

Preliminary Program for Keynote Lectures on June 26*

**Note that the titles of talks are not yet final.*

MORNING SESSION, 9:00–12:45

I. RIES CRATER — MESSAGES FOR CRATER FORMATION, SHOCK METAMORPHISM, AND IMPACTITE CLASSIFICATION

Chairs: W. U. Reimold and K. Wünnemann

- 9:00 D. Stöffler
Welcome and Introduction
- 9:15 D. Stöffler and W. U. Reimold
The Impact of Ries Crater Research on the Recognition and Classification of Impact-Metamorphosed Planetary Crustal Rocks
- 9:50 F. Langenhorst
Shock Metamorphism at the Ries and Implications for Lunar Rocks and Martian Meteorites

10:25–10:40 Coffee Break

- 10:40 K. Wünnemann, N. A. Artemieva, and G. S. Collins
Modeling the Ries Impact Event: The Role of Water and Porosity for Crater Formation and Ejecta Deposition at Impact Craters

II. RIES CRATER — MESSAGES FOR CRATERS AND IMPACT FORMATIONS ON THE MOON AND MARS

Chairs: F. Langenhorst and D. A. Kring

- 11:15 G. Arp
Post-Impact Sedimentary and Geomicrobiological Processes in the Ries Crater with Possible Implications for Similar Processes on Mars
- 11:45 E. Buchner
Post-Impact Erosion and Redeposition of Impactites at the Ries Crater and Implications for Similar Processes on Mars
- 12:15 T. Kenkmann
The Ries Crater and the Interpretation of Ejecta Deposits at Impact Craters on Mars

12:50–14:00 Lunch Break

AFTERNOON SESSION, 14:00–17:00

**II. RIES CRATER – MESSAGES FOR CRATERS AND IMPACT FORMATION
ON THE MOON AND MARS CONTINUED**

- 14:00 B. L. Jolliff
Provenance of Impact-Melt Breccias Collected at the Apollo Landing Sites: What Did We Learn and What Are the Implications for Future Exploration?

**III. FUTURE LANDING SITES ON THE MOON AND MARS:
WHAT DO ASTRONAUTS NEED TO KNOW?
Chairs: U. Köhler and B. L. Jolliff**

- 14:35 C. M. Pieters
Future Landing Sites on the Moon: What is New and What More Do We Need to Know?
- 15:10 J. W. Head
Potential Landing Sites on Mars for Human or Robotic Sample Return Missions
- 15:45 D. A. Kring
What Can Astronauts Learn from Terrestrial Impact Craters for Operations on the Moon and Mars?

**IV. GENERAL DISCUSSION
Chairs and Moderators: H. Hiesinger and T. Spohn**

- 16:20–17:00 Group Discussion

List of Keynote Speakers and Chairs:

- Artemieva, N. A., Russian Academy of Sciences, Institute for the Dynamics of Geospheres, Moscow
- Arp, G., Zentrum für Geowissenschaften, Geobiologie, Universität Göttingen
- Buchner, E., Institut für Planetologie, Universität Stuttgart, und Hochschule Neu-Ulm, Wissenschafts- und Technologietransfer
- Collins, G. S., Dept. Earth Science and Engineering, Imperial College, London, UK
- Head, J. W., Dept. of Geological Sciences, Brown University, Providence, USA
- Hiesinger, H., Institut für Planetologie, Universität Münster
- Jolliff, B. L., Dept. of Earth and Planetary Sciences, Washington University, St. Louis, USA
- Kenkmann, T., Museum für Naturkunde, Leibniz-Institut für Evolutions- und Biodiversitätsforschung an der Humboldt-Universität zu Berlin
- Köhler, U., Institut für Planetenforschung, Deutsches Zentrum für Luft- und Raumfahrt, Berlin
- Kring, D. A., Lunar and Planetary Science Institute, Houston, USA
- Langenhorst, F., Bayerisches Geoinstitut, Experimentelle Geowissenschaften, Universität Bayreuth
- Pieters, C. M., Dept. of Geological Sciences, Brown University, Providence, USA
- Reimold, W. U., Museum für Naturkunde, Leibniz-Institut für Evolutions- und Biodiversitätsforschung an der Humboldt-Universität zu Berlin
- Spohn, T., Institut für Planetenforschung, Deutsches Zentrum für Luft- und Raumfahrt, Berlin
- Stöffler, D., Museum für Naturkunde, Leibniz-Institut für Evolutions- und Biodiversitätsforschung an der Humboldt-Universität zu Berlin
- Wünnemann, K., Museum für Naturkunde, Leibniz-Institut für Evolutions- und Biodiversitätsforschung an der Humboldt-Universität zu Berlin