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Secondary Track Finding for PANDA

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Track reconstruction is essential for a meaningful physics analysis of data from complex detectors such as PANDA. For hyperon detection this task is even more challenging because hyperons typically fly several centimeters before they decay. Therefore, a secondary track finder for PANDA's barrel part will be presented. This algorithm, the ApolloniusTripletTrackFinder, is the only algorithm currently available at PANDA designed to find tracks not coming from the interaction point. Therefore, the finding rate for secondary particles is much higher (about 20 \%-points) than for the currently existing algorithms. Combining this algorithm with a primary track finder promises to improve the reconstruction rate for hyperon decays. The performance of this algorithm for simple test cases and simulated physics processes will be presented.

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