

Application of a split-window algorithm to estimate land surface temperature from NOAA-AVHRR data Aplicación de un algoritmo de split-window para la estimación de la temperatura de la superficie terrestre desde datos

AVHRR-NOAA

Parra, Juan

Sobrino, José

Morales, Luis

Castellaro, Giorgio

Uribe, Juan

Gaete, Nelba

The estimation of land surface temperature, in partial to completely cloudless clear days, was estimated using data from the Advanced Very High Resolution Radiometer (AVHRR) sensor aboard the satellites of the series National Oceanic and Atmospheric Administration (NOAA) for application of an algorithm based the Split Window's method. The utilized algorithm presupposes corrections for emissivity and the total atmospheric water vapour, and it was validated with field measurements of surface temperature. To this end an LI-1000 data logger was installed at the Agrometeorology Station dependent of the National Institute of Agricultural Research, Carillanca Regional Research Center Carillanca, Araucanía Region of the Araucanía ( $38^{\circ}41'$  S lat;  $72^{\circ}25'$  W long; 200 m.o.s.l.). The measurements of temperature were realized at time intervals of one hour. Obtained results showed that the application of the algorithm permits obtaining the land surface temperature with a high grade degree of confidenc