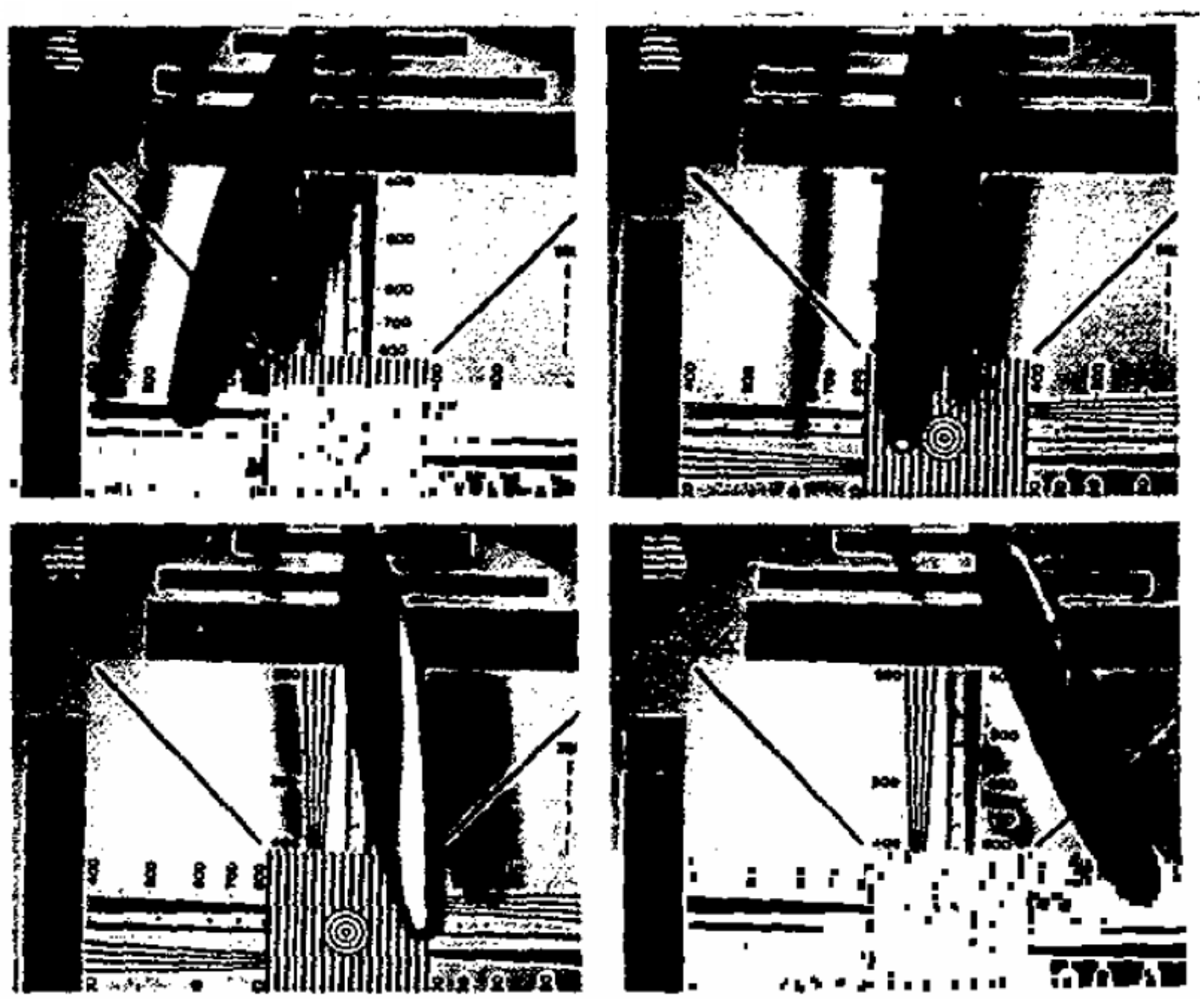
DIGITAL PIXEL SENSOR

ISSCC 2001



A 10kframe/s 0.18μm CMOS Digital Pixel Sensor with Pixel-Level Memory

ELECTRICAL SIGNALS become immune against various noise sources once they enter the digital domain. This is the basic idea behind this work: to convert the analog signals of an image sensor in its earliest stage into digital signals. This is done to incorporate in every pixel an 8-bit A-to-D converter. Pixels are still less than 10mm in size and every pixel contains 37 transistors to allow the conversion from photons in - digital numbers out.

S. Kleinfelder S. Lim X. Liu A. El Gamal
Stanford University, Standford, CA