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Principal Components of Thermography analyses of the Silk Tomb, Petra (Jordan)

Miguel Gomez-Heras (1,2,3), Monica Alvarez de Buergo (1), and Rafael Fort (1)

(1) Instituto de Geociencias (CSIC,UCM), Geomateriales, Madrid, Spain (alvarezm@geo.ucm.es), (2) CEI Moncloa (UPM, UCM, CSIC), Madrid, Spain (miguel.gomez.heras@gmail.com), (3) ETS Arquitectura, Universidad Politecnica Madrid, Spain (miguel.gomez.heras@gmail.com)

This communication presents the results of an active thermography survey of the Silk Tomb, which belongs to the Royal Tombs compound in the archaeological city of Petra in Jordan. The Silk Tomb is carved in the variegated Palaeozoic Umm Ishrin sandstone and it is heavily backweathered due to surface runoff from the top of the cliff where it is carved. Moreover, the name "Silk Tomb" was given because of the colourful display of the variegated sandstone due to backweathering. A series of infrared images were taken as the façade was heated by sunlight to perform a Principal Component of Thermography analyses with IR view 1.7.5 software. This was related to indirect moisture measurements (percentage of Wood Moisture Equivalent) taken across the façade, by means of a Protimeter portable moisture meter. Results show how moisture retention is deeply controlled by lithological differences across the façade.

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