Monday August 27, 2012

10:30 – 10:45  Opening Remarks  
Nader Haghighipour

Current State of (Habitable) Planet Detection I (Chair: Magali Deleuil)

10:45 – 11:15  Detecting Habitable Planets and Activities in East Asia (Invited)  
Bunei Sato (Tokyo Institute of Technology)

11:15 – 11:45  Patterns of Planet Occurrence from Doppler and Kepler (Invited)  
Andrew Howard (Institute for Astronomy, University of Hawaii)

11:45 – 12:00  Bayesian Statistics and Habitable Extrasolar Planets  
Turner Edwin (Princeton University)

12:00 – 12:15  The Dependence of the Frequency of Planets on the Mass of the Host Stars  
Eike Guenther (Thueringer State Observatory)

Isabelle Boisse (Center for Astrophysics, University of Porto)

12:30 – 14:00  Lunch Break

Current State of (Habitable) Planet Detection II (Chair: Alan Boss)

14:00 – 14:30  The Exoplanet Population at short Orbital Period Explored by CoRoT (Invited)  
Deleuil Magali (CoRoT Team, Laboratoire d'Astrophysique de Marseille)

14:30 – 14:45  New low-mass planets from the Anglo-Australian Planet Search  
Hugh Jones (University of Hertfordshire)

14:45 – 15:15  Current and Future of Microlensing Exoplanet Search (Invited)  
Takahir Sumi (Osaka University)

15:15 – 15:30  Microlensing constraints on the abundance of extrasolar planets  
Arnaud Cassan (Institut d'Astrophysique de Paris)

15:30 – 16:00  Break
### Detecting Signatures of Earth-Like Planets (Chair: Alan Boss)

<table>
<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>Speaker(s)</th>
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<tr>
<td>16:00 – 16:30</td>
<td>Possible False Positive Signatures of Life in Planetary Atmospheres Around M-dwarfs (Invited)</td>
<td>Feng Tian (CESS/Tsinghua University)</td>
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<td>16:30 – 16:45</td>
<td>Signatures of Earth-like Planets in the Chemical Composition of Solar-Type Stars</td>
<td>Jorge Melendez (Universidade de Sao Paulo Brazil)</td>
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<td>16:45 – 17:00</td>
<td>2012 MOST Photometry of the 55 Cancri System</td>
<td>Diana Dragomir (University of British Columbia)</td>
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<td>17:00 – 17:15</td>
<td>A Campaign for the Detection of Earth-Mass Planets in the Habitable Zone of Alpha Centauri</td>
<td>Rob Wittenmyer (University of New South Wales)</td>
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<td>17:15 – 17:30</td>
<td>Exoplanets Surveys at Universidad de Chile</td>
<td>Patricio Rojo (Universidad de Chile)</td>
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<tr>
<td>17:30 – 17:45</td>
<td>The PLATO Mission</td>
<td>Giampaolo Piotto (Universita' di Padova)</td>
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<tr>
<td>17:45 – 18:00</td>
<td>Exploring the cosmic context of Earth</td>
<td>Martin Dominik (University of St Andrews)</td>
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Tuesday August 28, 2012

8:30 – 10:00  The Kepler Mission: NASA's ExoEarth Census (Plenary Invited)
Natalie Batalha (Kepler Team, NASA Ames)

10:00 – 10:30  Break

Kepler Mission and Other Techniques (Chair: Andrew Howard)

10:30 – 10:45  Eta-Sub-Earth: New Projection from Kepler Data
Wesley Traub (JPL)

10:45 – 11:00  The Kepler Completeness Study: Implications for Rocky Planets
Jessie Christiansen (SETI, NASA Ames)

11:00 – 11:15  Auto-Vetting Transiting Planet Candidates Identified by the Kepler Science Pipeline
Jon Jenkins (SETI, NASA Ames)

11:15 – 11:30  Evidence for Solid Planets from Kepler's Near-Resonance Systems
Man Hoi Lee (The University of Hong Kong)

11:30 – 11:45  On the Asymmetrical Distribution of Kepler's Near-Resonance Planets
Ji-Wei Xie (University of Toronto)

11:45 – 12:00  Kepler's Rocky Planets Orbiting M Dwarfs
John Johnson (Caltech)

12:00 – 12:15  Detection and Characterization of Transiting Systems with Smaller Exoplanets
Teruyuki Hirano (Universit of Tokyo)

12:15 – 12:30  Microarcsecond Relative Astrometry from the Ground Using a Diffractive Mask and Multi-Conjugate Adaptive Optics
Mark Ammons (Lawrence Livermore National Laboratory)

12:30 – 14:00  Lunch Break

Terrestrial Planets in Solar System and Earth’s Water
(Chair: Rudolf Dvorak)

14:00 – 14:30  The Basic Dynamical Model of Terrestrial Planet Formation (Invited)
Eiichiro Kokubo (National Astronomical Observatory of Japan)

14:30 – 15:00  Shaping of the Inner Solar System by the Gas-Driven Migration of Jupiter (Invited)
Kevin Walsh (Southwest Research Institute)
15:00 – 15:15  
**Main-Belt Comets as Tracers of Ice in the Inner Solar System**  
*Henry Hsieh (IfA, Hawaii)*

15:15 – 15:30  
**Frozen Volatiles in Comets and on the Moon**  
*Rita Schulz (ESA)*

15:30 – 16:00  
**Break**

**Terrestrial Planets and Water Delivery in Extrasolar Planets**  
(Chair: *Rudolf Dvorak*)

16:00 – 16:30  
**The Elemental Compositions of Extrasolar Planetesimals (Invited)**  
*Michael Jura (UCLA)*

16:30 – 16:45  
**Possible Signs of Water in an Extrasolar Asteroid**  
*Jay Farihi (University of Cambridge)*

16:45 – 17:00  
**Migration & Extrasolar Terrestrial Planets: Watering the Planets**  
*Jade Carter-Bond (University of New South Wales)*

17:00 – 17:15  
**Observations of Terrestrial Planet Formation**  
*Carl Melis (University of California, San Diego)*

17:15 – 17:30  
**Terrestrial Planet Formation in a Triple Stellar System**  
*Othon Winter (UNESP, Brazil)*
Wednesday August 29, 2012

Planets in and around Binary Stars, Trojan Planets, Exomoons
(Chair: Natalie Batalha)

10:30 – 10:45 Recent Kepler Results on Circumbinary Planets
William Welsh (San Diego State University)

10:45 – 11:00 Prospects of the Detection of Additional Circumbinary Extrasolar Planets
Tobias Hinse (Korea Astronomy and Space Science Institute)

11:00 – 11:15 On the Habitability of Terrestrial Planets in Binary Star Systems
Elke Pilat-Lohinger (Institute of Astrophysics, University of Vienna)

11:15 – 11:30 Habitability of Planet-Hosting Binary Star Systems: Calculating Habitable Zone for Circumprimary and Circumbinary Planets
Nader Haghighipour (Institute for Astronomy, University of Hawaii)

11:30 – 11:45 Mutual Inclinations of Multi-Planet Systems and Circumbinary Planets and the Assembly of Proto-Planetary Disks
Dong Lai (Cornell University)

11:45 – 12:00 Trojans in Exosystems with Two Massive Planets
Rudolf Dvorak (Institute of Astrophysics, University of Vienna)

12:00 – 12:15 Exomoon Habitability Constrained by Illumination and Tidal Heating
René Heller (Leibniz-Institute for Astrophysics)

12:15 – 12:30 Exoplanets Behaving Badly with Their Host Stars: Evidence of Transfer of Planet Orbital Angular Momentum to Their Host Stars - Case Study of the Hot Jupiter System HD 189733 (and other examples)
Edward Guinan (Villanova University)

12:30 – 14:00 Lunch Break

Atmospheric Characterization: Giant Planets (Chair: Elke Pilat-Lohinger)

14:00 – 14:30 Atmospheric Characterization of Extrasolar Planets (Invited)
Jean-Michel Desert (Harvard)

14:30 – 14:45 Atmospheric Dynamics of Short Period Planets
Ian Dobbs-Dixon (University of Washington)
14:45 – 15:00  Near-infrared Thermal Emission of Hot Jupiters  
Bryce Croll (MIT)

15:00 – 15:15  Characterizing Hot Jupiter Atmospheres: New Results from Hubble WFC3  
Sukrit Ranjan (Harvard)

15:15 – 15:30  WASP-12b and 4b: Closing in on the Compositions of Highly-Irradiated Exoplanet Atmospheres  
Morgan Hollis (University College London)

15:30 – 16:00  Break

Atmospheric Characterization: Terrestrial Planets (Chair: Othon Winter)

16:00 – 16:30  Climate Regimes of Tidal-Locking Aqua-Exoplanets (Invited)  
Yongyun Hu (Peking University)

16:30 – 16:45  Temporal Variations in the Evaporating Atmosphere of the Exoplanet HD 189733b  
Alain Lecavelier des Etangs (IAP-CNRS)

16:45 – 17:00  Diversity of Planetary Atmospheric Circulations and Climates in a Simplified General Circulation Model  
Yixiong Wang (University of Oxford)

17:00 – 17:15  Photochemistry of Terrestrial Exoplanet Atmospheres and Applications in Searching for Biosignature Gases  
Renyu Hu (MIT)

17:15 – 17:30  Terrestrial Planet Atmospheric Characterization with HST: From Venus to 55 Cancri e  
David Ehrenreich (IPAG)

17:30 – 17:45  On the Climatic Impact of CO2 Ice Particles in Atmospheres of Terrestrial Exoplanets  
Daniel Kitzmann (Berlin Institute of Technology)

17:45 – 18:00  Capabilities of the James Webb Space Telescope for Exoplanet Imaging  
Mark Clampin (NASA Goddard Space Flight Center)
Thursday August 30, 2012

Habitability of Planets Around Low-Mass Stars (Chair: Wes Traub)

10:30 – 11:00  The HARPS Search for Low-Mass, Habitable, Transiting Planets Around M dwarfs (Invited)
                 Thierry Forveille (Observatoire de Grenoble)

11:00 – 11:15  Carmenes: A Radial-Velocity Survey for Terrestrial Planets in the Habitable Zones of M Dwarfs
                 Andreas Quirrenbach (University Of Heidelberg)

11:15 – 11:30  Occurrence Rate of Habitable Planets Around M-dwarfs: Limits from Kepler
                 Courtney Dressing (Harvard)

11:30 – 12:00  Planetary Climate in M-dwarf Systems (Invited)
                 Raymond Pierrehumbert (University of Chicago)

12:00 – 12:15  The UV Radiation Environment of Exoplanets
                 Linsky Jeffrey (JILA/University of Colorado)

12:15 – 12:30  Habitable Worlds Around M Dwarf Stars
                 Alan Boss (DTM, Carnegie Institution)
Friday August 31, 2012

Super-Earths and their Interior Dynamics (Chair: Ji-Lin Zhou)

8:30 – 9:00  Habitable planets: Interior Dynamics and Long-Term Evolution (Invited)
             Paul Tackley (Institute of Geophysics, ETH Zurich)

9:00 – 9:15  Mass-Radius Relationships of Rocky Exoplanets
             Frank Sohl (DLR Berlin)

9:15 – 9:30  Consequences of the Tidal Disruption of Giant Planets: On the Connections
             With the Hot Super-Earths
             Shang-Fei Liu (Department of Astronomy, Peking University)

9:30 – 9:45  The Anelastic Equilibrium Tide in Exoplanetary Systems
             Francoise Remus (Observatoire de Paris)

9:45 – 10:00 Detecting Molecules and Magnetic Fields on Exoplanets
             Svetlana Berdyugina (KIS, Freiburg – UH/NAI, Hawaii)

10:00 – 10:30 Break

Planetesimal Formation and Disk-Planet Interaction (Chair: Svetlana Berdyugina)

10:30 – 10:45  From Dust to Planetesimals in the Habitable Zone
               Hubert Klahr (Max Planck Institute for Astronomy)

10:45 – 11:00  Planetesimal Formation in Zonal Flows Arising in Magneto Rotationally
               Unstable Protoplanetary Disks
               Karsten Dittrich (Max Planck Institute for Astronomy)

11:00 – 11:15  Laminar Accretion in the Habitable Zone of Protoplanetary Disks
               Xuening Bai (Princeton University)

11:15 – 11:30  Type I Planet Migration in Weakly Magnetised Laminar Discs
               Jérôme Guilet (DAMTP, University of Cambridge)

11:30 – 11:45  Accretion and Planet Formation in the dead Zones of Accretion Disks
               Wladimir Lyra (Jet Propulsion Laboratory)

11:45 – 12:00 Modeling Disc-Planet Interactions
               Jorge Cuadra (PUC, Chile)

12:00 – 12:15 Observational Constraints on Disk Evolution and the Initial Steps
               Towards Planet Formation
               Leonardo Testi (ESO)
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<tr>
<td>12:15 – 12:30</td>
<td>Planetesimal Capture by an Evolving Giant Gaseous Protoplanet&lt;br&gt; <em>Morri Podolak</em> (Tel Aviv University)</td>
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<tr>
<td>12:30 – 14:00</td>
<td>Lunch Break</td>
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<tr>
<td><strong>Surveys and Detection Programs I</strong> (Chair: <em>Nader Haghighipour</em>)</td>
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<tr>
<td>14:00 – 14:15</td>
<td>The Impact of Herschel on the Debris Disc-Exoplanet Connection&lt;br&gt; <em>Jonathan Marshall</em> (Universidad Autonoma de Madrid)</td>
</tr>
<tr>
<td>14:15 – 14:30</td>
<td>The WFCAM Transit Survey: Search For Planets Around Cool Stars&lt;br&gt; <em>Sipőcz Brigitta</em> (University of Hertfordshire)</td>
</tr>
<tr>
<td>14:30 – 14:45</td>
<td>Astrometric Detection of Earth-like Planets with Moderate Space Telescope&lt;br&gt; <em>Michael Shao</em> (JPL)</td>
</tr>
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<td>14:45 – 15:00</td>
<td>Exoplanets Search and Characterization with the SOPHIE Spectrograph at OHP&lt;br&gt; <em>Guillaume Hébrard</em> (IAP/OHP)</td>
</tr>
<tr>
<td>15:00 – 15:15</td>
<td>Homogeneous Studies of Transiting Extrasolar Planets: Current Status&lt;br&gt; <em>John Southworth</em> (Keele University)</td>
</tr>
<tr>
<td>15:15 – 15:30</td>
<td><strong>TFRM-PSES</strong>: Filling a Niche in Transit Surveys of Super-Earths Around M Dwarfs&lt;br&gt; <em>Octavi Fors</em> (Universitat de Barcelona)</td>
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<tr>
<td>15:30 – 16:00</td>
<td>Break</td>
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**Surveys and Detection Programs II** (Chair: *Nader Haghighipour*)

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<tr>
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<td>The Arecibo Search for Radio Flares From Ultracool Dwarfs&lt;br&gt; <em>Alexander Wolszczan</em> (Penn State University)</td>
</tr>
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<td>16:15 – 16:30</td>
<td><strong>SPICES</strong>: A Mission Concept to Characterize Long-Period Planets From Giants to Super-Earths&lt;br&gt; <em>Anthony Boccaletti</em> (Paris Observatory)</td>
</tr>
<tr>
<td>16:30 – 16:45</td>
<td>Exoplanet Occultation Spectrophotometry with SOFIA&lt;br&gt; <em>Daniel Angerhausen</em> (Hamburg Observatory)</td>
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<tr>
<td>16:45 – 17:00</td>
<td>Characterising Super Earths with the ECHO Space Mission Concept&lt;br&gt; <em>Marcell Tessenyi</em> (University College London)</td>
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</table>
17:00 – 17:15  Do Have Nanosatellites a Role in Detecting Exoplanets?  
*Werner Weiss (University of Vienna)*

17:15 – 17:30  The Planetary Astrobiological eXplorer (PAX) Project  
*Alain Leger (PAXTeam, IAS)*

17:30 – 17:45  Electric Field Break-Down in Mineral Clouds on Giant Gas Planets  
*Christiane Helling (University of St Andrews)*

17:45 – 18:00  Concluding Remarks  
*Nader Haghighipour*