

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