



Contribution ID: 21

Type: Poster

X-ray metrology of a close packed array of 'edgeless' Medipix3 detectors.

Thursday, September 7, 2017 12:40 PM (1h 50m)

This poster contribution reports on the production of an array of active edge silicon sensors as a prototype of a large array. Four Medipix3RX.1 chips were bump bonded to four single chip sized Advacam active edge n-on-n sensors. These detectors were then mounted into a 2 by 2 array and tested on B16 at Diamond Light Source with an x-ray beam spot of 2 μ m. The results from these tests, compared with optical metrology give confidence that these sensors are sensitive to the physical edge of the sensor, with only a modest loss of efficiency in the final two rows of pixels. We present the efficiency maps recorded with the microfocus beam and a sample powder diffraction measurement. These results give confidence that this sensor technology can be used in much larger arrays of detectors at synchrotron light sources, leading to significantly simplified fabrication processes.

Primary author: Dr PLACKETT, Richard (University of Oxford (GB))

Co-authors: ARNDT, Kirk (University of Oxford (GB)); HORSWELL, Ian (Diamond Light Source); SHIPSEY, Ian (University of Oxford (GB)); Prof. BORTOLETTO, Daniela (University of Oxford (GB)); TARTONI, Nicola; Dr WILLIAMS, Scott (Diamond Light Source)

Presenter: Dr PLACKETT, Richard (University of Oxford (GB))

Session Classification: Poster session