Radiometric calibration network for vicarious calibration of Earth observing imagers in the reflected solar

Kurt Thome[1], Marc Bouvet

1) kurtis.thome@nasa.gov, NASA Goddard Space Flight Center

Abstract

A challenge for the remote sensing community is ensuring the absolute radiometric calibration of the the ever-increasing number of Earth observing satellite sensors. Assessing the post-launch radiometric calibration is the responsibility of each sensor team and typically involves simulating the top-of-atmosphere signal from in-situ and atmospheric measurements. The Committee on Earth Observation Satellites (CEOS) Working Group on Calibration and Validation (WGCV) Infrared Visible Optical Sensors (IVOS) has developed a radiometric calibration network. RadCalNet provides SI-traceable, top-of-atmosphere, nadir-viewing reflectance at 30-minute intervals via a public web site that can be used for absolute radiometric calibration. RadCalNet currently consists of four radiometric calibration test sites in the USA, France, China, and Namibia. The spectral range of RadCalNet data covers 400 nm to 1000 nm at all sites with specific sites providing results up to 2500 nm. The history of RadCalNet and descriptions of the RadCalNet processing, determination of absolute uncertainties, and example results are provided.

Keywords - Calibration targets and sites