

探测器与实验方法

Primary vertex reconstruction based on the Kalman filter technique at BESIII

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摘要 Primary vertex reconstruction is crucial to estimate the beam profile in collision experiments. We study the principle of an iterative process, called the Kalman filter method, and apply it to primary vertex reconstruction at BESIII. A Newton procedure to find the zero point of the distance function's gradient is used for primary vertex finding in 3-dimensional space. Results are obtained based on raw data at BESIII.

关键词 [primary vertex](#), [Kalman method](#), [BESIII](#)

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