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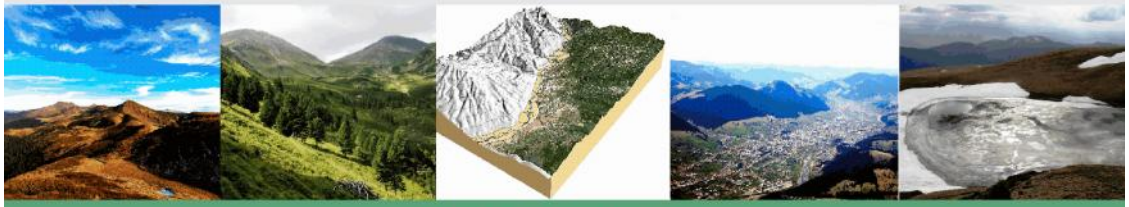

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Using thermal imagings in the study of periglacial forms and processes

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Periglacial morphogenetic domain is marked by the presence of landforms whose genesis and evolution is closely related to thermal conditions. It goes without saying therefore of interest to know the thermal characteristics of these periglacial landforms. To achieve this objective, the use of clasical thermometers is also expensive and laborious process, but in our opinion, the most expeditious way is to use a infrared termocamera. Tacking into account that radiant temperature of the Earth surface is a a function of their internal temperature or kinetic temperature, and their ability to emit radiation, strongly dependent on the thermal properties of the material - with physical and compositional differences -, we consider that a thermal image can also reveal just some of the differences in the morphological structures. Energy flux that occurs at topographic surface interactions with the atmosphere cause individualization of microclimates, with implications for the appearance and development of the periglacial morphogenetic processes like creep, fros heaving, solifluction, thermal sorting and weathering. A way of understanding of these processes and highlighting small-scale differentiation knowing as much detail as possible, is knowing the thermal image, thermal imprint of each microform. .
Using a Fluke Ti20 thermal infrared camera, our interest was focused to several periglacial forms including, solifluxion lobe, earth hummocks, nivation niche and weathering rock face from Făgăraş Mountains and Muntele Mic. Thermal imagers allow both highlighting each periglacial microforms in contrast with neighboring areas and also the presence of ,,heat islands'' and ,,cold island''. Revealing in this respect is the image of an earth hummock frozen core. In the same manner the thermal image shape clear ,,the cold island''of the snow patch presented in the nivation niche. The thermal image of the weathering wall facilitates identification both of the cracks network and lithological and mineralogical differentiation, knowing that each mineral has a thermal emissivity signature. Using a specific software can statistically analyze thermal value classes, graphically represented then by histograms.