
RADAR REFLECTIVITY IN SOIL**Gaikwad P. D.**

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ABSTRACT

Radar is an active remote sensing system to detect objects and determine their range (or position) by transmitting short bursts of microwaves. , microwaves can penetrate light rain, clouds and be used to detect sea ice during the day and night and regardless of cloud cover in present paper is to understand the radar signal of reflectivity in soil.

Keywords: Radar, microwave, sensor etc

INTRODUCTION

RADAR stands for Radio Detection And Ranging. Radar systems are basically 38 categorized into three classes: imaging radars, scatter meters, and altimeters are used for monitoring. [1] RADAR systems are active sensors which provide their own source of electromagnetic energy by recording the range and magnitude of the energy reflected from all targets as the system passes by, a two-dimensional image of the surface can be produced. The microwave region of the spectrum is quite large, relative to the visible and infrared, and there are several wavelength bands. K bands: X-band C-band: S-band: L-band: P-band. [2-5].

METHODS

There are three approaches, which are generally applied for the determination of the soil moisture. These are point measurements, soil-water models and remote sensing.

IMAGE ANALYSIS

Analysis of remote sensing imagery involves the identification of various targets in an image, and those targets may be environmental or artificial features which consist of points, lines, or areas.[6]. Forestry, agriculture and land cover, since water is a vital component in each of these disciplines Techniques.

RESULT AND DISCUSSION

C-band



L-band

Figure-1: Two radar images of the same agricultural fields

Here are two radar images of the same agricultural fields, each image having been collected using a different radar band. As shown in figure 1. The one on the top was acquired by C-band radar and the one below was acquired by L-band radar. You can clearly see that there are significant differences between the way the various fields and crops appear in each of the two images depending on the radar wavelength. The L band has a longer wavelength and is more penetrating than the C band. Due to longer wavelength surface will appear dark with same surface due to increased backscattering surface will appear bright in radar images.

CONCLUSION

Different radar bands having same agricultural fields has low radar reflectivity

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