

EARTH OBSERVATION SYMPOSIUM (B1)
Earth Observation Data Management Systems (4)

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THE VALIDATION SITE OF SATELLITE APPLICATION PRODUCTS AND THE RELATED
ACTIVITIES

Abstract

Earth Observation Satellite (EOS) data has become an important component of a wide variety of earth science studies. EOS data have been used for various science applications, such as geology, atmosphere, ocean, environment, etc. However, in order to fully realize the potential of EOS data for such applications, it is necessary that basic product should be calibrated and validated in terms of product quality. Especially, in recent years there has been an increasing demand for improved accuracy and reliability of EOS data. It is now generally recognized that Calibration and Validation (Cal/Val) are an essential component of any satellite system. The EOS data are usually not ready for use directly, but need to undergo a series of pre-processing steps. However, in most cases, data users have to use the EOS data that have already been collected and archived so that it is difficult to evaluate the pre-processing result and improve the data analysis in many ways. Also most of scientists in the field of remote sensing require an understanding of product accuracy and uncertainty. The validation of EOS application products is an important factor for data users because of its reliability and usefulness demonstration. However, in order to fully understand an accuracy of EOS application products, the systematic validation plan should be prepared including test site, sensing instrument, various dataset, and etc. The procedure of Cal/Val is well organized depend on each system and items. But the validation process for EOS application products carried out each user. Especially, there is not systematic validation procedure for application products from high resolution satellite data. The purpose of this study is to establish the Product Validation Site (PVS) in order to generate and evaluate the KOREA Multi-Purpose SATELLITE (KOMPSAT) application products such as ortho-rectified image, DEM, and many others. To fulfill this purpose, in this study, characteristic of validation site on the Committee on Earth Observation Satellite (CEOS) were surveyed and its results were used to define a concept of product validation and to design a validation site for KOMPSAT. Various experimental studies with a field campaign are performed during the establishment of validation sites. This paper summarizes the status of the PVS for KOMPSAT and presents results from related activities.