



Identification of giant Saharan quartz particles in Iceland

György Varga (1) and Pavla Dagsson-Waldhauserova (2,3)

(1) Research Centre for Astronomy and Earth Sciences (Hungarian Academy of Sciences), Sopron, Hungary (varga.gyorgy@csfk.mta.hu), (2) Agricultural University of Iceland, Physical Sciences, Reykjavik, Iceland, (3) Czech University of Life Sciences Prague, Faculty of Environmental Sciences, Department of Ecology, Prague, Czech Republic

Saharan dust samples collected in Europe compose almost totally from fine-grained silty material. Reported grain size values are generally in the range of 2 to 20-30 μm , however, episodically the grain size of transported Saharan dust material can be significantly larger. And now, these giant mineral dust particles are standing in the focal point of recent investigations.

Dust material collected in Iceland from the deposited material of an unusual Sahara dust event (April 2014) was analysed by automated static image analysis technique completed with Raman spectroscopy. More than hundred thousand individual particles were granulometrically characterized, and we were able to identify quartz particles larger than 100 micrometres. Transport of giant particles from the Sahara towards the Arctic can be regarded as extremely rare events, previous studies did not mention similar episodes.

Support of the National Research, Development and Innovation Office NKFIH KH130337 (for G. Varga) is gratefully acknowledged.