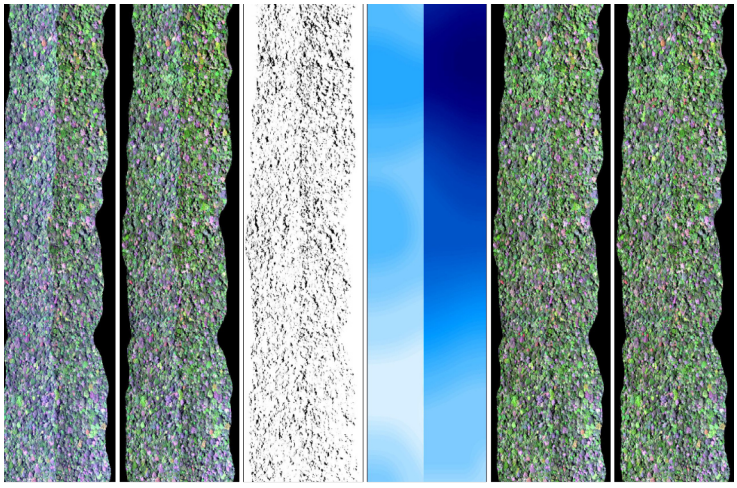
ATCOR® - 3 / 4

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:

Atmospheric Compensation

- ATCOR-3 for small and medium FOV satellite imagery, for rugged terrain, and
- ATCOR-4 for airborne imaging spectroscopy, mulutscanner imagery , all terrain

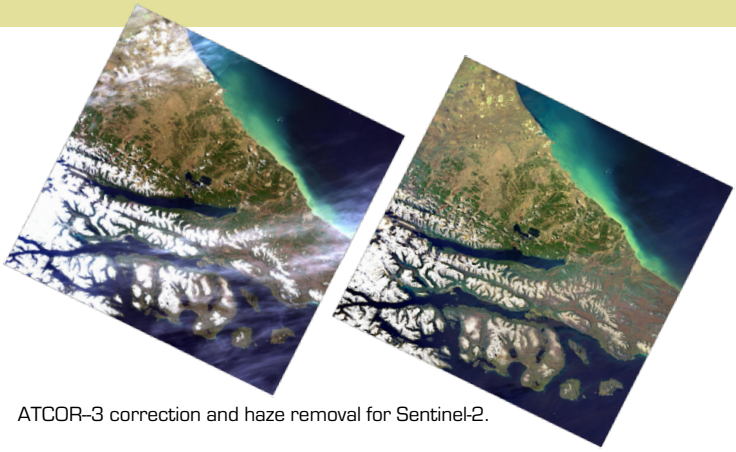


ATCOR-4, aerosol scatterin removal and BRDF correction.

Complete Solution

ATCOR is the major, state of the art software suite available on the market which includes the capability for radiometric correction in rugged terrain considering cast shadow and illumination calculations. It is based on the reliable MODTRAN® radiative transfer code.

The MODTRAN® trademark is being used with the express permission of the owner, the United States of America, as represented by the United States Air Force and by Spectral Sciences, Inc. (for use outside of the USA). MODTRAN® software used in this product is licensed from the United States of America, as represented by the United States Air Force, under U.S. Patent Nos. 5,884,226, 7,433,806 and 7,593,835 B2.



ATCOR–3 correction and haze removal for Sentinel-2.

Fully Featured

- Complete graphical interface for the atmospheric & topographic correction based on IDL (Harris Inc),
- based on ENVI™ file formats,
- batch processing and logging capabilities for operational processing,
- using high-accuracy MODTRAN® radiative transfer calculations,
- ATCOR-3 support for Landsat, SPOT, IRS sensors, MERIS, ASTER, ALI, DMC, Ikonos, Quickbird, Orbview, Worldview, RapidEye, THEOS, Sentinel, VENuS, and more.
- ATCOR-3 hyperspectral option for CHRIS, PRISMA, Hyperion, and others,
- ATCOR-4 support for airborne multispectral and hyperspectral instruments as defined by user (by generic sensor-definition interface),
- automatic aerosol type and aerosol optical thickness retrieval,
- flexible water vapor retrieval,
- removal of haze, cloud shadow, and cirrus clouds,
- capability for in-flight vicarious radiometric and spectral calibration and validation with preview-checks of spectra,
- sensor simulation tool for at-sensor radiance cube from reflectance imagery,
- correction for spectral smile,
- BRDF correction (BREFCOR method).

Requirements

- IDL version 8.7 - IDL virtual machine provided with software distribution,
- Linux, Mac OS-X, or Windows (64bit required),
- RAM: min. 8GB allocated to IDL,
- ENVI™ license recommended, but not a condition.

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ReSe APPLICATIONS

DLR

ATCOR method developed by
Dr. Rudolf Richter
German Aerospace Center