

Quantum Imaging with 3D Semiconductor Detector

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We have started Grant-in-Aid for Scientific Research on Innovative Areas titled “Interdisciplinary research on quantum imaging opened with 3D semiconductor detector” in 2013.

In this program, innovative radiation detectors using new semiconductor technology of Silicon-On-Insulator (SOI) has been developed. They open up the new frontiers of particle and nuclear physics, astrophysics, material and life science with quantum beam imaging.

The SOI multi layer wafer technology enables us to realize a 3D sensor where sensor layer and read out electronics layer are bonded in a true monolithic way. The effective combination of those two active layers can come up with various new functional devices which are effective to enhance the quantum beam imaging technology with visible and IR light, X-ray, electron and other charged beam.

The researchers who have a strong interest in developing innovative sensors and those who need any breakthrough in their imaging devices for further studies have collaborated in this program to establish new research field of quantum imaging.

This fiscal year is final year of the program. I will present the technology details and performance of the developed detectors.

Mar.13th (Tues.) 13:30- at Nishina Hall
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於 仁科ホール、仁科記念棟2階

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