Level3 Z Tracking Algorithm

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Abstract

Level3 as part of the CLEO III detector has worked as a filter and classification system. Because of deterioration of the ϕ silicon portion the tracker portion of Level3 is inoperable. In order to regain the functionality of the r-ϕ tracker, I have been working on a z tracking algorithm to distinguish and filter events. Overcoming some of the limitations of the z silicon and beam, the initial z-tracker achieved an efficiency of 84% when applied to previous runs. This is below the target of efficiency of 90%, but with minor changes, this efficiency can hopefully be boosted to the goal.