

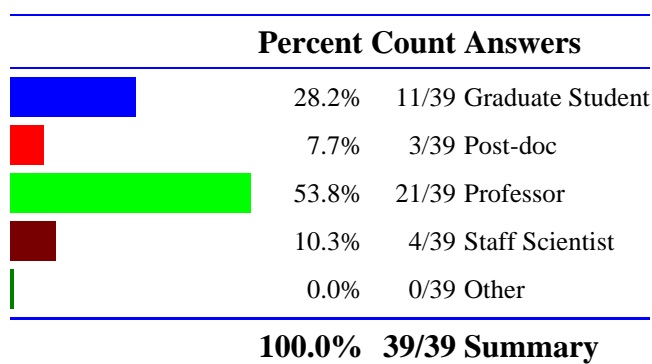
NIST Center for Neutron Research (NCNR)

Live Report

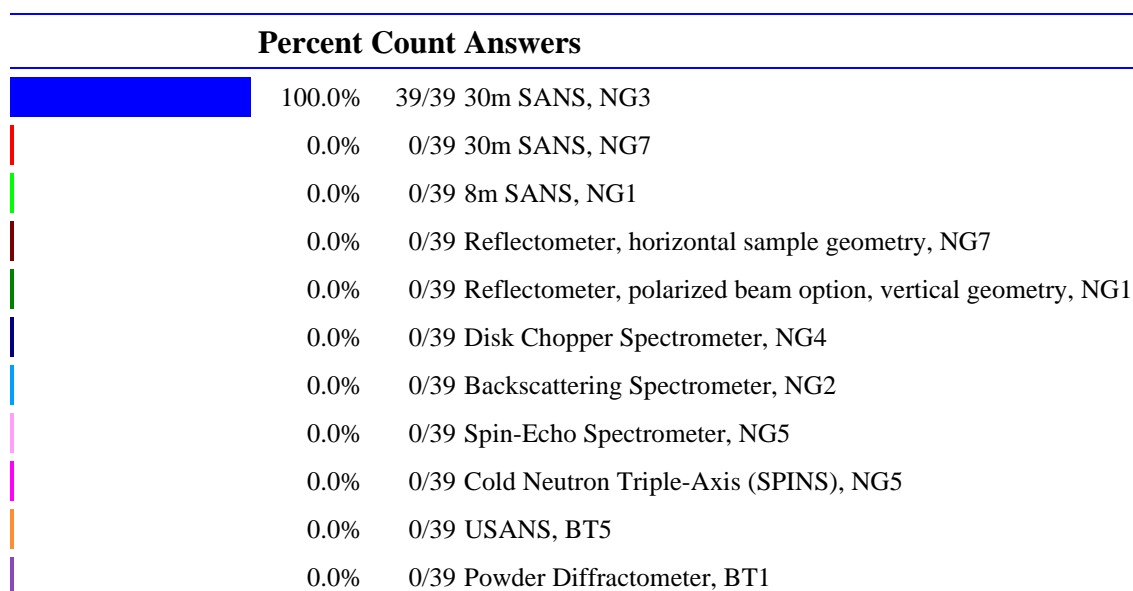
22-Feb-2004 7:53:19 AM

There are a total of **39** responses for the selected group from 13-Feb-2004 to 20-Feb-2004.

1. Your position



2. Your primary instrument (Please use this instrument as the basis for answers to sections 3 and 4)



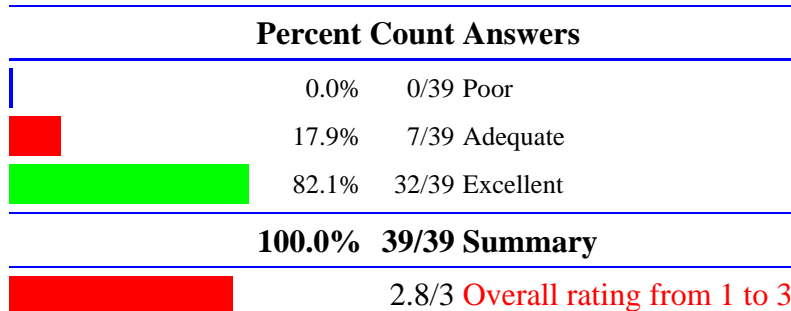
				0.0%	0/39 Residual Stress Diffractometer, BT8
				0.0%	0/39 Filter Analyzer Spectrometer (FANS), BT4
				0.0%	0/39 Triple-Axis Spectrometer with polarized beam option, BT2
				0.0%	0/39 Triple-Axis Spectrometer, BT9

100.0% 39/39 Summary

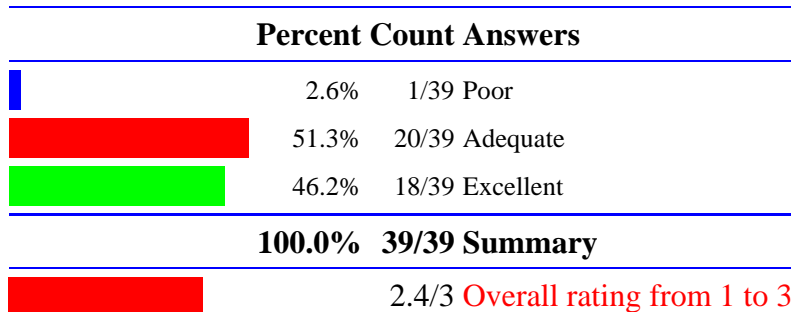
3. Please rate the proposal process

1) Ease of proposal submission		2.8/3		
2) Referee reports and PAC comments		2.4/3		
3) Proposal process fairness		2.5/3		
4) Scheduling process following approval		2.7/3		
Legends:				
<div style="display: flex; flex-direction: column; gap: 5px;"> <div>■ Poor</div> <div>■ Adequate</div> <div>■ Excellent</div> <div>■ Overall rating based on the scale from 1 to 3</div> </div>				

1) Ease of proposal submission

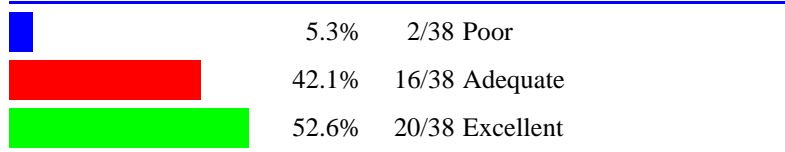


2) Referee reports and PAC comments

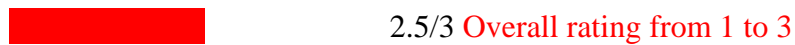


3) Proposal process fairness

Percent Count Answers

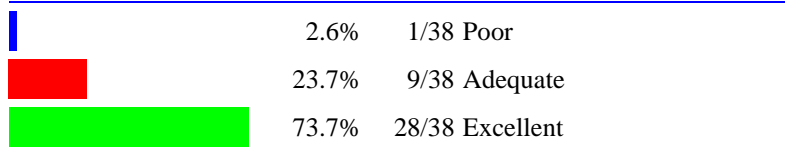


100.0% 38/38 Summary

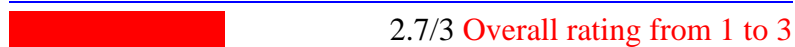


4) Scheduling process following approval

Percent Count Answers



100.0% 38/38 Summary



4. Please rate the effectiveness of the health physics training

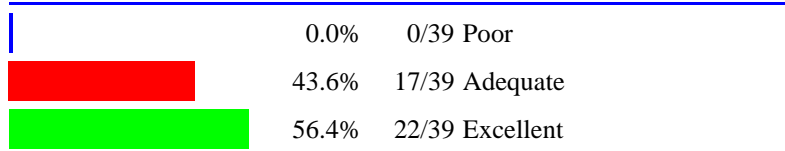
1) Relevance of computer based training content	2.6/3	
2) Efficiency of computer based training	2.6/3	
3) NCNR Health Physics tour	2.7/3	
4) Discussion/exam review with health physicist	2.6/3	
5) Refresher/Reindoctrination Training	2.5/3	

Legends:

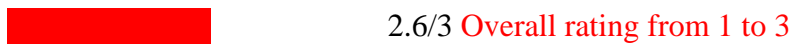
- Poor
- Adequate
- Excellent
- Overall rating based on the scale from 1 to 3

1) Relevance of computer based training content

Percent Count Answers

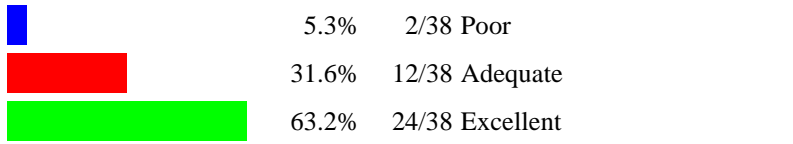


100.0% 39/39 Summary

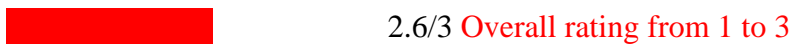


2) Efficiency of computer based training

Percent Count Answers

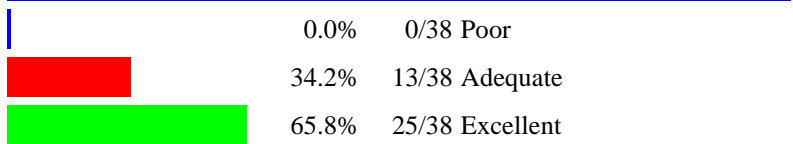


100.0% 38/38 Summary

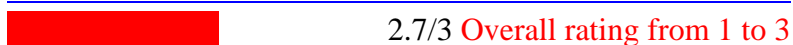


3) NCNR Health Physics tour

Percent Count Answers

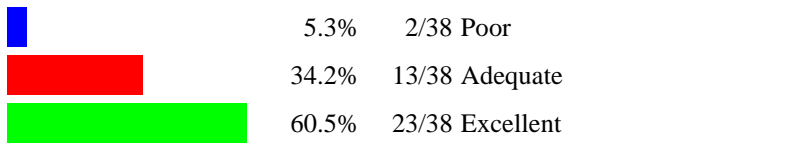


100.0% 38/38 Summary

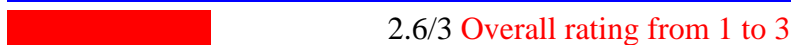


4) Discussion/exam review with health physicist

Percent Count Answers

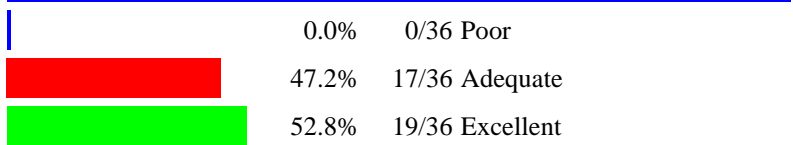


100.0% 38/38 Summary

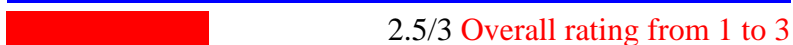


5) Refresher/Reindoctrination Training

Percent Count Answers



100.0% 36/36 Summary

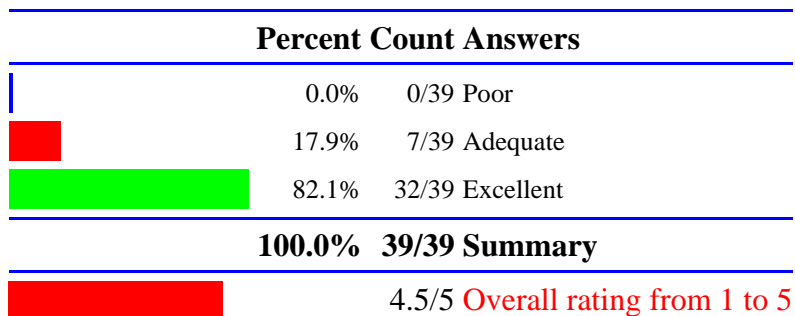


5. Please rate the user support facilities

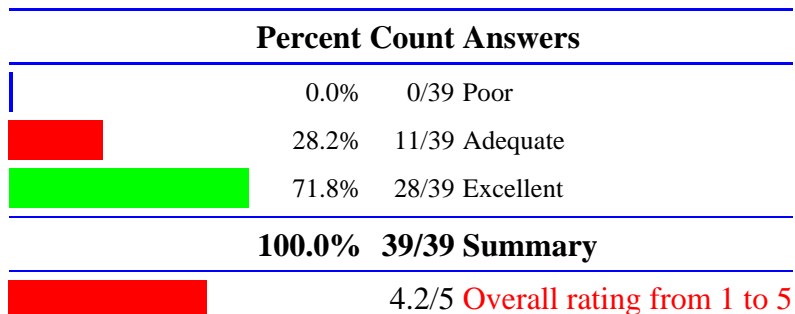
1) User Laboratory		
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facilities		4.5/5	
2) Tools and supplies in support labs		4.2/5	
3) User Offices		3.6/5	
4) NCNR computers for users		4.1/5	
5) Network access for user laptops		3.8/5	
6) Break/snack room facilities		3.2/5	
Legends:			
Poor			
Adequate			
Excellent			
Overall rating based on the scale from 1 to 5			

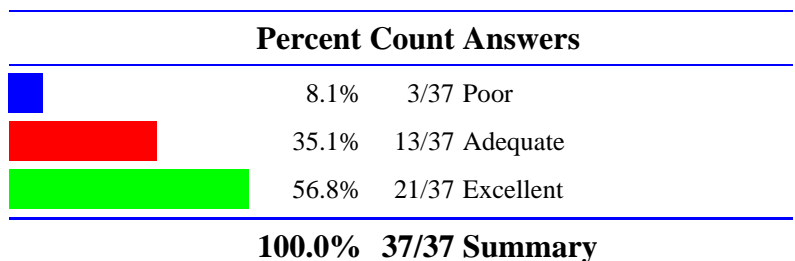
1) User Laboratory facilities

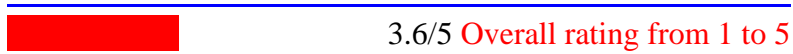


2) Tools and supplies in support labs

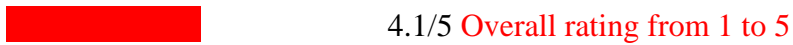
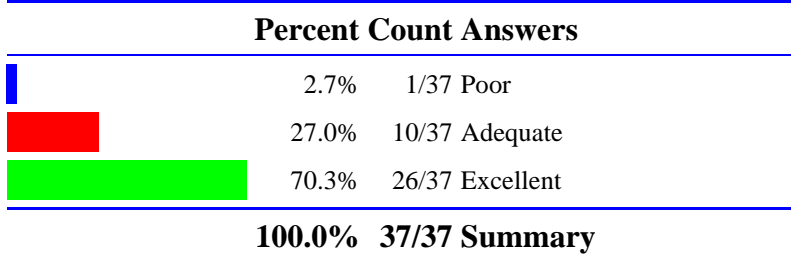


3) User Offices

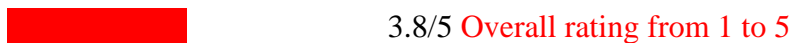
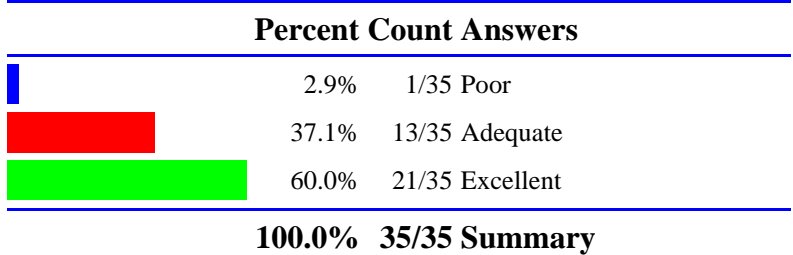




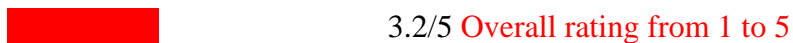
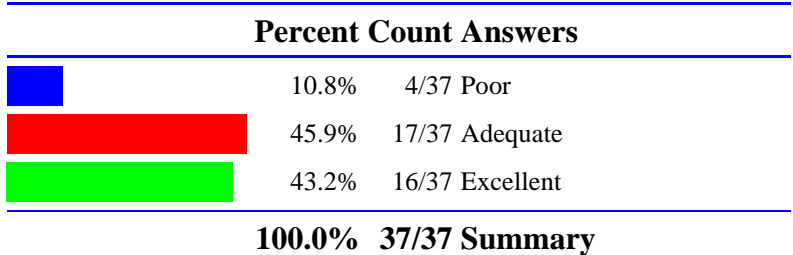
4) NCNR computers for users



5) Network access for user laptops



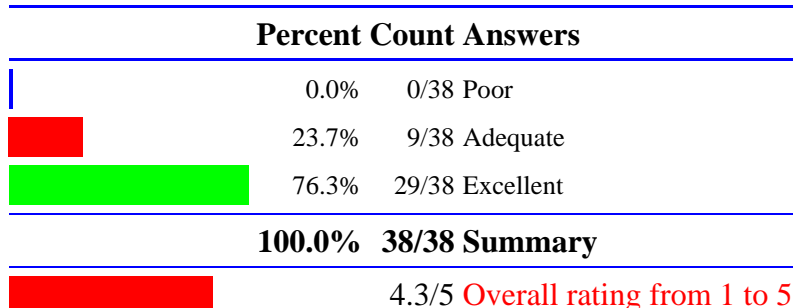
6) Break/snack room facilities



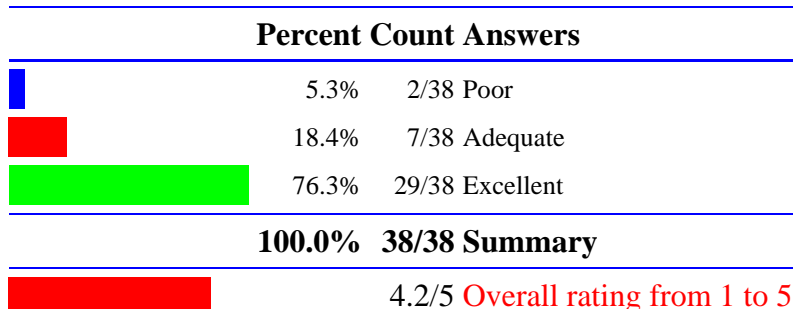
6. Please rate the following aspects of sample environments

1) Availability of different sample environments		4.3/5			
2) Quality and reliability of the equipment		4.2/5			
3) Support from sample environment personnel		4.7/5			
Legends:					
Poor					
Adequate					
Excellent					
Overall rating based on the scale from 1 to 5					

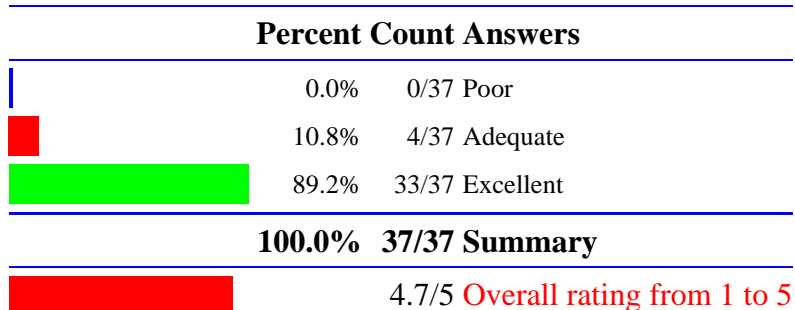
1) Availability of different sample environments



2) Quality and reliability of the equipment



3) Support from sample environment personnel



7. What other sample environments would you research benefit from

- [High speed centrifuge at laboratory facility for sample preparation just prior to neutron runs would be useful, in order to remove particle aggregates that influence low-Q data.](#)
- [High pressure cells for neutron scattering](#)
- [inert atmosphere](#)
- [more and better low temperatrue \(< 1 K\) environments, especially if they are available with and without high fields.](#)
- [I have used NG7, NG3, NG1, NG1 Reflectometry and have found all facilities and assistance to be outstanding. I am interested in also accessing USANS BT5 and in learning more about neutron spin-echo capabilities.](#)
- [T- Control Shear Cell](#)
- [smaller sample holders \(for precious samples\)](#)

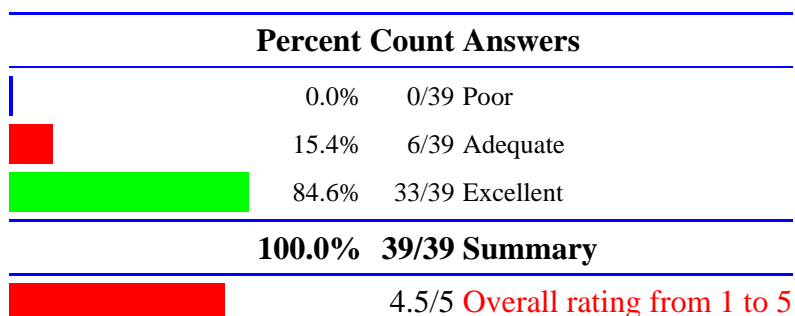
better temperature regulation and monitoring (biological samples)
most of this OK for SANS, but we found that other equipment (pressure cells, sample holders for disk chopper spectrometer, etc) were designed for polymeric materials and not appropriate for biological samples.

- The major need is to be able to use chemicals and solvents which are volatile so that odor will be detected during use in the SANS/USANS work. A good hood system which is portable and can be used to remove the air column, near the sample holders, to exhaust it outside would provide major flexibility for doing chemical reactions which generate phases or particles within the beam.
- Parallel Plate Polymer Melt Rheometer

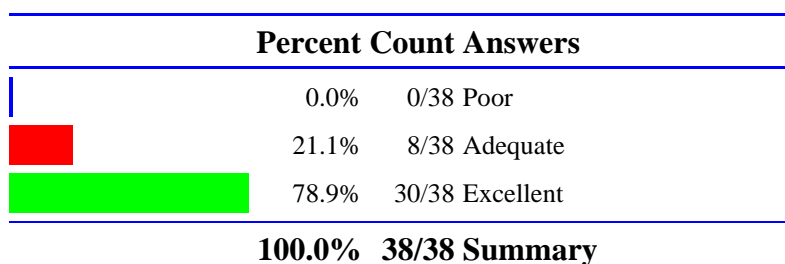
8. Please rate your primary NCNR instrument

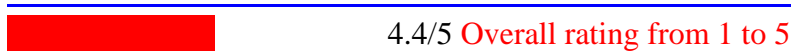
1) Hardware reliability and performance		4.5/5		
2) Data acquisition software		4.4/5		
3) Support from NCNR staff		4.9/5		
Legends:				
<div style="display: flex; flex-direction: column; gap: 5px;"> <div> Poor</div> <div> Adequate</div> <div> Excellent</div> <div> Overall rating based on the scale from 1 to 5</div> </div>				

1) Hardware reliability and performance

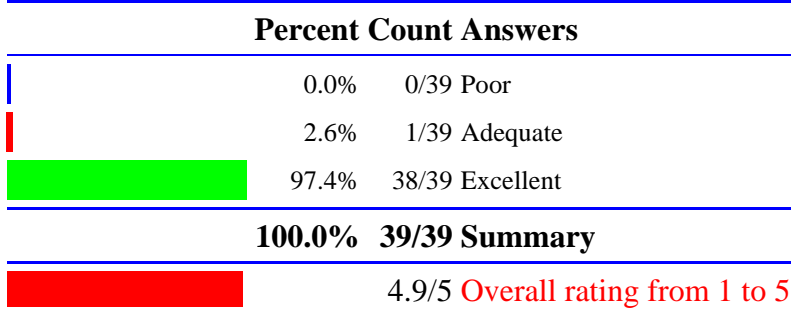


2) Data acquisition software


















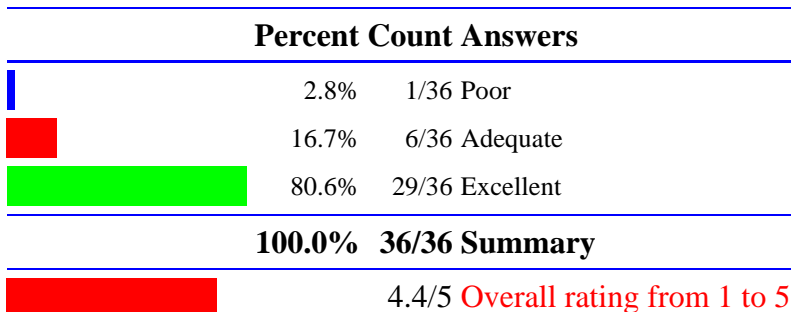
3) Support from NCNR staff



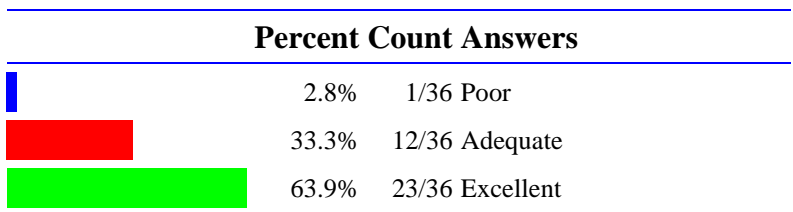
9. Please rate data analysis and visualization software at the NCNR

1) Quality of software		4.4/5		
2) Range of capabilities		3.9/5		
3) Assistance from NCNR staff		4.8/5		
Legends:				
 Poor				
 Adequate				
 Excellent				
 Overall rating based on the scale from 1 to 5				

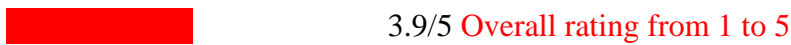
1) Quality of software



2) Range of capabilities

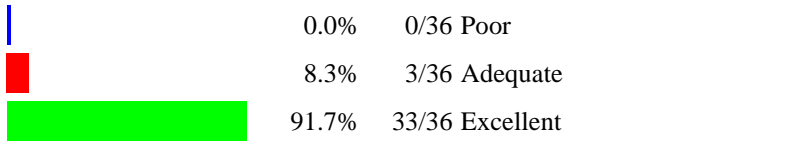


100.0% 36/36 Summary

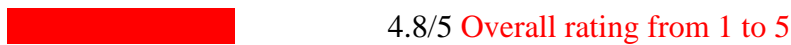


3) Assistance from NCNR staff

Percent Count Answers



100.0% 36/36 Summary

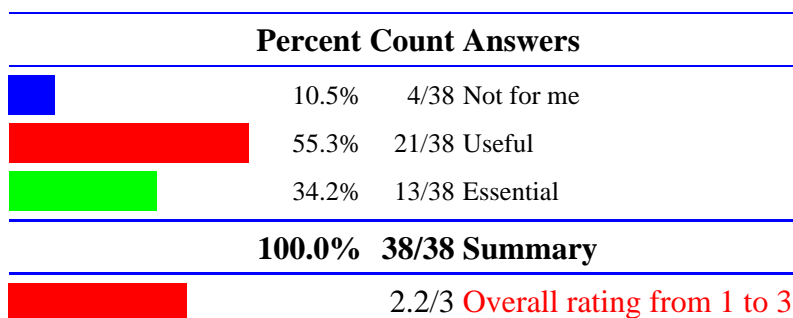
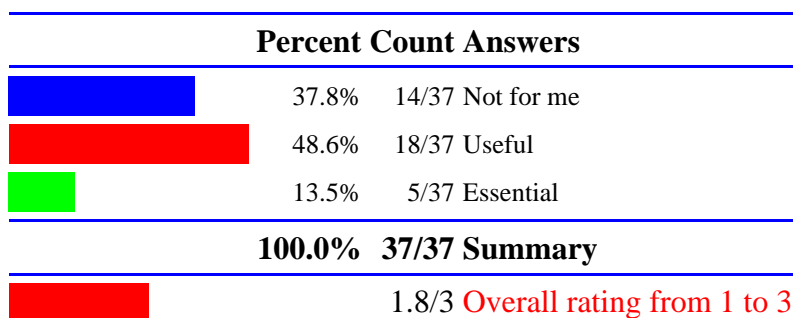
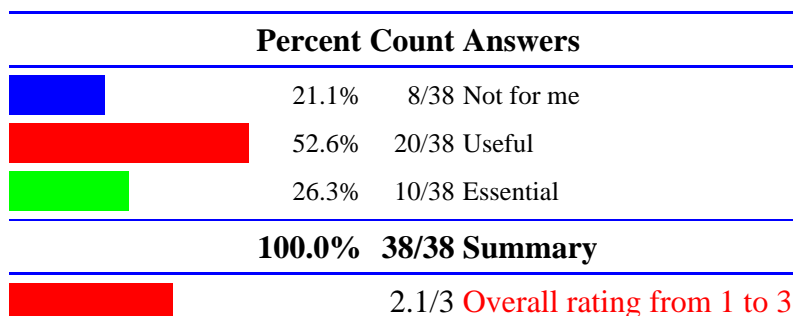


10. What other data analysis tools would your research benefit from

- o [A Small angle scattering model for multilammlar vesicles.](#)
- o [Additional fitting packages for SANS data\(structure factor forms, additional core shell forms\(cylinders\)\)](#)
- o [Data reduction software and instructions for Spin Echo](#)
- o [One element of our data analysis that has been frustrating is the difficulty in fitting a polydisperse form factor model to our scattering data. We know from experience that some of our samples form aggregates that are oblate ellipsoidal with solvent entrainment and we know they are polydisperse. It has been difficult for us to adequately fit our sample data to the "polydisperse cylinder" model that NIST makes available because the program is not sufficiently robust. Otherwise, all sample analysis tools have been outstanding.](#)
- o [We perform SANS under flow resulting in asymmetric 2D patterns. While techniques for analyzing these patterns are being developed it will be key that new analytical tools be easily incorporated into existing NCNR analysis software.](#)

11. Please rate to what extent these forms of remote access (would) benefit your research program

1) Remote viewing of instrument status and data		2.2/3	
2) Remote control of instrument		1.8/3	
3) Mail in samples for simple, well defined measurements		2.1/3	
Legends:			
Not for me			
Useful			
Essential			
Overall rating based on the scale from 1 to 3			

1) Remote viewing of instrument status and data**2) Remote control of instrument****3) Mail in samples for simple, well defined measurements**

12. **Please list any neutron instruments not currently at the NCNR that would benefit your research program or the community in general.**

- [Higher neutron flux would be useful](#)
- [powder diffraction with area detector, for visualizing anisotropy of small molecule powder samples--I think that your current powder instruments don't have the right detector capability for this.](#)
- [As quite a portion of proposals are rejected each year, please consider to increase the numbers of SANS and NR.](#)
- [An instrument covers the Q range from 0.01 to 2.0 A-1. It is an instrument between the currently existing SANS and wide-angle diffractometer. The instrument shall be very capable of Machine with such a range tackles the nano-scale, which will benefit the entire nano-community.](#)

13. **Are there any other comments or suggestions about the NCNR that you would like to add?**

- This is an excellent facility which I hope will continue to develop and grow.
- This is a great facility made all the more wonderful by the personnel I work with and have interacted with (Hammouda, Kline, Glinka).
- During the proposal submission process it should be made horribly, insultingly, condescendingly clear that only 3 figures are allowed to be included with the experimental report.. maybe its 4 actually. Whatever the hell the number is I spent a week writing a report that had to many figures, then had to re-write it at the last minute cause I had too many figures.. granted, I'm an idiot, but the process should be made as idiot proof as possible.. in short, it should be easier for short-sighted people like me to have access to a nuclear reactor.
- It's a wonderful place to do research--supportive, friendly staff and excellent facilities and training.
- NCNR is a premier neutron scattering facility in terms of the operation policy, resource development and user assistance, #1 in the US and arguably that internationally. It deserves the strongest support possible.
- More available beam time, for both proposal based and collaborative work.
- By and large, my experiences at NIST have been superb. The staff -- health physics, scientific, beamline -- are knowledgable, friendly, and a joy to work with. I am pleased to do anything in my power to assist in keeping the facility vibrant and active.
- The NCNR is one of the finest user facilities in the world. The instruments provide capabilities that are unique and critical to the field of materials research, biological sciences, chemistry, and solid state physics. The facility is maintained such that the instruments are easy to use, always operating reliably, and running around the clock. The funding is put to exceptionally good use. Plus, on a scale of 1-10, the staff is a 99! They are always available to help- before, during and after experiments, and they provide excellent training, teaching and customer service functions. This facility is a precious and indispensable resource for the advancement of science and should, unquestionably, be fully staffed and supported for many years to come.
- Is it possible to build up a cafeteria in NCNR building?
- This facility is essential for neutron research in the eastern US. The staff scientists have been wonderful.
- There seems to be no correlation between the quality of the proposals, and the significance of the results, as indicated by the literature, and the acceptance or rejection. It seems that any new idea faces a very strong resistance while old; pretty much variations on old experiments are welcomed. It defeats the purpose of a dynamic scientific place.
- This is a wonderful program.
- I have been completely pleased with the interactions with the facilities and the people who work there. Keep up the good work!
- I have found staff to be quite knowledgeable and helpful.

Proposal process and allocation of instrument time seems somewhat politicized; I wonder whether we have received time in the past because of personal connections.

I wish quasi-elastic and inelastic experiments could be made more sensitive and more useable for biological samples. These applications are unique to neutrons (as opposed to X-rays), and it would be great to exploit them.

- This was our first experience at NCNR. Neutron scattering brings an important added dimension to experimental efforts in structural biology of macromolecular machines, and

we wanted to explore its potential. I can say without qualification that the scientists and staff at NCNR with whom we interacted were helpful and patient with us (my post doc and graduate student) in preparing samples, collecting data, and assisting us with the analysis and interpretation. The operation is an excellent model for how a national user facility should operate. Keep up the good work.

- The program bringing graduate students to NIST to conduct experiments based on their submission of short proposals is a superb concept and of enormous value. There is no way we could have ever gotten into the use of Neutron scattering or learned so much about its value without this program. Dr. Glinka and his staff are to be congratulated on contributing to the success of many research programs and for "spreading the neutron gospel" through their excellent service to the scientific community through this program. If ever a program deserved expansion, this is it.
- As I hope is apparent by my responses above, I have had very good experiences at NIST, both in terms of using instruments and interacting with staff scientists. I have used both the SANS and USANS instruments.

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