

Nadir Angle Dependence of Water Surface Return at 2 Microns Using TODWL

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This presentation discussed the nadir angle dependence of water surface return at 2 microns using TODWL. Data from a space-based DWL would benefit from using surface returns to calibrate each shot. Therefore, a model of how signal should fall off as function of angle for different wind regimes has been developed. Using TODWL, only one order of magnitude decrease between 0 and 30 degrees is found, but the theory (model) predicts three orders of magnitude. TODWL data were saturating the detector close to nadir and it is speculated that had an attenuator been applied, the observations would come closer to theory, but only by one order of magnitude. Thus, this problem remains not solved.

Notes

Several suggestions and questions were made about the interpretation of this work within the framework of the earlier efforts by Tratt and Menzies.