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Front pages of the 12th International "Hiroshima" Symposium on the Development and Application of Semiconductor Tracking Detectors, held on 15-18 December, 2019, in Hiroshima, Japan

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Cover letter for the submission of "Front pages of the HSTD12 issue"

This is the submission of the front pages of the HSTD12 proceedings issue (VSI: HSTD12). One file, HSTD12FrontPages.tar, is uploaded by including all files where

HSTD12frontPages.tex - main tex file. The rest of tex files are "include"'d through this main file.

The front pages have been reviewed by all the guest editors of the HSTD12 issue.

Yoshinobu Unno
Chair of the organizers (of HSTD12 symposium)
and the managing Guest Editor of the VSI: HSTD12 issue

P.S. The manuscript, HSTD12frontPages2101061042.pdf, is the pdf file made out of the "HSTD12frontPages.tex" file for cross-checking with the typeset by the publisher.

HSTD12 - Development and Application of Semiconductor Tracking Detectors

Proceedings of the 12th International "Hiroshima" Symposium on the Development and Application of Semiconductor Tracking Detectors (HSTD12)
15 - 18 December 2019
International Conference Center Hiroshima, Hiroshima, Japan

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Section VI. ASICs

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Section IX. New ideas and future applications

Editorial

The 12^{th} International "Hiroshima" Symposium on the Development and Application of Semiconductor Tracking Detectors (HSTD12) was held on December 15 - 18, 2019, at the International Conference Center Hiroshima, Hiroshima, Japan. The primary goal of the symposium is to bring together experts in the design, processing and applications for discussions of experiences, lessons learned and new ideas which are still in the early stage of development. The series of "Hiroshima" symposia has been held traditionally in the Pacific Rim region since the first symposium in Hiroshima in 1993. The proceedings of the symposia have been published in Nuclear Instruments and Methods [1, 2, 4, 5, 6, 7, 8, 9, 10, 11].

To the 12^{th} symposium, a total number of 163 participants were registered with 143 contributions, among which 55 were assigned to oral presentations and 88 to posters. The topics of the contributions covered the field of semiconductor detectors and related areas, from technologies and simulations (10 and 2 contributions, respectively), pixel sensors for tracking and imaging (24 and 14), strip sensors (10), radiation damage and radiation tolerant materials (20 total), ASICs (20), large scale application in particle physics experiments (14), applications in astrophysics, biology, medicine, etc. (12 total), and new ideas and future applications (14 total). Following the tradition, oral sessions were held as plenaries only, while posters sessions were scheduled throughout the entire symposium for presentation and discussion, with coffee, tea, and cookies, during the coffee/tea/lunch breaks.

In past symposia, we were witnessing the development of silicon-based tracking devices, shown in Fig. 1. The first generation of this evolution were strip sensors, followed by pixel sensors as the second generation. In this symposium, we have seen the birth of silicon-based fast timing detectors in large-scale applications, for the ATLAS and CMS experiments, that will be operational in the mid-2020's.

The symposium was entertained with a welcome reception in the Conference Center in the evening of 14^{th}, Saturday, and with a half-day break, in the afternoon of 16^{th}, Monday, used for an excursion to Miyajima island where the world-heritage Itsukushima shrine and the sacred mountain "Misen" are, and with the symposium dinner, in the evening of 17^{th} at Hiroshima-city Bunka Koryu Kaikan. The dinner was entertained with the "Kagura" (dance in dedication to the gods) performance by the dancing team "Saniwa Kagura-Dan", provided by the Hiroshima Convention & Visitors Bureau. The group performed "Yamata no Orochi" - the story of a god who saved the life of an old couple's daughter to be sacrificed to a big, eight-headed snake (embodied by three snakes in the dance), who the god charmed to sleep with "sake" and then defeated.

The symposium was supported by the Hiroshima Convention & Visitors Bureau, through Ms. A. Sawada of the MICE promotion department, which partially covered the fee for the Conference Center, organized a welcome message from the mayor of Hiroshima City, and the entertainment at the symposium dinner. The symposium was made possible by the excellent contributions of the local organizers, Profs. H. Takahashi and T. Mizuno of Hiroshima University, who not only managed and executed the symposium but also complemented a guest editor, Y. Fukazawa.

Among the 143 contributions, 109 papers were included for publication in these proceedings. Like previous issues, the papers were peer-reviewed with the help of many anonymous reviewers in the field, as well as a special guest editor, D. Bortoletto, in case of a conflict of interest of the managing guest editor, to whom the organizers wish to extend their appreciation. We also appreciate the support of the publisher's editorial team: V. Letizia, L. Li, S. Vikram, and others.

The next Symposium will be held in Vancouver, Canada, in 2022[1].

Guest Editors

References

[1] 1993 Hiroshima (Nucl. Instr. Meth. A342, 1-308, 1994)
[2] 1995 Hiroshima (Nucl. Instr. Meth. A383, 1-266, 1996)
[3] 1997 Melbourne (not published)
[4] 2000 Hiroshima (Nucl. Instr. Meth. A466, 243-428, 2003)
[5] 2004 Hiroshima (Nucl. Instr. Meth. A541, 1-466, 2005)
[6] 2006 Carmel (Nucl. Instr. Meth. A579, 557-914, 2007)
[7] 2009 Hiroshima (Nucl. Instr. Meth. A636 Supplement 1, S1-S256, 2011)
[8] 2011 Taipei (Nucl. Instr. Meth. A699, 1-250, 2013)
[9] 2013 Hiroshima (Nucl. Instr. Meth. A765, 1-296, 2014)
[10] 2015 Xi'an (Nucl. Instr. Meth. A831, 1-448, 2016).
[11] 2017 Okinawa (Nucl. Instr. Meth. A924, 1-484, 2019)

[1] Due to the pandemic of the new corona virus COVID-19, the 13^{th} symposium is postponed by one year, from 2021 to 2022.

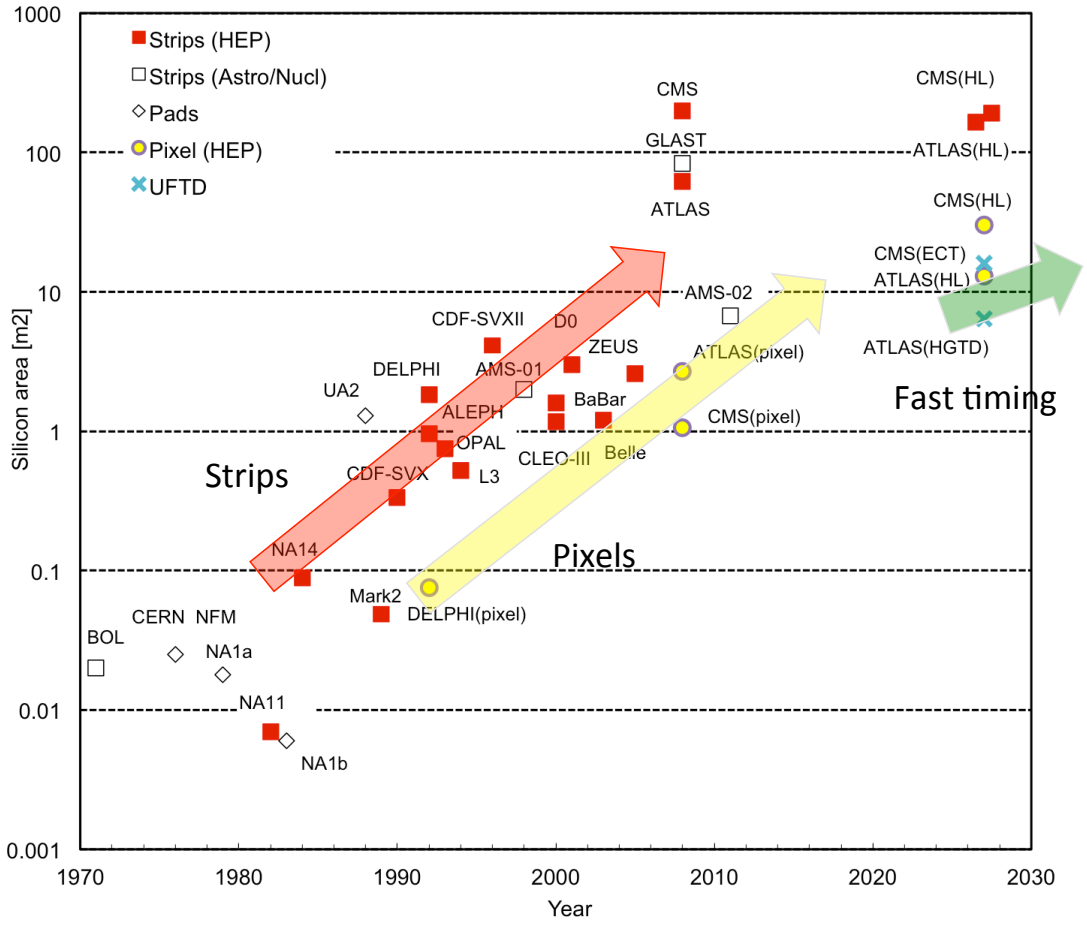

Fig. 1: Evolution of the area of silicon-based detectors. The first wave were strip sensors, followed by a second wave of pixel sensors. A new generation of fast timing detectors with large-scale applications is being developed.

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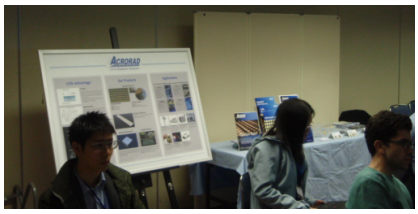
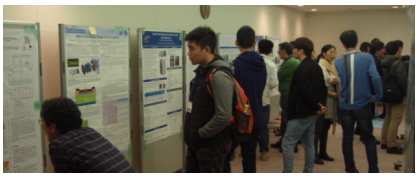
Symposium Photos

on the steps of “the Conference Center relief”

plenary session





poster sessions throughout the symposium, with coffee/tea/cookies

poster sessions throughout the symposium, with coffee/tea/cookies

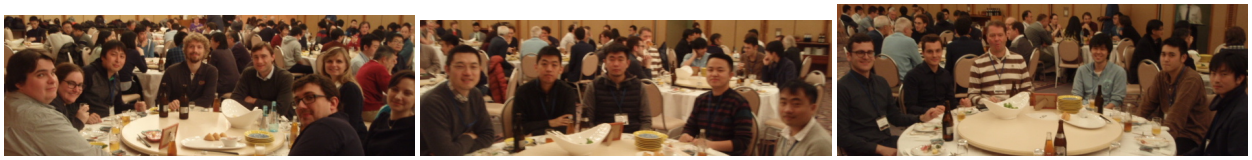
Peace Memorial Park at sunrise, Conference Center on the left

Welcome Reception the night before the Symposium

Excursion to Miyajima Island: ferry, shrine, and town

at the vista point of ”Lion’s nose” of mount “Misen”, with the scenery of Hiroshima city in the background

Symposium dinner at Hiroshima City Bunka Kouryu Kaikan



happy faces

the entertainment: ”Kagura” (dance in dedication to the gods), ”Yamata no Orochi”, and aftermath

Symposium dinner opening and closing by the founders of the symposium

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