



Contribution ID: 7

Type: **Keynote talk**

Optical and IR Applications in Astronomy and Astrophysics

Monday 1 September 2008 13:50 (40 minutes)

The set comprising of silicon charge-coupled devices, low band-gap infrared arrays and bolometer arrays provide astronomers with position-sensitive photon detectors from the X-ray to the sub-mm. In recent years the most significant advances have occurred in the near-infrared part of the spectrum because not only have the detector formats caught up with those of CCDs but also because the advent of adaptive optics has meant that very largest telescopes can achieve their diffraction limit in the infrared. Thus infrared cameras, spectrometers and hybrid instruments that measure spatial and spectral information simultaneously are now commanding the greatest attention on telescopes from 6.5-10 meters in effective aperture. Scientific applications of these new infrared instruments span everything from the search for nearby solar systems to the orbital motions of stars about the massive black hole at the center of the Milky Way and studies of the first galaxies to form in the high redshift Universe. Background, principles and applications of infrared array detectors to astronomy and astrophysics will be discussed with particular emphasis on work at the W. M. Keck 10-m telescope on Mauna Kea, Hawaii.

Author: Prof. MCLEAN, Ian

Presenter: Prof. MCLEAN, Ian

Session Classification: Applications in Astronomy and Astrophysics

Track Classification: Applications in Astronomy and Astrophysics