June 26, Monday
June 27, Tuesday
June 28, Wednesday
June 29, Thursday
June 26, Monday
June 27, Tuesday
June 28, Wednesday
June 29, Thursday

Space Astrophysics Detectors and Detector Technologies

Program for Monday 26 June

7:30    8:45am  Registration
8:45    9:00am  Welcome & Logistics
9:00    9:30am  NASA’s Strategic Plan and Science Opportunities - Hashima Hasan NASA HQ
9:30    10:00am Science drivers for UV Optical Space Detector Development - Jon Morse Univ. Colorado
10:00   10:30am UV Technology Overview – Charles Joseph, Rutgers Univ.
10:30   11:00am Coffee Break
11:00   11:30pm MCPs & Anodes for UV Astronomy – Oswald Seigmund, Univ. California, Berkeley
11:30   12:30pm Open (contributed talks)
12:30   2:00pm  Lunch
2:00    2:30pm  UV-Optical CCDs – Mark Clampin, STScI
2:30    3:00pm  Active Pixel Sensors – Bedabrata Pain, JPL
3:00    3:30pm  Poster Highlights - reviewed by Barry Welsh, UC Berkeley
3:30    4:00pm  Coffee Break
4:00    4:30pm  GaN Detectors – Marty Peckerar, Naval Research Lab
Contributed talks for Monday to include

**Novel MgZnO UV detectors** - R.D. Vispute, W. Yang, S. Choopun, R.P. Sharma & T. Venkatesan, College Park Maryland

**Large-area, photon-counting, mega-pixel arrays in UV/Optical** - Katsushi Arisaka, UCLA, Department of Physics and Astronomy

**Fully depleted, 300 micron thick CCD image sensors with applications in the x-ray, uv, visible and near-infrared regions** - S.E. Holland et al, LBNL

**Delta-doped imagers for UV and EUV applications** - S. Nikzad, T.J. Jones, T.J. Cunningham, P.W. Deelman, and S.T. Elliott, Center for Space Microelectronics Technology, Jet Propulsion Laboratory, California Institute of Technology

**Low Noise Readout using Active Reset for CMOS APS** - B. Fowler, M. Godfrey, J. Balicki & J. Canfield, Pixel Devices International


**UV Digital Cameras Based on 32x32 and 128x128 Arrays of AlGaN p-i-n Photodiodes** - J.D. Brown, J. Matthews, J. Boney, P. Srinivasan, & J.F. Schetzina, North Carolina State University

**Development of GaN-based films for use in UV sensitive but visible blind detectors** - Mel Ulmer, Manijeh Razeghi & Bruce Wessels, Northwestern University

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**Program for Tuesday 27 June**

8:00 9:00am  Registration

9:00 9:30am  **Cosmic Journeys** - Alan Bunner, NASA HQ

9:30 10:00am  **IR Science** – George Rieke, Univ. Arizona

10:00 10:30am  **InSb & HgCdTe Detectors** – Judy Pipher, Univ. Rochester

10:30 11:00am  Coffee Break

11:00 11:30am  **Si IBC Arrays for the Mid-Infrared** – Jeff Van Cleve, Cornell Univ

11:30 12:00pm  **Germanium detectors for the Far-Infrared** – Erick Young, Univ. Arizona

12:00 1:00pm  Open (Contributed talks)

1:00 2:00pm  Lunch

2:00 2:30pm  **An Overview of STJ detectors** – Dan Prober, Univ. Yale

2:30 3:00pm  **Some current & future developments in detectors for astrophysics at ESA** – Tony Peacock, ESTEC

3:00 3:30pm  Poster highlights review

3:30 4:00pm  Coffee Break

4:00 4:30pm  **Electronic Devices for Cryogenic Detector Systems** – Murzy Jhabvala, GSFC

4:30 5:00pm  **Transition Edge Sensors for Optical and Gamma ray Detectors** – Blas Cabrera, Stanford

5:00 6:00pm  Open (Contributed talks)
Contributed talks for Tuesday to include:

**Camera-on-a-Chip technology for astronomical sensors** - Don Hall, Institute for Astronomy, Hawaii

**NGST Detectors: What We Need** – Knox Long (STScI), Matthew Greenhouse (NASA/GSFC), Craig McCreight (NASA/Ames) & Bernard Rauscher (STScI).

**HgCdTe Arrays for the Far-Infrared** - Albert Betz, University of Colorado

**Initial Performance Results of the 2048 by 2048 2.5 microns HgCdTe Focal Plane Array** - Cabelli, et al, Rockwell Science Center

**NTD Germanium: Current Successes and Future Directions** - E.E. Haller & J.W. Beeman, University of California, Berkeley and Lawrence Berkeley National Laboratory

**Quantum Well Infrared Photodetectors for Astronomy** - Michael Ressler, et al. JPL

**Single Photon Energy Resolving Detectors** - Armen Gulian, NRL


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**Program for Wednesday 28 June**

8:00 9:00am  **Registration**

9:00 9:30am  **Gamma-ray science** – Fiona Harrison, Cal Tech

9:30 10:00am  **High Resolution Detector technologies for an Advanced Compton Telescope** – Elena Aprile, Columbia Univ.

10:00 10:30am  **CZT Detectors for Hard X-Ray & Gamma Ray Astronomy - Current Technologies** - Ann Parson, GSFC

10:30 11:00am  **Coffee Break**

11:00 11:30am  **Detectors for GeV Gamma Rays** - Bob Hartman, GSFC

11:30 12:30pm  **Contributed talks**

12:30 2:00pm  **Lunch**

2:00 2:30pm  **X-Ray Science** – Steven S. Murray, Harvard-Smithsonian Center for Astrophysics

2:30 3:00pm  **X-Ray CCDs** – Mark Bautz, MIT

3:00 3:30pm  **Poster review highlights**

3:30 4:00pm  **Coffee Break**

4:00 4:30pm  **X-Ray Calorimeters** – Caroline Stahle, GSFC

4:30 5:30pm  **Contributed talks**

Contributed talks for Wednesday to include:

**Gas Proportional Pixel Detectors for X and Gamma-ray Imaging** - P. Deines-Jones¹, K. Black¹, S.D. Hunter¹, J.R. Huang², T. N. Jackson², K. Jahoda¹, H. Klauck², and W. Qian². ¹NASA/Goddard Space Flight Center, Greenbelt, MD 20771; ²Center for Thin Film Devices, 121 Electrical
Characterization of a multianode photomultiplier tube for use with scintillating fibers to detect gamma rays - Keith Rielage, McDonnell Space Sciences Center & Dept. of Physics, Washington University, St. Louis, MO 63130

Detector systems for the X-ray evolving universe spectroscopy mission (XEUS) - M. Bavdaz, A. Peacock, A. Parmar, M. Beijersbergen, J. Schiemann+. Space Science Department of ESA, ESTEC, 2200AG Noordwijk, Netherlands. *Directorate Of Manned Spaceflight and Microgravity ESA, ESTEC, 2200AG Noordwijk, Netherlands

Advanced X-ray CCD Detectors for the Constellation-X and MAXIM Missions - George R. Ricker, MIT


Modeling of CdZnTe Strip X-ray Detectors - Emrah Kalemci, Center for Astrophysics and Space Sciences, University of California at San Diego


Magnetic Calorimeters for X-Ray and Gamma-Ray Detection - George Seidel, Brown University

NTD Germanium-Based Microcalorimeters for X-Ray and Gamma-Ray Astronomy - Eric Silver a, Simon Bandler a, Herbert Schnopper a, Stephen Murray a, Marco Barbera c, Norm Madden b, Don Landis b, Jeff Beeman b, Eugene Haller b, Greg Tucker d. a Harvard-Smithsonian Center for Astrophysics, 60 Garden Street, Cambridge, MA 02138, b Lawrence Berkeley National Laboratory, 1 Cyclotron Road, Berkeley, CA 94720, c Osservatorio Astronomico di Palermo, Palermo, Italy, d Brown University, Providence, RI 02912


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Program for Thursday 29 June

8:00  9:00am  Registration

9:00  9:30am  NASA Technology Funding Opportunities – Rick Howard, NASA HQ

9:30 10:00am  TES Arrays for Far-Infrared Imaging & Spectroscopy - Harvey Moseley, GSFC

10:00 10:30am  Far-IR Photon Counting Detectors – Rob Schoelkopf, Yale Univ

10:30 11:00am  Coffee Break

11:00 11:30am  Semiconductor Bolometers & Applications - Jamie Bock, JPL

11:30 12:30pm  Contributed talks

12:30 2:00pm  Lunch

2:00 2:30pm  HEB Heterodyne Sensors for Submillimetre/FAR IR Astronomy – William R. McGrath, JPL

2:30 3:00pm  HEMT Technology for Astrophysics Applications – Todd Gaier, JPL

3:00 3:30pm  Poster Highlights - reviewed by Charles Lawrence, JPL

3:30 4:00pm  Coffee Break

4:00 4:30pm  Submillimeter & Far Infrared Heterodyne Systems - Jonas Zmuidzinas, CalTech

4:30 5:30pm  Open (Short Talks – Discussions – Poster Highlights)
Contributed talks for Thursday to include:

Voltage-biased Superconducting Bolometers for the far-Infrared to millimeter wavelength range - Adrian T. Lee, Jan M. Gildemeister, Mike Myers, Paul L. Richards, Jesse Skidmore, and Jongsoo Yoon, University of California, Berkeley

Ideal Integrating Bolometer - Al Kogut, GSFC


Superconducting Transition Edge Sensor Bolometer Arrays for Submillimeter Astronomy - Dominic Benford GSFC

Hot-electron direct detectors: feasibility of NEP H 10⁻²⁰ WHz at submillimeter waves - Boris S. Karasik, William R. McGrath, and Henry G. LeDuc - Jet Propulsion Laboratory, California Institute of Technology, Pasadena, CA 91109, Michael E. Gershenson, Dept. of Physics and Astronomy, Rutgers University, Piscataway, NJ 08854, Andrew V. Sergeev, Dept. of Electrical and Computer Engineering, Wayne State University, Detroit, MI 48202

Wideband Lag Correlators for Heterodyne Spectroscopy - Andrew Harris, University of Maryland

Tunable antenna-coupled inter-subband terahertz (TACIT) mixers: the quantum limit without the quantum liquid. - M. S. Sherwin,1 C. Cates,1 K. Maranowski,2 A. C. Gossard2 and W. R. McGrath3. 1Physics Department and Center for Terahertz Science and Technology, UCSB, Santa Barbara, CA 93106, 2Materials Department, UCSB, Santa Barbara, CA 93106, 3Center for Space Microelectronics Technology, Jet Propulsion Laboratory, California Institute of Technology, Pasadena, CA 91109

Laser Micromachining of THz Waveguide, and Quasi-Optical Components - C. Walker, C. Drouet d'Aubigny, B. Jones, C., Groppi Steward Observatory, Univ. of Arizona, J. Papapolymerou, Dept. of Electrical and Computer Engineering, Univ. of Arizona

A novel approach for a tunable sub-millimeter detector - Faiz Rahman, Caltech