

Requirements

1. What is your current beam stability requirement?
2. Do you anticipate that this requirement will be more stringent in the future?
3. What beam stability time scale is most important for your experiments?

Source of Instability

4. Is there a good understanding of the sources of instability?
5. How do you distinguish between beam motion induced by the SR and those induced by the beamline optics components?
6. What diagnostics do you use to assess the health of your beamline. (e.g. I0 detector, beam position monitor, fluorescent screen, burn paper)?
7. Is the spectrum of the instability understood?
8. Are you concerned with long-term thermal drifts, short-time-scale vibration, or both?
9. Do you observe any beam instabilities due to the liquid nitrogen pumping system?
10. Do you observe any beam instabilities due to environmental factors extrinsic to your beamline (floor vibration, ambient temperature, APS water temperature, etc)?

General

11. How do you choose the distance between the monochromator and the sample?
12. How much time is being devoted to alignment / setup activities following machine startup or beamline reconfiguration? (Should more time be devoted to this?)
13. Do you need to chase the beam?
14. Have you made any beam stability improvements that could be used by other CATs?
15. How many staffs is involved in beamline operation and development?
16. Should the APS institute a policy that requires the review of user equipment that can introduce un-wanted vibrations on the experiment floor?
17. Is it desirable that the APS provide engineering resources to the users to abate any beam instabilities due to the optics design i.e. design review of the monochromators?