

DRAFT Charge to the Committee
BABAR Technical Review
October 11-12, 2000

PEP-II typically runs at nearly two-thirds of its design peak luminosity of 3×10^{33} , and due to higher-than-design PEP-II/BaBar efficiencies has produced daily luminosities as high as 150 pb^{-1} , actually surpassing the design value of 135 pb^{-1} . Plans are in place to increase the peak luminosity to 1×10^{34} by the end of 2002. To take advantage of this luminosity increase and to fix some minor problems in the original design, some improvements are needed to BaBar. A major component of these improvements is the computing power and disk space needed to process, store, and analyze the bonanza of events.

We ask you to evaluate the adequacy of our plans for items to be completed by the end of 2003, And comment on the credibility of the projected costs. In particular:

- Comment on computing model:
 - Has the proper tradeoff between amount (cost) of offline computing hardware and ease and speed of performing various physics analyses been taken?
 - Is the model of how data is staged from tape to disk realistic?
 - Evaluate the feasibility of locating a significant fraction of the computing at European centers for use by the full collaboration.
- Evaluate the Instrumented Flux Return (IFR) improvements.
- Evaluate the plans for the trigger, particularly the rejection rates for the L1 z trigger
- Comment on plans for upgrading the front end electronics and DAQ for the various detector components.
- Comment on plans for R&D on detector aging and performance improvements including IFR efficiency, drift chamber aging, DIRC photomultiplier frosting.
- Comment on schedule for replacing SVT modules and on the radiation damage tests and on the schedule of R+D for a later replacement of the SVT.