

PHYSIKALISCHES KOLLOQUIUM
EINLADUNG

Monday, 16.11.2015, 16.15 p.m., W2-1-148

speaks

Dr. Urs Mall,

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about

Water and Ice

– From the Moon to 67P / Churyumov - Gerasimenko and back

The question to what extent and how water and organic compounds were delivered to terrestrial planets has wide implications from biology to geophysics.

After decades where our next neighbor, the Moon, was considered to be an extremely dry place, the detection of water in various samples from the lunar interior and in lunar volcanic glasses has provided direct evidence for the accretion and retention of an extremely volatile molecule in the Moon's interior. These recent findings are interpreted that either the Moon forming material was not completely devolatilized or, alternatively, that volatile-rich material was delivered to the lunar magma ocean shortly after the Giant impact. As comets have been considered to be one of the possible carriers for water, we review the evidence on the existence of water on the Moon and then show the most recent water abundance measurements from the nucleus of comet 67P/C-G from the Rosetta mission.

We will address the question of how we can use and extend the technology flown on Rosetta to investigate the inventory of volatiles with the upcoming Russian and Chinese lunar missions back to the Moon.

All interested persons are cordially invited.

Gez. Prof. Dr. Björn Poppe