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Instrumenting LSST: Three Billion Pixels on the Sky

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The Large Synoptic Survey Telescope (LSST) will conduct a 10-year all-sky optical survey with science goals ranging from the study of the nature of dark energy and dark matter to exploring the transient sky. As a dedicated survey telescope LSST has a single instrument, the LSST Camera. Now under construction, the LSST Camera will be the largest astronomical camera ever built, with a 3.2 gigapixel CCD focal plane, covering a 9.6 square degree field of view, and having a readout speed of only 2 seconds per image. In this talk, I will describe how the camera's design meets the ambitious scientific goals of LSST with an emphasis on some of its novel instrumental features.