Sample Mounting Systems

1) How do I prepare and ship my samples to work with the system?
   a. What are the common problems with sample preparation?
   b. How do I acquire any of the specialized equipment that I may need?
   c. If I purchase specialized storage containers or pins – will they be useful at more than one beamline or synchrotron?
2) How reliable is the system?
   a. Are there any reliability statistics available?
   b. What are the common problems that occur?
   c. How long has it been tested?
3) How difficult is it to use the system?
4) How do I transfer samples from the shipping container to the mounting system?
5) How fast can I mount / dismount crystals?
6) How cold are the crystals during transport?
7) Can the system be operated remotely?

Automatic Crystal Centering

1) How reliable is the system?
   a. What are the common problems that occur?
   b. Do any of the problems result in crystal damage?
2) How long does it take to center a sample?
3) Is there an optimum way to mount my crystals to get the best results?
4) What if I don’t agree with the automated center position?
5) What is it centering on? (Does the system center the loop or try to identify the crystal inside the loop?)
6) Could the beam size be automatically adjusted to the loop size?
7) Will I get the same loop center position each time I mount the same sample?
8) Do the different routines used at different beamlines give the same results?
9) While screening, can I choose a best crystal position and save this information to use later for data collection?
10) How does the lighting effect crystal centering? Could the lighting be adjusted automatically?
Crystal Screening Interfaces

1) How difficult is it to use the system?
2) Could the user easily pause the system to look at a crystal more closely without losing results or having to start over?
3) How reliable is the software?
   a. What are the common problems that occur?
   b. How long has it been tested?
4) How do I input the crystal identity and location information?
5) How do I keep track of the location of my crystals?
6) Is there a log available with all my screening results?
7) Can the crystal and/or screening information be easily transferred to and used at another beamline or synchrotron source?
8) Can the software automatically determine crystal quality? If so,
   a. How is this done?
   b. What rating scheme is used?
9) Can the system automatically autoindex my crystals?
10) How many images can be collected from each crystal during screening? Can the angle between them be set?
11) Is there an option for the software to automatically mount and collect data from the best available crystal after screening?
12) Can the system automatically collect from multiple crystals with high screening ratings until a sufficient dataset is obtained?

Data Backup

1) What systems are available at each synchrotron?
2) How much time will I have to backup my data?
3) Could I bring and use my own firewire hard drive?
4) If I bring my own laptop, is it easy to use for backup?
5) Could I have my data moved to a long-term storage area? If so,
   a. Could this be done automatically? If so would my data be written to this storage area whether I ask for it or not?
   b. How would I retrieve my data and how long would it take?
   c. Is there a way to share my data without having to give out my account password?
   d. How secure is my data?
   e. How safe is my data?
   f. How long will it be stored?
   g. Would I still need to do my own backups to take home?