# ATCOR - 2 / 3 / 4

Atmospheric & Topographic Correction

The ATCOR software derives surface reflectance, emissivity, and temperature from calibrated images by atmospheric and topographic correction. The model is applicable to all optical remote sensing systems with special focus on imaging spectroscopy data:

- **ATCOR-2**: small and medium FOV satellite imagery, flat terrain,
- **ATCOR-3**: small and medium FOV satellite imagery, for rugged terrain (see figure), and
- **ATCOR-4**: wide FOV airborne imagery, all terrain.
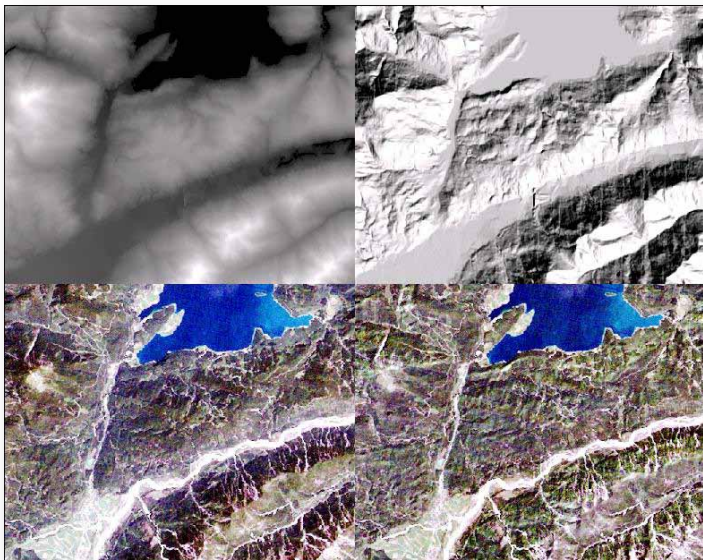
Atmospheric / topographic correction of Landsat imagery using ATCOR-3

Complete Solution

ATCOR is the only software suite available on the market which includes the capability for radiometric correction in rugged terrain considering cast shadow and illumination calculations. It uses proven MODTRAN® pre-calculated look-up tables of the atmospheric radiation field.

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Fully Featured

- Complete graphical interface for the atmospheric & topographic correctio based on IDL (ITT Vis),
- batch processing and logging capabilities for operational processing,
- based on ENVI file formats,
- ATCOR-2/3 support for Landsat (TM, MSS, ETM+, PAN), SPOT (1-5; HRV incl. Pan), IRS (1A/1B/1C/1D Liss-2/3, WiFS, P6: Liss-3, AWiFS), MOS-B, MERIS, ASTER, ALI, DMC, Ikonos, Quickbird, and Orbview,
- hyperspectral option for CHRIS, Hyperion, and others as plug-in to ATCOR-3,
- ATCOR-4 support for airborne multispectral and hyperspectral instruments as defined by user (generic sensor-definition interface),
- automatic aerosol type and aerosol optical thickness (visibility) retrieval,
- water vapor retrieval using configuarable differential absorption in 940 and 1130 nm bands,
- removal of haze, cloud shadow, and cirrus clouds,
- capability for in-flight vicarious radiometric and spectral calibration,
- correction for spectral smile,
- sensor simulation tool for at-sensor radiance cube from reflectance imagery,
- option to perform preview-checks of spectra.
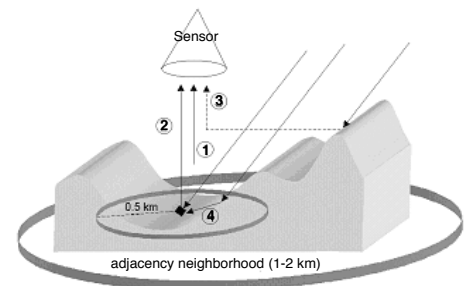
Radiance components considered in ATCOR

Requirements

- IDL version 6.2 or higher or the free IDL VM from ITT Visual Information Solutions,
- Linux, Unix, OS-X, or Windows (64bit recommended),
- RAM: min. 4GB allocated to IDL,
- ENVI™ license recommended, but not a condition.