Plug-ins

This page lists approved BEAM 4.7 plug-ins and their related documentation.
The Plug-ins for the current BEAM version are listed on the BEAM website.

Plug-ins for other BEAM versions can be found at:

- BEAM 4.6
- BEAM 4.5
- BEAM 3.7

To install a plug-in, download its module file and copy it into the `modules` directory of your BEAM installation directory. The module will be installed once you start BEAM VISAT. You can uninstall the module simply by removing the module file. Note that modules can also be installed, uninstalled and updated using VISAT module manager (Main menu / Help / Module Manager).

EO Data Product Readers / Writers

GlobCOLOUR Product Readers

Description: This module provides product readers for importing the binned and mapped GlobCOLOUR Level-3 data products into BEAM/VISAT.
This module is the successor of *globcolour-product-readers version 1.5.1*
Author: R. Quast and N.Fomferra of Brockmann Consult
Version: 1.0
Module: beam-globcolour-reader-1.0.jar

METOP AVHRR Level-1b Product Reader

Description: A product reader for the METOP AVHRR Level-1b format. This plug-in has been developed by Brockmann Consult under contract to EUMETSAT in order to support the EUMETSAT Polar System (EPS).
Author: M. Zühlke of Brockmann Consult
Version: 1.5
Module: beam-metop-avhrr-reader-1.5.jar

SPOT VGT Product Reader

Description: Enables BEAM to read SPOT VGT data products. Please note that this reader is still under development.
Author: N. Fomferra of Brockmann Consult
Version: 1.0-SNAPSHOT
Module: beam-spot-vgt-reader-1.0-SNAPSHOT.jar

EO Data Processors

QAA IOP Processor

Description: Retrieval of inherent optical properties (IOPs) for coastal and open ocean waters for MERIS.
Author: Zhongping Lee et al, Mississippi State University
Software development: Mingrui Zhang, Winona State University
Version: 1.0 (01. March 2009)
Module: QAA1.0.0.jar
Documentation: Processor Documentation (Journal paper), update to the documentation paper

ATSR MSSL Stereomatcher

Description: For the retrieval of geometric cloud-top height and the assessment of the co-registration error in ATSR data.
The first utilises the Mannstein camera model to translate parallax into height, while the second uses clear
views of land as ground control points to determine the presence and size of any shift between the nadir and the forward view.
Author: Ludwig M. Brinckmann Mullard Space Science Laboratory
Version: 0.9.2
Module: mssl-stereomatcher-0.9.2.jar
Documentation (refers to version 0.9.1 and may therefore be partially obsolete): User Manual

MERIS FAPAR Processor

Description: A VISAT plug-in and stand-alone processor which computes the Fraction of Absorbed Photosynthetically Active Radiation (FAPAR) for MERIS Level-1b data.
Author: Ophelie Aussedat, Nadine Gobron of JRC
Version: 2.1.3 (8. June 2005)
Module: jrc-fapar-2.1.3.jar
Documentation (refers to version 2.1.1 and may therefore be partially obsolete): README, ATBD

MERIS WeW Case 2 Waters Processor

Description: A VISAT plug-in and stand-alone processor which makes use of MERIS Level-1b TOA radiances in the bands 1-7, 9-10 and 12-14 in order to retrieve case II water properties and atmospheric properties above case II waters.
Author: Thomas Schroeder, Michael Schaale of FUB
Version: 1.2.4
Module: beam-wew-water-1.2.4.jar
Documentation (refers to version 1.2.2 and may therefore be partially obsolete): README

- Article in *International Journal of Remote Sensing*: Atmospheric correction algorithm for MERIS above case-2 waters
- Article in *International Journal of Remote Sensing*: Retrieval of atmospheric and oceanic properties from MERIS measurements
- Article in *Science Direct*: Using MERIS full resolution data to monitor coastal waters

AATSR SEBS Processor

Description: The Surface Energy Balance System (SEBS) processor is aimed to estimate the land surface physical properties from AATSR product, in combination with meteorological information.
Author: lichun at itc.nl, ITC, Netherland
Version: 1.2
Module: beam-sebstool-1.2.jar
Documentation:

- Article in *Journal of Geophysical Research*: Partitioning the solar radiant fluxes in forest canopies in the presence of snow

MERIS Vegetation Processors

Description: A set of three VISAT plug-ins and stand-alone processors:

- BAER - computes the Aerosol Optical Thickness, the Angstrom coefficient and generates atmospherically corrected reflectances in 13 channels over land from MERIS Level-2 data
- TOA-VEG - computes the Fraction of Absorbed Photosynthetically Active Radiation (FAPAR), the fCover, the LAI and the LAI chlorophyll content product from MERIS Level-1b data
- TOC-VEG - computes the Fraction of Absorbed Photosynthetically Active Radiation (FAPAR), the fCover, the LAI and the LAI chlorophyll content product from MERIS Level-2 data
  Author: F. Baret of INRA, Wolfgang v. Hoyningen Huene of Uni Bremen, C. Castillon of Noveltis
  Version: 2.0.3 (= BAER 1.0, TOA-VEG 1.1.0, TOC-VEG 0.6)
  Module: beam-meris-veg-2.0.3.jar
  Documentation:
- BAER: README, ATBD, Validation Report
- TOA-VEG: README, ATBD, Validation Report
- TOC-VEG: README, ATBD, Validation Report

AATSR Recalibration Processor

Description: The purpose of the AATSR Recalibration processor is to perform appropriate nonlinearity and drift corrections on AATSR L1b products.
Algorithm: D. Smith from Rutherford Appleton Laboratory, UK
Software: O.Danne, Brockmann Consult
Version: 1.1
Module: beam-aatsr-recalibration-1.1.1.jar
Documentation:

- Calibration Status of AATSR and MERIS Reflectance Channels (workshop presentation)
- Software User Manual (SUM)

MERIS/AATSR Synergy Toolbox

Description: The MERIS/AATSR Synergy Toolbox provides processing schemes for improved cloud screening, global aerosol retrieval and land atmospheric correction using the combined multi-spectral and multi-angle information from geo-located and geo-registered MERIS and AATSR measurements
Algorithms: P. North et al. from Swansea University, J. Fischer et al. from Free University of Berlin, L. Gomez-Chova et al. from University of Valencia
Software: O.Danne/R.Quast of Brockmann Consult, L.Gomez-Chova of University of Valencia, A.Heckel of Swansea University
Version: 1.1.1
Modules: All the following modules are required:

- beam-meris-aatsr-synergy-core-1.1.1.jar
- beam-meris-aatsr-synergy-preprocessing-1.1.1.jar
- beam-meris-aatsr-synergy-cloud-screening-1.1.1.jar
- beam-meris-aatsr-synergy-aerosol-retrieval-1.1.1.jar
- beam-aatsr-recalibration-1.1.1.jar
- beam-meris-brr-2.2.jar
- beam-meris-sdr-2.2.jar

Documentation:

- Cloud screening ATBD
- Land aerosol and surface reflectance ATBD
- Ocean aerosol ATBD
- Detailed Processing Model (DPM)
- Input/Output Data Description (IODD)
- Software User Manual (SUM)

MERIS MEPIX Processor

Description: MEPIX is a BEAM scientific processor for multiple use. In the short term, it was serving as an experimental platform to evaluate the new products which are derived from the exploitation of the oxygen band. This work was done in the context of the ESA O2 project. In parallel that part of the MERIS L2 processing which is relevant for the pixel classification has also been implemented in an extended version of MEPIX, with the objective to test the standard MERIS pixel classification with the new pressure products. Furthermore, the pixel classification as developed in the GlobCover and AlbedoMap projects has been integrated in the MEPIX processor. This allows e.g. to compare the standard L2 pixel classification with the GlobCover one, which is part of work being done for the MERIS Data Quality Working Group.

Algorithms: R. Santer from LISE (Université du Littoral Côte d'Opale, France), J. Fischer et al. from Free University of Berlin
Software: O.Danne of Brockmann Consult
Version: 1.1.1
Module: All the following modules are required:

- beam-meris-mepix-1.1.1.jar
- beam-meris-brr-2.2.jar
- beam-meris-sdr-2.2.jar

Documentation:

- Technical Note on MEPIX algorithms
- Software User Manual (SUM)

MERIS/AATSR Glint Processor

Description: The MERIS/AATSR Glint Processor allows for the correction of the influence of the atmosphere and the specularly reflected solar radiation (sun glint) on radiance spectra measured with MERIS and/or AATSR.

Algorithms: R. Doerffer from GKSS Research Centre, C. Brockmann from Brockmann Consult, J. Fischer et al. from Free University of Berlin
Software: M.Peters/O.Danne of Brockmann Consult
Version: 1.1.1
Module: All the following modules are required :

- beam-meris-glint-1.1.1.jar
- flint-processor-1.1.1.jar

Documentation:

- Glint Correction with MERIS (ATBD 1)
- Glint Correction with MERIS and AATSR (ATBD 2)
- Software User Manual (SUM)

MERIS ICOL+ Processor

Description: ICOL+ is an advanced version of the ICOL processor, which is used to correct for the adjacency effect (increased radiance due to scattering and reflection of photons) in MERIS L1B data.
Among other improvements, ICOL+ allows for an adjacency correction over land, and is able to process also Landsat TM data.
Algorithms: R. Santer of LISE (Université du Littoral Côte d'Opale, France), F. Zagolski from Parbleu, Canada
Software: M. Zühlke and O.Danne, Brockmann Consult
Version: 2.5
Module: ICOL version 2.5 will be available as public BEAM 4.7 plugin in early autumn 2010. In the meantime, please use the former ICOL version 1.0.4, which is available as BEAM 4.5 plugin.
Documentation: in preparation

MERIS/AATSR Snow Radiance Processor

Description: The MERIS/AATSR Snow Radiance Processor allows for the retrieval of snow properties (temperature, emissivity, grain size, soot concentration) from radiance spectra measured with MERIS and/or AATSR.
Algorithms: A.Kokhanovsky from University of Bremen, J.Fischer/R.Preusker from Free University of Berlin, O.Krüger from Brockmann Consult.
Software: O.Danne, Brockmann Consult
Version: 1.0
Module: The MERIS/AATSR Snow Radiance Processor, version 1.0, will be available as public BEAM 4.7 plugin in early autumn 2010.
Documentation: in preparation