



Austrian Space Forum

# THE INTERNATIONAL MARS ANALOG RESEARCH PROGRAM OF THE AUSTRIAN SPACE FORUM

G. GROEMER AND R. ALBRECHT,  
AUSTRIAN SPACE FORUM





Österreichisches Weltraum Forum

- Citizen science organisation since 1998, led by professionals
  - 180 team members
  - High public visibility & space outreach & academic involvements
  - Level-of-effort methodology
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# OEWF RESEARCH FOCUS

- **Hardware development:**
  - Aouda.X spacesuit simulator
  - Mars analog rovers
  - Stratospheric balloons & Cubesats
  - 3 operational ground stations by 2017
- **Research focus**
  - Planetary surface operations
  - Planetary protection
  - Optimizing remote science support
- **12 major field campaigns**
  - E.g. Rio Tinto 2011, Dachstein 2012 (NASA/JPL, Exomars-h/w, Morocco 2013)
  - >25 nations involved





## Mission Support Center Innsbruck/Austria

- + Support Rooms (Flight Planning, Ground Support, Rem. Sci. Support,...)
- + ext. Rover control room (Budapest/Hungary and Torun/Poland)

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*Sans Fuentes, S.A. (2012) "Human-robotic Mars science operations: target selection optimization via traverse and science planning". MSc thesis, University of Innsbruck, Innsbruck, Austria.*

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**ÖWF** ÖWF Multi-Mission Data Archive

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## OeWF Multi-Mission Data Archive

Welcome to the multi-mission Science Data Archive of the Austrian Space Forum.

This archive contains information about the scientific and engineering experiments of our field missions, the type and quantity of data collected as well as information about the Principal Investigators and how to contact them.

For questions, please send us a message via the "Contact Us" link.

<https://mission.oewf.org/archive>

- To develop equipment, methodologies & strategies for planetary exploration since the beginning of the space age.
- APR activities have immensely proliferated and are now being carried out by both government agencies and non-governmental entities
- Throughout the years, APR has now emerged into a scientific and engineering discipline as a key enabling asset for future missions of exploration beyond Earth orbit.

## **ANALOG PLANETARY RESEARCH**

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- Emergence of a new field of science and engineering
- Policy initiative, Austrian Space Forum is the secretary organisation
- **The VSAPR articulates benefits and stated goals of analog research to communicate them within the scientific community, policy makers and the general public**

## **VIENNA STATEMENT ON ANALOG PLANETARY RESEARCH (VSAPR)**

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# The signatories state that Analogue Planetary Research

1. is a vibrant and multi-disciplinary field of research that has matured so as to be considered a coequal discipline in the canon of sciences;
2. is a key element in the preparation of human and robotic exploration beyond Earth orbit, as it anticipates and studies problems of practical nature;
3. fosters the collaboration of various levels of professionalism, nations and walks of life;
4. has found the broad interest of the public, as it deploys space capabilities on Earth and so triggers fascination and imagination and the next generation of explorers;
5. has a direct impact on the discovery of new technologies and their application in society.



## Goals to foster Analogue Planetary Research (APR):

- Institutions shall increase their APR activities or their support to APR activities. This encompasses the financing of APR related activities, support to young researchers and the promotion of APR related subjects and curricula.
- Institutions shall closer cooperate, join forces and benefit from each other. Networks and platforms shall be established in order to enhance the efficiency of global APR activities.
- Results of APR activities shall be made publicly available and shall be better integrated.



- › **Kim Binsted**, HI-SEAS Forschungsteam, University of Hawaii at Manoa, *Vereinigte Staaten*
- › **Pablo De Leon**, Department of Space Studies, University of North Dakota, *Vereinigte Staaten*
- › **Jean Pierre Paul De Vera**, DLR Institut für Planetenforschung, *Deutschland*
- › **Stefano Debei**, University of Padova, Centre for Studies and Activities for Space (CISAS) "G. Colombo", *Italien*
- › **Ludovic Ferriere**, Naturhistorisches Museum Wien, *Österreich*
- › **Kai Gehreth**, Mars Society Deutschland, *Deutschland*
- › **Cayetano Santana Gil**, Mars Society Spanien, *Spanien*
- › **Felipe Gómez**, Astrobiology Center (CAB), National Institute for Aerospace Technology (INTA), *Spanien*
- › **Gernot Grömer**, Österreichisches Weltraum Forum, *Österreich*
- › **Akos Kereszturi**, Hungarian Academy of Sciences, Astrophysical and Geochemical Laboratory, *Ungarn*
- › **Jesús Martínez-Frías**, Spanish Planetology and Astrobiology Network, *Spanien*
- › **Mihail Mateev**, Mars Society Bulgarien, *Bulgarien*
- › **Michaela Musilová**, Slovak Organisation for Space Activities, *Slowakei*
- › **Haritina Mogosanu**, KiwiSpace Foundation, *Neuseeland*
- › **Gordon Osinski**, Centre for Planetary Science and Exploration, *Kanada*
- › **Tibor Pacher**, Puli Space Technologies, *Ungarn*
- › **Ewan Reid**, Mission Control Space Services Inc., *Kanada*
- › **Jean-Marc Salotti**, Bordeaux Institut National Polytechnique, *Frankreich*
- › **Brian Shiro**, HI-SEAS Forschungsteam, University of Hawaii at Manoa, *Vereinigte Staaten*
- › **James Skinner**, US Geological Survey, *Vereinigte Staaten*
- › **Ulrich Walter**, Technische Universität München, *Deutschland*

Currently (June 2016): 22 signatories from 14 countries

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# Next steps

- Dissemination w.r.t. funding agencies and research community
- Public outreach
- **We are inviting researchers and institutions to consider becoming a signatory party to the VSAPR**

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<http://oewf.org/en/analog-planetary-research/>

# AMADEE 18

*Desert Analog Mission / Feb. 2018*

→ **Candidate host countries sought !!**

- + National analog research stimulus (students & general public)
- + Cooperation with national institutions

→ Contact us!

