

MONDAY, 10. OCTOBER

8:00 – REGISTRATION

9:00 – 9:30 OPENING SESSION

PREBIOTIC CHEMISTRY

Chairperson: A. Brack

9:30 Radiation and prebiotic chemistry on Titan: from laboratory models to Cassini-Huygens observations

F. Raulin, Y. Bénilan, M. Cabane, P. Coll, S. Derenne, M.-C. Gazeau, J.C. Guillemin, E. Hebrard, G. Israel, A. Jolly, H. Niemann, M.-J. Nguyen, C. Romanzin, R. Sternberg, C. Szopa

10:00 Molecules of astrobiological relevance

Z. Peeters, Z. Martins, O. Botta, I.L. ten Kate, J. Garry, S. Charnley, P. Ehrenfreund

10:15 Irradiation by radioactive minerals in impact craters:
1. Preferred sites for carbon concentration and detection of organic molecules

J. Parnell, P. Lindgren

10:30 – 11:00 Coffee break

PREBIOTIC CHEMISTRY

Chairperson: F. Raulin

- 11:00 Intrinsic noise in autocatalytic reaction networks with diffusion
David Hochberg
- 11:15 Cyanobutadiyne (HC≡C-C≡C-C≡N): preparation, characterization,
photochemical synthesis, chemistry
Y. Trolez, J-C. Guillemin
- 11:30 The synthesis of organic compounds in the late stages of stellar evolution
Sun Kwok
- 11:45 RNA viruses as models for early replicons
K. Lehto
- 12:00 Deep UV Raman investigations of meteoritic and microbiological samples
*J. Popp, T. Frosch, P. Rösch, N. Tarcea, M. Hilchenbach, T. Stuffer, S. Hofer
H. Thiele, R. Hochleitner*
- 12:15 Infrared spectra of a species of astrochemical interest: Aminoacrylonitrile
(3-Amino-2-Propenenitrile)
Abdessamad Benidar, Jean-Claude Guillemin, Otilia Mó, Manuel Yáñez.

12:30 – 14:00 *Lunch break*
EANA Executive Council Meeting

INTERPLANETARY TRANSFER OF LIFE AND EXPERIMENTS IN EARTH ORBIT

Chairperson: G. Horneck

- 14:00 Artificial Martian meteorites
A. Brack
- 14:30 The experiment MARSTOX on FOTON M-2
P. Rettberg, E. Rabbow, C. Panitz, U. Pogoda de la Vega, G. Horneck
- 14:45 AMINO, PROCESS and UV-olution: investigation of solid/gas heterogeneous chemistry of organic compounds in space via Foton and the space station
H. Cottin, P. Coll, D. Coscia, C. Szopa, F. Raulin and A. Brack
- 15:00 Chance of nucleic acid molecules to survive the extraterrestrial UV radiation
M. Hegedüs, A. Fekete, K. Módos, G. Kovács, Gy. Rontó, H. Lammer, C. Panitz
- 15:15 Adaptation of the lichen *Rhizocapron geographicum* to harsh altitude conditions: relevance to a habitable Mars
Rosa de la Torre, Leopoldo Garcia-Sancho, Gerda Horneck
- 15:30 From Supernova to consciousness. Evolution of iron-binding compounds.
Part 2 – Human brain
J. Gałazka-Friedman, K. Szlachta, E. Bauminger, D. Kozirowski, A. Friedman

15:45 – 16:15 Coffee break

GENERAL ASPECTS

Chairperson: F. Westall

- 16:15 Space exploration and 'protection of the environment' issues
Iván Almár
- 16:35 Astrobiology at university level: teaching experience from Finland
H. Lehto, K. Lehto
- 16:55 Imaging systems for Exo/Astrobiology planetary missions
J.-L. Josset, S. Beauvivre
- 17:15 SETI-Italia activity and status report 2005
S. Montebugnoli, J. Monari, L. Zoni, S. Righini, C. Cosmovici
- 17:35 Astrobiology in France: A long lasting effort embedded in the international
missions and open for multilateral cooperations
M. Viso, F. Raulin, A. Brack

POSTER SESSION

19:00 Welcome party in Hotel Unio

TUESDAY, 11. OCTOBER

LIFE IN EXTREME RADIATION ENVIRONMENTS

Chairperson: D. Field

9:00 Radiobiological effects at low temperature and their relevance to astrobiology

G. Horneck

9:30 Cosmic ray and UV radiation exposure over the Martian history: astrobiological implications

H. Lammer, H. I. M. Lichtenegger, N. K. Belisheva, Yu. N. Kulikov

10:00 Response of a phototroph to a simulated martian UV flux and implications for cryptoendoliths on early Earth

C.S. Cockell, A.C. Schuerger, D. Billi, I. Friedmann, C. Panitz

10:20 TL dose measurements on board the Russian segment of the ISS by the “Pille” system during Expedition-9 and -10

I. Apáthy, Yu.A. Akatov, V.V. Arkhangelsky, L. Bodnár, S. Deme, I. Fehér, I. Padalka, T. Pázmándi, G. Reitz, S. Sharipov

10:40 – 11:00 Coffee break

LIFE IN EXTREME RADIATION ENVIRONMENTS

Chairperson: P. Rettberg

- 11:00 Mutagenicity tests on bacterial cultures using exceptionally radioactive heavy mineral beach sands – irradiation or chemistry?
A. Harilaos Tsikos, B. Charles S. Cockell, C. John Parnell
- 11:15 Preliminary investigation of the effect of proton and Gamma radiation on antibodies for applications in astrobiology
P.K. Wilson, D.P. Thompson, M.R. Sims, D.C. Cullen
- 11:30 Preliminary investigation of the effect of proton and Gamma radiation on fluorescent dyes for applications in astrobiology
D.P. Thompson, P.K. Wilson, D.C. Cullen, M.R. Sims
- 11:45 Plant seeds as model vehicles for panspermia
D. Tepfer, A. Zalar, S. Hoffmann and S. Leach
- 12:00 Endolithic microorganisms in dolomite rock in the Swiss Alps
R. Bachofen, Th. Horath and Th. R. Neu
- 12:15 Search for past (present?) life on Mars: the SAM experiment selected onboard MSL 2009
P. Coll, M. Cabane, P.R. Mahaffy, The SAM Team...
- 12:30 Testing the stability of life marker chip components during space flight
J. Toporski, A. Steele, M. Sims, D. Cullen, N. Wainwright, J. Maule, M. Fries and H. Rowlands

12:45 – 14:30 *Lunch break*
EANA Executive Council Meeting

EARLY STARS AND STELLAR ENVIRONMENTS

Chairperson: E. Szathmáry

- 14:30 Astronomy and astrobiology: a synthesis
David Field
- 15:00 The UV radiation environment in the solar system
A. Hanslmeier, M. Vazquez, H. Lammer, M. Khodachenko
- 15:15 Setting a scene: before another Earth will be found
E. Szuszkiewicz, J. C. B. Papaloizou,
- 15:30 Interstellar molecular absorptions
J. Krelowski
- 15:55 Delivery of terrestrial life-spores to embryonic planetary systems
M. K. Wallis and N.C. Wickramasinghe

16:10 – 16:30 Coffee break

- 16:30 – 18:00 Poster session
- 18:00 EANA Open Business Meeting (for everybody)

Conference Dinner in the Restaurant MARGITKERT

WEDNESDAY, 12. OCTOBER

HABITABLE ZONES AND PLANETARY HABITABILITY

Chairperson: H. Lammer

9:00 Implications for the radiation environment of the early Earth based on the early and mid archean microfossils

F. Westall; G. Southam; C. Cockell; C.E.J. de Ronde

9:25 The impact of galactic cosmic rays through the magnetospheres of different extrasolar planets

J.-M. Griefmeier, A. Stadelmann, H. Lammer, N. Belisheva, U. Motschmann

9:40 Results of the First Workshop on the Habitability of Planets Orbiting M Dwarf Stars

Rocco L. Mancinelli

9:55 Are all the planets in our solar system experiencing global warming?

Barry E. DiGregorio

10:10 How common is complex life in the Milky way?

W. von Bloh, C. Bounama, S. Franck

10: 30 – 11:00 Coffee break

HABITABLE ZONES AND PLANETARY HABITABILITY

Chairperson: E. Szuskiewicz

- 11:00 Searching for habitable worlds: the NASA Astrobiology Institute examines critical issues
R. Grymes and R. Briggs
- 11:15 Water in the mid-and low-latitudinal martian surface: Presence and consequences
Diedrich T.F. Möhlmann
- 11:40 Water in exoplanets: the MASER search continues
C. B. Cosmovici, S. Montebugnoli, S. Righini, L. Zoni
- 11:55 Signs of water runoff and its relation to possible living organisms on Mars
E. Szathmáry, A. Horváth, A. Sik, Sz. Bérczi, T. Gánti, T. Pócs, A. Kereszturi
- 12:15 Extremophile cryptobiotic communities in cold and hot deserts
T. Pócs, E. Szathmáry, A. Horváth, B. Nagy, A. Sik, Sz. Bérczi, T. Gánti, A. Kereszturi
- 12:30 Watery habitats in comets: temporary sub-crustal ponds
M. K. Wallis, N.C. Wickramasinghe and J. T. Wickramasinghe

12:45 – 14:00 Lunch break

HABITABLE ZONES AND PLANETARY HABITABILITY

Chairperson: M. Nigel

- 14:00 Methanogenic archea from Siberian permafrost: fit for Mars?
D. Morozova and D. Wagner
- 14:15 On the habitability of an earth-like exoplanet exposed to the intensive stellar CME activity
M. L. Kodachenko, H. Lammer, J.-M. Grießmeier, I. Ribas, F. Selsis, M. Leitner, T. Penz, C. Eirora, A. Hanslmeier, H. K. Biernat, H. O. Rucker
- 14:30 Possible habitats for life in the Venusian environment? Can the Venus Express payload answer?
C. Muller and D. Schulze-Makuch
- 14:45 Estimating the breathability of air across the habitable zone for various star types using a photochemical model
John Lee Grenfell, Barbara Stracke, Beate Patzer, Ruth Titz, Heike Rauer
- 15:00 Lightning-induced astrobiological potential of rare gas-grain medium: where& when in solar system
Yuriy Serozhkin
- 15:15 Passing of the solar system through the dense Interstellar gas clouds and a planetary habitability
A.K. Pavlov, A.N. Konstantinov, A.A Pavlov, S.M. Livshits, V.M. Ostryakov
- 15:30 Relaxation mechanisms of planetary environments oscillations
A.V. Karnaukhov, E. V. Karnaukhova

16:00 CLOSING THE WORKSHOP