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Recent Results from the Babar Experiment

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CP violation, first observed 43 years ago in the neutral kaon system, has now also been observed in one more system: the B meson system. Big Bang theories in particle astrophysics tend to predict equal quantities of matter and antimatter in our universe, and understanding CP violation and its origins will be a key element in understanding the matter-antimatter asymmetry of our universe. Our Standard Model of Particle Physics has been a triumph of particle physics - but it has a shortcoming: it accommodates CP violation, but apparently at a level orders of magnitude too small to explain the matter-antimatter asymmetry of our universe. As we enter the final years of the 15-year BaBar physics program at the Stanford Linear Accelerator Center (SLAC) B Factory, we have a B meson sample of almost 400 million and are on track to more than double our data sample before we complete data-taking in the autumn of 2008. We have examined and tested CP violation and the electroweak sector of Standard Model of Particle Physics to excruciating precision. An overview of the BaBar experiment, recent results and outlook will be presented.

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