

HISTORY-UPDATES

August 23 2022

Manual <Lang.pdf> has been improved.

April 20 2022

Program LAICAM has been upgraded and <laicam.pdf> modified accordingly.

February 15 2022

Update of program OPENNESS: cumulated estimates of spectral ratio R/FR have been added to gap fraction (GF), total gap (TG), canopy openness (CO), site openness (SO), UOC and SOC, as function of zenith angles. Manual <openness.pdf> has been modified accordingly.

May 26 2021

Program LAINRC has been slightly modified and <lainrc.pdf> accordingly.

March 30 2021

Programs have been adapted to Mac OS Big Sur. Universal Binaries are still available on request.

June 12 2020

All programs for WINDOWS, Mac OSX and LINUS have been revised.

May 12 2020

All programs for WINDOWS have been revised. Revision for Mac OSX and LINUX will follow.

July 02, 2019

For each program exemplified in manual pages, corresponding parameter files can be found in the document <parameter-files.pdf>.

January 14, 2019

In program SUNFLK a bug affected calculation of sunfleck frequency distribution. Other results were not affected. The bug is now fixed. See manual <sunflks.pdf> and new versions of the program (Windows and Mac OS). We apologize for the inconvenience.

December 06, 2018

Program SUNFLK output contains a misleading sentence in last line: "Relative daily sunshine (DSF)". Replace it by "Relative daily length of sunflecks". See manual <sunflk.pdf>.

September 29, 2017

Based on Lang approach for deriving effective LAI, a new program LANG was introduced, split into two subprograms LANG01 and LANG02. The aim of this program is to compare two methods of fitting mean contact numbers against zenith angles using: 1) ordinary least squares and, 2) least absolute deviation (LAD) from the median, and appreciate their respective merits. LAD is considered as a 'robust' method for better taking into accounts outliers in the set of data. See manual <lang.pdf>.

March 10, 2017

Program LAIBHM and companion program BHMSYS slightly modified, and accordingly manual pages <laibhm.pdf>.

January 25, 2017

Program PARSOC presented a bug with respect to the conversion factor for EPAR (energy units) to QPAR (quantum units). The bug is now fixed.

April 20, 2016

In LAILANG program, Total Gap (TG), Canopy Openness (CO) and Site Openness (SO) did not correspond to hemisphere view as indicated in the manual and output in the result file, only over the selected view angle instead. This miscalculation is now corrected in order estimate TG, CO and SO over the whole range of zenith angles. We apologize for the inconvenience.

October 07, 2015

GFA program dialog improved, file GFA.pdf changed accordingly. GFA-LIN available in both 32 (gfa32_LIN) and 64 (gfa64-LIN) modes.

May 26, 2015

To Mac OS X users. Batch processing GFA under Mac OSX is still not available. As an alternative, we suggest using Windows approach. See Windows (rewritten manual) for GFA batch processing under Windows environment.

April 14, 2015

To Mac OS X users. Running program GFA-OSXi failed while loading *.bmp files. The bug is now fixed. The corrected program can be downloaded from CIMESOSX.zip archive. We apologize for the inconvenience. GFA-PPC, GFA-WIN and GFA-LIN are not affected.

January 10, 2015

Simplifying the use of CIMES programs. All programs with suffix *.sh, like LANGSH, CMPSH, CAMSH, etc., which return 'short' output files are now merged into their corresponding programs, like LAILANG, LAICMP, LAICAM, etc., which formerly returned only 'long' format output. 'Short' output means that results are displayed in only one line, useful for further processing in a spreadsheet. 'Long' output means that detailed results are presented in several lines or tables. Thus, new programs like LAICMP, etc. allow the user to return results either in 'long' or 'short' formats. The following programs are affected by these simplifications: CAMSH → LAICAM; CMPSH → LAICMP; LANGSH → LAILANG; CMLPMLSH → LAIMIL (new name replacing CLMPML). Thus, single *.sh as separate programs are now discarded from CIMES package. In addition, OPENNESS program is slightly modified, including an option 'long' or 'short' output format. All manual files: laicam.pdf, laicmp.pdf, lailang.pdf, laimil.pdf (replacing clmpml.pdf) have been updated, while *.sh manual files discarded. All general manuals are updated as well.

September 27, 2014

Program GFA-LIN modified to allow classified images be processed as well as grey-scale images. Dialog for data input improved in GFA-WIN and GFA-OSX.

March 12, 2014

“Usage” warning message of program PARSOC corrected.

June 20, 2013

Output of program PARSOC improved.

May 04, 2013

Program CLMPML is modified: suppression of unreliable Lang & Xiang clumping index (CIIx). See reliable estimates of CIIx in programs LAILANG, LAICMP, LAICAM. Manual files <CIMES.pdf>, <CLMPML.pdf> are updated accordingly.

April 22, 2013

Program PARSOC modified: correction of erroneous Red/FarRed expression, slight change in results output. Corresponding manual file <PARSOC.pdf> is corrected accordingly.

September 18, 2012

LAISTS, a new program for deriving LAI, is added to CIMES software. The approach is based on Suits extremophile distribution of leaf angles. This approach was applied by Anderson in the eighties. It is still used in current models of vegetation remote sensing, like PROSAIL. The program is available for Mac OSX, Windows and LINUX.

June 06, 2012

A new program for deriving LAI, LAINRC, is added, a method by Norman and Campbell, based on multi-angular processing of gap fractions using a constrained linear least squares technique. Executable files for Mac OSX, Windows and LINUX.

April 16, 2012

A new program for deriving LAI, LAIBHM, is added, a historical valuable method by Raymond Bonhomme, based on multi-angular processing of gap fractions. Executable files for Mac OSX, Windows and LINUX.

March 02, 2012

Manual files <practiceHP> and <GettingStarted> updated.

February 27, 2012

A small modification of GFA-WIN was needed to change the suffix ‘dat’ to ‘txt’, making the program output <gapsize.txt> instead of <gapsize.dat>. This change was required for using correctly batch-processing scripts. Manual file <gfa.pdf> updated.

February 10, 2012

A simplified new version of GFA-WIN, GFA-PPC, GFA-OSX and GFA-LIN is available. This program loads easily BMP image files, grey-toned and binary (encoded 8-bit) as well. Manual file <gfa.pdf> and batch processing scripts have been modified accordingly. New GFA programs will be found in CIMESWIN.zip, CIMESLNX.zip and CIMESOSX.zip archives for Windows PC, Linux and Mac OS environments, respectively. Manual <gfa.pdf> and batch processing scripts

(Windows) are located in MANUALGENRL.zip archive.

August 18, 2011

New script files for improved batch processing of all programs, including interactive GFA. Windows environment. Batch processing for Mac OSX and UNIX will follow. See folder <BatchCimes> in MANUAL GENERAL.

August 08, 2011

For Windows users: <GettingStarted.pdf> introduces to CIMES practice, using Windows DOS-like 'Cmd' command. <Getting Started.pdf> for Mac OSX and UNIX will follow. See the text in MANUAL GENERAL, accompanied by an example HP.

February 02, 2011

Program TRANSLAI, using gap fraction data pooled over transects, grids, or any other plot configuration, is (re-) introduced in CIMES. See <translai.pdf> manual file for details. Currently, Windows version only.

June 02, 2010

Examples of parameter files for all CIMES programs are presented in <cimesprm.pdf> file (MANUALGENRL.zip).

November 23, 2009

Manual files <LAICAM.pdf>, <LAICMP.pdf> and <LAILANG.pdf> slightly modified with respect to correction for slope effects.

November 16, 2009

In program GFA-WIN, the names of output files <gapfract.dat> and <gapsize.dat> are replaced by the names <gapfract.txt> and <gapsize.txt>, respectively.

November 06, 2009

Full revision of Manual pages. Updates: LAILANG, LAICAM, LAICMP, LAIMLR, LOGCAM.

October 06, 2009

Program LAILANG: two methods are available for processing null-gap segments, i.e. segments of the sky map (or sampling grid) completely obscured by vegetation. Other program (LAICAM) will follow. Corresponding manual pages and <shortoutput.xls> file are modified accordingly.

September 21, 2009

Output of program CLMPML improved. Corresponding manual pages and <shortoutput.xls> file are modified accordingly.

September 06, 2009

For Mac users (Intel-based): the core program GFA-OSXi did not work until now owing to a compilation problem. We apologize for this inconvenience. The bug is fixed now. Although GFA-OSXi is a Universal Binary program, it is adapted only to Intel-based Mac. Due to byte-ordering differences with Mac PPC, GFA-OSXi would yield spurious results if run on a Mac PPC. On a Mac PPC (G4 and G5), please run GFA-PPC.

August 08, 2009

New version of Manual archive: MANUALSOLAR.zip available, except PARMOD.

August 06, 2009

New version of 'structure' part of the Manual available (archive: MANUALSTRUC.zip).

August 04, 2009

New version of 'general' part of the Manual available (archive: MANUALGENRL.zip).

July 21, 2009

The manual is being reorganized and rewritten. The release of the new version is scheduled for September 2009 (schedule obsolete).

June 17, 2009

For Mac Users: All programs are released in Universal Binary for Mac OS X. These new executables can be used on Mac PPC (G4 and G5) and Intel-based Mac as well, except GFA. GFA remains distinct under the names GFA-PPC and GFA-OSX, due to differences in byte-ordering. As a result, previous CIMESPPC and CIMESOSXi binaries are obsolete and replaced by the new CIMESOSX binaries.

June 06, 2009

Update reference list <ref.pdf> in <MANUALGENLR.zip> archive.

May 14, 2009

Program SUNFLK released (Mac PPC, Windows and LINUX), for estimating sun-fleck dynamics below forest canopies. MANUALSOLAR.zip contains the corresponding user's manual.

April 30, 2009

1. Release of CIMES-LNX, the full CIMES-FISHEYE package of programs for LINUX environment
2. Revision of all programs in CIMES-WIN (Windows) and CIMES-PPC (Mac G4 and G5, Power PC)
3. Revision and new programs for CIMES-OSXi (Mac Universal, Intel-based) May 2009.

April 28, 2009

STRUCTFILES: Revision of program LAILANG.

March 30, 2009

1. Cumbersome MANUAL.ZIP is split into three independent parts: MANUALGENRL, MANUALSTRUCT and MANUALSOLAR archives
2. CIMESOSXi programs for Mac Intel will be updated and available end April.

March 23, 2009

SUNFILES:

1. PARCLR slightly modified (introduces ground-reflected radiation on slopes)

2. Programs PARHOR (clear sky conditions, hourly values), PARSOC (standard overcast conditions) released.

March 01, 2009

SUNFILES: Program PARCLR released, for estimating solar radiation regimes of forest canopies under clear sky.

Feb. 27, 2009

1. SUNFILES. Utilities: SUNEPHEMERIS, a new program, introduces to the set of programs for estimating solar radiation regimes. This program is interactive.
2. STRUCTFILES. Programs CLMPML and PCS display integrated Pielou's Coefficient of Segregation, in addition to other 'clumping factors'.

Jan. 20, 2009

1. Program CLMPML now estimates clumping indices after Lang & Xiang (1986) and Leblanc et al. (2005), in addition to the modified Chen & Cihlar (1995) clumping index.
2. Manuals <cimes.pdf>, and <clmpml.pdf> were updated accordingly.
3. All programs are updated for Windows and Mac OS X (PPC only). Mac OS X (Intel based) will be updated soon.

Jan. 16, 2009

1. Programs LAILANG, LAICAM and CAMSH display Lang & Xiang (1986) clumping index CIIx.
2. Manuals <laicam.pdf> and <cimes.pdf> were changed accordingly.
3. Program LAICAM compiled for Windows and Mac PPC.
4. Program LAIEXP was discarded.

Jan. 30, 2008

1. All programs accept gap fraction files up to 40 zenith annuli x 150 azimuth sectors, i.e. the sampling grid (sky map) displays a maximum 6000 lines in a gap fraction file. Program CMPBLL is limited to 36 azimuth sectors. Programs CLMPML and PCS are based on circular transects, therefore not concerned by sampling grids.
2. The whole program package has been revised. Bugs were fixed in LAIEXP.

2007

1. LAIMLR, LOGCAM: two bugs fixed concerning the counter for empty segments.
2. LAIMLR: mean contact numbers and SE are calculated for zenith view angle 55° in addition to a multi-angular approach.
3. All programs using gap fraction data can load gap fraction files using sky maps up to 40 zenith annuli x 150 azimuth sectors = 6000 lines, with few exceptions.
4. GFA can be used more friendly thanks to a macro written by Alemo Gonsano (for Windows only, at present).

Most CIMES-FISHEYE programs have been devised and written in C and C++ languages since 1982, continuously revised, updated, sometimes rewritten if necessary. The history of these changes is recorded only from 2007.

9