

InterCAT Technical Working Group Meeting June 20, 2002

Agenda Review and TWG Activity Summary: (Reinhard Pahl)
Reinhard called the meeting to order and reviewed the agenda.

APS Reports

Update on APS Front-End Component Failures (John Noonan, ASD)

John reported on the repairs of several front-end components and installations. The defective photon shutter was removed from Sector-6 and checked for the suspected water-to-vacuum leak. Despite bakeout and aggressive cleaning of the coolant lines the vacuum group was unable to detect a vacuum leak. Additional tests will be performed, e.g. X-ray analysis of the shutter blade.

With respect to the incident at Sector-6 the APS is currently developing a policy on how in similar cases the loss of beamtime for the affected CAT can be minimized and also have minimum impact on the operation of the other CATs.

In Sector-12 the actuators of the P4 safety shutter had to be replaced because the shutter shaft was "freezing". At this time various ideas are considered to improve the design and long-term performance of this critical unit. Once a general solution has been determined all APS installations of these actuators will be changed. It is anticipated that this task will take about three years until complete.

APS has replaced the wall collimator at 14-ID with a new design. Settlement of the lead shot used for shielding in the old design and possible operating failure lead to severe misalignment. The new style avoids the use of lead shot and allows for vertical adjustment of the component. ChemMat-CARS will be the next sector requiring a new collimator due to extreme floor settlements (see report by H. Friedsam). Within the next three years all wall collimators will be modified.

APS Settlement Surveys (Horst Friedsam, ASD)

[The slides of this presentation are available at the TWG web site.]

Since 1994 the survey and alignment group has been following the settlement of the APS floor. The position of 600 control points is logged every two years but this task is becoming increasingly difficult as more sectors are built out. Over the years changes >5mm have been observed with sectors 9, 16 and 32 showing the largest settlements. Sectors 15-17 were surveyed and adjusted during the April 2002 shutdown, sectors 17-21 are scheduled for alignment in September 2002. The deterioration of the storage ring alignment can be attributed to motion of the girders. Somewhat surprisingly the horizontal motion is larger than the vertical, 400 μm vs. 200 μm , respectively. These deviations are going to be adjusted as the Decker distortion is implemented at all sectors. In addition, all wall collimators will be set to the source height.

Continued efforts in realigning the storage ring will affect the CATs if beamline settlements are not compensated at the same time. APS has started discussions with several CAT members to address this issue.

APS-User Strategic Planning Meeting (Andy Howard, IMCA-CAT)

Andy provided a short summary on the APS/Users Retreat from May 15-17. Participants of the meeting praised the opportunity and depth of discussions between the facility management and its users. On the agenda were technical issues, user support, the independent investigator program, communication, compliance issues and the future of the Collaborative Access Team (CAT) system. Since then a number of task forces have been formed to address specific issues like beamline stability and diagnostics, Independent Investigator (II) program and operation of DOE BES funded CATs. A preliminary response from APS Director Murray Gibson to the APS user community and staff can be found on the web at:

http://www.aps.anl.gov/xfd/communicator/prelim_response.pdf

TWG Discussion

It is expected that the role of TWG may change once the new APS monthly operation meeting is on its way. But most of the attendees agreed that TWG should continue its monthly meeting, and take a wait-and-see position on how the new operational meeting addresses its community's concerns. Some of the TWG subgroups also have become obsolete by changes in APS general operations (e.g. top-up operation) while other subgroup topics are now going to be discussed in committees created in response of the APS-User Strategic Planning Meeting (beam stability etc.). Nevertheless there was general consensus that there are plenty of topics to be addressed by the InterCAT Technical Working Group in the future.

To improve the communication among the CATs and the sometimes small attendance it was suggested to advertise the TWG meetings and its agenda more strongly, e.g. by CAT-NET message and posters in every LOM. It was emphasized that TWG should also recruit the new generation of scientists, engineers and technicians around the ring who arrived at the APS more recently and are not aware of the monthly meetings. New resident users can benefit significantly from the technical discussions and thus these meetings could be a training ground for this group.

Next TWG meeting:

The next meeting will be held at 10h30 on July 18, 2002 in Bldg.401, room A1100.