

# International Workshop on SOI Pixel Detector (SOIPIX2015)

from Tuesday 02 June 2015 at 16:00 to Saturday 06 June 2015 at 16:00 (Asia/Tokyo)  
at Tohoku University, Sendai, Japan ( Katahira Sakura Hall )

**Description** All talks include 5min question time.

[Go to Workshop page.](#)

2015.6.1 v7.0

[Go to day](#) ▼

## Tuesday 02 June 2015

16:00 - 17:00 Registration

## Wednesday 03 June 2015

09:00 - 09:30 Registration

09:30 - 11:10 Opening Session

Convener: T. Wada (JAXA/ISAS)

Location: Sendai, Japan ( Katahira Sakura Hall )

09:30 **Opening Address** 10'

Speaker: Akimasa Ishikawa (Tohoku Univ.)

09:40 **Introduction of SOI Pixel Activities** 30'

Speaker: Yasuo ARAI (KEK/IPNS)

10:10 **Kyoto's X-ray Astronomical SOI pixel sensor - XRPIX** 30'

Speaker: Takeshi Tsuru (Kyoto Univ.)

10:40 **SOI activities in Cracow** 30'

Speaker: Marek Idzik (AGH-Univ. of Science and Technology)

11:10 - 11:30 Coffee Break

11:30 - 12:50 Morning Session

Convener: T. Tsuru (Kyoto U.)

11:30 **Development of KEK SOI pixel sensors** 20'

Speaker: Toshinobu MIYOSHI (KEK/IPNS)

11:50 **A Study on the shielding mechanisms of SOI pixel detector** 30'

Speaker: Yunpeng Lu (IHEP)

12:20 **Lapis SOI Pixel Process** 30'

Speaker: Masao Okihara (Lapis Semiconductor Co. Ltd.)

12:50 - 14:10 Lunch

14:10 - 15:30 Afternoon Session#1

Convener: T. Miyoshi (KEK)

14:10 **Development of Far-Infrared Image Sensor** 20'

Speaker: Takehiko Wada (JAXA/ISAS)

14:30 **Some issues with DIPIX measurements** 30'

Speaker: Piotr Kapusta (IFJPAN)

15:00 **SOI pixel sensor for gamma-ray imaging** 30'

Speaker: Kenji Shimazoe (Univ. of Tokyo)

15:30 - 16:20 Poster Session (& Coffee Break)

Convener: A. Ishikawa (Tohoku U.)

15:30 **P1: Soft X-ray performance of Back-illuminated SOI pixel Sensor for X-ray astronomy** 01'

Speaker: Makoto Ito (Kyoto Univ.)

15:31 **P2: Reduction of cross-talks in the Kyoto's X-ray Astronomical SOIPIXs with Double-SOI wafer** 01'

Speaker: Shunichi Ohmura (Kyoto Univ.)

15:32 **P3: Study of the basic performance of the XRPIX for the future astronomical X-ray satellite** 01'

Speaker: Koki Tamasawa (Tokyo Univ. of Science)

15:33 **P4: Improvement of the Positional Resolution of XRPIX and its Application to an X-ray Interferometer** 01'

- Speaker: Kiyoshi Hayashida (Osaka Univ.)
- 15:34 **P5: Development of Far-Infrared Image Sensor with Silicon-supported Germanium Blocked Impurity Band Detector** 01'  
Speaker: Chihiro Kochi (JAXA/ISAS)
- 15:35 **P6: Anti-reflection at the Detector Surface using Subwavelength Structure** 01'  
Speaker: Keita Yamamoto (Sokendai(JAXA/ISAS))
- 15:36 **P7: DAQ Development for Silicon-On-Insulator Pixel detectors** 01'  
Speaker: Ryutaro Nishimura (Soukendai (KEK))
- 15:37 **P8: X-ray induced total ionizing dose effect on the SOI pixel detector for X-ray astronomical use** 01'  
Speaker: Koji Mori (Miyazaki Univ.)
- 15:38 **P9: Feasibility study of UV avalanche photosensors using SOI-CMOS technology for High-Sensitivity imaging** 01'  
Speaker: Ryutaro Hamasaki (Sokendai (KEK))
- 15:39 **P10: Application of monolithic SOI pixel detector to stress analysis and materials evaluation for industrial use** 01'  
Speaker: Toshihiko Sasaki (Kanazawa Univ.)
- 15:40 **P11: A SOI-Based Low Noise and Wide Dynamic Range Event-Driven Detector for X-Ray Imaging** 01'  
Speaker: Sumeet Shrestha (Shizuoka Univ.)
- 15:41 **P12: SOI pixel circuits with synchronized TMC for time-of-flight stigmatic imaging mass spectrometry** 01'  
Speaker: Kaori Watanabe (Hokkaido Univ.)
- 15:42 **P13: Characteristics of Non-Irradiated and Irradiated Double SOI Integration Type Sensor** 01'  
Speaker: Mari Asano (Univ. of Tsukuba)
- 15:43 **P14: Bias Dependence of TID Effect Compensation in Double SOI** 01'  
Speaker: Naoshi Tobita (Univ. of Tsukuba)
- 15:44 **P15: Development of a pixel ion detector for stigmatic time-of-flight imaging mass spectrometry** 01'  
Speaker: Fujita Yowichi (KEK)
- 15:45 **P16: Improvement of spatial resolution of a stigmatic imaging mass spectrometer by ion trajectory simulation** 01'  
Speaker: Ayane Okazaki (Osaka Univ.)
- 15:46 **P17: Light Dark Matter Search by SOIPIX** 01'  
Speaker: Naoya Oka (Kobe Univ.)
- 15:47 **P18: Development of the Pixelated Photon Detector Using SOI Technology for TOF-PET** 01'  
Speaker: Akihiro Koyama (Univ. of Tokyo)
- 15:48 **P19: A study of active shielding optimized for 1-80 keV wide-band X-ray detector in space** 01'  
Speaker: Yoshihiro Furuta (U. of Tokyo)
- 16:20 - 17:30 Afternoon Session #2  
Convener: I. Kurachi (KEK)
- 16:20 **Improving Charge-Collection Efficiency of Kyoto's SOI Pixel Sensors** 20'  
Speaker: Hideaki Matsumura (Kyoto Univ.)
- 16:40 **Position and time sensitive ion detector for stigmatic imaging mass spectrometry** 20'  
Speaker: Hisano Hazama (Osaka Univ.)
- 17:00 **Device and Circuit Techniques for SOI Pixel Sensors** 30'  
Speaker: Shoji Kawahito (Sizuoka Univ.)
- 18:30 - 20:30 Workshop Dinner 2h00' (Shokeikaku)

## Thursday 04 June 2015

- 09:00 - 10:40 Morning Session #1  
Convener: T. Hatsui (Riken)
- 09:00 **X-ray Radiation Hardness of Fully-Depleted SOI MOSFETs and Its Improvement** 30'  
Speaker: Ikuo Kurachi (KEK)
- 09:30 **Compensation of radiation damages for SOI pixel detector via tunneling** 20'  
Speaker: Miho Yamada (KEK)
- 09:50 **TID responses of back-biased DSOI and FDSOI transistors** 30'  
Speaker: Kai Zhao (IMECAS)
- 10:20 **Evaluations of TID-Effect Compensation and Sensor-Circuit Cross-Talk Suppression in**

**Double-SOI Devices 20'**

Speaker: Shunsuke Honda (U. Tsukuba)

10:40 - 11:10

Poster Award Ceremony, Group Photo &amp; Coffee Break

11:10 - 12:50

Morning Session #2

Convener: H. Hazama (Osaka U.)

11:10 **X-ray imaging detectors for X-ray Free-Electron Lasers 30'**

Speaker: Takaki Hatsui (Riken)

11:40 **Application of SOI Area Detectors to Synchrotron Radiation X-ray Experiments 20'**

Speaker: Ryo Hashimoto (KEK/IMSS)

12:00 **SOI pixel sensor for the ILC vertex detector 20'**

Speaker: Shun Ono (Osaka Univ.)

12:20 **Fine Pitch Micro-Bump Junction for the 3D Stacked Detector/Sensor Devices 30'**

Speaker: Makoto Motoyoshi (T-micro Co. Ltd.)

12:50 - 14:10

Lunch

14:10 - 15:30

Afternoon Session

Convener: S. Kawahito (Shizuoka U.)

14:10 **Response of SOI image sensor to therapeutic carbon ion beam 20'**

Speaker: Akihiko Matsumura (Gunma Univ.)

14:30 **Two-dimensional diffraction X-ray measurement with monolithic SOI pixel detector 20'**

Speaker: Shingo Mitsui (Kanazawa Univ.)

14:50 **Plasmon filter for SOI pixel sensor 20'**

Speaker: Atsushi Ono (Shizuoka Univ.)

15:10 **SOIKID, SOI pixel detector combined with the superconducting detector KID 20'**

Speaker: Hirokazu Ishino (Okayama Univ.)

15:30 - 15:50

Coffee Break

15:50 - 16:40

Final Session

Convener: T. Tsuboyama (KEK)

15:50 **Development FD-SOI MOSFET amplifiers for integrated read-out circuit of superconducting-tunnel-junction single-photon-detectors 20'**

Speaker: Kenji Kiuchi (U. Tsukuba)

16:10 **Gamma Polari-Calorimetry with SOI pixels for proposals at Extreme Light Infrastructure (ELI-NP) 20'**

Speaker: Kensuke Homma (Hiroshima U.)

16:30 **Final Remark 10'**

Speaker: Junji Haba (KEK)

16:50 - 17:50

Research Leader Meeting (closed)

## Friday 05 June 2015

08:45 - 17:00

Tour II

08:45 **Global INTEgration Initiative (GINTI) 4h00'** (Sendai, Japan)Material: [Participants](#) [Schedule](#)12:45 **Matsushima Sightseeing 4h00'** (Sendai, Japan)

09:00 - 17:00

Tour I

09:00 **Lapis Miyagi Fab. 4h00'** (Furukawa)13:00 **Matsushima Sightseeing 4h00'**

09:15 - 17:00

Tour III

09:20 **Tohoku Univ. Imaging Lab. & Fluctuation Free Facility (FFF) 6h45'**

## Saturday 06 June 2015

13:30 - 16:00

Public Lecture

Location: エルパーク仙台6階ギャラリーホール

13:30 **Opening 10'**13:40 **SOI検出器を使ってILCでヒッグス粒子の正体に迫る 45'**

Speaker: Hitoshi Yamamoto (Tohoku Univ.)

14:25 **3次元半導体検出器で切り拓く放射線イメージング 45'**

Speaker: Yasuo Arai (KEK/IPNS)

15:10 **ブラックホールと宇宙の進化をSOI検出器で探る 45'**

