

***BABAR*** Dedication Speech  
August 13, 1999

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The dictionary definition of “*Spokesman*” is: *A person chosen to speak for a group or organization in an official capacity.*

This doesn't precisely describe what I do every day, but it is an appropriate description of what I am doing at the moment.

On behalf of the *BABAR* Collaboration I want to thank all of you for joining us to celebrate the dedication of this experiment.

In 1986 the ARGUS experiment made the first measurement of  $B\bar{B}$  mixing and found that it was much larger than had been expected theoretically. It was immediately clear to many people that this observation meant that it might be possible to study the phenomenon of  $CP$  violation in the  $B$  meson system. A lot of activity ensued throughout the HEP community, spawning, as such activities do, quite a number of experimental proposals. Some of these were unusual in that they proposed not only the construction of a more or less conventional colliding beam detector, but also the construction of a new type of  $e^+e^-$  colliding beam accelerator, which has come to be known as an asymmetric  $B$  factory. Two of these proposals, one at SLAC and one at

KEK, made it all the way to reality. Last year we celebrated the successful completion of the PEP-II accelerator; today we dedicate its companion experiment, *BABAR*.

The *BABAR* Collaboration was formed in December 1993, soon after the approval of the project. The Collaboration is by far the largest experimental group that SLAC has ever seen as well as the most international in character. More than 600 scientists and engineers from 71 institutions from nine countries have contributed to the design and construction of *BABAR*.

The Collaboration set itself very ambitious goals for designing, constructing and commissioning the experiment. These goals were so ambitious that the manifold review committees that guided our efforts often viewed them with only thinly veiled skepticism. We nonetheless began the data-taking phase of the experiment nearly two months ahead of our baseline schedule. Further, the experiment works sufficiently well that we have skipped the normal “engineering run” phase and have gone straight to taking data usable for physics.

The building of *BABAR* has been a success made possible by the skill and dedication of a very large number of extremely talented people from all parts

of the Collaboration as well as many others from SLAC and other laboratories. Speaking *for* the Collaboration, I thank all of these people, who have worked so hard to make us a success. Speaking *to* the Collaboration, I want personally to thank you, a remarkable group of people, for creating a spirited, vital organization that has demonstrated how a group of independent, hard-headed people can work together effectively in the service of common goals.

We have also received solid, enthusiastic support from SLAC and DOE and from the funding agencies of the collaborating countries: INFN in Italy, IN2P3 and CEA in France, PPARC in the UK, BMFT in Germany, NSERC in Canada , as well of those of our Chinese, Russian and Norwegian collaborators. The construction of both PEP-II and *BABAR* were distinguished by the fact that the funding profiles proposed at inception were actually provided in a timely way; those of us who have been around the block a few times appreciate how remarkable this was. This funding schedule made it possible for me to tell the Collaboration several times that if we don't keep our (very ambitious) schedule, the fault would rest clearly on our shoulders; we wouldn't be able to avail ourselves of the classic excuse; " the money didn't come when we needed it". In this case it did, and

we have, to this point, made pretty good use of it. Having now entered the operations phase, we hope that these agencies will provide operating funds at a level that will allow their physicists to best extract the science in *BABAR*.

We began, in May, to gather the data needed for us to try to understand the mechanism of *CP* violation in the *B* meson system, and, thereby, perhaps, the origin of the matter/antimatter asymmetry of the universe. PEP-II is performing well and *BABAR* is showing itself capable of producing good data with high efficiency.

I have often used the metaphor that we are engaged in both a hundred-meter dash and a marathon. That is, we are striving to be first to make the first statistically significant measurement of a *CP*-violating quantity in the *B* meson system (the hundred meter dash) and as well we strive to take the lead in fully understanding the relation of *CP* violation to the unitarity triangle construction, which will truly be a marathon.

We have been quick out of the blocks. We can feel the wind in our face and hear the footsteps of our fellow entrants in the race. The next few years promise to be great fun in the service of good science.