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## High Resolution X-ray Imaging Using Monolithic Silicon Pixel Sensor

*Monday 11 June 2018 16:10 (20 minutes)*

A high resolution X-ray imaging system based on ALPIDE, a CMOS monolithic active pixel sensor (MAPS), is presented. ALPIDE is a 15 mm × 30 mm large MAPS with 512 × 1024 27 μm × 29 μm pixels that are read out in a binary hit/no-hit fashion, and with the control and readout system, it can detect the max particle rate of 100 MHz / cm<sup>2</sup>, and achieve the spatial resolution of around 5 μm. The imaging system counts the incident X-ray photon hits on every ALPIDE pixel per exposure to produce a gray scale image. Imaging results of grating patterns and insect specimens are presented.

### Minioral

Yes

### Description

X-ray imaging

### Speaker

Chenfei Yang

### Institute

USTC

### Country

China

**Authors:** Mr YANG, Chenfei (1. State Key Laboratory of Particle Detection and Electronics, University of Science and Technology of China, Hefei 230026, China; 2. Department of Modern Physics, University of Science and Technology of China, Hefei 230026, China); Prof. FENG, Changqing (State Key Laboratory of Particle Detection and Electronics, University of Science and Technology of China, Hefei 230026, China; Department of Modern Physics, University of Science and Technology of China, Hefei 230026, China); Prof. SUN, Xiangming (Central China Normal University CCNU (CN)); LIU, Jun (Central China Normal University CCNU (CN)); YANG, Ping (Central China Normal University CCNU (CN)); Prof. LIU, Shubin (State Key Laboratory of Particle Detection and Electronics, University of Science and Technology of China, Hefei 230026, China; Department of Modern Physics, University

of Science and Technology of China, Hefei 230026, China); Prof. AN, Qi (State Key Laboratory of Particle Detection and Electronics, University of Science and Technology of China, Hefei, 230026, China; Department of Modern Physics, University of Science and Technology of China, Hefei, 230026, China)

**Presenter:** Mr YANG, Chenfei (1. State Key Laboratory of Particle Detection and Electronics, University of Science and Technology of China, Hefei 230026, China; 2. Department of Modern Physics, University of Science and Technology of China, Hefei 230026, China)

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