

Special Session 6
August 10-11, 2009

Planetary Systems as Potential Sites for Life

organized by

Commission 16 / Commission 51 / Commission 53
Physical Study of Planets & Satellites / Bio-Astronomy / Extrasolar Planets

during the

IAU XXVIIth General Assembly
August 3-14, 2009
Rio de Janeiro (Brazil)

Scientific Organizing Committee

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Scientific Programme

Oral Contributions

Monday 10 August

11:00 Opening Remarks

Alan P. Boss, Régis Courtin & Michel Mayor

I. Sites for Life in the Solar System

11:10 Energy for life in deep-subsurface environments on Earth and Mars (I)

Lisa M. Pratt

11:30 Europa, Enceladus, and Titan as possible sites for life (I)

Régis Courtin

11:50 Comets and the origin and evolution of life (I)

Antonio Lazcano

12:10 The great oxidation of Earth's atmosphere (O)

Zdzislaw E. Musielak *et al*

12:20 The current-climate water cycle at the Mars Phoenix landing site (O)

Mark T. Lemmon & Phoenix Science Team

12:30 Lunch Break

II. Laboratory and Space Experiments

14:00 Gas-phase prebiotic chemistry in extraterrestrial environments (I)

Nadia Balucani

14:20 S.E.T.U.P. related studies on N₂ dissociation by cold plasma
and on CH₄ photodissociation at 121.6 and 248 nm (I)

Marie-Claire Gazeau *et al*

14:40 Astrochemistry on the EXPOSE/ISS and BIOPAN/Foton experiments (I)

Hervé Cottin *et al*

15:00 The Organism/ORganics Exposure to Orbital Stresses nanosatellite (I)

Pascale Ehrenfreund *et al*

15:20 Surviving on Mars: test with LISA simulator (O)

Giuseppe Galletta *et al*

15:30 Coffee Break / Poster Viewing

III. The Search for Low-Mass Extrasolar Planets

16:00 The search for very low-mass planets (I)

Michel Mayor

16:20 CoRoT explores the close-in planet population towards the low-mass domain (I)

Magali Deleuil *et al*

16:40 The search for icy and habitable Earths via gravitational microlensing (I)

David P. Bennett

17:00 Observations and modelling of transiting exoplanets (I)

Giovanna Tinetti

17:20 Search for Earths around Alpha Centauri (O)

Debra A. Fischer

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IV. Habitability of Extrasolar Planets

11:00 Modelling extrasolar planetary atmospheres (I)

France Allard

11:20 Remote detection of planetary habitability and life (I)

Victoria S. Meadows

11:40 Defining the envelope for the search for life in the Universe (I)

Lynn J. Rothschild

12:00 Earthshine observations and the detection of vegetation on extrasolar planets (I)

Danielle Briot

12:20 Detecting signs of life: observing requirements (O)

Wesley A. Traub

12:30 Lunch Break

V. Missions and Surveys under Development

14:00 Mars Science Laboratory and future Mars missions (I)

Michel Cabane & SAM Team

14:20 Characteristics of the Kepler target stars (I)

Natalie M. Batalha *et al*

14:40 SIM-Lite astrometric observatory for detection of Earth-like planets (I)

Xiaopei Pan *et al*

15:00 The Gaia Astrometric Survey (I)

Alessandro Sozzetti

15:20 The SEE-COAST concept (I)

Anthony Boccaletti *et al*

15:30 Coffee Break / Poster Viewing

VI. Remembering Pioneers in Bioastronomy

16:00 Gavriil Adrianovich Tikhov (1875-1960), a pioneer in astrobiology (I)

Victor G. Tejfel

16:15 Leslie Orgel (1920-2007) and the RNA world (I)

Pascale Ehrenfreund

16:30 Jean Heidmann (1923-2000) and SETI (I)

Régis Courtin

16:45 George Wetherill (1925-2006), geochemist, planetary scientist, and astrobiologist (I)

Alan P. Boss

17:00 Stanley Miller (1930-2007) and the origins of life (I)

Antonio Lazcano

17:15 Concluding Remarks

Alan P. Boss, Régis Courtin & Michel Mayor

Poster Contributions

(by alphabetical order)

Title	First Author
UV habitability and dM stars: an approach for evaluation of biological survival	Abrevaya, X. C.
Laboratory studies on possible formation routes of nitriles and organosulfur compounds in the gas-phase chemistry of planetary	Balucani, N.
Gaia mission overview	Blasco, C.
The Gaia spacecraft and instruments	Blasco, C.
Gaia's scientific rewards	Blasco, C.
Technical limitations in the search and characterization of exoplanets with high-precision radial-velocimetry	Boissé, I.
High cadence NIR observations of extrasolar planets	Caceres, C.
Study of optical fibers scrambling to improve radial velocity measurements	Chazelas, B.
The search for water on HD209458b	Contreras Morales, Y.
A high resolution spectroscopic method of direct detection of extrasolar planets	Cubillos, P.
Orbital stability of terrestrial planets in stellar habitable zones: analytical and numerical results	Cuntz, M.
Selection of most promising candidates in the CoRoT mission for radial-velocity follow-up	Da Silva, R.
Hunting for super-Earths with the MOST satellite	Dragomir, D.
Analysis of the transit curves for some exo-planets discovered by CoRoT mission	Dumitrescu, A.
Life on extraterrestrial environments: theoretical and laboratory simulations	Galante, D.
Biological relevance of giant flares from soft-gamma repeaters	Galante, D.
Modeling of debris disks in binary systems and single stars	Garcia, L.
Living with a red dwarf star: radiation and plasma environments of hosted planets and impacts on life	Guinan, E.
Exoplanets search and characterization with the SOPHIE spectrograph at OHP	Hébrard, G.
The NASA-UC Eta-Earth survey at Keck Observatory	Howard, A.
Photometric follow-up of 6 transiting planets candidates	Hoyer, S.
The dynamical structure and habitable zones of the quintuple-planet system 55 Cancri	Ji, J.
A southern hemisphere search for planets around giant stars	Jones, M.
Organic molecules and NIR spectra of Jupiter, Saturn, and Titan	Kim, S.-J.
The search for exomoons	Kipping, D.
Detecting planetary signals with bayesian methods	Kotiranta, J.S.
A possible tangential transit of the exoplanet 51 Peg b	Ksanfomality, L.
The InfraRed Dual Imaging and Spectrograph for SPHERE: performance and calibration	Langlois, M.
Alpha Centauri: chemical composition of the nearest extrasolar terrestrial planets	Lineweaver, C.
Obtaining the mass of exoplanet candidates by combining radial velocity and optical interferometry	Martioli, E.
Testing models in the search to determine how habitable planets form	Miguel, Y.
Multiplicity study of exoplanet host stars	Mugrauer, M.
Searching for Earth analogs around nearby stars with HARPS	Pepe, F.
Photoabsorption of hydrocarbons in Titan atmosphere	Pinho Magalhães, F.
Silicate mineralogy of FU Orionis star disks	Sainz, E.
Extraterrestrial palaeoclimatology: glaciations on Mars	Sanchez Saldias, A.
Search for life on exoplanets: toward a coordinated world-wide strategy	Schneider, J.
Photometric characterization of exoplanets with angular and spectral differential high-contrast imaging	Vigan, A.
The discovery of glycolaldehyde in a star forming region	Viti, S.
Interior structure models of Earth-like exoplanets and application to CoRoT-Exo-7b	Wagner, F.
Exoplanet imaging with a 4-meter telescope at the Antarctic: Chinese Exoplanet Explorer (CEE)	Zhu, Y.