

AD/TD Joint Projects Meeting
Wednesday, 3 March 2004, 1:30 AM
TD/Hermitage Conference Room

Present: Paul Czarapata, Hank Glass, Keith Gollwitzer, Dave Harding (scribe), Jim Kerby, Jim Lackey, Dave McGinnis, Jeff Spalding, Rich Stanek, Herman White

AGENDA

Reports of notable achievements, problems, and issues
Implications of new Budget Office plan
Vacuum brazing for electron cooling - unique request
Spare IQD keeps slipping
TD will do global review of statuses by 3/10/04

New jobs
Reshim 12 Tevatron dipoles in March
Measure 3 400 MeV line quads (done)
Spare electron cooling solenoids
Strengthen MI trims dipoles
WQB upgraded
Decision 3/1/04 on upgrading Debuncher injection septum magnet
More ceramic beam tubes (P-Bar, Booster)

AD Responses to status report

Continued refinement of project list
Projected TD capacity
Need priorities, appropriate reporting categories
What can dribble into 2005?
Shutdown '04
What is coming in 2005?

Notable Achievements or Problems

The Budget Office is now insisting that a device be built with M&S and labor from the same division, as opposed to the agreement that AD and TD had reached starting this year to have AD fund the M&S and TD fund the labor. Although there is fear in AD of losing control of priorities, this demand will probably have to be lived with. We just need to figure out how to do it efficiently. We imagine an initial allocation of funds to AD, then a transfer for each project when a baseline is established.

The issue of vacuum brazing for the electron cooling project is claimed to have been a one-time request, not the start of a series of requests.

Delivery of the first new-style spare IQD has slipped some more. TD now expects an April completion. The plan is to then defer further work. The new potting mold discussed earlier is currently in the detailed design phase. Other than testing the potting mold when it arrives, no further work is planned until after the 2004 shutdown.

TD plans to do a global update of the project statuses by 3/10/04.

AD reports trouble with conditioning the separators that TD built in FY02-03. They think that the issue is dirtiness. Jeff Spalding will talk with Peter Limon and Jim Kerby will talk with Rodger Bossert to find out what is going on.

New jobs

Reshim 12 Tevatron dipoles during March shutdown. This is on. Technicians will be drawn from around Technical Division, as was the case in 2003, to minimize the impact on TD work for AD.

Measure three 400 MeV line quads. This has been done.

Build two spare electron cooling 2-meter solenoids. Dave McGinnis says that this is not a high priority until after the shutdown. TD should aim to have them done by the end of the calendar year.

Strengthen MI horizontal trims. The trims lose linearity above their design current. For SY120, MI now needs to run a few magnets in a ramped mode above the design field strength. The field needs to track the main dipole bend field and then have a time bump on top of that. While the field vs. current can be parameterized, this is not implemented in the control electronics, so better magnet performance is desired. McGinnis deprecated the importance and urgency of this, but as a minimal effort it will proceed.

WQB. The wide aperture quadrupole for the Main Injector extraction and injection points has been elevated in priority. These are needed for running SY120 and NuMI at the same time, and one is highly desirable for NuMI alone. TD has started meeting regularly with MI to develop the specifications and review the conceptual design. The projection is that the first magnet should be ready about March 2005 and the balance ready for the 2005 summer shutdown.

Debuncher injection septum. P-Bar has decided that on the basis of field calculations and beam calculations that they want to install a modified injection septum magnet with a common vacuum to reduce the septum thickness. The procurement time on the replacement power feedthroughs for the failed magnet gives enough time to modify it. The vacuum system in that area will undergo extensive revisions during the 2004 shutdown, so a final go-ahead is waiting for a review of those plans, expected early next week.

More ceramic beam tubes. Both Debuncher and Booster extraction kickers would benefit significantly from having rectangular beam tubes in place of round ones. These should be higher priority than the spare long rectangular tubes for NuMI extraction in Main Injector. TD would like to use these orders to encourage the potential vendors for the long tubes.

Priorities

The Tevatron dipole anchors issue needs need increased attention. Progress has been made in identifying potential problem magnets, but it is tedious work sifting through old travelers. The current estimate is that 15% of magnets have at least one broken anchor. The key need at this point is understanding whether the broken anchors, if indeed that is

the source of the anomalous behavior, have any effect on the magnetic field. Initial measurements on one magnet at MTF were too noisy to be useful. Correcting that needs to be a priority. There are competing demands on the cryogenic testing system: LHC, B-TeV, high field magnet testing.

Shutdown 2004

Dave McGinnis is going to insist that all shutdown work requests be submitted by June 1 to allow adequate evaluation and planning time. The shutdown is currently scheduled to start August 23, though there is a strong lobby requesting a delay until after Labor Day.

2005

Dave Harding asked for any information available about plans for 2005 and beyond to allow planning.

Next Meeting: Wednesday, 17 March 2004, 10:30 AM
Location to be determined