

InterCAT Technical Working Group Meeting August 21, 2003

Agenda Review and TWG Activity Summary: (Reinhard Pahl)

Reinhard called the meeting to order and reviewed the agenda.

APS Updates/News

APS Partner User Council – TWG interactions (John Quintana, LS/DND-CAT)

John explained the function of the recently formed Partner User's Council (PUC) and its relation with the Technical Working Group (TWG). The PUC replaces the Research Directorate and is an advisory group to the APS director representing management from all sectors. At times the PUC will require input on technical details – therefore the TWG chair(s) are asked to participate in the PUC meetings and discuss issues of relevance in the general forum or specific subgroups. The results of these discussions will then be presented to the PUC which in turn will issue its recommendations correspondingly.

Q: How can the sectors learn about the PUC activities and how can the resident staff gain input to the PUC?

A: It is the obligation of the sector or CAT representatives to the PUC to disseminate the information. Otherwise, technical issues can certainly be brought to the attention of the TWG chair(s) which will be able to present these to the PUC.

ID X-ray BPM feedback/feedforward and its implications (Glenn Decker, AOD)

The accelerator group has implemented insertion device Xbpm gap feedback/feedforward controls on sectors 5, 6 18, 22 and 34. Based on various lookup tables the beam position fluctuations associated with ID gap changes were improved significantly. At fixed gap a long-term stability of ~1 micron was achieved; beam position changes are larger and to be expected when the gap settings are changed. In order to operate correctly the algorithm requires the insertion device gap to be less than 30 mm. If this condition is not valid any longer, or the beamline shutter (PS2) is closed, the Xbpm have to be removed from the orbit correction configuration. Presently this is still done 'manually' by an operator but will be automated for the APS run 03-3. It should be noted that this advanced orbit correction can only be implemented at sectors which have been realigned according to the Decker distortion. (For more information see the TWG web pages at www.aps.anl.gov/cats/twg/, ref. Decker_030821.pdf.)

Glenn also noted that with beginning of the APS run 03-3 the default 23 singlet fill pattern will be replaced with 24 evenly distributed bunches. An updated description of the various modes and fill patterns will be available at the APS web pages <http://www.aps.anl.gov/aod/userops/>.

APS power systems overview (Greg Markovich, ASD)

After the last global power outage at the APS many sectors discussed and requested emergency power for their beamlines and equipment. Greg, who is responsible for the now ongoing installation of the emergency power infrastructure, explained the APS power grid and availability of emergency power: One transformer will be installed between adjacent sectors. Approx. 7.5 kVA will be available to each sector in the form of 120, 208, 480 volt and single or three phase circuits. E-power will be distributed from a junction box just below the mechanical mezzanine. From this point, every sector is responsible for conduit, wire, receptacles and labor on their respective beamlines.

Greg also offered all sectors to help in analysis of power quality and (peak) consumption. The

electrical group is well equipped to monitor any of these problems. For further questions call Greg at 2-4421 or e-mail him at gmm@aps.anl.gov.

Discussions

'Shared equipment' – inventory and management (Reinhard Pahl, TWG chair)

The idea to share equipment between sectors has been brought up a number of times. (Note: This idea is not to be confused with the detector pool.) A request for input issued by the TWG chairs resulted little response. Members of the community felt that equipment is generally not shared (as mostly only a particular institution has paid for it) but only given out on loan for a certain period of time. In almost all cases this will be done on an individual basis. The offer to facilitate a list of equipment available by any sector at the TWG web page (with the proper tools for search and edit) was received with mixed enthusiasm. Tim Mooney suggested making use of the existing listserver which could distribute messages to the community regarding availability of any components. Some members stated that they were too busy to generate an inventory of 'spare' parts in their sector; others voiced concern that the management would be very difficult as the actual status of individual components could change rapidly and therefore would not always be reflected in the 'shared' list.

No consensus was reached how to proceed on this topic. The meeting was adjourned with another request for additional input on this issue: Please send comments or suggestions to the TWG chairs R.Pahl at pahl@anl.gov or E.Dufresne at dufresne@umich.edu.

Next TWG meeting:

The next meeting will be held at 10h30 on Thursday September 18, 2003 in Bldg.401, Room A1100.