[Title Slide 1]

It is now mid-May 1999. Last February, PEP-II had turned off and the last three months had been spent rolling the BaBar detector onto the beam line and reconnecting the accelerator beam pipes around and through the detector.

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The LER had been completed last June 40th, with first collisions about two weeks later. The PEP-II team had been gradually inching up the luminosity throughout the summer and fall and the peak luminosity so far achieved was 5.2×10^{32}.

Now the rubber was on the road. With the detector on line we PEP-IIers knew we would have a completely different machine to work on. We were going to have to be more careful with injection. The stored beams would now have to be reasonably stable in order for the backgrounds in the detector to remain acceptable. The detector was going to put many more constraints on the machine. The detector magnetic field was going to change the beams. The elephant had arrived.

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On the flip side, this new, beautiful detector, freshly put together, was going to the other side of the shielding wall where any number of bad things might happen if the beams went haywire enough. Injection backgrounds might be intolerable making it very difficult to get the wanted beam currents. Backgrounds from the stored beams might be so high the detector would not be able to turn on. A sudden beam loss might break a wire in the drift chamber or darken some of the CsI crystals or ruin some of the readout electronics.

A small group of people (one of whom is not 10 yds from this podium) had spent many long hours calculating detector backgrounds and deciding where to place masking in order to minimize the background rates. Now we would finally see if these calculations had been done correctly and whether or not anything had been missed.

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Another small group of people had put together a set of hastily constructed detectors to get a glimpse of the machine backgrounds in the previous few months of running before the detector rolled on line. They did not find any glaring problems but it was still not the same as the real detector.

To say the least, we were all a bit nervous.

Plopped down into this somewhat strained situation were the BaBar run coordinators.
They had to make sure the detector was running as well as it could. In addition, they were the liaison between the various detector subgroups and the accelerator people. Most of these coordinators came from university groups and, although knowing about accelerators in general, only a few of them had any knowledge of day-to-day accelerator operation.

Now when a detector like BaBar is designed and built each separate component of each subsystem is tested and optimized. Then the greatest headache is integrating all of the subsystems into a coherent and complete whole.

The accelerator design and construction is very similar. However, the accelerator usually does not have major difficulties integrating the design except near and inside the detector.

A major difference between detectors (like BaBar) and accelerators (like PEP-II) is that the detector can and does collect an enormous amount of data that is used to cross-check and validate the hardware in nearly real time whereas the accelerator has a hard time obtaining enough information about the beams to know exactly what the state of the accelerator is. It is a real struggle just to be able to measure some of the more important parameters of a collider and, many times, there is still speculation about what is actually going on. This is usually surprising to non-accelerator physicists (at least it was to me).

Back to the BaBar run coordinators. They had to try to understand what we accelerator types were talking about and what we were concerned about, and then they had to translate what they had pieced together into something that they could communicate to the BaBar shift leaders so that they, in turn, would have some understanding of what was going on. They also had to collect the various concerns of the detector subsystem groups, whether it was a particular background or a particular hardware problem, and then try to decide if this particular concern was something we on the accelerator side could or should address.

I am pleased to say that all of the BaBar run coordinators rose to this task and performed outstandingly. And there were quite a few of them. Approx. 30 over the 9 years we ran. Several people did double duty (they must not have greased the right palms).

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Somewhat to our dismay, it seemed to us PEP-IIers that we would just get a run coordinator trained and up to speed when we would be given a new run coordinator. However, every time this happened we would get another terrific person who was up to the challenge and with whom we quickly felt at ease.

On the PEP-II side, we were always a much smaller group than the BaBar collaboration. Most of us were in this for the long haul and continuity was not a real problem.

Of course, there were rough times when either PEP-II or the detector was not working very well, and these were the times when calm people were needed who could put their heads together to find the best way out the predicament. The BaBar run coordinators were always there to help us work out a solution to the problem du jour.

I mustn’t forget the PEP-II group or the rest of the BaBar collaboration, especially the spokespersons. We all worked together to make this B-factory perform as splendidly as it did.

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I would just like to emphasize the BaBar run coordinators, as perhaps unsung heroes in this story, who really helped put out sparks and grease the wheels between the detector and the accelerator.

This presentation is about the BaBar/PEP-II interface, but I think the true interface was the superb communication we had between the detector people and the accelerator people.

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I would argue that this is one of the biggest contributors to the success of the B-factory. I'd like to thank all of the people on the PEP-II and on the BaBar side who made this interface so successful.

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