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High Energy, Optical, and Infrared Detectors for Astronomy IV

Andrew D. Holland
David A. Dorn
Editors

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Contents

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1 EM CCDs
Andrew D. Holland, The Open University (United Kingdom)

2 CCDs I
Paul R. Jorden, e2v technologies plc (United Kingdom)

Introduction

Astronomical Telescopes and Instrumentation once again combined the visible, infrared and high energy detector sessions into a single conference; High Energy, Optical, and Infrared Detectors for Astronomy IV. This combination resulted in a rich variety of applications and detectors being presented by the community. This combination also provided an excellent overview of the leverage of detector technologies and methods across the photon energy spectrum, where many of the detection techniques and methodologies are common. Sessions were also held into associated readout electronics and radiation damage which are important for many applications.

Over ninety papers were presented over four days and attendance was high through the conference. This reflects on the excellence of presented material, the presenting authors, and the relevance of the conference to present-day astronomy.

The presentations covered detector performance, both theoretical and experimental, detectors in instruments and camera systems, sophisticated new controllers and software, packaging of very large detector mosaics, radiation testing, and the future direction of sensor technologies.

Over the years, proceedings like these have been an invaluable output and record of SPIE meetings. They represent a current snapshot of detector technologies. This year's conference had several talks on CCDs covering optical and X-ray bands, and included a session on electron-multiplying CCD technology and applications. Several contributions detailing the continued development and improvement of both CMOS imagers, and CMOS readout and active pixel sensor technologies that are utilized in infrared, visible, and high energy applications. Many results were "hot off the press", with some being taken just days before the conference, which helps maintain the vitality of these events. We hope the detailed information presented here will contribute to further advancements in all detector technologies.

Such a successful meeting could not have taken place without the support and help of many people, especially all of you whose names appear on the papers collected here. We acknowledge the valuable advice and assistance for structuring the conference and chairing the sessions given to us by the Program Committee and would especially like to thank Jim Beletic, Gert Finger, Paul Jorden, Satoshi Miyazaki, Lothar Strueder, and Hiroshi Tsunemi for their assistance in chairing some of the sessions.

Finally we hope that you enjoy the written proceedings as an accurate record of the conference, and look forward to seeing you in Amsterdam in 2012.

Andrew D. Holland
David A. Dorn