

We are working on scribe-cleave-passivate (SCP) technology of making slim edge silicon sensors. Such sensors feature a radically reduced amount of inactive peripheral region, which facilitates making large tracking systems with hermetic spatial coverage. The SCP technology allows making a resistive sidewall, which can withstand bias voltage gradient. This eliminates the need for the inactive region with the voltage gradient along top or bottom surface of the sensor. The current studies continue in the framework of Planar Pixel proposal for the ATLAS upgrade, as well as RD50 Collaboration. The RD50 efforts involve application of SCP technology to all types of modern sensors. We will describe the studies of technical developments, physics performance, and applicability of this technology to future experiments.