Direct Detection of Extra-solar Planets Using High Contrast Imaging

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Large astronomical telescopes coupled with new adaptive optics technologies enable high contrast imaging. Current systems approach a dynamic range of nearly a million to one on scales near the diffraction limit. In the next decade a new generation of instruments will improve contrast by another one to two orders of magnitude and provide images of extra-solar planetary systems.

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Sloan Auditorium, Goergen 101
Refreshments served

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Abstract:

Large astronomical telescopes coupled with new adaptive optics technologies enable high contrast imaging. Current systems approach a dynamic range of nearly a million to one on scales near the diffraction limit. In the next decade a new generation of instruments will improve contrast by another one to two orders of magnitude and provide images of extra-solar planetary systems.

Biography:

1979 – 82 B.Sc. (First Class Honors) in Physics, Imperial College, University of London
1982 – 85 Ph.D. in Physics, Imperial College, University of London
Diploma of Imperial College Professional Experience:
1984 – 86 1851 Research Fellow at Imperial College & Lawrence Berkeley Laboratory
1987–1989 Research Fellow in Physics, California Institute of Technology
1989–1991 Senior Research Fellow in Physics, California Institute of Technology
1999– Professor, Astronomy Dept., U. C. Berkeley.
2008–2010 Chair, Astronomy Department of Astronomy, U. C., Berkeley
2010– Director Dunlap Institute for Astronomy & Astrophysics;
Professor of Astronomy, University of Toronto;

Honors & Awards:
1981 Tyndall Prize, Imperial College
1984 – 86 Royal Commission for the Exhibition of 1851 Science Research Fellow
1985 – 87 NATO Research Fellow
1990 Dudley Observatory Award
1993 – 1997 Packard Foundation Fellow
2007 Donald Sterling Noyce Prize for Excellence in Undergraduate Teaching
2010 American Association for the Advancement of Science Newcomb Cleveland Prize