

PROGRAM

Sunday, 28th June

17h30 – 20h00 *Registrations and welcome drink (entrance hall), posters installation.*

Monday, 29th June

8h30 – 9h05 *Registrations (entrance hall) and posters installation.*

9h05 – 9h10 Welcome address by **Francis BERNARDEAU**, IAP Head.

9h10 – 9h20 Meeting presentation and practicalities by **Jean-Pierre MAILLARD**, LOC Chair.

Session I: Solar System and exoplanets.

Morning Chair: Jack LISSAUER.

9h20 – 10h00 **Jérémy LECONTE** (Canadian Institute for Theoretical Astrophysics):

Who's who: does living in the Solar System mislead us? (Invited review)

10h00 – 10h15 **Radoslaw POLESKI** (The Ohio State University Department of Astronomy):

Exoplanets sharing origin with Uranus.

10h15 – 10h30 **Stéphane MAZEVET** (LUTH, Observatoire de Paris):

Planetary structure revisited using ab-initio equations of states.

10h30 – 11h05 *Coffee break (entrance hall) and posters display.*

11h05 – 11h20 **Pierre AUCLAIR-DESROTOUR** (IMCCE, Observatoire de Paris):

Towards a new model of atmospheric tides: from Venus to super-Earths.

11h20 – 11h35 **Frédéric MASSET** (Instituto de Ciencias Físicas, UNAM, Mexico):

Planet heating as a safety net against inward migration of planetary cores.

Session II: From rocky planets to mini-Neptune planets.

11h35 – 12h15 **Natalie BATALHA** (NASA Ames Research Center):

Mapping exoplanet discoveries into exoplanet populations (Invited review).

12h15 – 12h30 **Eric GAIDOS** (University of Hawaii at Manoa):

Do smaller stars really host smaller planets?

12h30 – 14h00 *Lunch break.*

Afternoon Chair: Didier QUELOZ.

14h00 – 14h40 **David CHARBONNEAU** (Harvard Center for Astrophysics):

The compositions of small planets (Invited review).

14h40 – 14h55 **Eric LOPEZ** (Institute for Astronomy, University of Edinburgh):

Using photo-evaporation to understand super-Earths and sub-Neptunes.

14h55 – 15h10 **Geoff MARCY** (University of California at Berkeley):

Masses and densities of planets 1-4x the size of Earth.

15h10 – 15h25 Posters quick presentations 1/3 (Chair: **Sébastien FROMANG**).

15h25 – 16h10 *Coffee break (downstair) and posters display.*

- 16h10 – 16h50 **James KASTING** (Penn State University):
Theoretical perspectives on rocky planets (Invited review).
- 16h50 – 17h05 **Illeana GOMEZ-LEAL** (Cornell University):
Modeling the emission of terrestrial planets with general circulation models.
- 17h05 – 17h20 **Jack LISSAUER** (NASA Ames Research Center):
Composition, structure and formation of low-density planets within 0.5 AU of their star.
- 17h20 – 17h35 **George RICKER** (Massachusetts Institute of Technology):
Discovering Earths and super-Earths in the Solar neighborhood with TESS.
- 17h35 – 17h50 **Heike RAUER** (Institute of Planetary Research, DLR - Berlin):
The PLATO 2.0 mission.
- 17h50 – 18h15 Posters display.
- 18h30 – 21h00 Welcome reception (Observatoire de Paris, Cassini Room).

Tuesday, 30th June

Morning Chair: **Geoffrey MARCY**.

- 9h00 – 9h40 **Masahiro IKOMA** (The University of Tokyo):
Theoretical perspectives on super-Earths and mini-Neptunes (Invited review).
- 9h40 – 9h55 **Jean-François DONATI** (IRAP, Université de Toulouse):
SPIRou : a nIR spectropolarimeter & high-precision velocimeter for the CFHT.
- 9h55 – 10h10 **David EHRENREICH** (Université de Genève):
The CHEOPS mission.
- 10h10 – 10h25 **Andrea CHIAVASSA** (Laboratoire Lagrange, Observatoire de la Côte d'Azur):
New view on exoplanet transits: describing the granulation pattern with three-dimensional hydrodynamical simulations of stellar convection.
- 10h25 – 10h40 Posters quick presentations 2/3 (Chair: **Sébastien FROMANG**).
- 10h40 – 11h25 Coffee break (downstair) and posters display.

Session III: From mini-Neptune to giant planets.

- 11h25 – 12h05 **Magali DELEUIL** (Laboratoire d'Astrophysique de Marseille):
Twenty years of exploration of the giant planets population (Invited review).
- 12h05 – 12h20 **Jean-Baptiste DELISLE** (Observatoire de Genève):
Dissipation in planar resonant systems: implications of observed orbital configurations.
- 12h20 – 12h35 **Veselin KOSTOV** (University of Toronto):
Planets with two suns.
- 12h35 – 14h00 Lunch break.

Afternoon Chair: **Jean-Philippe BEAULIEU**.

- 14h00 – 14h15 **Bastien COURCOL** (Laboratoire d'Astrophysique de Marseille):
The high precision search for northern Neptunes and super-Earths with SOPHIE.
- 14h15 – 14h30 **Simon BORGNIET** (IPAG - Institut de Planétologie et d'Astrophysique de Grenoble):
The close (0.02 to 2.5 AU) giant planet population around main-sequence A-F stars.
- 14h30 – 14h45 **Lauren WEISS** (University of California at Berkeley):
Constraining the Kepler-11 planet masses with radial velocities.
- 14h45 – 15h00 **Aldo Stefano BONOMO** (INAF - Osservatorio Astrofisico di Torino):
Structure and evolution of transiting giant planets: a Bayesian homogeneous determination of orbital and physical parameters.
- 15h00 – 15h15 **Ignas SNELLEN** (Leiden Observatory):
First results from the Multi-site All Sky CAmeRA, MASCARA.
- 15h15 – 15h30 Posters quick presentations 3/3 (Chair: **Sébastien FROMANG**).

- 15h30 – 16h15 *Coffee break (downstair) and posters display.*
- 16h15 – 16h30 **Philipp EIGMUELLER** (Institute of Planetary Research, DLR - Berlin):
Next Generation Transit Survey (NGTS).
- 16h30 – 16h45 **Gwenaël BOUÉ** (IMCCE, Observatoire de Paris):
On the origin of stellar spin-orbit angle in extrasolar systems.
- 16h45 – 17h00 **Isabelle BOISSE** (Laboratoire d'Astrophysique de Marseille):
First radial velocity observation of a binary system detected by microlensing.
- 17h00 – 17h15 **Akihiko FUKUI** (National Astronomical Observatory of Japan):
Characterization of microlensing planetary systems by AO imaging.
- 17h15 – 17h30 **Beata DEKA-SZYMANKIEWICZ** (Torun Centre for Astronomy, N. Copernicus Univ.):
Metallicity distribution for planet-hosting stars from Penn State - Torun Centre Planet Search (PTPS).
- 19h00 – 20h30 *Public conference by Didier Queloz (Amphithéâtre Farabeuf, rue École Médecine).*

Wednesday, 1st July

Morning Chair: Isabelle BARAFFE.

- 9h00 – 9h15 **David BENNETT** (University of Notre Dame):
Frequency of exoplanets beyond the snow line from 6 years of the MOA survey.
- 9h15 – 9h30 **Michel MAYOR** (Observatoire de Genève):
From Super-Earths to Giant Planets.
- 9h30 – 9h45 **Hiroyuki KUROKAWA** (Tokyo Institute of Technology):
Reevaluation of the possibility and impact of layered convection: application to the radius anomaly of hot Jupiters.
- 9h45 – 10h00 **Sivan GINZBURG** (Racah Institute of Physics, The Hebrew University, Jerusalem):
Hot-Jupiter inflation due to deep energy deposition.
- 10h00 – 10h15 **Mutlu YILDIZ** (Ege University, Izmir):
On the structure and evolution of planets and their host stars - effects of various heating mechanisms on the size of giant gas planets.
- 10h15 – 10h30 **Marion NEVEU-VANMALLE** (Geneva University/Cambridge University):
Two hot Jupiters from WASP with siblings.
- 10h30 – 11h10 *Coffee break (entrance hall) and posters display.*

Session IV: From giant planets to brown dwarfs.

- 11h10 – 11h50 **Adam SHOWMAN** (Lunar and Planetary Lab, U. of Arizona):
Theoretical perspectives on giant planets (Invited review).
- 11h50 – 12h05 **Allona VAZAN** (Tel Aviv University):
Convection and mixing in giant planet evolution.
- 12h05 – 12h20 **François SOUBIRAN** (University of California at Berkeley):
Hydrogen-water mixtures in giant planet interiors studied with ab-initio simulations.
- 12h20 – 12h35 **Alain LECAVELIER DES ÉTANGS** (Institut d'Astrophysique de Paris):
Beta Pic b, physical properties and possibility of transits.
- 12h35 – 12h45 *Group picture outside (weather permitted).
Free afternoon.*
- 19h00 – 23h00 *Conference dinner (Westin Paris-Vendôme Hotel, 3 rue de Castiglione).*

Thursday, 2nd July

Morning Chair: **Michel MAYOR**.

- 9h00 – 9h15 **Amaury TRIAUD** (University of Toronto):
A hike across the desert.
- 9h15 – 9h30 **Clément RANC** (Institut d'Astrophysique de Paris):
Brown dwarfs detections through gravitational microlensing.
- 9h30 – 9h45 **Johannes SAHLMANN** (European Space Astronomy Centre, ESA - Madrid):
Exploring the giant planet - brown dwarf connection with astrometry.
- 9h45 – 10h00 **Javiera REY** (Observatoire de Genève):
Radial velocity search for long-period exoplanets and brown dwarfs.
- 10h00 – 10h15 **Henri BOFFIN** (European Southern Observatory):
Possible astrometric discovery of a substellar companion to the closest binary brown dwarf system WISE J104915.57-531906.1.
- 10h15 – 10h30 **Szilárd CSIZMADIA** (Institut für Planetary Research, DLR - Berlin):
A new transiting BD from the CoRoT sample and the frequency of close-in brown dwarfs.

10h30 – 11h05 *Coffee break (downstair) and posters display.*

- 11h05 – 11h45 **Gilles CHABRIER** (CRAL, ENS-Lyon):
Giant planets and brown dwarfs: who's who? (Invited review)
- 11h45 – 12h00 **Jean SCHNEIDER** (LUTH, Observatoire de Paris):
Difficulties with a planet and brown dwarfs who's who.
- 12h00 – 12h15 **Nicolas LODIEU** (Instituto de Astrofísica de Canarias, Tenerife):
BDs and super-Jupiters in the nearest OB association to the Sun: Upper Scorpius.
- 12h15 – 12h30 **Marta BRYAN** (California Institute of Technology):
Searching for scatterers: high contrast imaging of young stars with wide-separation planetary mass companions.

12h30 – 14h00 *Lunch break.*

Afternoon Chair: **Heike RAUER**.

- 14h00 – 14h40 **Kevin LUHMAN** (Penn State University):
Observations of brown dwarfs (Invited review).
- 14h40 – 14h55 **Aleks SCHOLZ** (University of St. Andrews):
Brown dwarfs and planemos in nearby star forming regions.
- 14h55 – 15h10 **Catarina ALVES DE OLIVEIRA** (European Space Agency):
Observing free-floating brown dwarfs and transiting exoplanets with JWST/NIRSpec.
- 15h10 – 15h25 **Andrzej NIEDZIELSKI** (Torun Centre for Astronomy, N. Copernicus Univ.):
Red giants with brown dwarfs companions.
- 15h25 – 15h40 **Gabriel-Dominique MARLEAU** (Max-Planck-Institut für Astronomie):
Luminosities of young directly-detectable exoplanets.

15h40 – 16h15 *Coffee break (entrance hall) and posters display.*

- 16h15 – 16h30 **Cilia DAMIANI** (Institut d'Astrophysique Spatiale):
Can brown dwarfs survive on close orbits around convective stars?
- 16h30 – 16h45 **Karla PEÑA RAMÍREZ** (Pontificia Universidad Católica de Chile):
Current status of the Sigma Orionis substellar mass function.
- 16h45 – 17h00 **Aina PALAU** (Centro de Radioastronomía y Astrofísica):
Searching for bona-fide proto-brown dwarfs.
- 17h00 – 17h15 **Elena MANJAVACAS** (Max Planck Institut für Astronomie - Heidelberg):
Hunting for binaries with X-Shooter spectra.
- 17h15 – 17h30 **Sylvestre LACOUR** (LESIA, Observatoire de Paris):
Pupil masking, a tool to understand planetary formation.
- 17h30 – 17h45 **Eduardo MARTÍN** (Centro de Astrobiología - Madrid):
Euclid Legacy Science on Brown Dwarfs.

Friday, 3rd July

Session V: The planetary atmospheres diversity.

Morning Chair: Ignas SNELLEN.

- 9h00 – 9h40 **David SING** (University of Exeter):
Observations of exoplanet atmospheres from super Earths to hot Jupiters (Invited review).
- 9h40 – 9h55 **Vincent BOURRIER** (Observatoire de Genève):
Evaporating atmospheres: from hot Jupiters to super Earths.
- 9h55 – 10h10 **Björn BENNEKE** (California Institute of Technology):
Four hot Jupiters with robustly oxygen-rich compositions ($C/O < 0.9$).
- 10h10 – 10h25 **Zachory BERTA-THOMPSON** (Massachusetts Institute of Technology):
Thick high-altitude clouds on an extremely inflated hot Jupiter.
- 10h25 – 11h00 *Coffee break (entrance hall) and posters display.*
- 11h00 – 11h15 **Matteo BROGI** (University of Colorado at Boulder):
Exoplanet atmospheres at high spectral resolution.
- 11h15 – 11h30 **Catherine HUITSON** (University of Colorado at Boulder):
First results from a four-year survey of exoplanet atmospheres using Gemini/GMOS.
- 11h30 – 11h45 **Taisiya KOPYTOVA** (Max Planck Institut für Astronomie - Heidelberg):
C/O or not C/O? Chemical fingerprinting of the birthplaces of exoplanet and brown dwarf companions.
- 11h45 – 12h00 **Nikolay NIKOLOV** (University of Exeter):
HST Transmission Spectral Survey: observations, data analysis and results.
- 12h00 – 12h15 **Antonio GARCÍA MUÑOZ** (ESTEC, European Space Agency - Noordwijk):
Investigating close-in exoplanet atmospheres with optical phase curves.
- 12h15 – 12h30 **Jean-Philippe BEAULIEU** (Institut d'Astrophysique de Paris):
The ARIEL space mission.
- 12h30 – 14h00 *Lunch break.*

Afternoon Chair: Eduardo MARTIN.

- 14h00 – 14h15 **Thaddeus KOMACEK** (Lunar and Planetary Laboratory, University of Arizona):
Transitions in efficiency of heat redistribution in hot-Jupiter atmospheres.
- 14h15 – 14h30 **Hannah WAKEFORD** (University of Exeter):
Transmission spectral properties of cloud condensates.
- 14h30 – 14h45 **Derek HOMEIER** (CRAL/ENS-Lyon - ZAH/Landessternwarte Heidelberg):
Condensation processes in substellar atmospheres.
- 14h45 – 15h00 **Tiffany KATARIA** (University of Exeter):
Characterizing exoplanet atmospheres using atmospheric circulation models.
- 15h00 – 15h15 **Pascal TREMBLIN** (University of Exeter):
Vertical mixing and fingering convection in cool brown dwarf atmospheres.
- 15h15 – 15h30 **Vivien PARMENTIER** (University of California, Santa Cruz):
Cloudy and cloudless hot Jupiters.
- 15h30 – 16h30 **Concluding session** (Chair: **Jean-Pierre MAILLARD**).
- 16h30 – 18h00 *Farewell wine and cheese party (forum on 2nd floor).
Posters removing.*

List of posters:

1. **Michalina ADAMCZYK** (Torun Centre for Astronomy):
Brown dwarf search in Penn State-Torun centre for astronomy planet search - the JOTA project.
2. **Yann ALIBERT** (Physikalisches Institut - Univ Bern):
On the non-habitability of water rich planets.
3. **Nicole ALLARD** (GEPI, Observatoire de Paris):
New line profiles of potassium perturbed by molecular hydrogen for very cool brown dwarfs.
4. **Henri BOFFIN** (European Southern Observatory):
Regaining the FORS: optical ground-based transmission spectroscopy of the exoplanet WASP-19b with VLT+FOR2.
5. **Henri BOFFIN** (European Southern Observatory):
The closest known flyby of a star to the Solar System.
6. **Henri BOFFIN** (European Southern Observatory):
Temperature constraints on the coldest brown dwarf known.
7. **Isabelle BOISSE** (Laboratoire d'Astrophysique de Marseille):
Obliquities measured with SOPHIE.
8. **Giovanni BRUNO** (Laboratoire d'Astrophysique de Marseille):
Disentangling planetary and starspots features.
9. **Ilaria CARLEO** (INAF-Astronomical Observatory of Padua):
Searching for extrasolar planets around cool stars with GIANO.
10. **Priyanka CHATURVEDI** (Physical Research Laboratory):
Study of low mass stars in eclipsing binary systems by radial velocity with PARAS.
11. **Lester DAVID** (LESIA, Observatoire de Paris):
Beta Pictoris transit with PICSAT.
12. **Jadzia DONATOWICZ** (Technical University of Vienna):
'alOha' - A dynamically organized PLANET data plotting environment.
13. **Néstor ESPINOZA** (Instituto de Astrofísica, Pontificia Universidad Católica de Chile):
The impact of our limb-darkening assumptions on the retrieval of transit parameters.
14. **Taran ESPLIN** (Penn State University):
Searching for brown dwarfs in Chamaeleon I.
15. **Octavio Miguel GUILERA** (Instituto de Astrofísica - Universidad Nacional de La Plata):
Giant planet formation via pebble accretion.
16. **Guillaume HÉBRARD** (Institut d'Astrophysique de Paris):
Detecting the spin-orbit misalignment of the super-Earth 55 Cnc e.
17. **Guillaume HÉBRARD** (Institut d'Astrophysique de Paris):
HARPS-N and SOPHIE joint follow-up of Kepler planetary candidates.
18. **Nicolas IRO** (University of Hamburg):
VIPER: toward a universal model for planetary climate.
19. **Yui KAWASHIMA** (The University of Tokyo):
Transmission spectrum models of exoplanet atmospheres with haze: Effects of growth and settling of haze particles.
20. **Flavien KIEFER** (Université de Tel-Aviv):
Revisiting APOGEE's database with TODCOR: search for contact binaries and compact objects.
21. **Jacques LASKAR** (IMCCE):
Toward a rigorous framework for radial velocities computations.
22. **Man Cheung Alex LI** (The University of Auckland):
Unusual light curves with short-period brightness variations in the MOA database.
23. **Jorge LILLO-BOX** (Astrobiology Center, INTA-CSIC):
Close-in brown dwarfs and massive planets.
24. **Kento MASUDA** (University of Tokyo):
Mass, radius, and orbital architecture of hot Neptunes from radial velocities and transit variations.
25. **Federico MOGAVERO** (Institut d'Astrophysique de Paris):
Mass measurement through gravitational microlensing: non-inertial observers. Application to exoplanets and brown dwarfs (CANCELED).
26. **Paul MOLLIÈRE** (Max Planck Institute for Astronomy):
The C/O ratio's impact on hot and less hot Jupiter's spectra - A hint on the formation mode?

27. **Mauricio ORTIZ** (Landessternwarte Heidelberg):
Close-in planets around evolved stars: the peculiar case of Kepler-432b.
28. **Stefanie RAETZ** (ESTEC, European Space Agency - Noordwijk):
Investigating stellar activity by observations of planetary transits.
29. **Sophia SULIS** (Laboratoire Lagrange, OCA):
How reliable is an extrasolar planet detection claim when stellar noise is unknown ? An efficient approach with statistical control of the detection significance.
30. **Yuki TANAKA** (Nagoya University):
Atmospheric escape by magnetically driven wind from gaseous planets and atmospheric structures.
31. **Julia VENTURINI** (University of Bern):
Water condensation during formation: the impact on the critical core mass.
32. **Paul WILSON** (Institut d'astrophysique de Paris):
The SOPHIE search for northern extrasolar planets: Exploring the planet-brown dwarf boundary.
33. **Atsunori YONEHARA** (Kyoto Sangyo University):
Follow-up observation of microlensing at Kohyama Astronomical Observatory.
34. **Olga ZAKHOZHAY** (Main Astronomical Observatory, National Academy of Sciences of Ukraine):
New approach to identify planetary or brown dwarf companion in a circumstellar disk based on spectral energy distribution profile of the system.
35. **Olga ZAKHOZHAY** (Main Astronomical Observatory, National Academy of Sciences of Ukraine):
SED simulation results of a possible ring around the young brown dwarf G196-3B.
36. **Zenghua ZHANG** (Instituto de Astrofísica de Canarias):
Identification of the nature of metal-poor low-mass subdwarfs.
37. **Nikolay NIKOLOV** (Astrophysics Group, University of Exeter):
Radial velocity eclipse ,apping of exoplanets.

