

Alan Jackson

Address: Centre for Planetary Sciences, University of Toronto, 1265 Military Trail, Toronto, ON, M1C 1A4, Canada
Telephone: (+1)416 208 5099
E-mail: ajackson@cita.utoronto.ca
Website: www.alanjacksonastronomy.com
Nationality: British

Employment

Oct 2016 – **CPS Fellow**, Centre for Planetary Sciences, University of Toronto
Feb 2014 – Sep 2016 **Postdoctoral Research Associate**, School of Earth and Space Exploration, Arizona State University
Advisor: Erik Asphaug

Education

Oct 2010 – Jan 2014 **PhD, Institute of Astronomy, University of Cambridge**
Supervisor: Dr Mark Wyatt
Thesis title: Debris in planetary systems
Oct 2006 – Jun 2010 **MPhys (Hons), 1st class, Merton College, University of Oxford**

Teaching

Jan 2015 – May 2015 Co-instructor for Terrestrial Planet Formation (GLG 598) graduate course
Jan 2011 – May 2013 Supervisor/tutor (groups of 2-3) for Astrophysical Fluid Dynamics Part II (3rd year undergraduate) course

Students advised

Viranga Perera Graduate student, ASU
Travis Gabriel Graduate student, ASU

Grants

Project	Funding organisation	Duration	Total funding
<i>Stop hitting yourself: did most terrestrial impactors originate from the terrestrial planets?</i> Position: PI	NASA	3 years	\$643,000

Observing programs

Project	Facility	Time/time valuation	Support funding
<i>Mineralogical evolution in extreme debris disks</i> Position: Co-I, PI: Kate Su, University of Arizona	SOFIA	3.5 hrs	\$38,000
<i>Debris disk variability: observational test bed for probing terrestrial planet formation</i> Position: Co-I, PI: Kate Su, University of Arizona	Spitzer Space Telescope	130 hrs/ \$279,500	\$10,000

Professional service

Sep 2015 – Sep 2016 Convener for Stars, Planets and Disks discussion group at ASU
Apr 2015 – Member, ASU Nexus for Exoplanet System Science (NExSS) team
Jan 2015 – Jun 2015 Convener for Exoplanetary Systems journal club at ASU

Jan 2015

Chambliss Student Poster Award judge, 225th AAS meeting
Reviewer for *The Astrophysical Journal*, *Monthly Notices of the Royal Astronomical Society*, *Nature*, *Science*

Skills

Programming in C/C++, IDL, OpenMP, MPI

Use of the scientific packages MATLAB and MATHEMATICA

Numerical modelling of N-body systems using the MERCURY code

Numerical modelling of impacts using the SPLATCH and ISALE codes

Use of Windows and Linux/Unix operating systems, Microsoft Office and LaTeX

Administration of a large Linux cluster (8 nodes, 448 cores)

Publications

How to design a planetary system for different scattering outcomes: giant impact sweet spot, maximising exocomets, scattered disks

Wyatt M.C., Bonsor A., **Jackson A.P.**, Marino S., Shannon A., MNRAS, 2017, 464, 3385

Gas and dust around A-type stars at tens of Myr: signatures of cometary breakup

Greaves J. S., Holland W. S., Matthews B. C., Marshall J. P., Dent W. R. F., Woitke P., Wyatt M. C., Matrà L., **Jackson A.P.**, MNRAS, 2016, 461, 3910

The spherical Brazil nut effect and its significance to asteroids

Perera V., **Jackson A.P.**, Asphaug E., 2016, Icarus, 278, 194

Insights into planet formation from debris disks: II. Giant impacts in extrasolar planetary systems

Wyatt M.C., **Jackson A.P.**, in *The disk in relation to the formation of planets and their proto-atmospheres*, eds. Falanga M., Rodrigo R., Blanc M., Lammer H., Internat. Space Sci. Inst. – Beijing, 2016, also at Space Science Reviews, 2016, 205, 231

Eight billion asteroids in the Oort cloud

Shannon A., **Jackson A.P.**, Veras D., Wyatt M.C., 2014, MNRAS, 446, 2059

Debris from giant impacts between planetary embryos at large orbital radii

Jackson A.P., Wyatt M.C., Bonsor A., Veras D., 2014, MNRAS, 440, 3757

Molecular Gas Clumps from the Destruction of Icy Bodies in the β Pictoris Debris Disk

Dent W.R.F., Wyatt M.C., Roberge A., Augereau J.-C., Casassus S., Corder S., Greaves J.S., de Gregorio-Monsalvo I., Hales A., **Jackson A.P.**, Hughes A.Meredith, Lagrange A.-M., Matthews B., Wilner D., 2014, Science, 343, 1490

Debris from terrestrial planet formation: the Moon-forming collision

Jackson A.P., Wyatt M.C., 2012, MNRAS, 425, 657

Planetary evaporation by UV & X-ray radiation: basic hydrodynamics

Owen J.E., **Jackson A.P.**, 2012, MNRAS, 425, 2931

The coronal X-ray-age relation and its implications for the evaporation of exoplanets

Jackson A.P., Davis T.A., Wheatley P.J., 2012, MNRAS, 422, 2024

Presentations

Seminars/Colloquia

Sep 2015	<i>Asymmetric and variable debris disks: signatures of ongoing planet formation</i>	Astrophysics colloquium	Lund, Sweden
Sep 2015	<i>Optically thick debris from terrestrial planet formation</i>	Astrophysics seminar	Institute of Astronomy, Cambridge, UK
Oct 2013	<i>Light from shattered worlds</i>	Astrophysics seminar	DAMTP, Cambridge, UK
Mar 2013	<i>Light from shattered worlds</i>	Planet-Z meeting	ETH Zurich, Switzerland
May 2012	<i>When worlds collide: Debris from terrestrial planet formation</i>	Astrophysics seminar	Institute of Astronomy, Cambridge, UK

Conference oral presentations

Oct 2015	<i>Extreme, Variable debris disks produced by giant impacts during terrestrial planet formation</i>	EPSC 2015	Nantes, France
Feb 2015	<i>Stop hitting yourself: did most terrestrial impactors originate from the terrestrial planets?</i>	Early solar system bombardment III	LPL, Houston, Texas, USA
Jan 2015	<i>Debris from giant impacts: signatures of forming and dynamic planetary systems</i>	AAS 225	Seattle, Washington, USA
Sep 2014	<i>Giant impacts in the Beta Pic system</i>	30 years of Beta Pic and debris disk studies	IAP, Paris, France
Jul 2014	<i>Debris from giant impacts, at home and abroad</i>	Characterising planets across the HR diagram	Institute of Astronomy, Cambridge, UK
Sep 2013	<i>Light from shattered worlds</i>	EPSC 2013	UCL, London, UK
Oct 2012	<i>When worlds collide: Debris from terrestrial planet formation</i>	Rocks 'n' stars	MPS, Göttingen, Germany
Mar 2012	<i>Evaporating planets with stellar X-rays: A potential test for migration scenarios?</i>	UK-Germany NAM	Manchester, UK
Mar 2012	<i>Debris from giant impacts</i>	Exoplanets and their host stars	Oxford, UK

Conference poster presentations

Oct 2016	<i>Constraining the pre-impact orbits of Solar System giant impactors</i>	DPS 48/EPSC 2016	Pasadena, CA, USA
Oct 2016	<i>Stop hitting yourself!</i>	DPS 48/EPSC2016	Pasadena, CA, USA
Nov 2014	<i>Stop hitting yourself: did most terrestrial impactors originate from the terrestrial planets?</i>	DPS 46	Tucson, Arizona, USA
Jun 2013	<i>Light from shattered worlds: debris from giant impacts</i>	IAUS 299	Victoria, British Columbia, Canada
Mar 2013	<i>Debris from giant impacts: A dusty window on terrestrial planet formation</i>	Characterising Exoplanets	Royal Society, London, UK
Mar 2012	<i>Debris from giant impacts: Signposts of terrestrial planet formation</i>	UK-Germany NAM	Manchester, UK
Jul 2011	<i>Debris from giant impacts: Signposts of terrestrial planet formation</i>	Origins of solar systems	Mt. Holyoke College, Massachusetts, USA

Public Outreach

Front of house work at Institute of Astronomy public observing evenings
Demonstrator at annual Cambridge University Science Festival
Member of the Institute of Astronomy Ask an Astronomer team
Interviewed for BBC Radio Cambridgeshire 'Naked Scientists' programme

Public talks

Nov 2013	<i>Views of Venus</i>	Institute of Astronomy, Cambridge Public observing evening	Audience 170
Nov 2012	<i>How to build an Earth... in 4 easy steps</i>	Institute of Astronomy, Cambridge Public observing evening	Audience 165

Awards

2008 - 2010 Postmaster (College scholarship), Merton College, Oxford
2007 Exhibitioner (College scholarship), Merton College, Oxford

Professional Organisations

Royal Astronomical Society

American Astronomical Society

 Division for Planetary Sciences

 Division for Dynamical Astronomy