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W.K.H. Panofsky Prize in Experimental Particle Physics: The B-factory at KEK

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The B-Factory project at KEK is briefly described. It is an electron-positron collider, built by utilizing maximally the existing facilities built for the TRISTAN electron-positron collider. The electron ring is the one used for the TRISTAN collider, where-as the positron ring was built anew. Both rings were installed side-by-side in the same tunnel used for the TRISTAN collider. We adapted the finite angle collision scheme which were of some concern of some accelerator experts in the designs stage of the project from the view point of creating beam-beam instability. Thanks to the genius people of the KEK accelerator team, we have overcome the various problems of the accelerator and successfully achieved the luminosity higher than 10^{34} in the early days of the project. The adaptation of the finite angle crossing benefited to reduce the beam associated backgrounds and the operation of the accelerator and detector became much easier. The large circumference of the TRISTAN tunnel made the manipulation of the beam much easier. Contrary to the aggressive design of the B-Factory accelerator, the collider detector was the one consist of components based on the well-established technology. The detector of the experiment was operated successfully for years and we have accumulated sufficient number of B-meson pairs for the study of the CP asymmetry. We would like to briefly mention about the history of the Japanese high energy physics and also a close cooperation with the Japanese particle theory people, especially Makoto Kobayashi, Toshihide Maskawa, Ichiro Sanda and Hirotaka Sugawara.