



<http://kicp-workshops.uchicago.edu/ieu2013/>

## WORKSHOP PROGRAM



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THE UNIVERSITY OF  
**CHICAGO**

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The Kavli Institute for Cosmological Physics (KICP) at the University of Chicago will host a two-day workshop focusing on solid-state technologies to build cameras for both space and ground-based astroparticle physics experiments. In particular, alternatives to MAPMTs for the JEM-EUSO focal plane and CTA cameras will be discussed including SiPM and G-APD. The workshop will be structured as a series of presentations with ample time for discussions and working sessions.

## Local Organizing Committee

**Pedro Facal**

Kavli Institute for Cosmological Physics

**Toshihiro Fujii**

Institute for Cosmic Ray Research & Kavli Institute for  
Cosmological Physics

**Jeff Grube**

Adler Planetarium/EFI

**Andrew McCann**

Kavli Institute for Cosmological Physics

**Angela Olinto**

Kavli Institute for Cosmological Physics

**Paolo Privitera**

Kavli Institute for Cosmological Physics

**Scott Wakely**

Kavli Institute for Cosmological Physics

**Christopher Williams**

Kavli Institute for Cosmological Physics

**WORKSHOP PROGRAM**

May 9-10, 2013 @ LASR, University of Chicago

**Thursday - May 9, 2013****MORNING SESSION I***Chair: Christopher Williams*

9:00 AM - 9:10 AM

*WELCOME*  
*Angela Olinto*

9:10 AM - 9:30 AM

**Angela Olinto**, Kavli Institute for Cosmological Physics  
***JEM-EUSO Science Overview***

9:30 AM - 9:50 AM

**Jeff Grube**, Adler Planetarium/EFI  
***CTA Science Overview***

9:50 AM - 10:10 AM

*COFFEE BREAK***MORNING SESSION II***Chair: Javier Tiffenberg*

10:10 AM - 10:50 AM

**Marco Casolino**, RIKEN & INFN  
***The Focal Surface of JEM-EUSO detector***

10:50 AM - 11:00 AM

*QUESTIONS: JEM-EUSO FOCAL PLANE*  
*Marco Casolino*

11:00 AM - 12:00 PM

**Juan Estrada**, Fermilab  
***MAPMT Performance compared with Requirements Discussion***

12:00 PM - 1:00 PM

*LUNCH***AFTERNOON SESSION I***Chair: Christopher Williams*

1:00 PM - 1:30 PM

**Ardavan Ghassemi**, Hamamatsu  
***Latest MPPC Developments from Hamamatsu 1***

1:00 PM - 1:30 PM

**Ardavan Ghassemi**, Hamamatsu  
***Latest MPPC Developments from Hamamatsu 2***

1:30 PM - 2:15 PM

**Nepomuk Otte**, Georgia Tech  
***Nuisances of SiPMs and how to deal with them in Cherenkov telescopes on the example of the CTA SC-MST***

2:15 PM - 2:30 PM

*QUESTIONS: NUISANCES OF SIPMS AND HOW TO DEAL WITH THEM*  
*Nepomuk Otte*

2:30 PM - 3:15 PM

**Thomas Bretz**, ETH Zurich  
***FACT Telescope***

3:15 PM - 3:30 PM

*QUESTIONS: FACT TELESCOPE*  
*Thomas Bretz*

3:30 PM - 4:00 PM

*COFFEE BREAK***AFTERNOON SESSION II***Chairs: Toshihiro Fujii*

4:00 PM - 5:00 PM

**John W Mitchell**, Goddard Space Flight Center  
***SiPMs and G-APD Discussion***

5:00 PM - 6:00 PM

**Marco Ricci**, INFN, Laboratori Nazionali Frascati - ITALY  
***Mechanics and Thermal Requirements Discussion***



**Friday - May 10, 2013**

**MORNING SESSION I**

*Chair: Jeff Grube*

9:00 AM - 9:45 AM **David A Williams**, University of California, Santa Cruz  
*Characterization of SiPMs for Use in Cherenkov Telescopes*

9:45 AM - 10:00 AM *QUESTIONS: SIPM FOR CTA*  
*David Williams*

10:00 AM - 10:15 AM *COFFEE BREAK*

**MORNING SESSION II**

*Chair: Jeff Grube*

10:15 AM - 11:00 AM **Paul Rubinov**, Fermilab  
*Electronics for large focal plane arrays*

11:00 AM - 11:05 AM *QUESTIONS: ELECTRONICS*  
*Paul Rubinov*

11:05 AM - 11:50 AM **Justin Vandenbroucke**, KIPAC, SLAC  
*Waveform digitization with the TARGET chip*

11:50 AM - 12:00 PM *QUESTIONS: WAVEFORM DIGITIZATION WITH THE TARGET CHIP*  
*Justin Vandenbroucke*

12:00 PM - 1:00 PM *LUNCH*

**AFTERNOON SESSION I**

*Chair: Juan Estrada*

1:00 PM - 1:45 PM **Grzegorz W Deptuch**, Fermilab  
*3D integrated and digitally read-out solid-state photo-multiplier - proposal*

1:45 PM - 2:00 PM *QUESTIONS: 3D SIPM*  
*Grzegorz Deptuch*

2:00 PM - 2:45 PM **Eric Oberla**, UChicago HEP  
*Development of large area Micro-channel Plate Photodetectors for imaging and fast-timing applications*

2:45 PM - 3:00 PM *QUESTIONS: PSEC MCP*  
*Eric Oberla*

3:00 PM - 3:30 PM *COFFEE BREAK*

**AFTERNOON SESSION II**

*Chair: Pedro Facal*

3:30 PM - 4:30 PM *ELECTONICS DISCUSSION*

4:30 PM - 5:00 PM *SUMMARY AND FUTURE*