

Radar satellite images and detection of population in desert areas

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Satellite remote sensing is a powerful tool for detecting human presence and monitor his interaction with environment. High resolution satellite images can even document small scale object such as vehicles or even single persons. Actually the main objective of new mission is to guarantee persistency in the monitoring. Within this context Imaging Radar plays an important role being very reliable in its operations (unaffected by weather and lighting conditions). Moreover, due to the coherent detection mechanism, SAR data can provide information derived from both the amplitude and the phase of the microwave signal. In particular phase can provide information about activities occurred during a well defined time interval, including tracks left on ground by vehicles, animals and people. Some example of this technique are illustrated using COSMO-SkyMed the Italian constellation of SAR satellites.