

LCFI Status Report: Development of the ILC Vertex Detector
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The Linear Collider Flavour Identification (LCFI) Collaboration is developing sensors, electronic systems and mechanical support structures necessary for the construction of a high performance vertex detector at the ILC and investigating the contribution such a vertex detector can make to the physics accessible at the ILC. The sensors being developed are the Column Parallel Charge-Coupled Device (CPCCD) and the In-situ Storage Image Sensor (ISIS), both of which have the potential to satisfy the requirements for operation at the ILC. Extremely low mass support structures will be required for the sensor modules, in conjunction with careful mechanical design of the vertex detector. In addition, flavour tagging and heavy flavour charge identification investigations will be used to both optimise the vertex detector design and to maximise the physics potential of the ILC. The status of sensor development, mechanical and physics studies will be presented.