule form (for the running of approved experiments) and/or the Appendix A form (for other activities requiring beam).
2. Complete the attached Radiation Budget form and submit it to P. Degtiarenko at least two weeks before the beam request submission deadline.
3. What fraction of the PAC-approved runtime for your experiment is included in this request? \_\_\_\_%. If <100%, explain:  
\_\_\_\_\_  
\_\_\_\_\_
4. Identify any constraints on the scheduling of your experiments (e.g. periods when members of the collaboration have prior commitments that would exclude their participation, or times when critical apparatus will not be available):  
\_\_\_\_\_  
\_\_\_\_\_
5. Completion of the items outlined in 1-4 above will be adequate for straightforward experiments that use only the base equipment in the hall. More complex experiments require more detailed planning that must be coordinated with the hall leader. Complete the following table, and attach appendices as required, reviewing the material in them with the hall leader and engineer as appropriate. Allow adequate time for this process — it must be completed by the run request submission deadline. If any box in the table has been checked “yes,” obtain the signature of the hall leader indicating that the relevant appendices have been completed to his satisfaction.

Before the Experiment can be run, does it require:	Yes/No	Complete and attach Appendix
Beam development activities (test runs, prototype tests with beam, special beam conditions, etc.)?		A
Modification of the hall base equipment or installation of new equipment?		B
The use of polarized or cryogenic targets		C
Data acquisition, storage, and/or analysis capabilities beyond those routinely available in the hall?		D
Office, laboratory, or setup space beyond that already provided to the experiment collaboration?		E

Hall Leader concurrence: \_\_\_\_\_





# Appendix A:

## Proposed Apparatus or Beam Development Run Schedule

Fill in one of these forms for each proposed development activity. Enter data in preferred time sequence for energies, current, targets, beam conditions, etc, for the entire Development Run. Under "Special Requirements" below, note all critical scheduling needs, e.g., a certain set of energies must be run before another set, etc. Attach additional sheets as necessary.

Identify the goals of the development run and indicate the experiment(s) for which the proposed run is relevant:

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NOTE: INDICATE ALL MAJOR EQUIPMENT CHANGES, BREAKS, INSTALLATION OR SETUP, OR MAINTENANCE DAYS, ETC. ON SEPARATE LINES.

Days*	Setup Number from Radiation Budget Form	Special Requirements Include any variance from standard beam conditions, special developmental setups, special beamline or experimental equipment, and associated setup and installation times in the hall, etc.

\* Assume 100% efficiency for accelerator and experimental equipment operations.

▼ Provide setup numbers as indicated on the Radiation Budget form.



## Appendix B: Pre-Installation Requirements (sheet 1 of 3)

(This appendix to be completed in concert with experimental hall staff as identified by the hall leader.)

For all changes, additions, and enhancements to the standard\* equipment (including detector systems) and for new equipment, identify for each area listed below the following specific items: who will be doing the work (User/JLab staff/contractor); the man-weeks required for the work; when the work will be done; and the work location. Attach additional sheets as necessary.

Engineering and Design:\*\*

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Equipment to be Fabricated:\*\*\*

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Pre-Installation Tests:

(Identify any developmental activities, with or without beam, associated with the equipment changes. Indicate locations.)

\* See the Hall leader for a list and description of standard equipment.  
\*\* Complete requirements must be provided for equipment requiring JLab engineering and design.  
\*\*\* Complete drawings must be provided for equipment to be fabricated by JLab.



## Appendix B: Pre-Installation Requirements (sheet 2 of 3)

### INSTALLATION REQUIREMENTS

For each item below, identify days to complete installation, type of manpower (i.e. welder, electrician, programmer, etc.), man-weeks of effort for each subsystem, and the man effort (User/JLab staff/contractor). Attach additional sheets as necessary.

	Equipment to be Installed	Time (days) <small>(assuming 100% efficient operation)</small>	Type of Manpower	Man-Weeks of Effort	User/JLab Staff/ Contractor
Alignment					
Electrical					
Mechanical					
Detector					
Target					
Beamline (including Radcon)					
Modifications to Standard Equip.					
Slow Controls (EPICS)					
Other					



# Appendix B: Pre-Installation Requirements (sheet 3 of 3)

## DECOMMISSIONING and DEINSTALLATION

List all items requiring decommissioning and/or deinstallation following your experiment. For each item indicate type of manpower (lift operator, welder, electrician, etc.), man-weeks of effort for each subsystem, and the man effort (User/JLab staff/contractor). Attach additional sheets as necessary.

Equipment to be Removed	Equipment Location	Time (days) <small>(assuming 100% efficient operation)</small>	Type of Manpower	Man Weeks of Effort	User/JLab Staff/ Contractor



## Appendix C: Polarized and Cryogenic Targets

1. For polarized targets, describe plans for irradiation activities. (Include in the proposed commissioning and run schedule all appropriate irradiation activities.) Attach additional sheets as necessary.
2. Describe any changes and/or modifications to standard cryogenic targets.
3. Add installation and setup plans developed in coordination with M. Seely using the Appendix B format.

Obtain M. Seely's concurrence that the information is understood and adequate for schedule planning: \_\_\_\_\_

M. Seely/Date





## Appendix D: Data Acquisition

Indicate the anticipated data acquisition rates (peak and averages) as well as the anticipated total data going to media. Attach additional sheets as necessary.

• Data Acquisition Rate Peak (megabytes/second)	Rate Average (megabytes/second)	Total Data Going to Media (gigabytes)
_____	_____	_____

• Indicate the proposed modifications to the data acquisition system. Include a schedule of developmental activities identifying who is doing the work.

• Indicate the proposed modifications to the controls system. Include a schedule of developmental activities identifying who is doing the work.

Obtain G. Heyes' concurrence that the information is understood and adequate for schedule planning: \_\_\_\_\_

G. Heyes/Date



## Appendix E: User Staffing Profile

For each phase of the experiment (design, construction, testing, commissioning, running, deinstallation, and data reduction and analysis), indicate the number of onsite FTE users you anticipate, the incremental office and laboratory space required (i.e., space not already provided to collaboration members), and your desired location. Attach additional sheets as necessary.

	Collaboration FTEs at JLab	New Office Space Needed		Storage Space	Laboratory Space	How Long is Space Needed?	Comments
		Regular Office	2nd Floor Counting House Office				
Design							
Construction or Setup							
Testing							
Commissioning							
Running							
Deinstallation							
Decommissioning							
Data Reduction and Analysis							

**NOTE:**

If you require office space, you need to submit an *Office Space Request* form to the User/International Liaison Office. This form is available by request to the U/I Liaison or via the worldwide web at [http://www.jlab.org/user\\_resources/spaceform.html](http://www.jlab.org/user_resources/spaceform.html). Contact the U/I Liaison at 757.269.6388 or [users@jlab.org](mailto:users@jlab.org) for additional information.