

Evolving CMOS Pixels Sensors (CPS) to allow for more demanding requirements of the ILD vertex detector

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The DBD requirements for the ILD vertex detector refer to the 500 GeV running assuming the use of an anti-DID to mitigate the beam related background in the vertex detector. They do not incorporate a luminosity upgrade nor do they explicitly target a highly efficient low momentum tracking and a suppressed fake track rate. Test results of CMOS pixel sensors showed that the DBD requirements can be accommodated but the performances obtained up to now would not be suited to the more demanding requirements mentioned above. To address the latter, CPS are being developed at IPHC, which allow for a significantly faster read-out. The talk proposed will summarize the on-going R&D activity and its mid-term plans and goals.

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