

Atacama Field Campaign: laboratory and in-situ measurements for remote sensing applications

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© 2018, © 2018 Informa UK Limited, trading as Taylor & Francis Group. This work presents the preliminary results of the first field calibration campaign performed in the Atacama Desert, Chile, between the 18 and 22 August 2014, called the Atacama Field Campaign (ATAFIC 2014). In situ measurements were performed in order to spectrally characterize the surface reflectance spectra between 0.3 and 2.5 μm , radiometric temperature (8.0–14.0 μm) and atmospheric measurements. A soil sample was collected and analyzed using Fourier Transform Infrared Spectroscopy and X-Ray Diffraction techniques to characterize the surface reflectance spectra and mineralogical composition, respectively. ASTER land surface emissivity in addition to GOES, MODIS and Landsat-8 land surface temperature (LST) were also used. Results showed that the spectral features of the Atacama soil and the characteristics of this geographical zone, which is featured as the most hyper-arid and cloudless place in the world, make thi