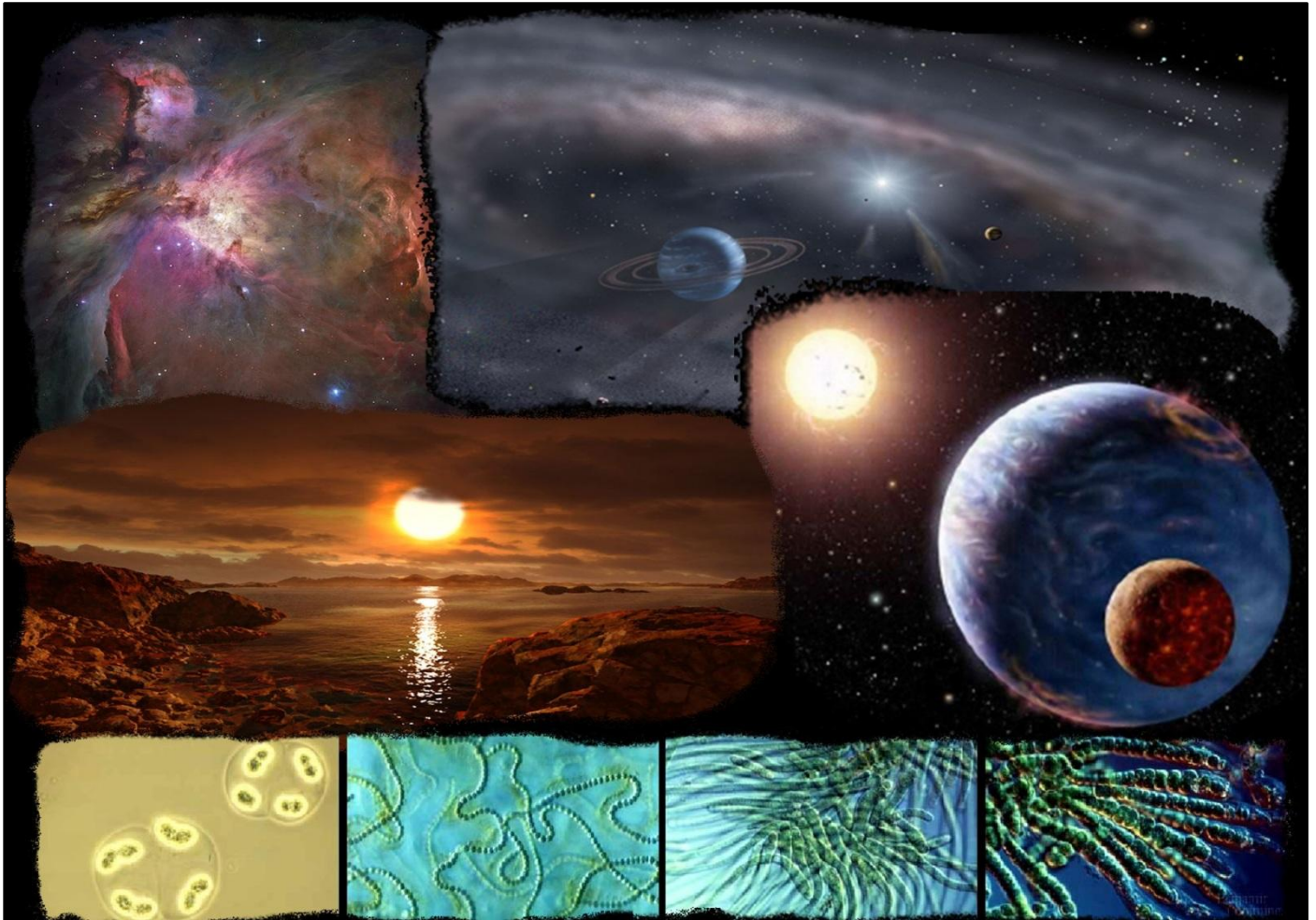


**PRELIMINARY PROGRAM**

**EXTRATERRESTRIAL LIFE - BEYOND OUR EXPECTATIONS?**



Vienna, Austria, May 21-22, 2012

 **ExoLife**

<http://www.univie.ac.at/eph/exolife>

## **Monday, May 21**

- 08.30 Registration  
09.10 Welcome  
09.30 *Introduction: Extraterrestrial Life – Beyond our Expectations?*  
Maria Firneis (University of Vienna, Austria)

### **Session 1: External Influences on Extra-Solar Planetary Habitability**

Chair: Maria Firneis (University of Vienna, Austria)

- 10.00 *Keynote: Pathways to Earth-Like Nitrogen Atmospheres: Implications for the Search for Exo-Earth*  
Helmut Lammer (Austrian Academy of Sciences, Austria)  
10.35 *Coffee break*  
10.55 *The Role of Stellar Plasma Interaction in the Evolution of Earth-Like Habitats*  
Kristina Kislyakova (Austrian Academy of Sciences, Austria)  
11.15 *On the Habitability of the Earth in Jupiter-Saturn Like Configurations*  
Elke Pilat-Lohinger (University of Vienna, Austria)  
11.35 *On Classical Habitable Zones in Binary Systems*  
Siegfried Eggel (University of Vienna, Austria)  
11.55 *Lunch*

### **Session 2: The Limits of Classical Habitability and Life**

Chair: Helmut Lammer (Austrian Academy of Sciences, Austria)

- 13.20 *Keynote: Assessing Planetary Habitability: Don't Forget Exotic Life!*  
Dirk Schulze-Makuch (Washington State University, USA)  
13.55 *Invited talk: Microscopic Liquid Subsurface Water in Cold Planetary Surfaces*  
Diedrich Möhlmann (DLR, Germany)  
14.15 *What is Life? Phenomenology versus Essentialism*  
Jean Schneider (Paris Observatory, France)  
14.35 *How Can We Detect Life When We Cannot Define It in a General Way?*  
Johannes Leitner (University of Vienna, Austria)  
14.55 *The Life Supporting Zone of Kepler-22b and the Kepler Planetary Candidates: KOI268.01, KOI701.03, KOI854.01 and KOI1026.01*  
David Neubauer (University of Vienna, Austria)  
15.15 *Compartmentalisation Strategies for Hydrocarbon-based Biota on Titan*  
Lucy Norman (University College London, UK)  
15.35 *Possible Signs of Life on Venus*  
Leonid Ksanfomality (Russian Academy of Sciences, Russia)  
15.55 *Coffee break and poster session*

### **Session 3: Actual Topics in Astrobiology**

Chair: Dirk Schulze-Makuch (Washington State University, USA)

- 16.25      *Keynote: Panspermia Revisited*  
Gerda Horneck (DLR, Germany)
- 17.00      *Photosynthetic Activity and Adaption Capacities of Lichens and Cyanobacteria to Martian Surface Conditions*  
Jean-Pierre de Vera (DLR, Germany)
- 17.20      *Results From a Crewed Mars Exploration Simulation at the Rio Tinto Analogue Site*  
Reinhard Tlustos (Austrian Space Forum, Austria)
- 17.40      *On the Role of Pressure in the Origin of Life*  
Richard Schwarz (University of Vienna, Austria)
- 18.00      *End of the first day*
- 18.30      *Workshop Dinner*

### **Posters:**

*Flare Activity and UV Habitability in Extrasolar Planets*

Ximena Abrevaya (Institute of Astronomy and Space Physics, Argentina)

*Ultraviolet and Liquid Water Habitable Zones of Planetary Systems*

Vera Dobos (Eötvös University, Hungary)

*Influence of Viscosity on Magnetic Field Generation in Super-Earths*

Manfred Gold (University of Vienna, Austria)

*Information Fluxes as Concept for Categorizations of Life*

Michael Hausmann (Kirchhoff Institute for Physics, Germany)

*Nebula-based Primordial Atmospheres of Planets Around Solar-Like Stars Revised*

Manuel Scherf (Austrian Academy of Sciences, Austria)

*Probing the Habitability of Exo-Moons of Gas Giants in Orbits Within the Habitable Zone*

Sonja Schiefer (University of Graz, Austria)

*Subsurface Oceans on Icy Solar System Bodies and their Impacts on Astrobiology*

Ruth-Sophie Taubner (University of Vienna, Austria)

## **Tuesday, May 22**

### **Session 4: Extra-solar Planets and Biosignatures**

Chair: Gerda Horneck (DLR, Germany)

09.00      *Keynote: SuperEarths and Life – Characterizing a Habitable Exoplanet*

Lisa Kaltenegger (MPI Astronomy, Germany)

09.35      *The Earth as a Benchmark: Spectropolarimetry Unveils Strong Bio-Signatures*

Michael Sterzik (ESO/Paranal Observatory, Chile)

09.55      *NASA's Kepler Mission and the Quest for Other Earth*

Michael Endl (McDonald Observatory, University of Houston, USA)

10.15      *Coffee break*

- 10.35 *Detection of the Water Maser Line at 1.35 cm in Exoplanetary Systems*  
Christiano Cosmovici (IFSI/INAF, Italy)
- 10.55 *From Satellite Remote Sensing of the Earth to Non-Invasive Diagnostics of Skin Cancer*  
Knut Stamnes (Stevens Institute of Technology, USA)
- 11.15 *Taxonomy of the Extra-Solar Planets*  
Eva Plavalova (Comenius University, Slovakia)
- 11.35 *Lunch*

## **Session 5: The Influence of Potential Extraterrestrial Life on Religion and Philosophical/Sociological Aspects of Astrobiology**

Chair: Lisa Kaltenecker (MPI Astronomy, Germany)

- 13.00 *Keynote: Theological Consequences of the Potential Discovery of Extraterrestrial Life*  
Jose Funes (Vatican Observatory, Vatican)
- 13.35 *The Implications of the Discovery of Extraterrestrial Life for Religion and Theology*  
Ted Peters (Graduate Theological Union, USA)
- 13.55 *Impacts of Philosophy and Theology on the Discussions Concerning the Existence of ExoLife and Vice Versa*  
Ludwik Kostro (University of Gdansk, Poland)
- 14.15 *The Ethical Implications for Discovery of Extraterrestrial Life*  
Jill Stuart (London School of Economics, UK)
- 14.35 *History of Women in Astrobiology*  
Michele Montgomery (University of Central Florida, USA)
- 14.55 *Coffee break*

## **Session 6: Searching for Extraterrestrial Intelligence and Communication**

Chair: Jose Funes (Vatican Observatory, Vatican)

- 15.15 *Modelling Evolution and SETI Mathematically*  
Claudio Maccone (International Academy of Astronautics, Italy)
- 15.35 *Science from Beyond: NASA's Pioneer Plaque and the History of Interstellar Communication, 1957-1972*  
William Macauley (Freie Universität Berlin, Germany)
- 15.55 *The Evolutionary Epistemics of Contact*  
Claudio Flores Martinez (University of Heidelberg, Germany)
- 16.15 *End of the workshop*
- 16.45 *Possibility for a guided tour through the Museum for Astronomy at the Institute for Astronomy, University of Vienna*