

## **Wednesday 15<sup>th</sup> March 2017**

08:45-09:00 Welcome by Christiane Helling

### Session I Atmospheres of Exoplanets: Observations (Chair: C. Helling)

09:00-09:30 D. Apai: Extrasolar Storms, review (US)

09:30-09:45 D. Armstrong: The first detection of variability in a Hot Jupiter atmosphere (Warwick)

09:45-10:00 L. Delrez: Probing the emission spectra of two ultra-hot Jupiters using ground-based occultation photometry (Cambridge)

10:00-10:15 B. Biller: Discovering the youngest free-floating planets: a transformative survey of Taurus with the novel W-band filter (Edinburgh)

10:15-10:30 N. Nikolov: VLT FORS2 comparative transmission spectral survey of clear and cloudy exoplanet atmospheres (Exeter)

10:30-10:45 J. Spake: Spectroscopic phase curves of hot Jupiters (Exeter)

10:45-11:00 A. Triaud: A septet of earths in the TRAPPIST-1 system (Cambridge)

*11:00-11:30 Coffee*

### Session II Atmospheres of Exoplanets: Modelling (Chair: I. Baraffe)

11:30-11:50 R. Pierrehumbert: Dynamics of condensible-rich atmospheres on tide-locked exoplanets (Oxford)

11:50-12:10 I. Boutle: Exploring the climate of Proxima B with the Met Office Unified Model (MET Office)

12:10-12:25 M. Hammond: Modelling the climate of 55 Cancri e (Oxford)

12:25-12:40 S. Lines: Cloud formation and evolution in hot Jupiter atmospheres (Exeter)

12:40-12:55 T. Loudon: Modelling the phase curve and occultation of WASP-43b with SPIDERMAN (Warwick)

*13:00-14:00 Lunch*

14:00-15:30 Discussion sessions

- \* Heather Cegla & Raphaëlle Haywood: Discussion and Q&A: Stellar Activity in Exoplanet Surveys
- \* Nathan Mayne: Exoplanet modelling
- \* Paul Rimmer: Laboratory Exoplanet Science
- \* Sarah Rugheimer: Workshop on using the JWST simulator, PandExo

*15:30-16:00 Coffee*

16:00-16:15 V. Parmentier: Cloudy nights on exoplanets (Arizona)

16:15-16:30 G. Lee: Modelling combined scattering and emission spectra using Monte Carlo radiative transfer (St Andrews)

- 16:30-16:45 A. Rushby: The carbonate-silicate cycle on Earth-like planets near the end of their habitable lifetimes (NASA AMES)
- 16:45-17:00 E. Lopez: Predictions for the transition between rocky super-Earths and gaseous sub-Neptunes (Edinburgh)
- 17:00-17:15 J. Owen: The early lives of low-mass exoplanet atmospheres (Princeton)
- 17:15-17:30 S. Daley-Yates: Magnetic Exoplanets: Interacting Fields and Flows (Birmingham)
- 17:30-19:30 Wine & Cheese and poster viewing*

## **Thursday 16<sup>th</sup> March 2017**

### Session III Detection and Characterisation of Exoplanets (Chair: D. Sing)

- 09:00-09:30 M. Jardine: Exoplanet environments, review (St Andrews)
- 09:30-09:45 E. Gillen: Young transiting planets in the K2 clusters (Cambridge)
- 09:45-10:00 A. Cameron: The CHEOPS transit photometry mission (St Andrews)
- 10:00-10:15 G. Tinetti: ARIEL-Atmospheric Remote-Sensing Infrared Exoplanet Large-survey (UCL)
- 10:15-10:30 C. Boehm/A. Sozzetti: THEIA-a new astrometry mission to search for exoplanets (Durham/INAF)
- 10:30-11:00 Poster pop-ups (chair: D. Forgan)
- 11:00-11:30 Coffee*
- 11:30-11:45 S. Thompson: HARPS3 and the Terra Hunting Experiment (Cambridge)
- 11:45-12:00 H. Jones: Planets around nearby M dwarfs (Hertfordshire)
- 12:00-12:15 H. Cegla: Cautionary Tales of Rossiter-McLaughlin Analyses (Geneva)
- 12:15-12:30 M. Guenther: Needle in a haystack: distinguishing planets from false positives with NGTS (Cambridge)
- 12:30-12:45 I. Waldmann: Deep learning in exoplanet spectroscopy (UC London)
- 12:45-13:00 S. Casewell: The direct detection of an irradiated brown dwarf in an eclipsing binary (Leicester)
- 13:00 Conference photo*
- 13:00-14:00 Lunch*

14:00-15:30 Discussion sessions

- \* Amy Bonsor & Oliver Shorttle: Exoplanets: what can we learn from Earth?
- \* Sarah Casewell: Brown dwarfs as proxies for exoplanets
- \* Farzana Meru: The disc-planet connection: from planet formation to planet observations
- \* Vivien Parmentier: Prospects to understand cloudy exoplanets

15:30-16:00 *Coffee*

#### Session IV Properties of the host star (Chair: Y. Unruh)

- 16:00-16:15 A. Bonsor: The Compositional Diversity of Exoplanetary Material (Cambridge)
- 16:15-16:30 H. Giles: Determining starspot lifetimes from photometry to feed models of stellar activity in exoplanet RV surveys (Geneva)
- 16:30-16:45 K. Hay: How should limb darkening be constrained when fitting exoplanet system parameters from a transit? (St Andrews)
- 16:45-17:00 T. North: Weighing in on the masses of retired A stars with asteroseismology. Ensemble Kepler and K2 observations of exoplanet hosts (Birmingham)
- 17:00-17:30 Poster pop-ups (chair: D. Forgan)

19:00 *Conference Dinner & Ceilidh (Don't forget to bring your coloured ticket)*

### **Friday 17<sup>th</sup> March 2017**

#### Session V Discs and Planet Formation (Chair: P. Woitke)

- 09:00-09:15 K. Rice: Disc fragmentation rarely forms planetary-mass bodies (Edinburgh)
- 09:15-09:30 M. Fletcher: An implicit integration scheme for dust grains in PHANTOM (Leicester)
- 09:30-09:45 M. Davies: Survival of habitable planets in unstable planetary systems (Lund)
- 09:45-10:00 A. Mustill: What do outer worlds do to inner planets? (Lund)
- 10:00-10:15 G. Rosotti: The origin of the eccentricity of the hot-Jupiter in CI Tau (Cambridge)
- 10:15-10:30 M. Kama: Observational studies of the C and O abundance in protoplanetary discs (Cambridge)
- 10:30-10:45 D. Veras: Explaining transits and variability with tidal disruption simulations of minor planets (Warwick)
- 10:45-11:00 D. Forgan: Advanced population synthesis models of planet formation via disc instability (St Andrews)

11:00-11:30 *Coffee*

11:30-12:30 Discussion session presentation

12:30-14:00 *Lunch*

## Session VI: Links to the Solar System (Chair: C. Helling)

- 14:00-14:15 S. Mikhail: How to make an Earth, and not a Venus (St Andrews)
- 14:15-14:30 G. Hodosán: Lightning on exoplanets and brown dwarfs: modelling lightning energies and radio powers (St Andrews)
- 14:30-14:45 P. Rimmer: Prebiotic Chemistry on Other Worlds (Cambridge)
- 14:45-15:00 Wrap-up by old and new UKEXOM hosts
- 15:00 Farewell coffee*