AYUB WOISIRI. The Backscatter Characteristic of ALOS PALSAR Imagery Within Eucalyptus grandis forest plantation stand. Under direction of I NENGAH SURATI JAYA and M. BUCE SALEH

This study was performed to identify the relationship between the backscatter of ALOS PALSAR having pixel size of 50 x 50 m and 6,25 x 6,25 m, and the variables of Eucalyptus grandis forest plantation stand. The main objective of the study is to identify the variables that affect backscatter value. The study was carried out in Samosir Regency, North Sumatera Province. This study found that the variable of stands that influence the backscatter are (1) basal area height of tree having classification accuracy of 61.7 % for resolution of 50 meters; and (2) acreage of tree canopy and trees density and the classification accuracy of 85. % for resolution 6.25 meters.

Key words: ALOS PALSAR, Stands, Eucalyptus grandis, Backscatter