

## Fabrication of CCDs

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Steve Holland

Lawrence Berkeley National Laboratory

We describe the fabrication technologies required to produce back-illuminated, fully depleted CCDs that are produced on high-resistivity, float-zone-refined silicon substrates. In the early stages of our CCD development we fabricated fully depleted CCDs on 100 mm diameter wafers in the Lawrence Berkeley National Laboratory MicroSystems Laboratory (MSL), a Class 10 cleanroom dedicated to the fabrication of devices on high-resistivity silicon. More recently we have collaborated with a commercial CCD foundry and adopted a hybrid fabrication model that involves processing of 150 mm diameter wafers at the commercial foundry and the MSL. In this talk we will describe the fabrication technologies used and the unique challenges that arise in the processing of high-performance, back-illuminated CCDs.