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low momentum track finding in Belle 2

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The Silicon Vertex Detector (SVD) of the Belle II experiment is a newly developed device with four measurement layers. Track finding in the SVD will be done both in conjunction with the Central Drift Chamber and in stand-alone mode. The reconstruction of very-low-momentum tracks in stand-alone mode is a big challenge, especially in view of the low redundancy and the large expected background. We describe two approaches for track finding in this domain, a cellular automaton and a combinatorial Kalman filter. Both methods are combined with a Hopfield network which finds an optimal subset of non-overlapping tracks. We present results on simulated data and compare the two methods in terms of efficiency, purity and speed

Student? Enter 'yes'. See http://goo.gl/MVv53

yes

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