

Abstract Submitted
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Optimization of the SiD concept in the presence of ILC backgrounds JAN STRUBE, Pacific Northwest Natl Lab, THOMAS MARKIEWICZ, SLAC National Accelerator Laboratory, CHRISTOPHER MILKE, University of California, Santa Cruz, ANNE SCHUETZ, DESY, BRUCE SCHUMM, University of California, Santa Cruz, MARCEL STANITZKI, DESY — The International Linear Collider is a high-energy e+e- machine, planned to be built in Japan in the next decade. Its physics program features precision measurements of the top and Electroweak sectors and a discovery potential of Physics beyond the Standard Model complementary to that of the LHC. We present studies of machine-related background processes in the context of detector optimization. For each of the dominant background processes, we will present its main signature in the detector, impact on physics measurements, and strategies for mitigation in detector design and reconstruction algorithms. The studies are based on a detailed simulation of the SiD detector concept.

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