

The Fourth National Mars Science Seminar

28.10.2022 | <https://mars.uj.edu.pl>

Some remarks about Martian „blueberries” and spherical concretion from Utah

Dr Natalia Zalewska

Centrum Badań Kosmicznych Polskiej Akademii Nauk

[POSTER]

Some terrestrial concretions may be analogs of Martian concretions „blueberries”. They were discovered on Mars in the Meridiani Planum by the Opportunity rover. They could have arisen in a similar sedimentation environment as some terrestrial concretions. Therefore, it is important to determine which Earth concretions are analogs of Martian concretions and under what conditions they were formed. For our research, as an analogs we chose: 1) Utah concretions from the Dakota Formation, 2) Utah Navajo Formation concretions, 3) Romanian „Trovants”- concretions. So far, we have used for research: i) modeling spectra from MiniTES using of data from Opportunity’s Moessbauer spectrometer for Martian concretions, ii) measurement of near (NIR) and mid-infrared (MIR) spectra and EDS X-Ray Spectroscopy for terrestrial concretions. Our research can determine conditions on Mars during the formation of Martian concretions and would be an evidence for the presence of liquid water in the history of Mars.



JAGIELLONIAN UNIVERSITY
IN KRAKÓW

Faculty of Physics, Astronomy
and Applied Computer Science
Faculty of Geography and Geology