

**FY14 User Survey Report
for the
SC Lattice QCD Computing Project Extension
(LQCD-ext)**

Unique Project (Investment) Identifier: 019-20-01-21-02-1032-00

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FY14 LQCD-ext User Survey Report Change Log

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0.8	Nearly complete draft	3/6/2015
0.9	Revised complete draft	3/20/2015
1.0	Final version	3/25/2015

Table of Contents

1	Overview.....	1
2	Executive Summary.....	1
3	Survey Methodology.....	3
4	Survey Results and Analysis.....	4
	4.1 Demographics.....	4
	4.2 Computing Facilities Operations.....	5
	4.3 Allocation Process and Call for Proposals (CFP).....	10
5	Action Plan in Response to Survey Results.....	14
	5.1 User Survey Methodology.....	14
	5.2 User Documentation.....	15
6	Detailed Results.....	16
	6.1 Respondent Affiliations.....	16
	6.2 Respondent Job Classifications.....	17
	6.3 Frequency of LQCD Computer Usage.....	18
	6.4 Average Job Submission Rate.....	19
	6.5 Facility Usage.....	20
	6.6 Overall User Satisfaction.....	21
	6.7 Documentation.....	22
	6.8 Documentation Improvement over Past Year.....	23
	6.9 User Support.....	24
	6.10 Responsiveness.....	25
	6.11 Reliability.....	26
	6.12 Ease of Access.....	27
	6.13 Effectiveness of Other Tools.....	28
	6.14 Site Used when Help Last Needed.....	29
	6.15 Requesting Help.....	30
	6.16 Initial Response Time.....	31
	6.17 Closing Tickets on Initial Response.....	32
	6.18 Time Needed to Resolve a Ticket.....	33
	6.19 Feedback on Helpdesk.....	34
	6.20 Participation in the Call for Proposals and Resource Allocation Process.....	35
	6.21 Sufficient Time to Prepare Proposal.....	36
	6.22 Overall Satisfaction with the Allocation Process and Clarity of CFP.....	37
	6.23 Transparency of the Allocation Process.....	38
	6.24 Fairness of the Allocation Process.....	39
	6.25 Effectiveness of the Allocation Process in Maximizing Scientific Output.....	40
	6.26 Call for Proposals Process Improvement Over Past Year.....	41
	6.27 Allocation Process Improvement Over Past Year.....	42
	6.28 Comments on Operation of LQCD Facilities.....	43
	6.29 Comments on the Call for Proposals and Resource Allocation Processes.....	44
7	Survey Questionnaire.....	45
8	Sampling Error in the User Survey Results.....	51

1 Overview

In order to serve the USQCD user community in the best possible manner, anonymous online surveys are conducted on an annual basis by the LQCD-ext Project to quantify the level of user satisfaction with the services provided by the LQCD computing project facilities. The LQCD-ext Integrated Project Team (IPT) uses the results of these surveys to identify ways to improve and optimize services using the limited resources available to the project. Annual user surveys have been conducted by the LQCD and LQCD-ext projects since 2007, with results summarized in written reports. This report presents the results of the FY14 LQCD-ext User Survey.

2 Executive Summary

The FY14 LQCD-ext User Survey was officially open from October 20, 2014 to December 19, 2014. Users could finish partially complete surveys through January 20, 2015. The survey was designed to measure user satisfaction during the seven month period from March 2014 through September 30, 2014 to dovetail the period covered by the FY13 User Survey. The online survey consisted of 29 questions designed to measure the level of satisfaction with the compute facilities operated and managed by the LQCD-ext project team, and with the annual resource allocation process conducted and managed by the USQCD Scientific Program Committee.

The survey was distributed to all scientific members of the USQCD collaboration, with a particular focus on obtaining input from active users who had submitted compute jobs to one of the three host facilities during the year. The FY14 survey was distributed to a total of 177 individuals; of these, responses were received from 61 individuals. 24 of the 48 most Active Users completed a survey, a response rate of 50%.

Questions related to facility operations were designed to quantify the level of satisfaction on a per-site basis. Results were then aggregated to obtain an overall score for the project. Table 1 shows the aggregate scores for the key facility measurement areas over time. The overall satisfaction rating, a KPI defined in the Project Execution Plan, was 97% in FY14, exceeding the target goal of 92%. In all areas, satisfaction ratings in FY14 were essentially the same as FY13.

Table 1. Satisfaction Ratings for Compute Facility Operations

Category	FY07	FY08	FY09	FY10	FY11	FY12	FY13	FY14
Overall Satisfaction	82%	91%	96%	81%	87%	93%	94%	97%
User	78%	92%	81%	73%	81%	89%	90%	88%
Documentation								
User Support	86%	100%	92%	88%	92%	94%	98%	96%
Responsiveness of Site Staff	89%	97%	98%	90%	90%	92%	98%	96%
System Reliability	74%	90%	84%	76%	91%	89%	96%	96%
Ease of Access	73%	74%	77%	76%	83%	92%	91%	91%
Effectiveness of Other Tools	77%	72%	83%	86%	88%	92%	97%	97%

Questions related to the annual allocation process operations were designed to gauge the level of satisfaction with several aspects of the allocation process, from the clarity of the Call for Proposals, through the transparency and fairness of the allocation process, to the extent to which the process maximizes scientific output. Table 2 shows the aggregate scores for the key measurement areas over time.

Table 2. Satisfaction Ratings for the Resource Allocation Process

Category	FY07	FY08	FY09	FY10	FY11	FY12	FY13	FY14
Overall Satisfaction with Allocation Process	69%	81%	84%	86%	84%	83%	97%	84%
Clarity of the Call for Proposals	79%	91%	93%	93%	93%	94%	99%	88%
Transparency of Allocation Process	61%	64%	79%	86%	74%	86%	93%	83%
Fairness of Allocation Process	63%	73%	88%	86%	93%	86%	96%	81%
Proposal Process Helps Maximize Scientific Output	70%	78%	85%	79%	88%	80%	91%	85%

User comments do not suggest a single specific reason why the process satisfaction ratings in 2014 have fallen from their record high levels in 2013. We speculate that the largest single increase in resources that occurred in 2013 was mostly responsible for the high satisfaction rate that year, although improvements in the communications with users and the establishment of the Scientific Advisory Board also occurred in 2013. Some user comments suggest also that the wide range of systems handled in the allocations process can be confusing or seem to be handled inconsistently.

3 Survey Methodology

The target audience for the LQCD-ext User Survey includes members of the USQCD collaboration (e.g., Principal Investigators, faculty members, researchers, students and post-docs) who submit jobs to the LQCD Computing Facility at any of the three host sites, BNL, FNAL, and JLab; and/or whoever participates in the annual resource allocation process. Technical staff who are members of the collaboration, and who are also directly involved with operations at one of the host sites, are excluded from survey participation since they are not considered facility users. The survey was distributed to all scientific members of the USQCD collaboration, with a particular focus on obtaining input from active users who had submitted compute jobs to one of the three host facilities during the year.

The FY14 User Survey questions were defined by the project team in collaboration with the USQCD Executive Committee and the Scientific Program Committee. The same questions were used in 2014 as were used in 2013. The survey consisted of 29 questions arranged into 4 sections designed to measure the level of satisfaction with the compute facilities operated and managed by the LQCD project team, and with the annual resource allocation process conducted and managed by the USQCD Scientific Program Committee. The survey sections are:

- Demographic Information: Questions 1-5
- User Satisfaction: Questions 6-13, 28
 - Question 6 measures the “Customer Satisfaction rating” KPI defined in the Project Execution Plan. The goal is to meet or exceed a rating of 92%.
- Helpdesk Evaluation: Questions 14-19
 - This evaluates the users’ impression of Helpdesk services to ensure it is consistent with the separate measurement of the “% tickets closed within 2 business days” KPI defined the Project Execution Plan.
- Allocations and Call for Proposals: Questions 20-27, 29

For satisfaction rating questions, responses of “very satisfied” and “satisfied” were used to infer satisfaction. The questions, responses, and verbatim user feedback are in Section 6.

The survey was executed using the SurveyMonkey online service (surveymonkey.com). General requirements for the survey are that the online survey be easily accessible by members of the collaboration for a finite length of time, and that user responses remain anonymous to those analyzing and using survey results.

The 2014 User Survey was officially open from October 20, 2014 to December 19, 2014. Respondents actually had until January 20, 2015 to finish incomplete surveys. Eleven email announcements and reminders were sent from the survey tool during this time to USQCD members who had not yet completed a survey, most of which targeted specific subsets of users.

- Of the 177 identified USQCD members, 61 completed a survey for a general response rate of 34%. The USQCD membership list however has grown to include many not actively using the LQCD Compute facilities, so this response rate is not of great concern.
 - Of the remaining users, 2 opted-out of the survey emails without completing a survey, and 114 did not complete a survey or opt-out.
 - 2 users who completed surveys in 2014 had opted-out in a past survey but chose to opt back in after a one-time email notice to reconsider their opted-out status.

- 24 of the 48 most Active Users (as identified by site managers) completed a survey for an Active User response rate of 50%.
 - This active user response rate is typical of past years.
- 20 of 27 PI's completed a survey for a PI response rate of 74%.
 - This response rate was not measured in past surveys.
- The number of survey responses on individual questions in 2014 was actually about the same as in 2013 due to more individual questions being skipped in 2013.

Results of this survey are shared with the Integrated Project Team for further analysis and to identify areas for potential improvement and to implement corrective actions. Items with satisfaction rating less than 80% are considered issues requiring further analysis and attention.

Since the total population of users is relatively small, as is the sample size of survey respondents, outliers may significantly affect the results of the survey. A single unsatisfied customer may affect the satisfaction ranking for an area.

4 Survey Results and Analysis

4.1 Demographics

Questions under this category are designed to collect demographic data of the user community. The demographics in the FY14 survey are very similar to the FY13 survey:

- Among the total of 61 respondents, 41 users are employed by a university or a college and 20 are employed by laboratories.
 - a. Source: Questions 1 and 2
- 25 users are faculty members. Research scientists and post docs make up most of the rest.
 - a. Source: Question 2
- 24 users submit jobs daily. 23 users submit jobs occasionally or never.
 - a. Source: Question 3
- The most common submission rate by users who do submit hobs is in the 10 to 19 jobs per week range.
 - a. Source: Question 4
- Among respondents, 32 users submitted jobs at FNAL, 21 users submitted jobs at JLab, and 8 users submitted jobs at BNL.
 - a. Source: Question 5

4.2 Computing Facilities Operations

User Satisfaction: Ratings associated with these questions assessed the overall user satisfaction with the LQCD facility and related satisfaction levels related to documentation, user support, system reliability, responsiveness of site support, accessibility, and tools support. Overall satisfaction rating for Compute Facility Operations in the FY14 survey is 97%, which exceeds our target rating of 92%. Detailed satisfaction ratings are in Table 3.

Table 3. User Satisfaction Ratings for Computing Facilities

Computing Facilities	FY14 Ratings
Overall Satisfaction	97%
Documentation	88%
User support	96%
Responsiveness	96%
Reliability	96%
Ease of access	91%
Other Tools	97%

The following graph shows the overall rating score trend over recent years. There has been continued improvement in this overall rating score in recent years.

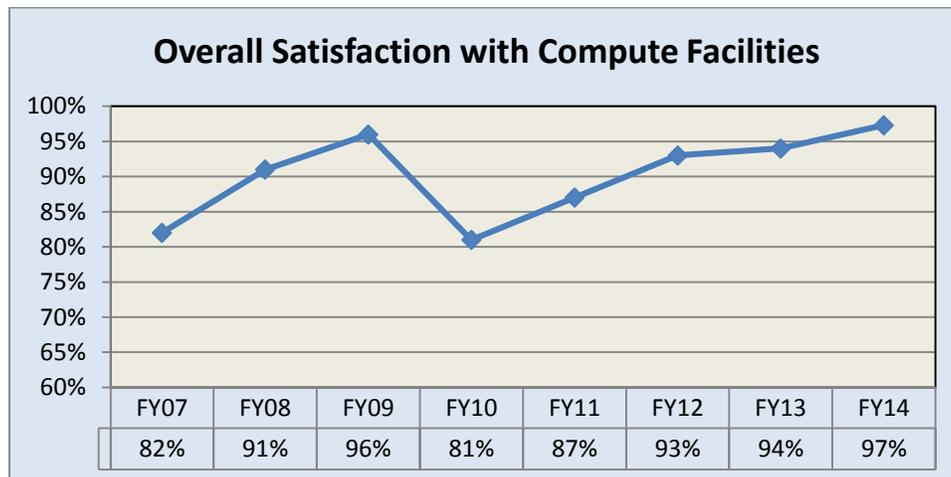
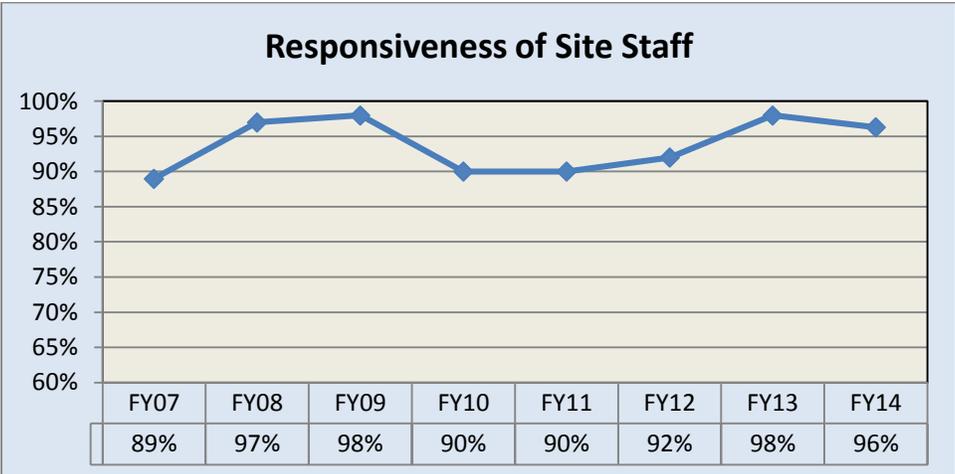
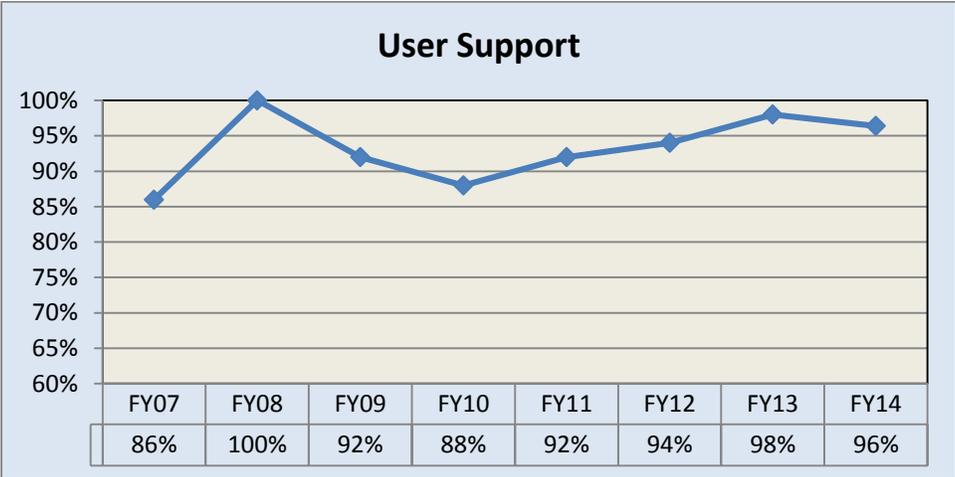
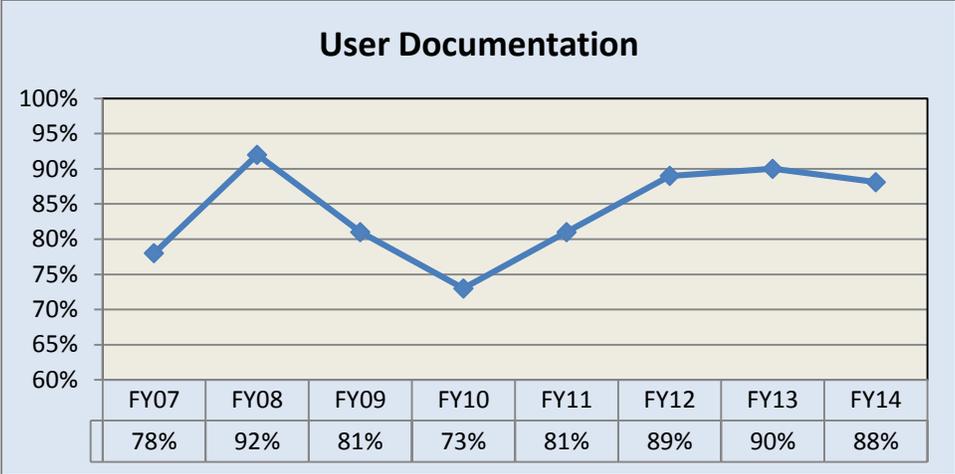
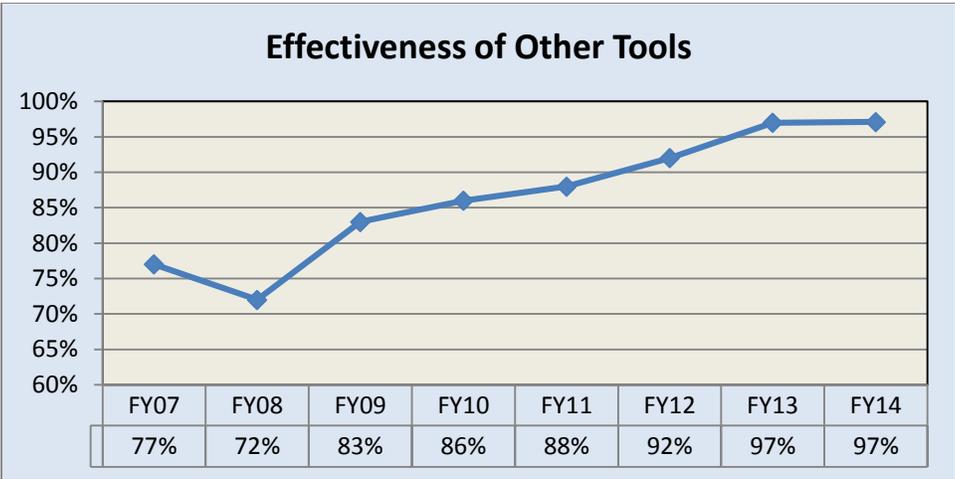
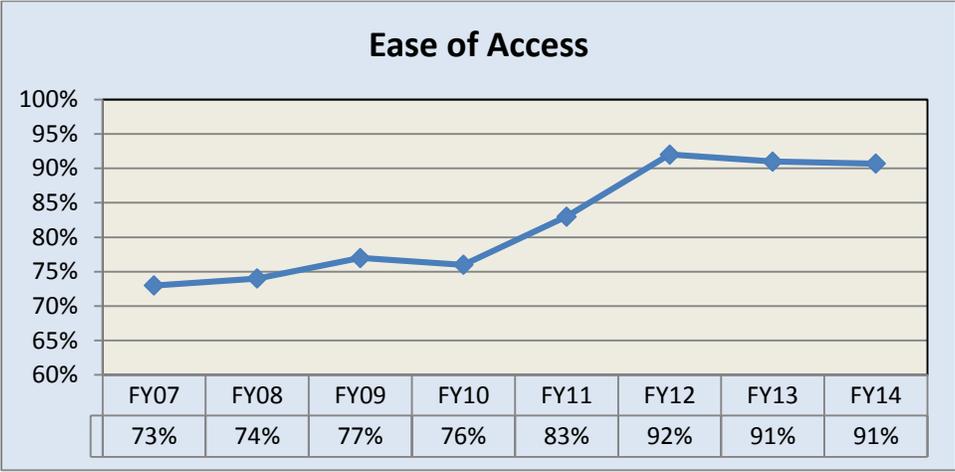
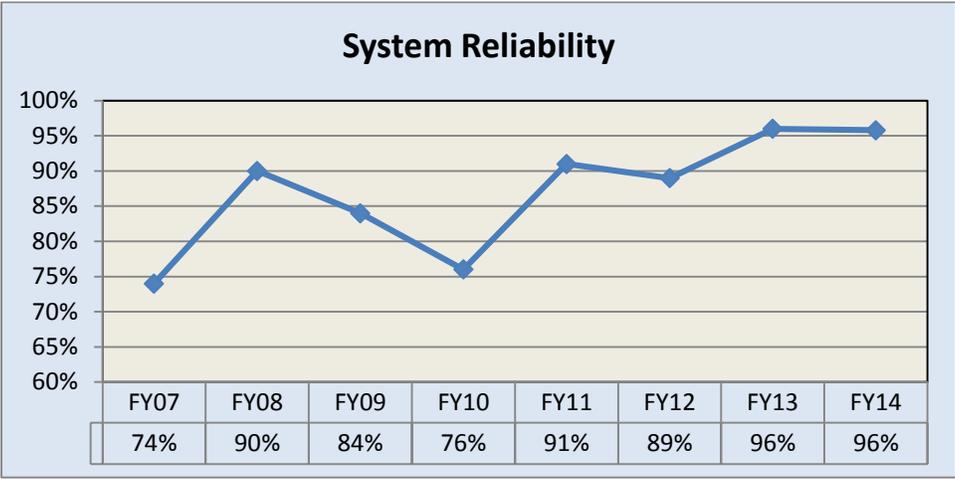


Figure 1. Overall Satisfaction Rating with LQCD Compute Facilities

As can be seen in Figures 2a-f, all Computing Facilities topics have remained roughly at the same level in the past two years.



Figures 2a-c. User Documentation, User Support, and Site Staff Responsiveness



Figures 2d-f. System Reliability, Ease of Access, Effectiveness of Other Tools

Table 4. Satisfaction Ratings for Compute Facilities by Site

FY14 Computing Facilities	All Sites	BNL	FNAL	JLab
Overall Satisfaction	97%	94%	100%	93%
Documentation	88%	70%	91%	89%
User Support	96%	85%	100%	95%
Responsiveness	96%	93%	100%	90%
Reliability	96%	97%	100%	86%
Ease of Access	91%	86%	96%	82%
Other Tools	97%	91%	100%	94%

Table 4 presents the satisfaction ratings broken down by site. The shaded regions mark either low outlying values in this year’s survey (yellow, red) or values showing significant improvement since last year’s survey (green).

BNL: Only seven responses were received on the BNL computing facilities questions, making their interpretation somewhat uncertain. The satisfaction rating for Documentation improved from FY13 (64%), but it is still very low. Related user feedback includes:

- Question 7 (Documentation): “The BNL documentation is out of date.”
- Questions 9 (Ease of Access), 19: A user points out that getting new user accounts is not straight-forward, requiring at least two separate applications and approvals treated by separate groups.
- Question 13 (Other Tools): “The half-rack at BNL does not have a proper queuing system.”

FNAL: FNAL received satisfaction ratings of about 92% or better. It is worth noting that FNAL in this time period operated a set of mid-life clusters, and that the stability of this hardware could explain in part the high satisfaction rating. Related user feedback includes:

- Multiple positive remarks regarding user support at Fermilab

JLab: JLab’s overall satisfaction rating of 93% continues the trend of improvement seen in FY13 (95%) after having addressed the staffing issues that reduced their ratings in FY12. Related user feedback includes:

- Question 7 (Documentation): A user requests a means to be notified of changes to hardware and software.
- Question 11 (Reliability): two user comments about job failures, especially on 9q and 10q.
- Question 12 (Ease of Access): A user commented: “Having to login to qcdgw to initiate scp transfers is annoying.”
- Multiple positive remarks regarding user support at JLab

HelpDesk Evaluation: Questions were posed to determine the usage and efficacy of the helpdesk and support at each site. Users were asked to consider the last problem report they submitted:

- The most recent help needed was at site:
 - FNAL: 58.3%
 - JLab: 25.0%
 - BNL: 6.3%
 - None: 10.4%
 - Source: Question 14
- 100% of users responding knew how to ask for help.
 - Source: Question 15
- 97% (42 of 43) received an initial response to their help request within 1 working day.
- 86% of problems were solved using the initial response.
- 71% of problems were resolved within one day and about 100% of the problems were solved within 3 days.

4.3 Allocation Process and Call for Proposals (CFP)

Questions associated with the allocation process are designed to assess different aspects of the resource allocation process. The questions address the Allocation Process itself, clarity of Call for Proposals (CFP), allocation transparency and fairness, and the goal of maximizing the scientific output through the Allocation Process. Detailed satisfaction ratings by topic are given below.

Table 5. User Satisfaction Ratings for the Allocation Process

Allocation and CFP Processes	FY14 Ratings
Allocation process	84%
CFP clarity	88%
Allocation transparency	83%
Allocation fairness	81%
Maximizing scientific output	85%

The overall satisfaction rating for the allocation process was 84%, as shown in Table 5 and the following chart, representing a drop from the peak in FY13 to levels seen in previous years.

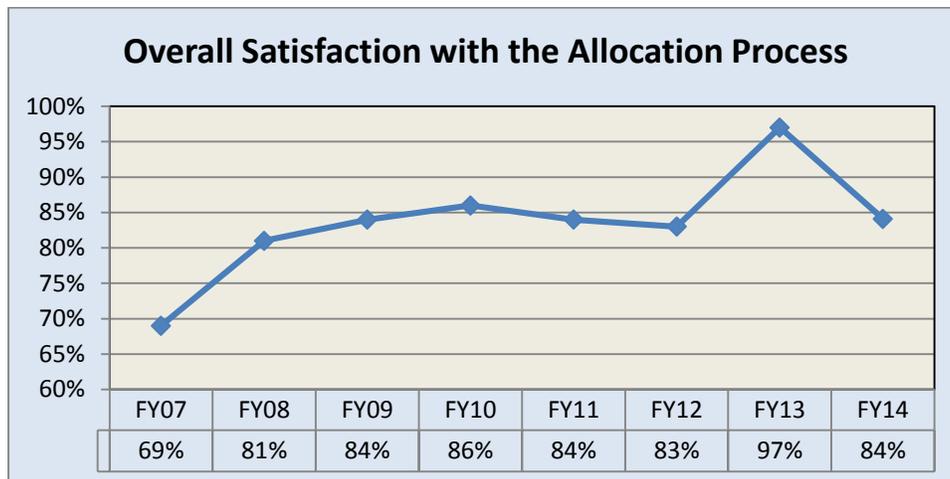


Figure 3. Overall User Satisfaction with the Allocation Process

This downtick can be seen in all areas treated, as shown in Figures 4a-f.

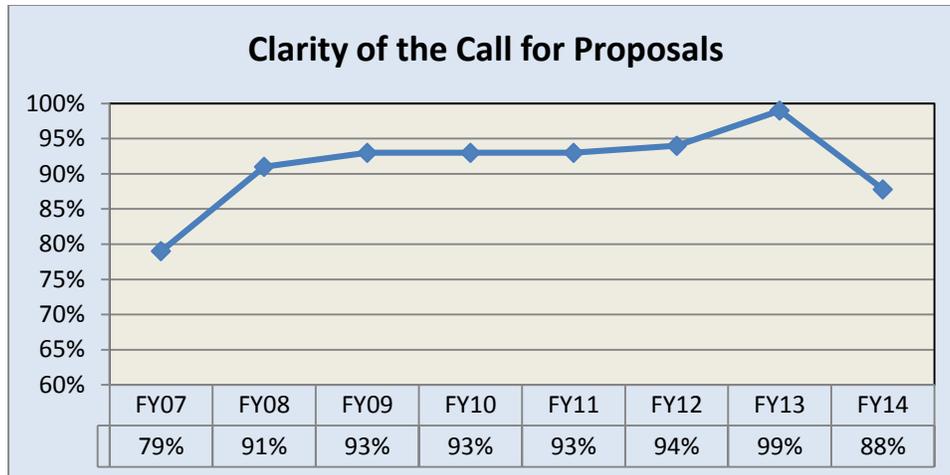


Figure 4a. Clarity of the Call for Proposals

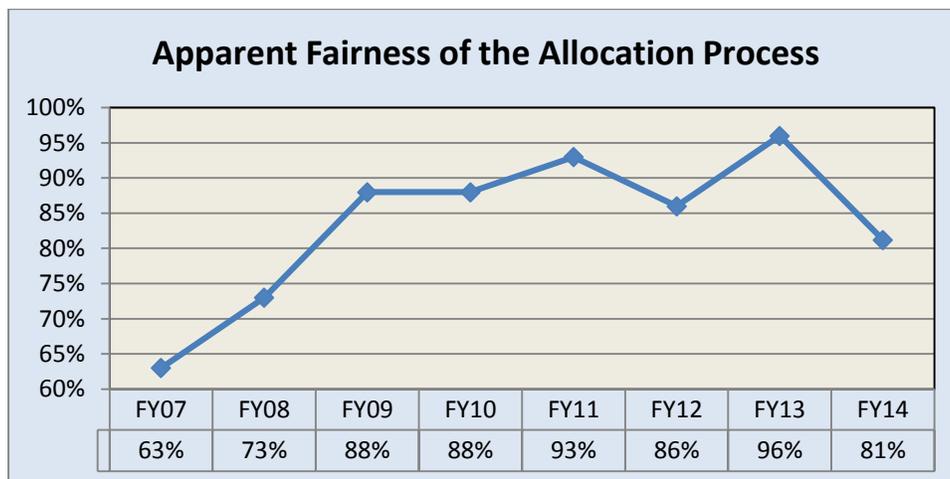
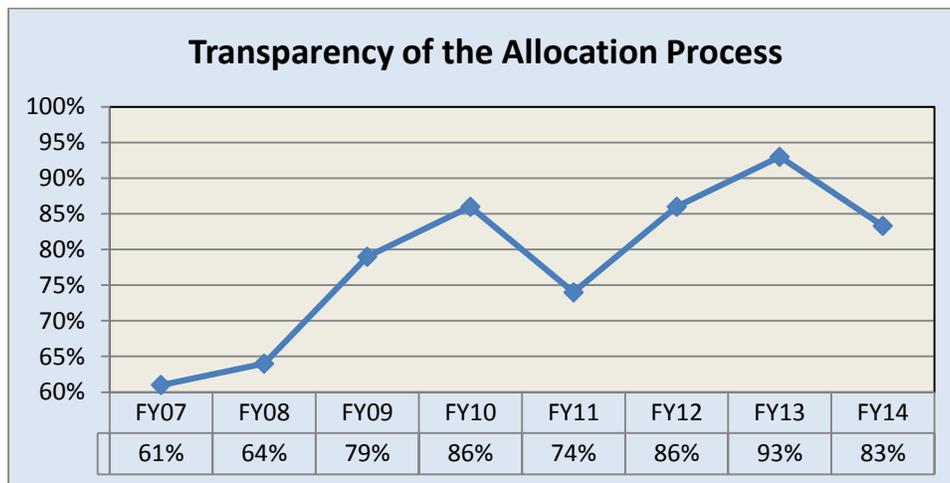


Figure 4b-c. Transparency and Fairness of the Allocation Process

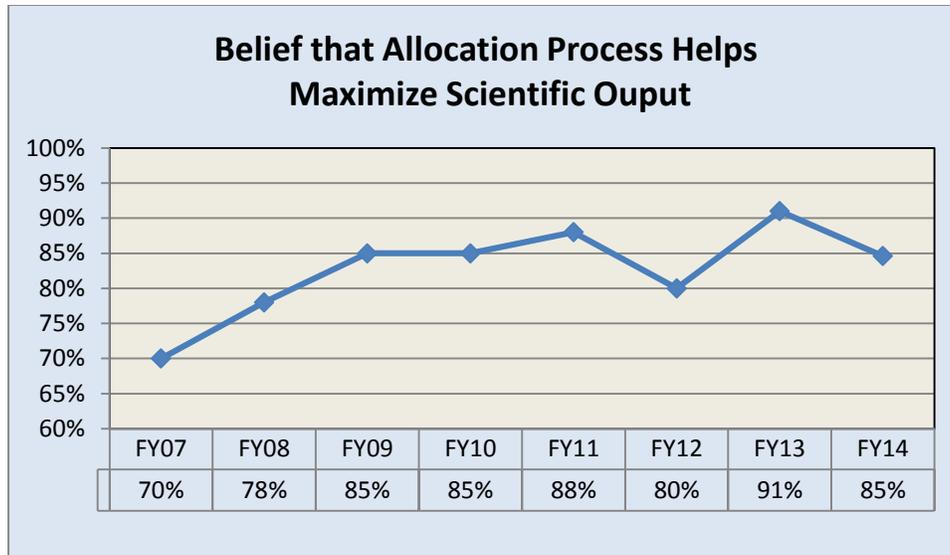


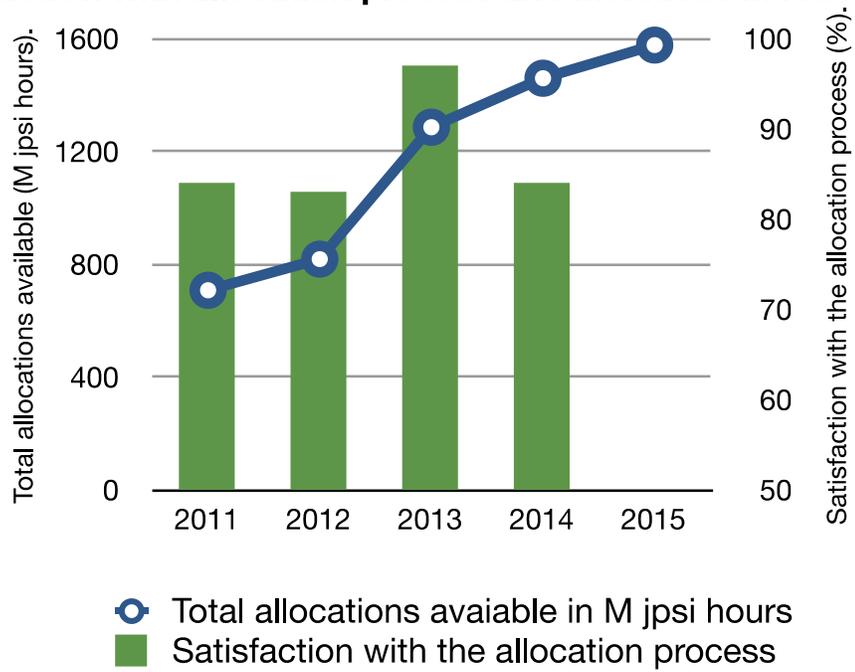
Figure 4d. Allocation Process Maximizes Scientific Output

Related user feedback includes:

- Question 22 Clarity of the Call: “CFP says that 1 C2050 GPU hour = 82 Jpsi equivalent core-hours. However, according to Chip Watson, the actual hardware/running cost is only is only a factor of 12 different, and he exchanged GPU allocations and CPU allocations at JLab at the rate 1 C2050 GPU hour = 12 Jpsi equivalent core-hours. This is inconsistent. Perhaps the CFP should also use a cost-based exchange rate (instead of performance based).”
- Question 23 (Transparency): “Procedure for allocating INCITE resources is perhaps of necessity somewhat obscure, since allocations not known until year end.”
- Question 24 (Fairness): “... I'm not aware of a list naming the awarded allocations.”
- Question 29 (General Comments): “SPC and executive committee should stick to their timeline announced in the CFP.”
- Question 29 (General Comments): “The allocation process is outstanding.”
- Question 29 (General Comments): “The wide range of systems makes the CFP harder to take in.”

The overall satisfaction with the allocation process showed a bump up to 97% in 2013, and dropped back in 2014. The overall satisfaction with the allocation process has been nearly constant for the last five years in the mid-80%’s. The exception was the very high satisfaction in 2013. 2013 was also the year in which the largest single increase in resources of the last five years occurred. (See graph on following page.) Our speculation is that this increase was mostly responsible for the high satisfaction rate that year, although improvements in the communications with users and the establishment of the Scientific Advisory Board also occurred that year. In a year in which almost all users got a significant increase in their allocations, almost all users were happy.

Satisfaction with allocation process and increases in resources.



5 Action Plan in Response to Survey Results

While the overall results of the user survey in FY14 are very positive, we have identified from the survey results a few areas that may be opportunities for improvement in the future. In addition, we describe the results of the FY13 Action Plans.

5.1 User Survey Methodology

While the user response rate of 34% continues a downward trend seen in recent years (42% in FY13, 47% rate in FY12), we believe that this is largely due to the very inclusive nature of the expanding USQCD membership list used by the survey. We had an Active User response rate in FY14 of 50% which is typical of recent years. We believe we can still do more to encourage Active Users and PIs to complete the survey though.

Past Action Plan from 2013 User Survey:

- Communicate more and more clearly about the user survey process through USQCD channels to increase the level of awareness, and hopefully participation, in the user survey.
 - 2014: While we did communicate more through USQCD channels, this did not seem to have as much impact on the response rate as we had expected. We will consider how to improve the message we are communicating, especially to PIs and Active Users who have the most to gain by responding as well as the most to offer back.
- Address the comments from users about the design of the survey. For example, we will develop a more complete and appropriate set of job classifications (see Section 6.2) to avoid confusing or alienating some users who participate in the survey.
 - 2014: We believe this was accomplished as there were no “Other” choices required by respondents for the demographics section.
- Identify alternate staff who might participate in the execution of the user survey, to avoid delays or disruptions due to crises taking away key staff.
 - 2014: The Associate Contract Project Manager executed the user survey in the same manner as the Contract Project Manager had in the past, so that either person could complete the process had there been a crisis.
- Deliver an executive summary of this report for the users at the close of the annual user survey cycle. This summary may raise awareness of how this report is used in the governance of the LQCD-ext Project and how participation in the user survey process can lead to desirable changes.
 - 2014: We plan to release the executive summary to a broader audience along with the 2014 User Survey Report.

Future Action Plan for 2015 User Survey:

- Refresh the USQCD membership list beginning at least a month before the opening of the survey to ensure it is up-to-date when the survey opens. Also, refresh the PI and the Active Users lists to track the response rate for these groups. Evaluate success of the survey response based on these groups, not the entire USQCD membership list.
- Consider declaring completion of the survey a civic duty of all PIs and Active Users.
- Make the ordering of choices consistent across the survey sections.
 - The Allocations Process and CFP section of the survey inadvertently flipped the ordering of Very Satisfied to Very Unsatisfied choices compared to the Computing Facilities section of the survey, which was noted by users.

- Reconsider the definition of satisfaction rating to avoid ratings going down when clearly the mean values of responses go up and vice versa.
 - An example of this can be found in Question 10 (Responsiveness) for BNL. In FY14, the satisfaction rating was lower than in FY13 (93% versus 97%) even though the weighted mean was actually higher than in FY13 (4.6 versus 4.3).
 - Weighted means are a common approach to quantifying user feedback in web commerce. People are generally familiar with their definition.
 - If implemented, this would require adjusting KPI targets in the Project Execution Plan. This would have to be done carefully to preserve trends and past evaluations. Even so, this risks creating the *appearance* of re-baselining the project that may not be tolerable.

5.2 User Documentation

The satisfaction rating for Documentation for the BNL site, while improved, is still very low.

Past Action Plan from 2013 User Survey:

- BNL Site Staff: Setup a web page with links to relevant BG/Q documentation to assist those new to the BG/Q technology in getting the information they need.
 - 2014: This was done.

Future Action Plan for 2015 User Survey:

- BNL Site Staff: The documentation web pages went down due to the retirement of old hardware. We are working with Bob M to host this documentation at Columbia instead.

6 Detailed Results

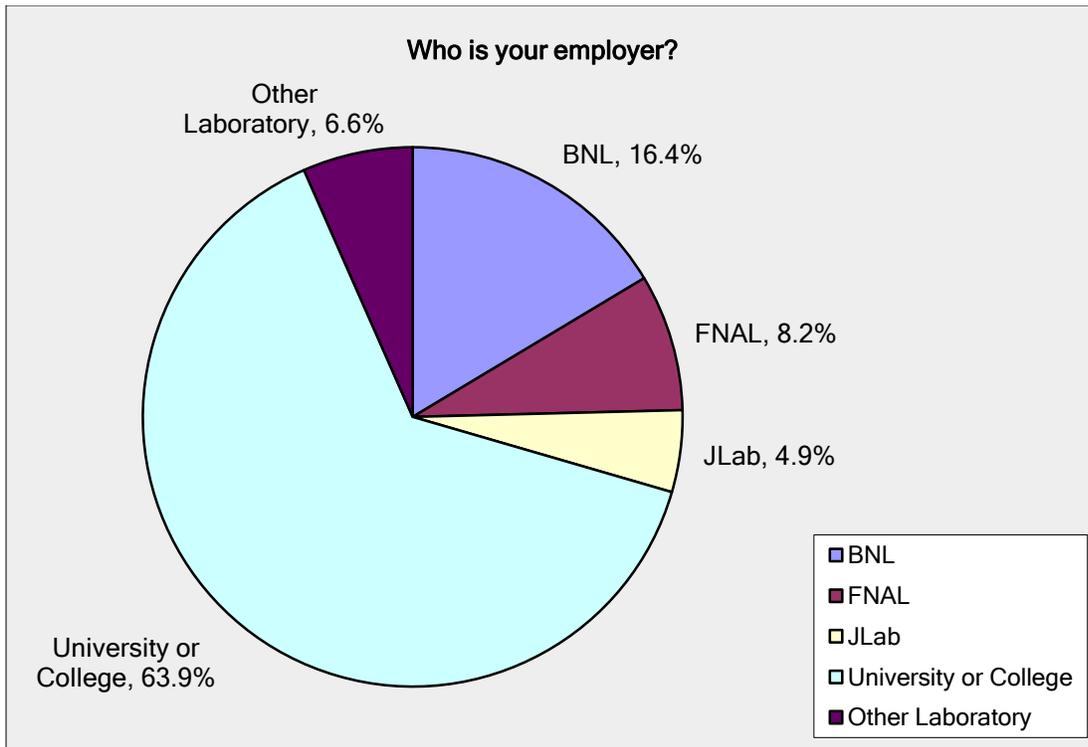
The questions, results, and user free-form feedback are presented below, organized one question per sub-section. Question N is in sub-section 6.N. User free-form feedback is reproduced verbatim. These comments are extremely useful in providing additional insight into areas in which we are performing well and into potential areas for improvement.

6.1 Respondent Affiliations

Survey Question 1. Who is your employer?

- BNL
- FNAL
- Jlab
- University or College
- Other Laboratory

Other Employer (please specify): [*text entry box*]



Employed by	Count
BNL	10
FNAL	5
JLab	3
University or college	39
Other Laboratory	4
<i>Answered Question</i>	61
<i>Skipped Question</i>	0

Other Employer (please specify):

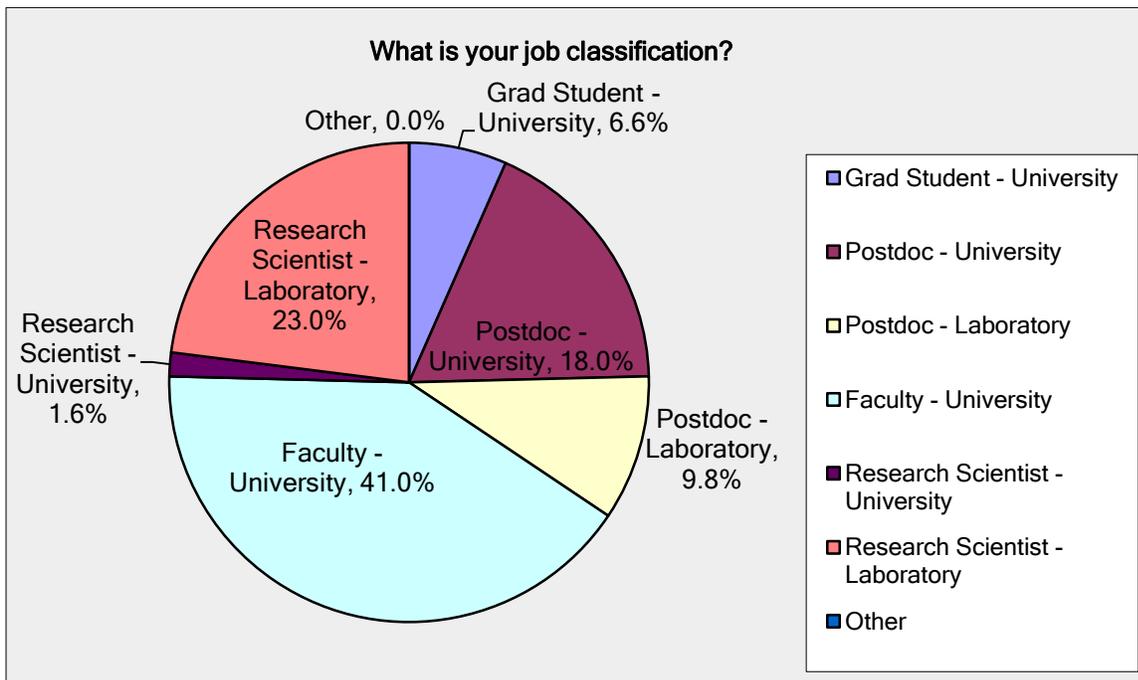
- DESY
- University of Utah
- Bergische Universität Wuppertal
- Old Dominion University
- ANL
- ANL

6.2 Respondent Job Classifications

Survey Question 2. What is your job classification?

- Grad student – University
- Postdoc – University
- Postdoc – Laboratory
- Faculty – University
- Research Scientist – University
- Research Scientist – Laboratory
- Other

Other Job Classification (please specify): [*text entry box*]



Job Classification	Count
Grad Student - University	4
Postdoc - University	11
Postdoc - Laboratory	6
Faculty - University	25
Research Scientist - University	1
Research Scientist - Laboratory	14
Other	0
<i>Answered Question</i>	61
<i>Skipped Question</i>	0

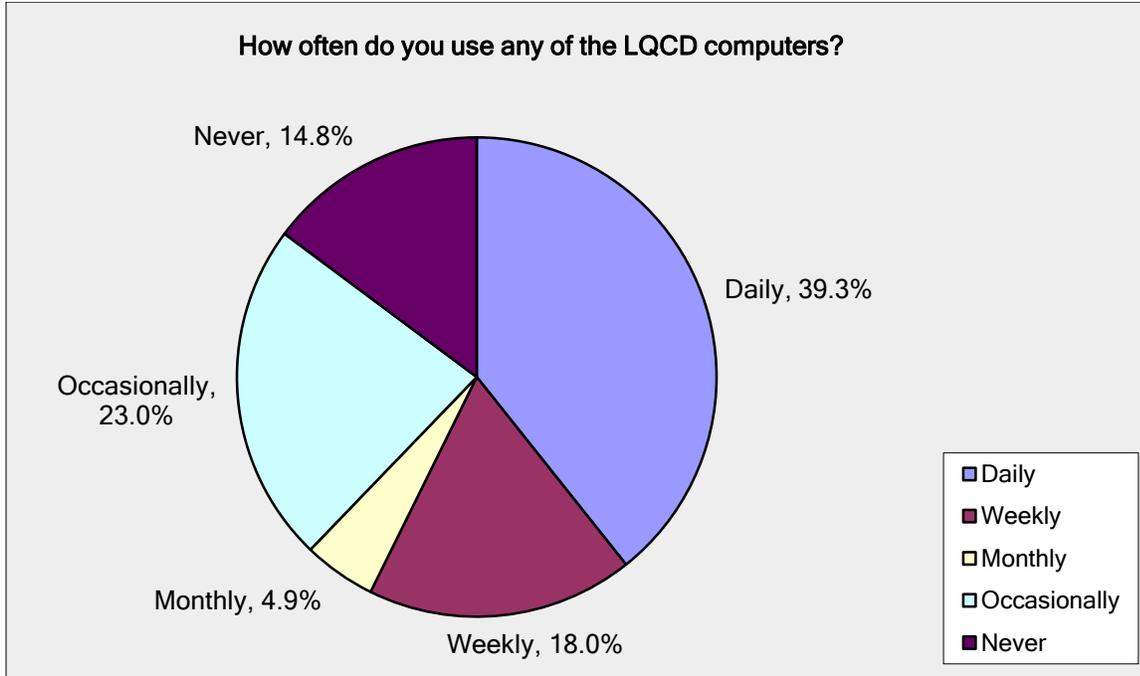
Other Job Classifications:

- (no comments)

6.3 Frequency of LQCD Computer Usage

Survey Question 3. How often do you use any of the LQCD computers?

- Daily
- Weekly
- Monthly
- Occasionally
- Never

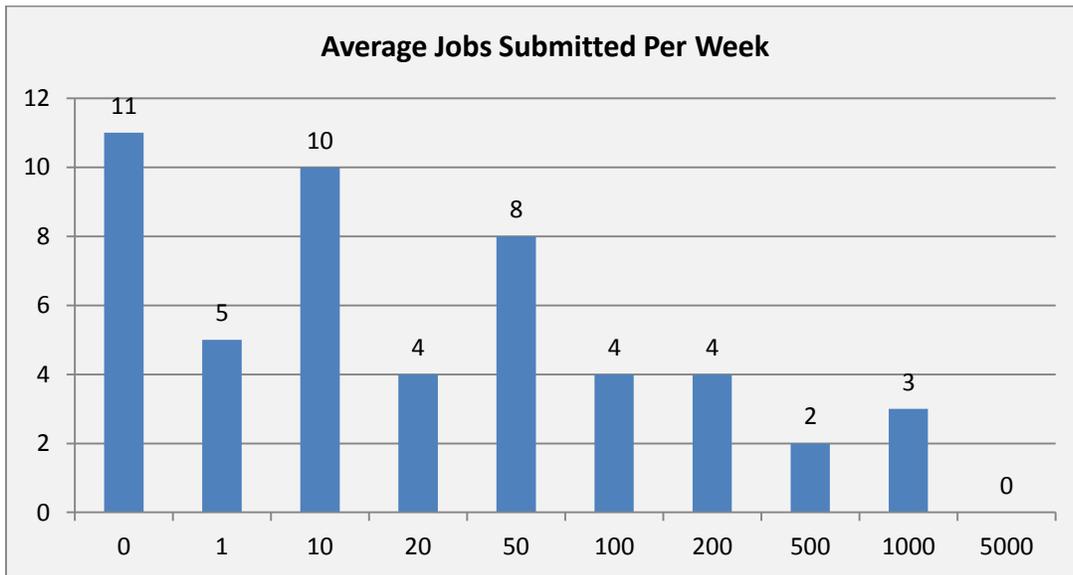


Usage	Freq.
Daily	24
Weekly	11
Monthly	3
Occasionally	14
Never	9
<i>Answered Question</i>	61
<i>Skipped Question</i>	0

6.4 Average Job Submission Rate

Survey Question 4. During periods when you are using the LQCD facilities, please enter the approximate number of jobs you submit on average in a given week.

- 0
- 1-9
- 10-19
- 20-49
- 50-99
- 100-199
- 200-499
- 500-999
- 1000-4999
- 5000 or more



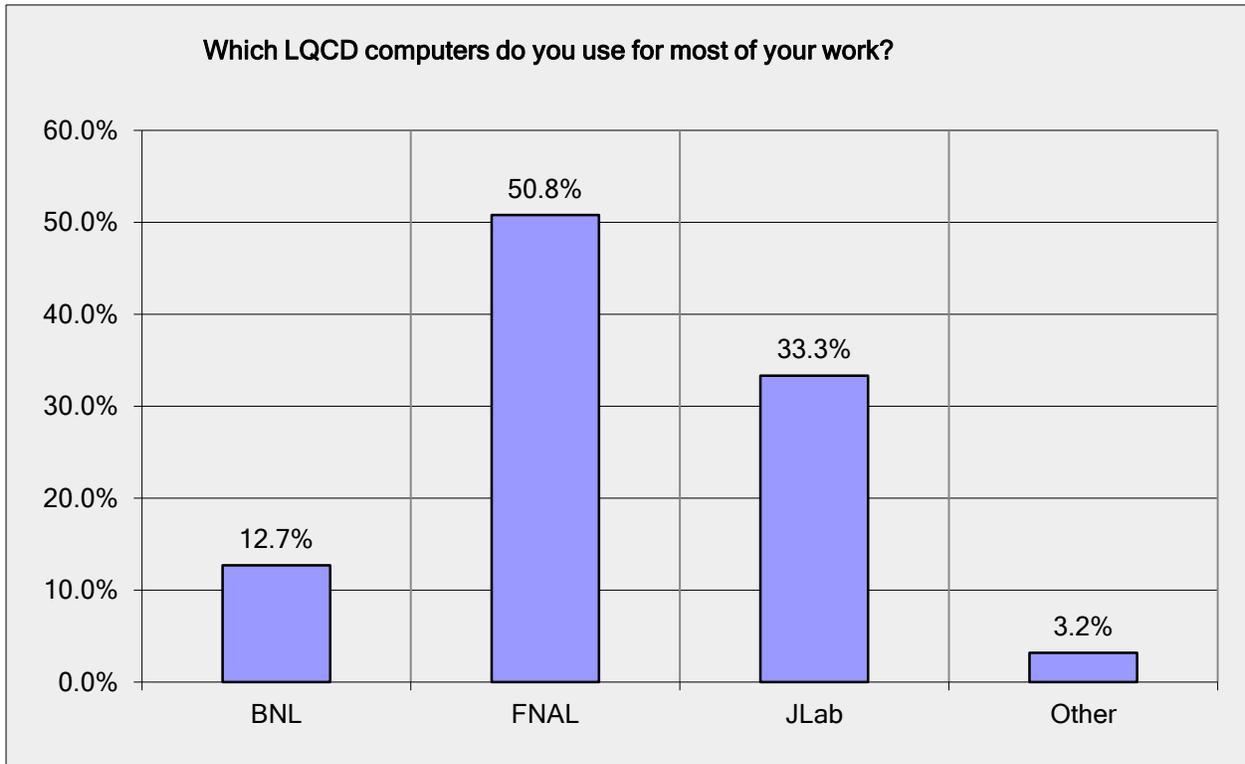
Avg. Jobs (<=)	Freq.
0	11
1	5
10	10
20	4
50	8
100	4
200	4
500	2
1000	3
5000	0
<i>Answered Question</i>	51
<i>Skipped Question</i>	10

6.5 Facility Usage

Survey Question 5. Which LQCD computers do you use for most of your work?

- BNL
- FNAL
- JLab

Other LQCD Computers (please specify): [*text entry box*]



Facility	Users
BNL	8
FNAL	32
JLab	21
Other	2
<i>Answered Question</i>	51
<i>Skipped Question</i>	10

User comments – Other LQCD Computers:

- Mira at Argonne
- NERSC, Bluewates (sic)

Analysis Notes:

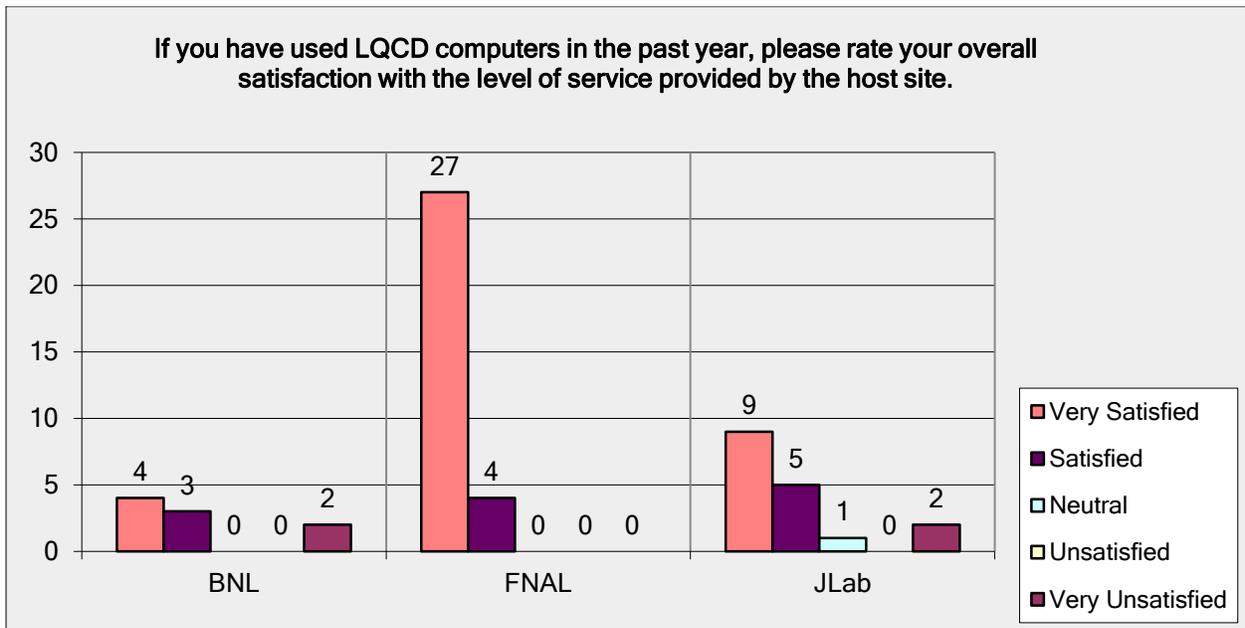
- Respondents could list more than one site in their response. 63 selections were made by the 51 respondents.
- Percentages shown in this plot are the fraction of the all selections made, and thus sum to 100%.

6.6 Overall User Satisfaction

Survey Question 6. If you have used LQCD computers in the past year, please rate your overall satisfaction with the level of service provided by the host site.

	Very Satisfied	Satisfied	Neutral	Unsatisfied	Very Unsatisfied	Not Applicable
BNL	0	0	0	0	0	0
FNAL	0	0	0	0	0	0
JLab	0	0	0	0	0	0

Comments: [*text entry box*]



Overall User Satisfaction	Users
Answered Question	48
Skipped Question	13

User Comments:

- In general they are very well maintained and useful! Thank you.
- Don does a very impressive job. He is extremely quick and very helpful.

Analysis Notes:

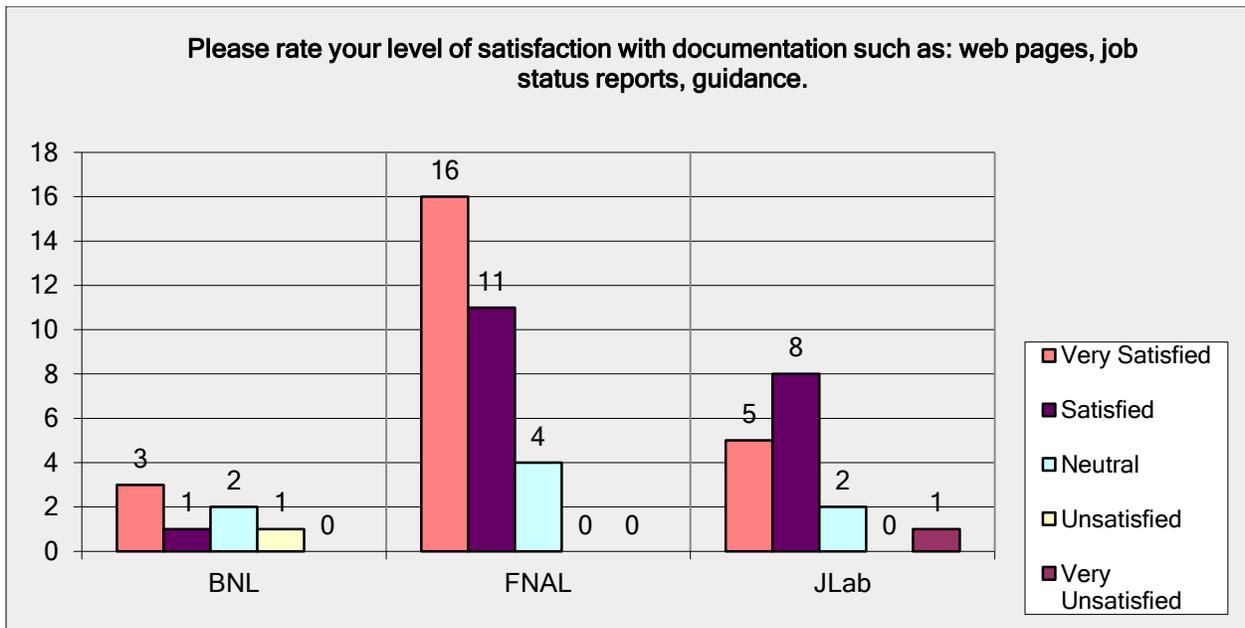
- Overall User Satisfaction rating = 97.3%, which exceeds the goal of 92%.
- This is the “Customer Satisfaction rating” KPI defined in the Project Execution Plan.

6.7 Documentation

Survey Question 7. Please rate your level of satisfaction with documentation, such as: web pages, job status reports, guidance.

	Very Satisfied	Satisfied	Neutral	Unsatisfied	Very Unsatisfied	Not Applicable
BNL	0	0	0	0	0	0
FNAL	0	0	0	0	0	0
JLab	0	0	0	0	0	0

Comments: [*text entry box*]



Documentation	Users
Answered Question	48
Skipped Question	13

User Comments:

- Nothing to complain about!
- JLab: The cluster status web page is very nice. But I would like to receive more communications about any changes to the software and hardware, as well as any system outages / failures. Maybe I'm just not signed up on the email list?
- The BNL documentation is out of date.

Analysis Notes:

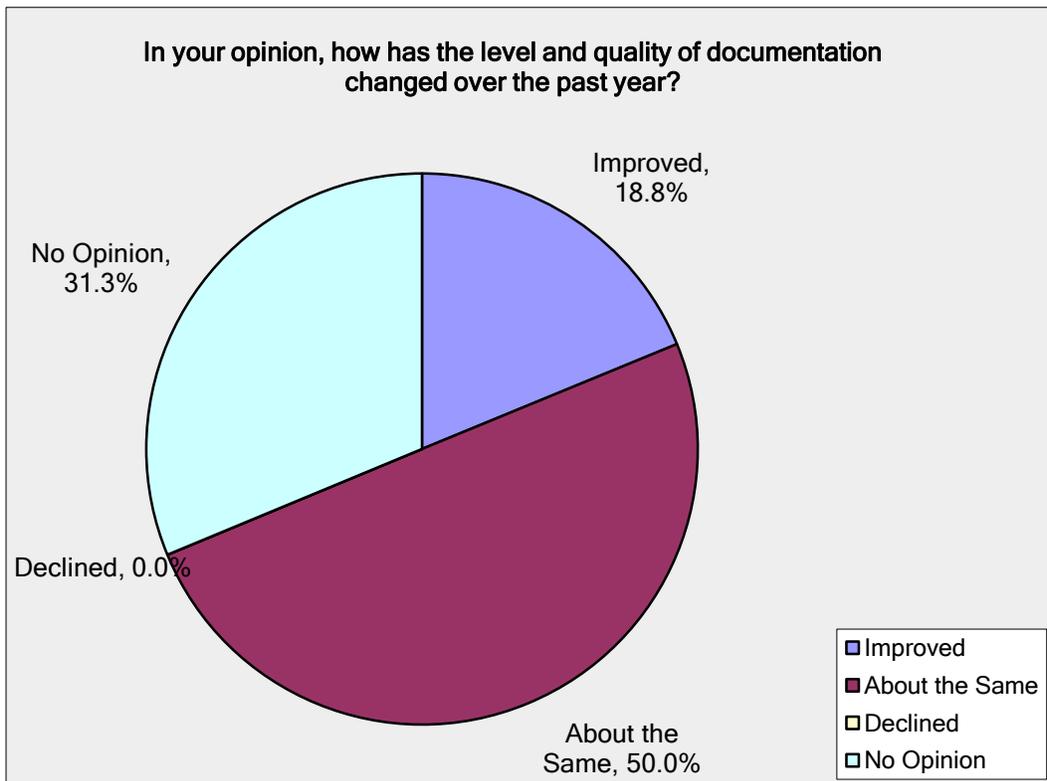
- Documentation User Satisfaction rating = 88.1%

6.8 Documentation Improvement over Past Year

Survey Question 8. In your opinion, how has the level and quality of documentation changed over the past year?

- Improved.
- About the same.
- Declined.
- No opinion.

Please provide feedback to help us better understand your answer: [*text entry box*]



Documentation Improvement	Users
Improved	9
About the same	24
Declined	0
No Opinion	15
<i>Answered Question</i>	48
<i>Skipped Question</i>	13

User Comments:

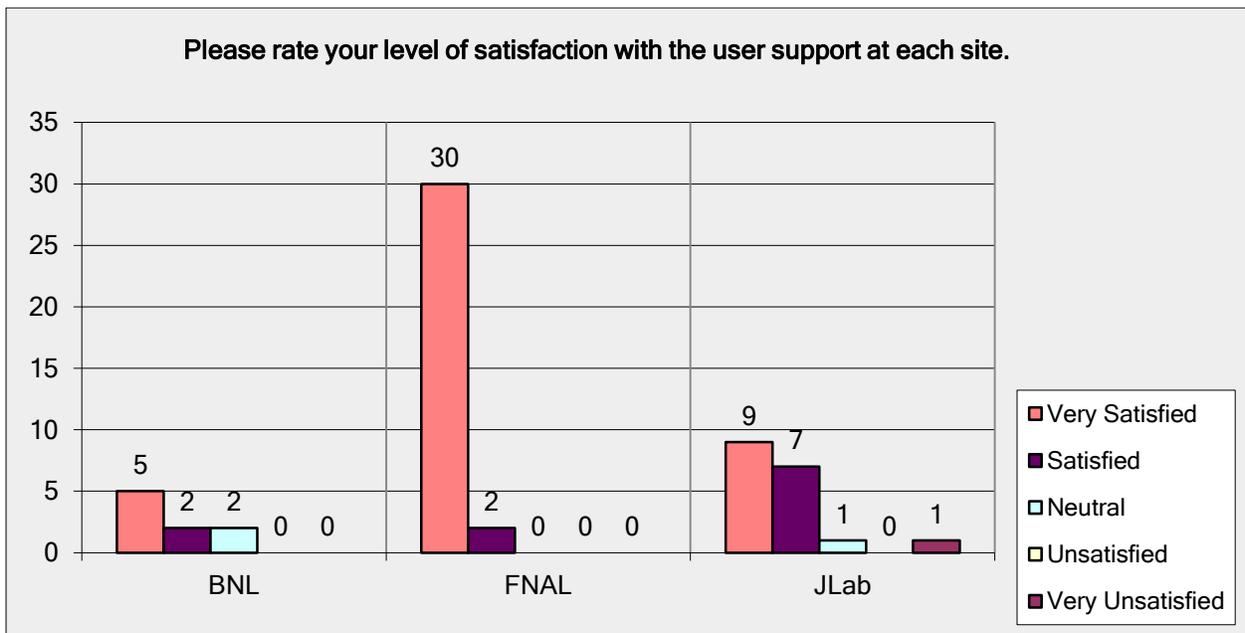
- I don't need much documentation so don't read them much.
- I haven't actively looked for documentation as I'm not normally the one to set up machines for project use, so I can't comment.
- I was satisfied before, I am satisfied now. I really do not know if anything changed

6.9 User Support

Survey Question 9. Please rate your level of satisfaction with the user support at each site.

	Very Satisfied	Satisfied	Neutral	Unsatisfied	Very Unsatisfied	Did Not Use
BNL	0	0	0	0	0	0
FNAL	0	0	0	0	0	0
JLab	0	0	0	0	0	0

Comments: [*text entry box*]



User Support	Users
Answered Question	48
Skipped Question	13

User Comments:

- Fermilab customer support is exceptionally good largely thanks to Don Holmgren!
- Once again, I personally haven't been in the position to use the user support, so I can't comment.
- Getting accounts at BNL has been problematic from time to time
- I would like to thank Balint Joo for his help with running on GPUs.

Analysis Notes:

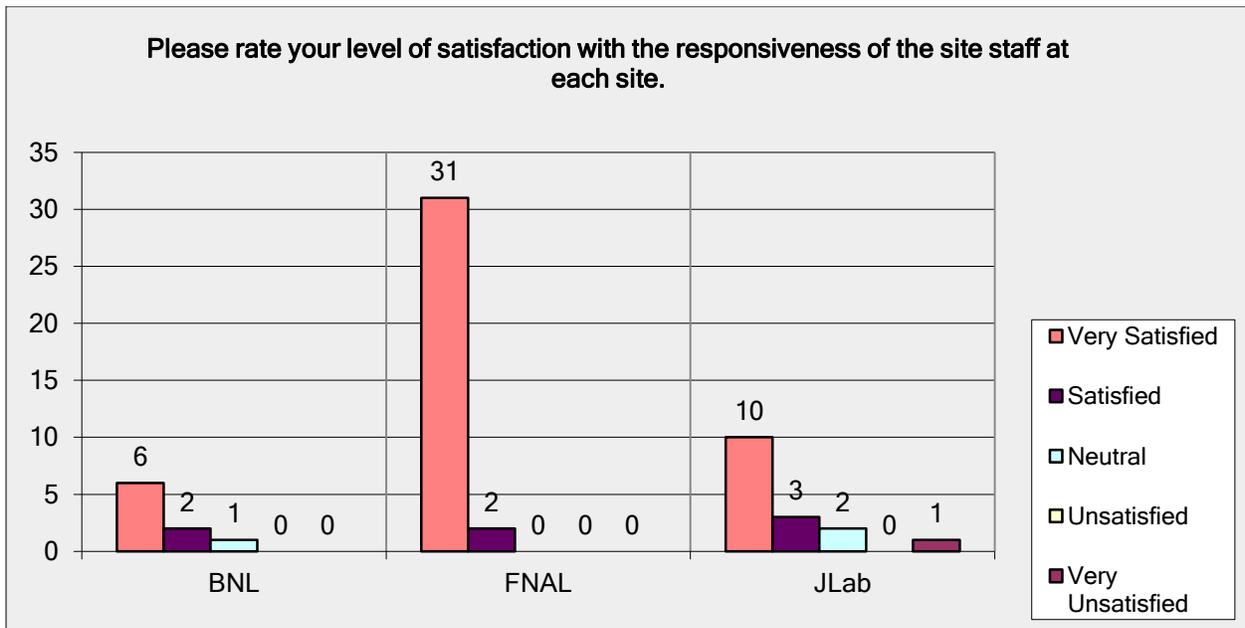
- User Support User Satisfaction rating = 96.4%

6.10 Responsiveness

Survey Question 10. Please rate your level of satisfaction with the responsiveness of the site staff at each site.

	Very Satisfied	Satisfied	Neutral	Unsatisfied	Very Unsatisfied	Did Not Use
BNL	0	0	0	0	0	0
FNAL	0	0	0	0	0	0
JLab	0	0	0	0	0	0

Comments: [*text entry box*]



Reliability	Users
Answered Question	48
Skipped Question	13

User Comments:

- The responsiveness and competence of the staff is a great justification for maintaining dedicated LQCD hardware.
- Very responsive, and helpful.

Analysis Notes:

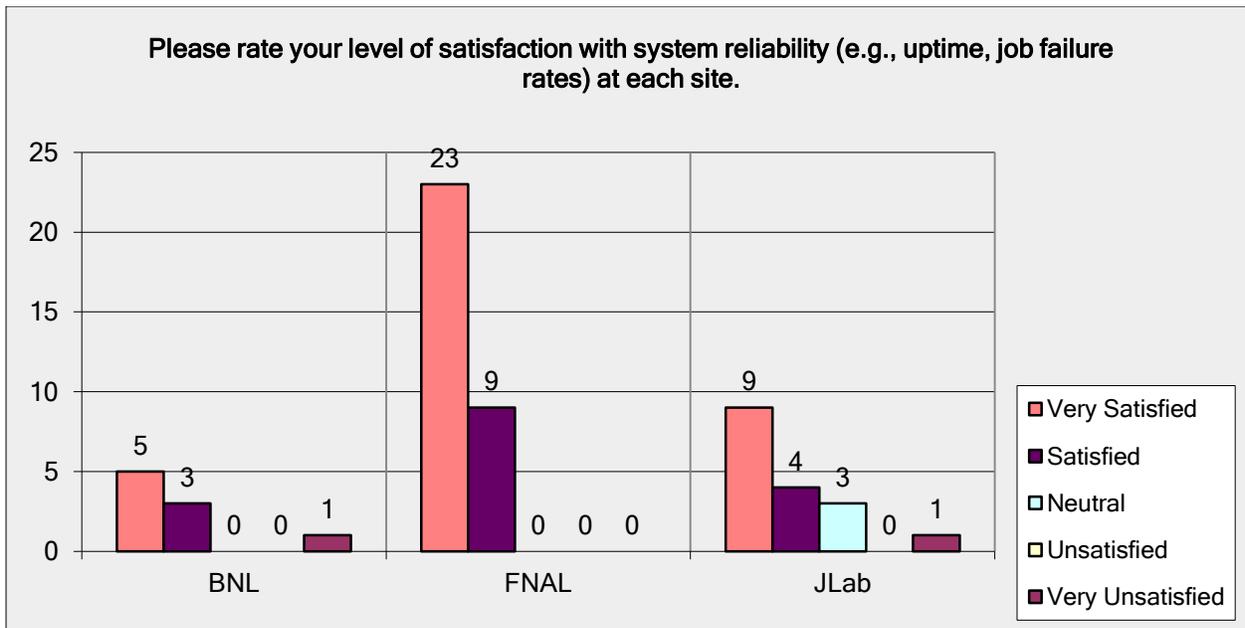
- Responsiveness User Satisfaction rating = 96.3%

6.11 Reliability

Survey Question 11. Please rate your level of satisfaction with the reliability (e.g., uptime, job failure rates) at each site.

	Very Satisfied	Satisfied	Neutral	Unsatisfied	Very Unsatisfied	Did Not Use
BNL	0	0	0	0	0	0
FNAL	0	0	0	0	0	0
JLab	0	0	0	0	0	0

Comments: [*text entry box*]



Responsiveness	Users
<i>Answered Question</i>	48
<i>Skipped Question</i>	13

Comments:

- No complaints!
- MPI jobs are beginning to fail on the 9q and 10q racks.
- Uptime at Jlab is very good, but I had frequent job failures.
- It is difficult to contact anyone on weekends at BNL when there is a hardware failure.

Analysis Notes:

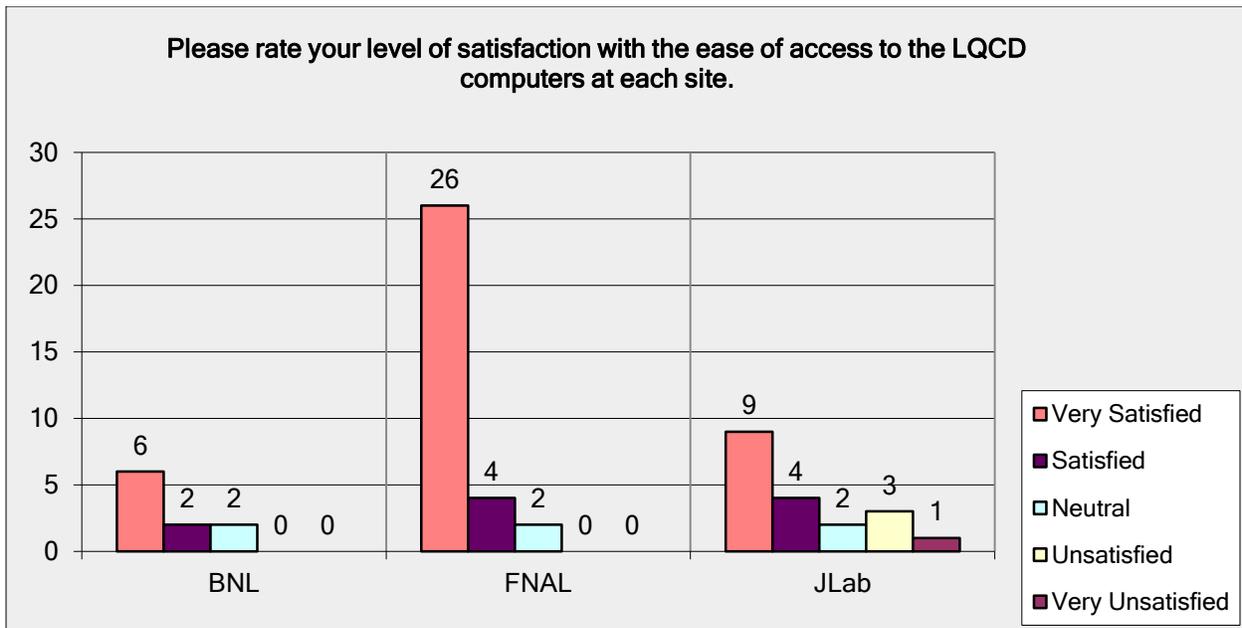
- Reliability User Satisfaction rating = 95.8%

6.12 Ease of Access

Survey Question 12. Please rate your level of satisfaction with the ease of access to the LQCD computers at each site.

	Very Satisfied	Satisfied	Neutral	Unsatisfied	Very Unsatisfied	Did Not Use
BNL	0	0	0	0	0	0
FNAL	0	0	0	0	0	0
JLab	0	0	0	0	0	0

Comments [*text entry box*]



Ease of Access	Users
Answered Question	48
Skipped Question	13

Comments:

- No complaints!
- EasyAcc® external battery
- JLab: Having to log in to qcdgw to initiate scp transfers is annoying. This is made worse by the restricted functionality of qcdgw (for example, one cannot use the command "cd"). I use Globus for large files, but it would still be nice to have simple scp access for transferring small files (such as a script or some source code).

Analysis Notes:

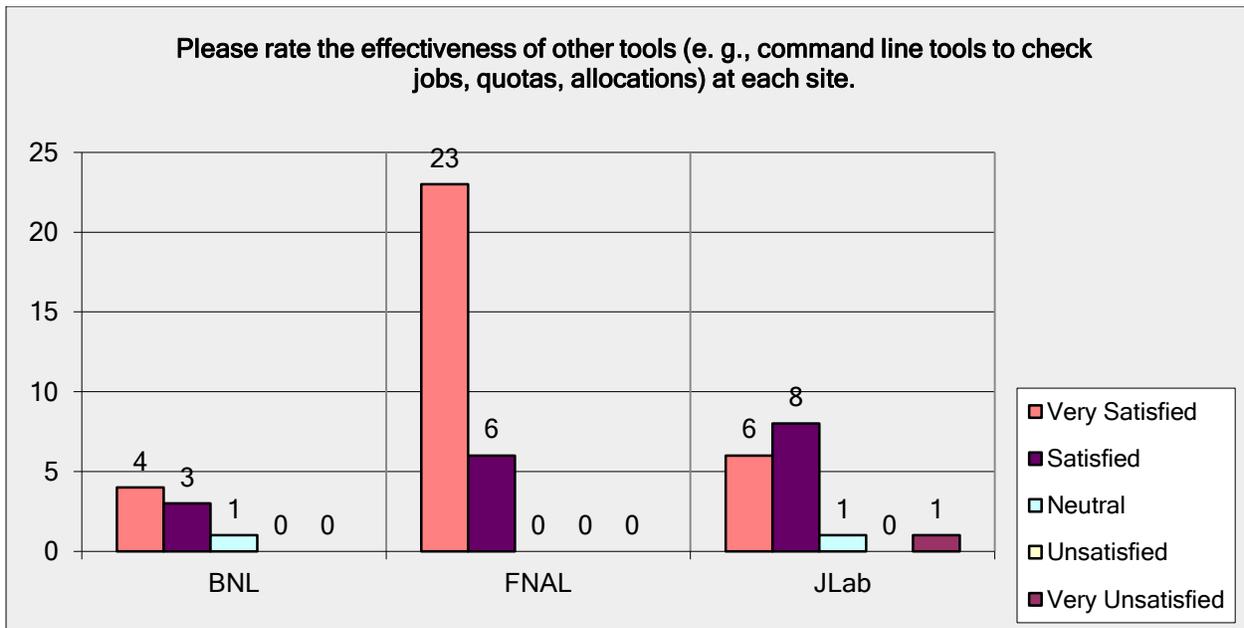
- Ease of Access User Satisfaction rating = 90.7%

6.13 Effectiveness of Other Tools

Survey Question 13. Please rate the effectiveness of other tools (e. g., command line tools to check jobs, quotas, allocations) at each site.

	Very Satisfied	Satisfied	Neutral	Unsatisfied	Very Unsatisfied	Did Not Use
BNL	0	0	0	0	0	0
FNAL	0	0	0	0	0	0
JLab	0	0	0	0	0	0

Comments [*text entry box*]



Other Tools	Users
Answered Question	49
Skipped Question	17

Comments:

- I can check and manage jobs, nothing to complain about.
- The half-rack at BNL does not have a proper queuing system.

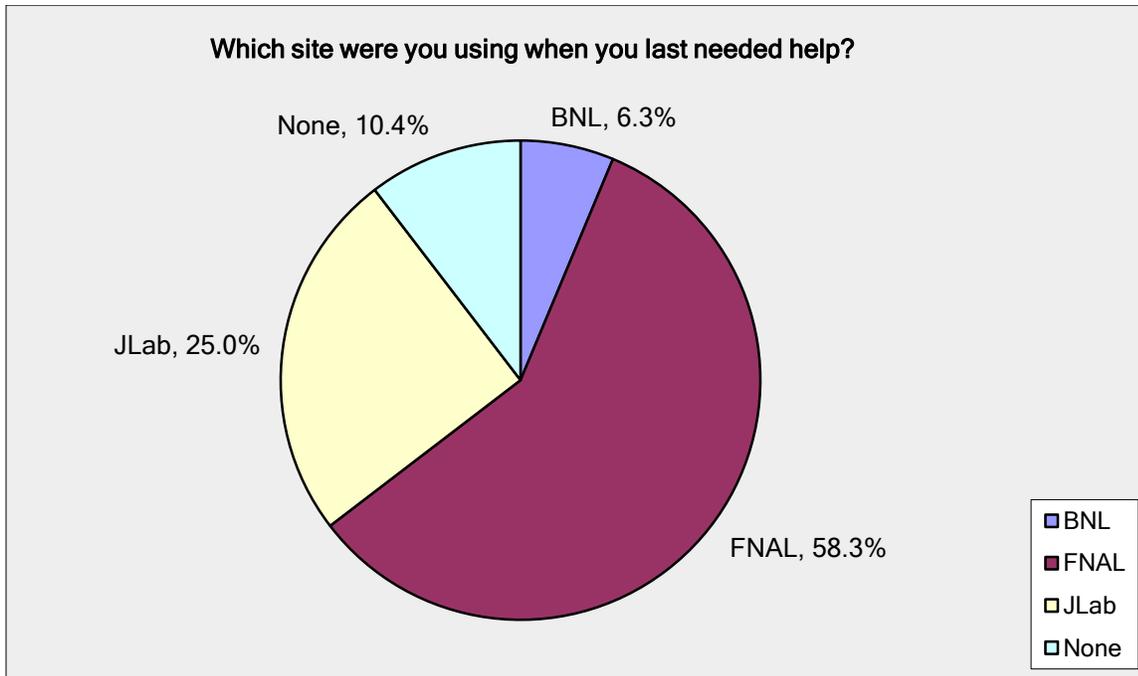
Analysis Notes:

- Other Tools User Satisfaction rating = 97.1%

6.14 Site Used when Help Last Needed

Survey Question 14. Which site were you using when you last needed help?

- BNL
- FNAL
- JLab
- None



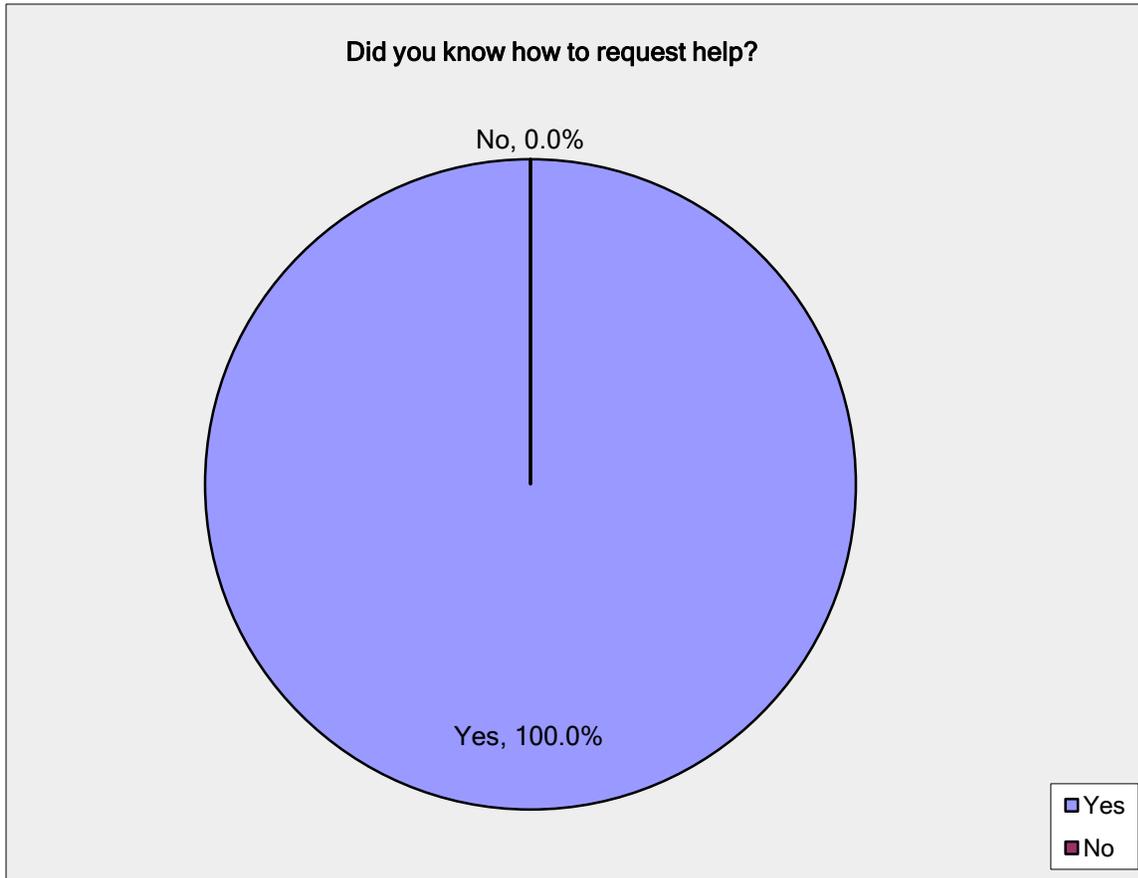
Help asked	Count
BNL	3
FNAL	28
JLab	12
None	5
<i>Answered Question</i>	48
<i>Skipped Question</i>	13

6.15 Requesting Help

Survey Question 15. Did you know how to request help?

- Yes
- No

Please provide feedback to help us better understand your answer: [*text entry box*]



Knows	Count
Yes	43
No	0
<i>Answered Question</i>	43
<i>Skipped Question</i>	18

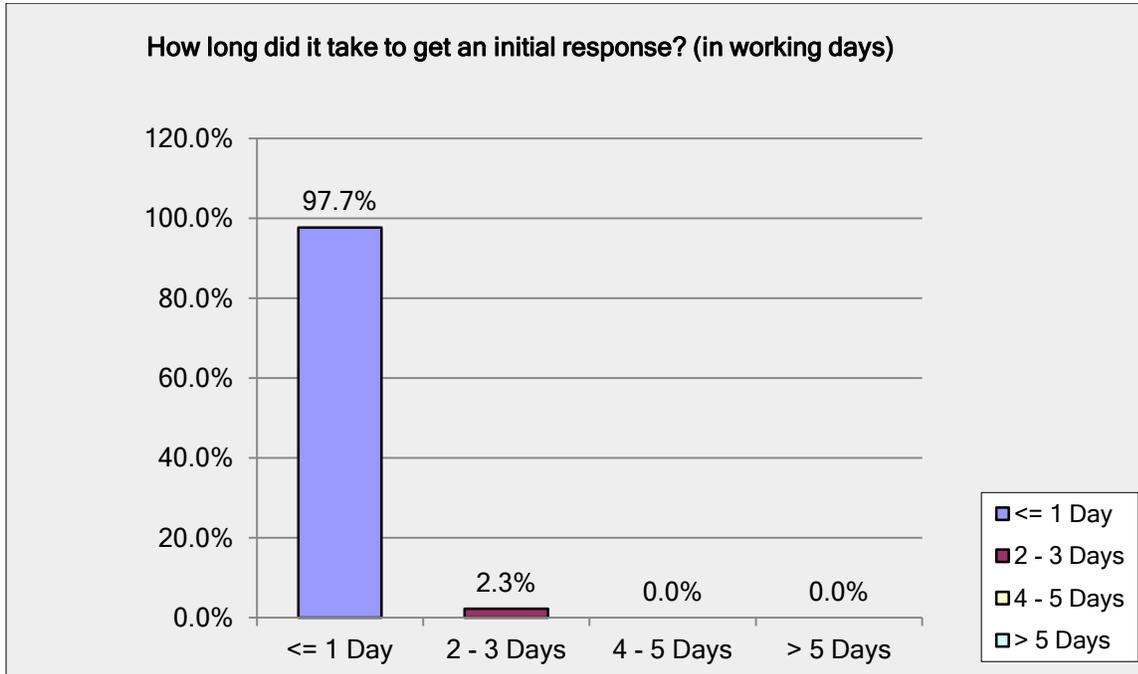
User Comments:

- I sent an e-mail... seemed easy.
- I used the Internet, email, and phone to contact staff for instructions. They were very helpful.
- I emailed hpcadmin@jlab.org and everything got fixed.
- I looked it up on the JLAB website.

6.16 Initial Response Time

Survey Question 16. How long did it take to get an initial response? (in working days)

- <= 1 Day
- 2 – 3 Days
- 4 – 5 Days
- > 5 Days

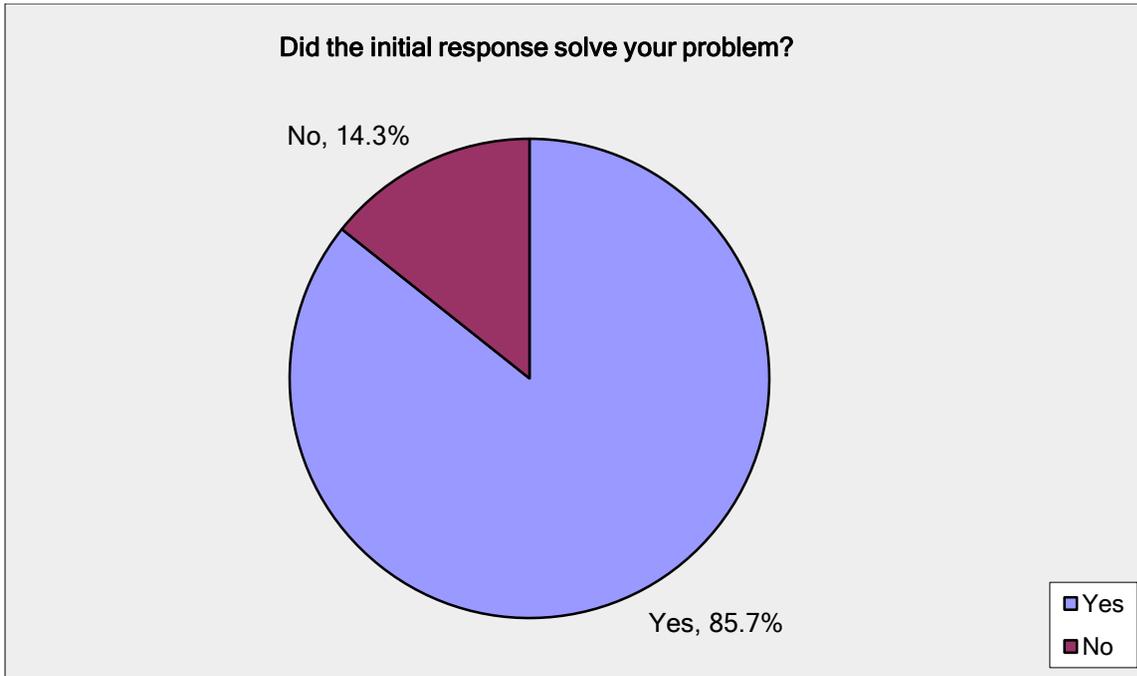


Days	Freq.
<= 1 day	42
2-3 days	1
4-5 days	0
>5 days	0
<i>Answered Question</i>	43
<i>Skipped Question</i>	18

6.17 Closing Tickets on Initial Response

Survey Question 17. Did the initial response solve your problem?

- Yes
- No

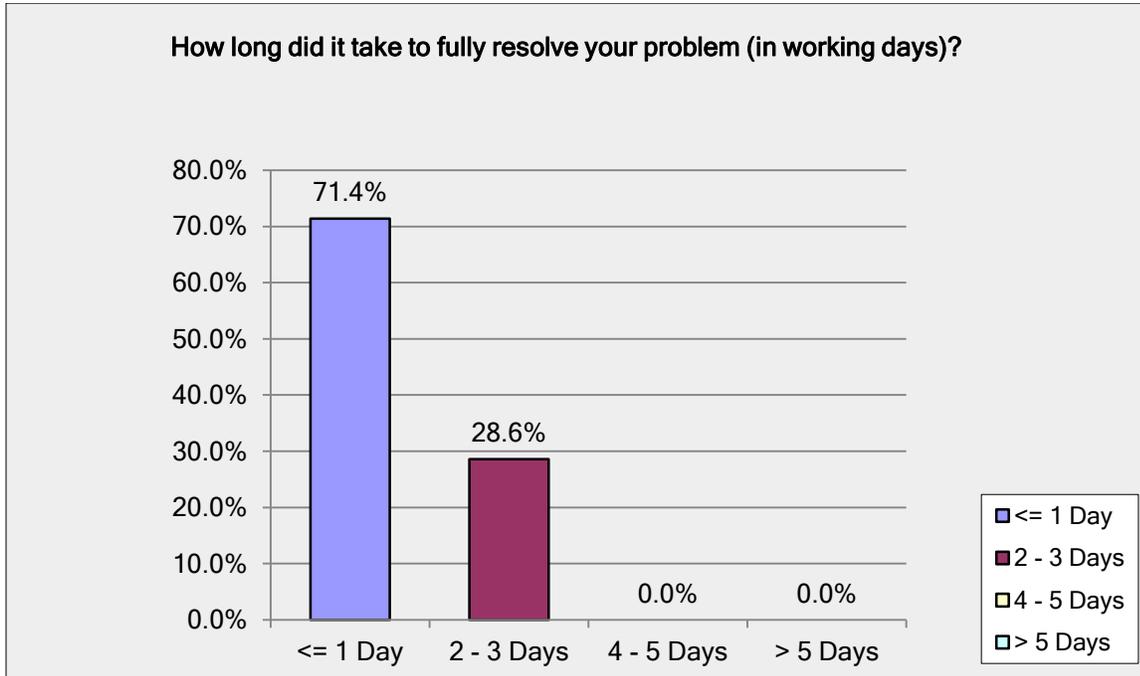


Closed?	Count
Yes	36
No	6
<i>Answered Question</i>	42
<i>Skipped Question</i>	19

6.18 Time Needed to Resolve a Ticket

Survey Question 18. How long did it take to fully resolve your problem (in working days)?

- <= 1 Day
- 2 – 3 Days
- 4 – 5 Days
- > 5 Days



Days	Freq.
<= 1 day	30
2-3 days	12
4-5 days	0
>5 days	0
<i>Answered Question</i>	42
<i>Skipped Question</i>	19

6.19 Feedback on Helpdesk

Survey Question 19. Regarding helpdesk services, do you have any comments or suggestions for improvement? If so please specify. [*text entry box*]

Helpdesk feedback	Users
<i>Answered Question</i>	5
<i>Skipped Question</i>	56

User Comments:

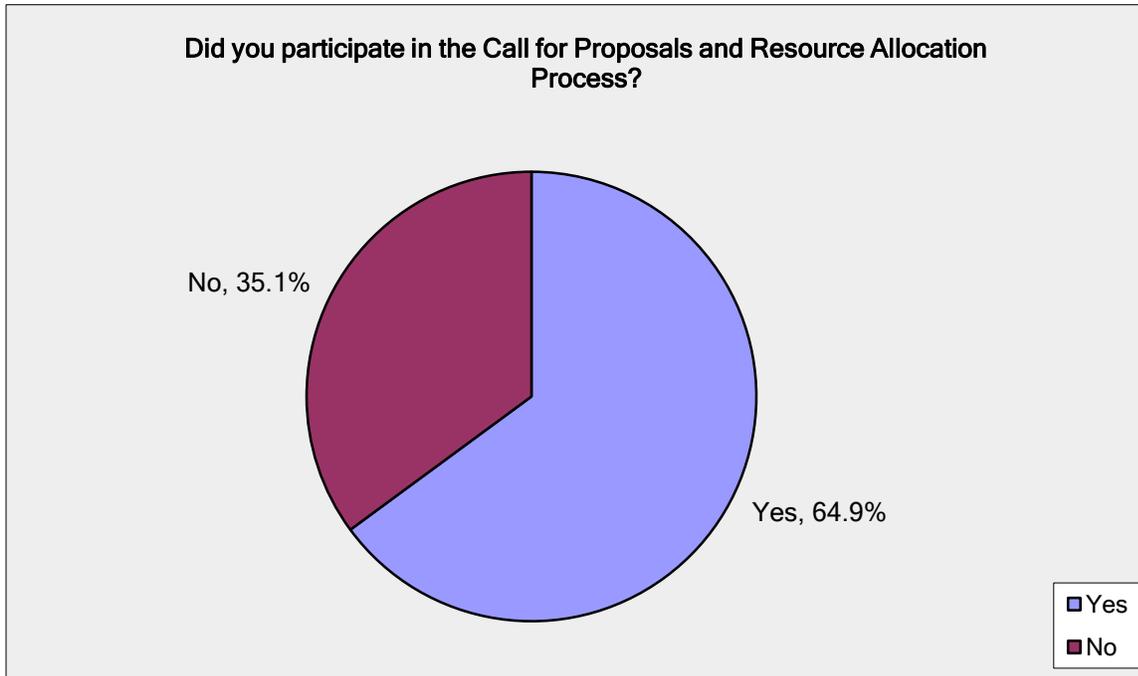
- Fermilab is absolutely the best in terms of helpdesk services!
- I've got nothing to complain about! Some type of automated response just to confirm that the e-mail arrive may be nice, but is not necessary, and would probably annoy some (most) people, so it may just be a nice opt-in option.
- For new user to get the new account on BNL's BG/Q, the current procedure could be improved significantly. There are more than one divisions (ITD and CSC) involved and each needs applications and the approvals, which new users could easily miss and cause delay the process for weeks.
- No complaints, very happy.
- N/A

6.20 Participation in the Call for Proposals and Resource Allocation Process

Survey Question 20. Did you participate in the Call for Proposals and Resource Allocation Process?

- Yes
- No

Comments: [*text entry box*]



Time to prepare CFP	Users
Yes	37
No	20
<i>Answered Question</i>	57
<i>Skipped Question</i>	4

User Comments:

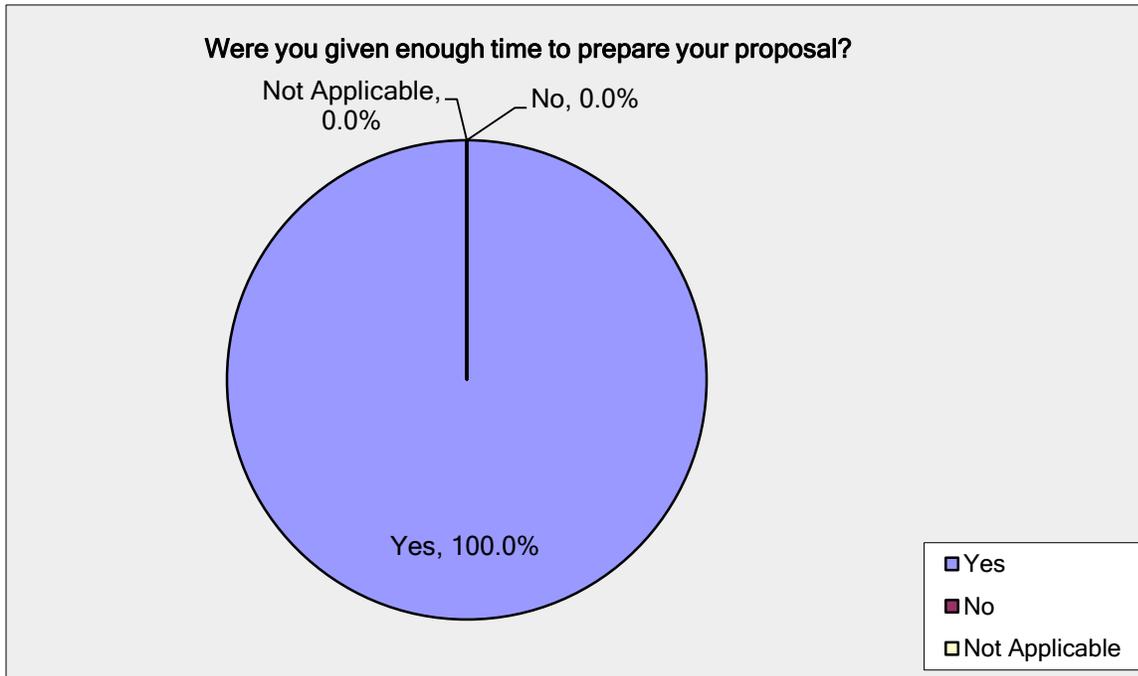
- I was a supporting writer for an allocation and not the one primarily responsible for it.

6.21 Sufficient Time to Prepare Proposal

Survey Question 21. Were you given enough time to prepare your proposal?

- Yes
- No
- Not Applicable

Comments: [*text entry box*]



Time to prepare CFP	Users
Yes	38
No	0
Not Applicable	0
<i>Answered Question</i>	38
<i>Skipped Question</i>	23

User Comments:

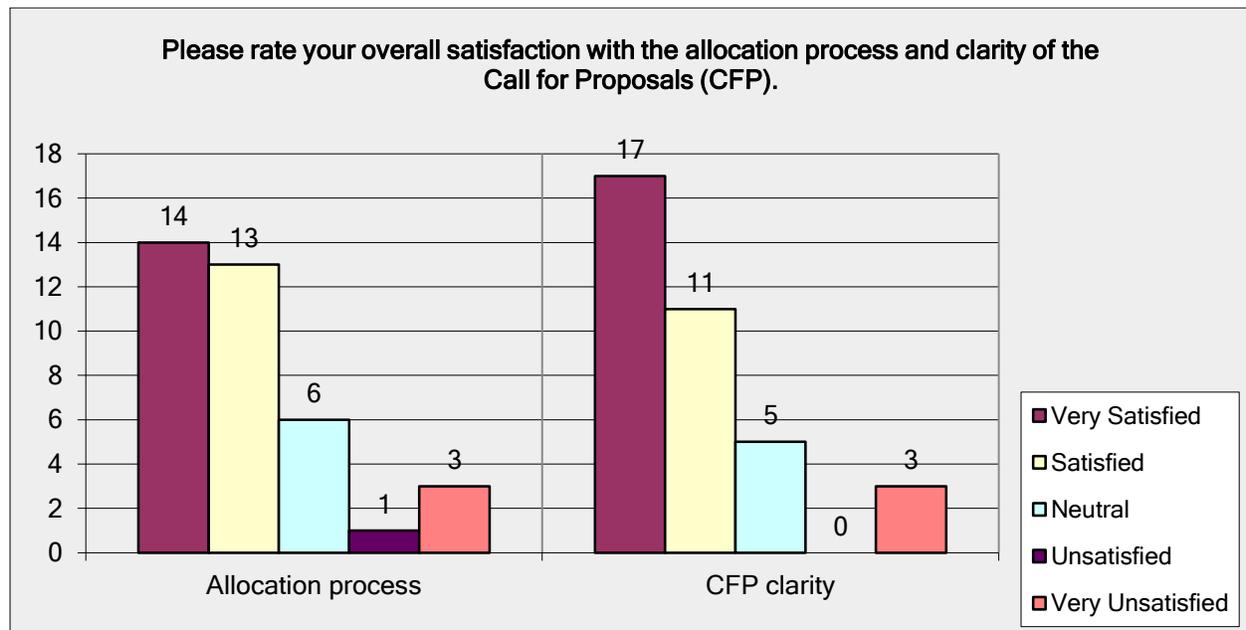
- Yes, we were.
- The regular annual cycle allows preparation even in advance of the official Call for Proposals.

6.22 Overall Satisfaction with the Allocation Process and Clarity of CFP

Survey Question 22. Please rate your overall satisfaction with the allocation process and clarity of the Call for Proposals (CFP).

	Very Unsatisfied	Unsatisfied	Neutral	Satisfied	Very Satisfied	No Opinion
Allocation process	0	0	0	0	0	0
CFP clarity	0	0	0	0	0	0

Comments: [*text entry box*]



Allocation, CFP Clarity	Users
Answered Question	37
Skipped Question	24

User Comments:

- No issues, no comment.
- The CFP says that 1 C2050 GPU hour = 82 Jpsi equivalent core-hours. However, according to Chip Watson, the actual hardware/running cost is only a factor of 12 different, and he exchanged GPU allocations and CPU allocations at JLab at the rate 1 C2050 GPU hour = 12 Jpsi equivalent core-hours. This is inconsistent. Perhaps the CFP should also use a cost-based exchange rate (instead of performance based).

Analysis Notes:

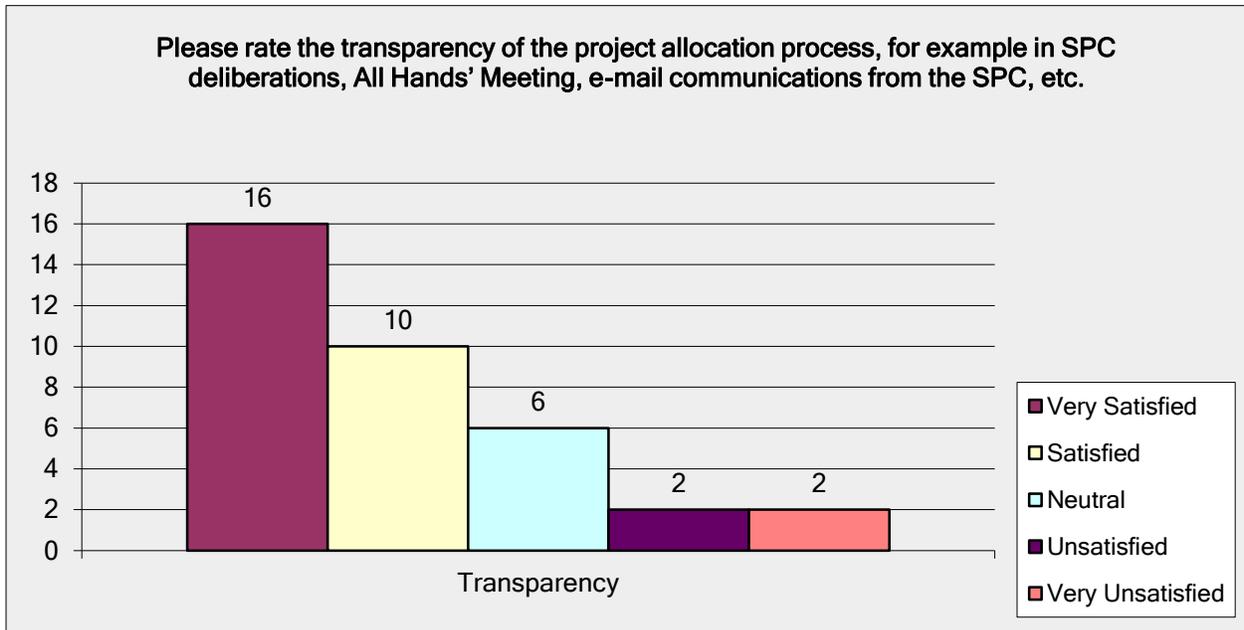
- Allocation Process User Satisfaction rating = 84.1%
- CFP Clarity User Satisfaction rating = 87.8%

6.23 Transparency of the Allocation Process

Survey Question 23. Please rate the transparency of the project allocation process, for example in SPC deliberations, All Hands' Meeting, email communications from the SPC, etc.

	Very Unsatisfied	Unsatisfied	Neutral	Satisfied	Very Satisfied	No Opinion
Transparency	○	○	○	○	○	○

Comments: [*text entry box*]



Transparency of Alloc. Process	Users
<i>Answered Question</i>	37
<i>Skipped Question</i>	24

User Comments:

- I wasn't responsible for managing responses, so I don't have a particular problem.
- Procedure for allocating INCITE resources is perhaps of necessity somewhat obscure, since allocations not known until year end.

Analysis Notes:

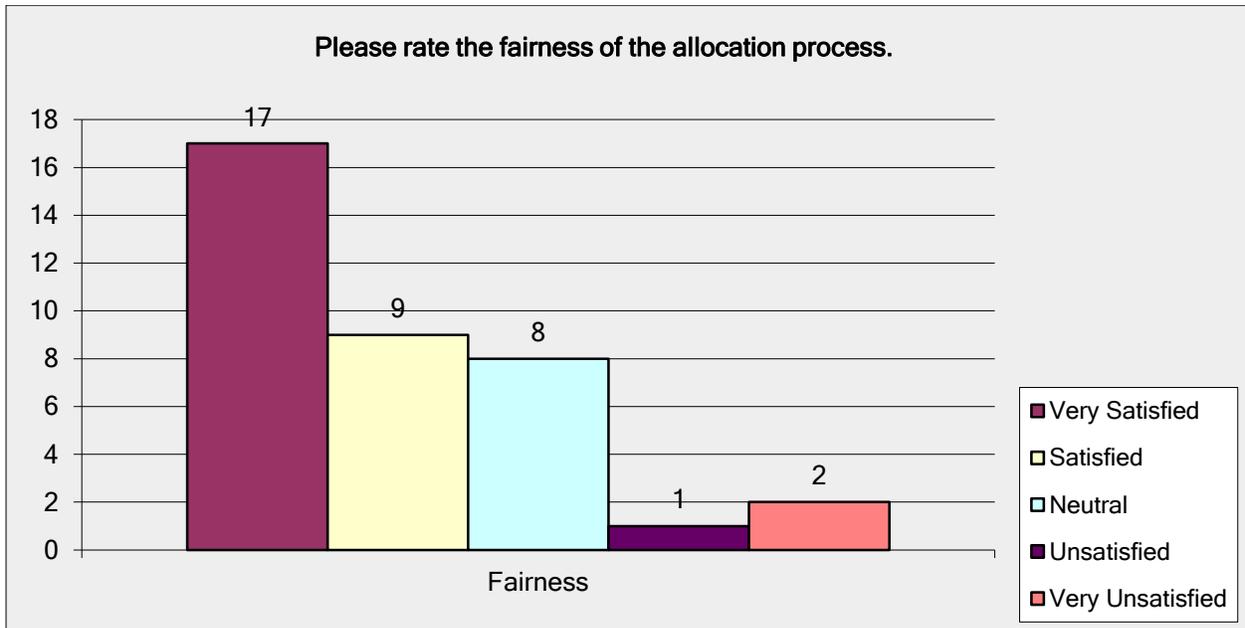
- Transparency of Allocation Process User Satisfaction rating = 83.3%

6.24 Fairness of the Allocation Process

Survey Question 24. Please rate the fairness of the allocation process.

	Very Unsatisfied	Unsatisfied	Neutral	Satisfied	Very Satisfied	No Opinion
Fairness	0	0	0	0	0	0

Comments: [text entry box]



Fairness of Alloc. Process	Users
Answered Question	37
Skipped Question	24

User Comments:

- Seemed fine.
- To the best of my knowledge, all proposals, total requests and total available computing time are publicly available but I'm not aware of a list naming the awarded allocations. Hence I can't judge the fairness.

Analysis Notes:

- Transparency of Allocation Process User Satisfaction rating = 81.2%

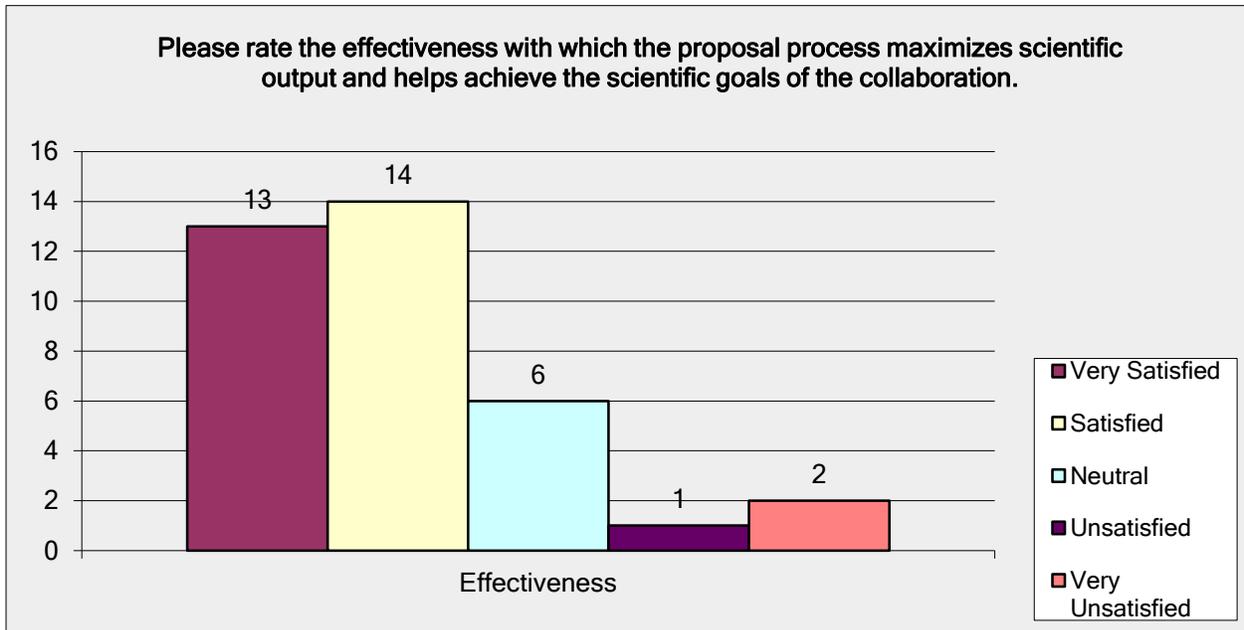
6.25 Effectiveness of the Allocation Process in Maximizing Scientific Output

Survey Question 25. Please rate the effectiveness with which the proposal process maximizes scientific output and helps achieve the scientific goals of the collaboration.

Very Unsatisfied Unsatisfied Neutral Satisfied Very Satisfied No Opinion

Effectiveness ○ ○ ○ ○ ○ ○

Comments: [*text entry box*]



Effectiveness of Alloc. Process	Users
<i>Answered Question</i>	41
<i>Skipped Question</i>	25

User Comments:

- I don't know enough about the other projects to really comment. I know the allocations have helped us personally.

Analysis Notes:

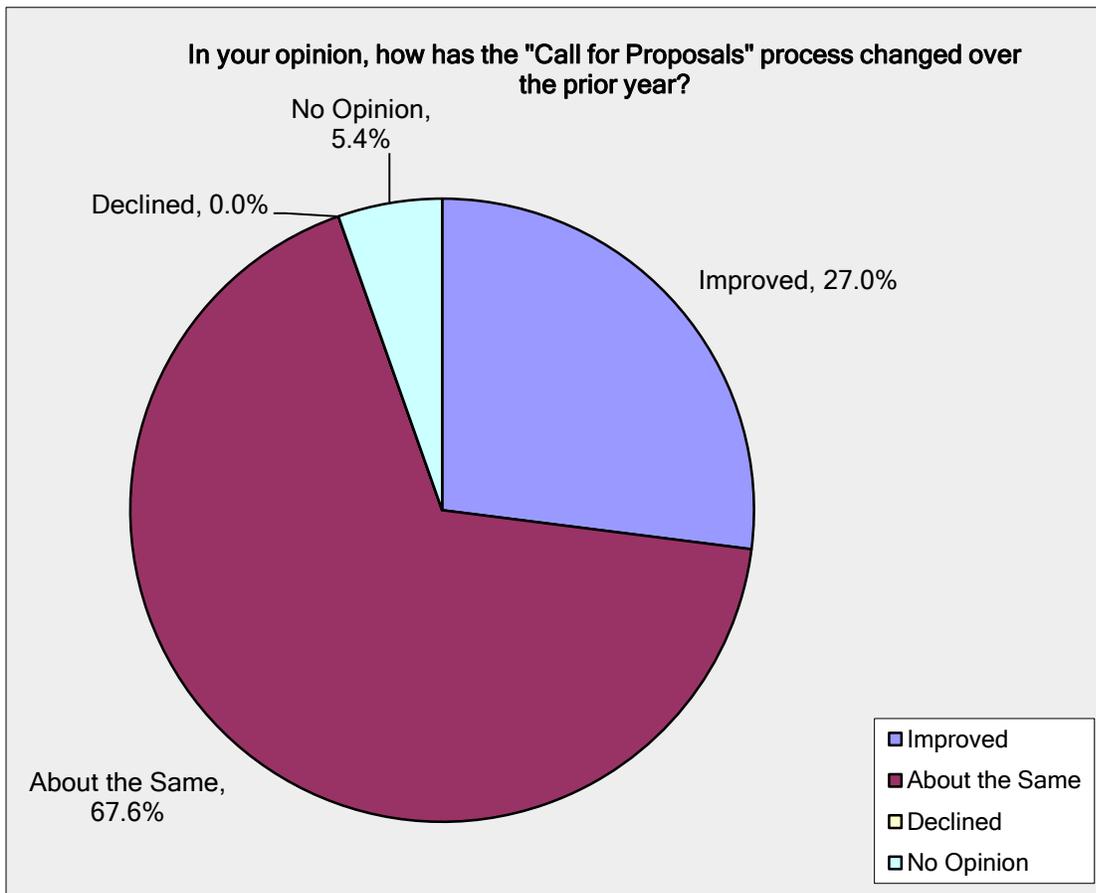
- Transparency of Allocation Process User Satisfaction rating = 84.6%

6.26 Call for Proposals Process Improvement Over Past Year

Survey Question 26. In your opinion, how has the "Call for Proposals" process changed over the prior year?

- Improved
- About the Same
- Declined
- No Opinion

Please provide additional information to help us better understand your answer: [*text entry box*]



Call for Proposals Process Improvement	Users
Improved	10
About the same	25
Declined	0
No Opinion	2
<i>Answered Question</i>	37
<i>Skipped Question</i>	24

User Comments:

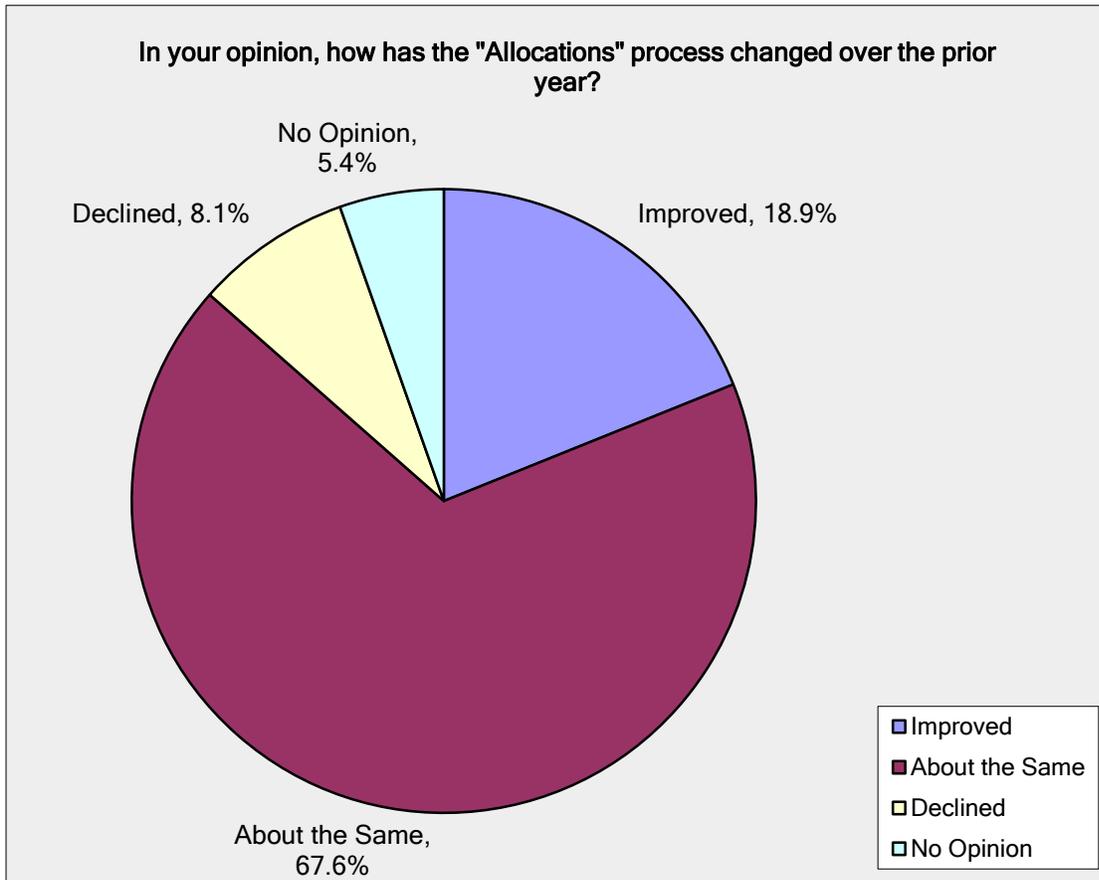
- I wasn't involved in it in previous years.
- More explicit reference to physics goals of the collaboration

6.27 Allocation Process Improvement Over Past Year

Survey Question 27. In your opinion, how has the "Allocations" process changed over the prior year?

- Improved
- About the Same
- Declined
- No Opinion

Please provide additional information to help us better understand your answer: [*text entry box*]



Allocations Process Improvement	Users
Improved	7
About the same	25
Declined	3
No Opinion	2
<i>Answered Question</i>	37
<i>Skipped Question</i>	24

User Comments:

- Again, I have had no previous experience before this year.
- Announcement of awarded computing time was unusually late.

6.28 Comments on Operation of LQCD Facilities

Survey Question 28. We value your opinion greatly. Please share with us any additional comments or suggestions regarding the operation and use of the LQCD computing facilities.
[*text entry box*]

General Comments	Users
<i>Answered Question</i>	9
<i>Skipped Question</i>	52

- Both Fermilab and Jlab work very well.
- Thank you for the resources you make available to the community. It does make a difference.
- For some reason, ordering of 'Satisfied' and 'Unsatisfied' were reversed for some questions, which could have confused some USQCD members. It almost did me.
- Our support at FNAL is outstanding beyond the call of duty, and I am very thankful for that.
- Keep up the good work!
- Fermilab clusters are still the best and most reliably managed computing facilities I'm using. Thank you, Don, Amitoj, Ken, et al.!
- N/A
- The LQCD facilities are crucial for the success of our research. All the HPC DOE sites (Argonne, Oak Ridge, and NERSC) are intended for capability computing. Many of our projects are capacity computing and could not be done anywhere else. That is where LQCD facilities enter.
- JLab facility top management is arrogant, disingenuous, shows low regard for user resources and data.

6.29 Comments on the Call for Proposals and Resource Allocation Processes

Survey Question 29. Please share with us any additional comments or suggestions regarding the Call for Proposals and Resource Allocation processes.

[*text entry box*]

General Comments	Users
<i>Answered Question</i>	5
<i>Skipped Question</i>	56

- No comments! Thank you, again.
- SPC and executive committee should stick to their timeline announced in the CFP.
- N/A
- The allocation process is outstanding.
- The wide range of systems makes the CFP harder to take in.

7 Survey Questionnaire

This section contains the contents of the FY14 survey as it was presented to the user community.

2014 LQCD Computing Facility User Survey

Introduction

This survey gathers information to help the LQCD Computing Project team assess how well the LQCD facilities and services are meeting the needs of the USQCD user community and to identify areas for improvement. Our objective is to understand, from your perspective, what we're doing well and what we could do better, so your honest opinion and specific comments really count. We know your time is valuable, so thank you very much for taking the time to share your insight with us.

The survey will be open from October 20, 2014 to December 1, 2014 inclusive (* extended to December 19, 2014 *). When completing the survey, please consider your experience over the past 7 months, March 1, 2014 through September 30, 2014. Provided we have sufficient response by December 1, 2014, we will have the survey results ready for users, including a new executive summary, in mid-January 2015.

Demographic Information

1. Who is your employer?

- BNL
- FNAL
- Jlab
- University or College
- Other Laboratory

Other Employer (please specify): [*text entry box*]

2. What is your job classification?

- Grad student – University
- Postdoc – University
- Postdoc – Laboratory
- Faculty – University
- Research Scientist – University
- Research Scientist – Laboratory
- Other

Other Job Classification (please specify): [*text entry box*]

3. How often do you use any of the LQCD computers?

- Daily
- Weekly
- Monthly
- Occasionally
- Never

4. During periods when you are using the LQCD facilities, please enter the approximate number of jobs you submit on average in a given week.

- 0
- 1-9
- 10-19
- 20-49
- 50-99
- 100-199
- 200-499
- 500-999
- 1000-4999
- 5000 or more

5. Which LQCD computers do you use for most of your work?

- BNL
- FNAL
- JLab

Other LQCD Computers (please specify): [*text entry box*]

User Satisfaction

In this section, we ask you questions about your satisfaction levels in different categories.

6. If you have used LQCD computers in the past year, please rate your overall satisfaction with the level of service provided by the host site.

	Very Satisfied	Satisfied	Neutral	Unsatisfied	Very Unsatisfied	Not Applicable
BNL	<input type="radio"/>					
FNAL	<input type="radio"/>					
JLab	<input type="radio"/>					

Comments: [*text entry box*]

7. Please rate your level of satisfaction with documentation, such as: web pages, job status reports, guidance.

	Very Satisfied	Satisfied	Neutral	Unsatisfied	Very Unsatisfied	Not Applicable
BNL	<input type="radio"/>					
FNAL	<input type="radio"/>					
JLab	<input type="radio"/>					

Comments: [*text entry box*]

8. In your opinion, how has the level and quality of documentation changed over the past year?

- Improved.
- About the same.
- Declined.
- No opinion.

Please provide feedback to help us better understand your answer: [*text entry box*]

9. Please rate your level of satisfaction with the user support at each site.

	Very Satisfied	Satisfied	Neutral	Unsatisfied	Very Unsatisfied	Did Not Use
BNL	<input type="radio"/>					
FNAL	<input type="radio"/>					
JLab	<input type="radio"/>					

Comments: [*text entry box*]

10. Please rate your level of satisfaction with the responsiveness of the site staff at each site.

	Very Satisfied	Satisfied	Neutral	Unsatisfied	Very Unsatisfied	Did Not Use
BNL	<input type="radio"/>					
FNAL	<input type="radio"/>					
JLab	<input type="radio"/>					

Comments: [*text entry box*]

11. Please rate your level of satisfaction with the reliability (e.g., uptime, job failure rates) at each site.

	Very Satisfied	Satisfied	Neutral	Unsatisfied	Very Unsatisfied	Did Not Use
BNL	<input type="radio"/>					
FNAL	<input type="radio"/>					
JLab	<input type="radio"/>					

Comments: [*text entry box*]

12. Please rate your level of satisfaction with the ease of access to the LQCD computers at each site.

	Very Satisfied	Satisfied	Neutral	Unsatisfied	Very Unsatisfied	Did Not Use
BNL	<input type="radio"/>					
FNAL	<input type="radio"/>					
JLab	<input type="radio"/>					

Comments [*text entry box*]

13. Please rate the effectiveness of other tools (e. g., command line tools to check jobs, quotas, allocations) at each site.

	Very Satisfied	Satisfied	Neutral	Unsatisfied	Very Unsatisfied	Did Not Use
BNL	<input type="radio"/>					
FNAL	<input type="radio"/>					
JLab	<input type="radio"/>					

Comments [*text entry box*]

Help-desk Evaluation

Based on your last help desk request, please answer the following questions.

14. Which site were you using when you last needed help?

- BNL
- FNAL
- JLab
- None

15. Did you know how to request help?

- Yes
- No

Please provide feedback to help us better understand your answer: [*text entry box*]

16. How long did it take to get an initial response? (in working days)

- <= 1 Day
- 2 – 3 Days
- 4 – 5 Days
- > 5 Days

17. Did the initial response solve your problem?

- Yes
- No

18. How long did it take to fully resolve your problem (in working days)?

- <= 1 Day
- 2 – 3 Days
- 4 – 5 Days
- > 5 Days

19. Regarding helpdesk services, do you have any comments or suggestions for improvement? If so please specify. [*text entry box*]

Call for Proposals (CFP) and Project Allocations Process Evaluation

This section contains questions related to the project resource allocation process.

20. Did you participate in the Call for Proposals and Resource Allocation Process?

- Yes
- No

Comments: [*text entry box*]

21. Were you given enough time to prepare your proposal?

- Yes
- No
- Not Applicable

Comments: [*text entry box*]

22. Please rate your overall satisfaction with the allocation process and clarity of the Call for Proposals (CFP).

	Very Unsatisfied	Unsatisfied	Neutral	Satisfied	Very Satisfied	No Opinion
Allocation process	<input type="radio"/>					
CFP clarity	<input type="radio"/>					

Comments: [*text entry box*]

23. Please rate the transparency of the project allocation process, for example in SPC deliberations, All Hands' Meeting, email communications from the SPC, etc.

	Very Unsatisfied	Unsatisfied	Neutral	Satisfied	Very Satisfied	No Opinion
Transparency	<input type="radio"/>					

Comments: [*text entry box*]

24. Please rate the fairness of the allocation process.

	Very Unsatisfied	Unsatisfied	Neutral	Satisfied	Very Satisfied	No Opinion
Fairness	<input type="radio"/>					

Comments: [*text entry box*]

25. Please rate the effectiveness with which the proposal process maximizes scientific output and helps achieve the scientific goals of the collaboration.

	Very Unsatisfied	Unsatisfied	Neutral	Satisfied	Very Satisfied	No Opinion
Effectiveness	o	o	O	o	o	o

Comments: [*text entry box*]

26. In your opinion, how has the "Call for Proposals" process changed over the prior year?

- Improved
- About the Same
- Declined
- No Opinion

Please provide additional information to help us better understand your answer: [*text entry box*]

27. In your opinion, how has the "Allocations" process changed over the prior year?

- Improved
- About the Same
- Declined
- No Opinion

Please provide additional information to help us better understand your answer: [*text entry box*]

General Comments

28. We value your opinion greatly. Please share with us any additional comments or suggestions regarding the operation and use of the LQCD computing facilities.

[*text entry box*]

29. Please share with us any additional comments or suggestions regarding the Call for Proposals and Resource Allocation processes.

[*text entry box*]

Thank you

Thank you very much for completing the survey. If you have questions or suggestions, please contact Bill Boroski at boroski@fnal.gov or Rob Kennedy at kennedy@fnal.gov.

8 Sampling Error in the User Survey Results

To help interpret the results of the User Survey, we develop a simple estimate of the uncertainty in the results due to the following:

- Sampling error for a small population
- Error propagation through the calculation of the Satisfaction Rating

To simplify this estimate, we assume the sampling was done randomly. The uncertainty due to sampling a small population ($N < 5000$) is given by the hypergeometric distribution:

$$n = (N z^2 p q) / (E^2 (N-1) + z^2 p q)$$

where:

- N = population size
 - For user survey, N is about 65 (facility users) or about 50 (people with experience in the allocations process)
- z = confidence level factor
 - For confidence level of 95%, $z = 1.96$
- p = proportion of possible selections
 - For most of the user survey, $p = 1$ choice of 5 possible choices = 0.20
- $q = 1 - p = 0.80$
- E = uncertainty in measurement due to sampling error
- n = sample size

(<http://uregina.ca/~morrisev/Sociology/Sampling%20from%20small%20populations.htm>)

Applying this to Question 6 (Overall Satisfaction), we have to take into account that some respondents contributed more than once to the total satisfaction since each person can more than one site and we sum over sites. We use the actual number of respondents, 48, to estimate the margin of error due to the sample size for a choice of 1 from 5 possible choices.

- $E = 5.8\%$ for $N = 65$, $n = 48$, $p = 0.20$, $z = 1.96$

This represents the uncertainty in the fraction of respondents selecting one of the five choices in this question due to sampling error. Since 40 of 57 respondents chose Very Satisfied, then the estimate of respondents in the population who would choose Very Satisfied is 70.2% +/- 5.8%.

Applying this to the Satisfaction Rating calculation, we can propagate the uncertainty on the responses for each choice through the satisfaction rating formula. This provides an estimate of the uncertainty on the rating itself (6.6%), and taking into account the upper limit of 100%:

- Overall Satisfaction Rating = 97% + 3% - 7%

If this survey were performed repeatedly randomly sampling the small population in the same manner, we estimate that 95% of those trials would yield a satisfaction rating between 90% and 100%.