

## MINX V1.1 for Mac OS X and Windows XP

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### **Built and Packaged by:**

David Nelson and Alex Menzies, JPL

### **Contact for Help:**

Go to the MINX page on the Open Channel Foundation website and click on the "MINX discussion forum". Enter your question or problem report there and check back in a few days to find a response.

### **Mac Package Contents (MINX.dmg):**

- *MINX.app* – A Mac application whose contents include the MINX IDL program and all the other components needed to run MINX except for those described in Requirements. Double-click to run.
- *README\_delivery.pdf* - this file.

### **Windows Package Contents (MINXInstaller.exe):**

- *MINX.sav* – The IDL program that you double-click to run MINX.
- *.data/\** - Two resource files needed by MINX.
- *.doc/\** - Two documentation files including this *README\_delivery.pdf* file.
- *\*.dll* – Seven dynamically-linked library files needed by MINX.
- *\*.dlm* – Two IDL files that point MINX to functions in the library files.
- *Uninstaller.exe* – A program to uninstall MINX.

### **Sample Package Contents (MINX\_Sample.zip):**

- *9 MISR GRP\_TERRAIN HDF files* - Radiometrically-calibrated and geometrically-corrected radiances, one file per MISR camera.
- *MISR GP\_GMP HDF file* - Camera geometry for each pixel in the MISR orbit.
- *MISR AGP HDF file* - DEM (digital elevation model) used by MINX.
- *MISR TC\_CLASSIFIERS HDF file* - Smoke, cloud, land and dust masks generated by the MISR SVM (support vector machine code) during standard processing

- *MISR AS\_AEROSOL HDF file* - Aerosol parameters generated during standard processing.
- *ModVolc\_AlaskaTest.txt text file* - Summary information on MODIS MOD14 thermal anomaly data from the ModVolc database for this MISR orbit.
- *FirePixels\_013289\_NAmerica2002.txt text file* - Processed coordinates of thermal anomalies and associated radiative power information for this MISR orbit.
- *README\_Sample.pdf* – PDF training file with instructions for learning how to use MINX effectively.

### **Tutorial Package Contents (MINX Tutorial.zip):**

- *file Orbit23963\_Block38.sav* - MINX save file with interpretation for orbit 23963.
- *file Orbit24123\_Block39.sav* - MINX save file with interpretation for orbit 24123.
- *file Orbit24152\_Block40-41.sav* - MINX save file with interpretation for orbit 24152.
- *file Orbit35858\_Block50-51.sav* - MINX save file with interpretation for orbit 35858.
- *file Orbit35990\_Block63.sav* - MINX save file with interpretation for orbit 35990.
- *folder ./023963* - 48 image, plot and raw data files
- *folder ./024123* - 136 image, plot and raw data files
- *folder ./024512* - 16 image, plot and raw data files
- *folder ./035858* - 56 image, plot and raw data files
- *folder ./035990* - 32 image, plot and raw data files
- *README\_Tutorial.pdf* – PDF training file with instructions for learning how to analyze and digitize smoke plumes.

### **System Requirements:**

Platform - MINX is available for Macintosh Intel and PowerPC computers running OS X and for Windows XP. At least one GB of memory is required, although two or more are strongly recommended. MINX has not been tested on Windows Vista.

X11 (Mac only) - You will need the Mac X11 application to run MINX. Many users will already have the Unix X11 application installed on their Mac. To check, use Finder to determine if it is located in your /Applications/Utilities/ directory. If it isn't, then you will have to install it from your Mac CD.

IDL - If you do not already have the free IDL Virtual Machine (VM) application installed, go to the ITT website at <http://www.itvis.com/ProductServices/IDL.aspx> and download it (you must register to download the application). Read the installation instructions, and when ready to download, choose either the Mac OS X (NATIVE Install) option or the Windows (XP) option, depending on your platform. After the download has completed, double-click on the downloaded file to begin the installation.

If you are installing on a Mac, be sure to accept the default destination directory of /Applications/ if you have administrative access. If you do not, you can install IDL in your home directory under /Users/<youruserid>/. Note that for MINX to work, the base IDL directory must be one of these: /Applications/itt/, /Applications/rsi/ or /Users/<youruserid>/itt/. If you have

installed OS X 10.5 (Leopard) on your Mac, then you must use IDL version 6.4.1 or later. For IDL 6.4 users, there is an IDL 6.4.1 patch that fixes Leopard incompatibility at this site: <http://www.ittvis.com/services/techtip.asp?ttid=4284>.

### **Installing MINX on the Mac:**

To install MINX, double-click the MINX.dmg icon you downloaded and drag a copy of the MINX icon from the MINX\_Delivery\_App folder to your desktop or to the folder where you want it installed.

MINX requires the use of left and right mouse buttons, so you should ensure that you have both buttons set up correctly in your System Preferences. (Select Keyboard & Mouse; then select Mouse. If the option is available for your mouse, set it to use a secondary button.)

There is a change in behavior of Macintosh OS X in versions 10.3.9 and later, which interferes with right-mouse clicking in an IDL plot window. The click generates no response, and the window can lock up (especially in the Show Orbit Location option of MINX). If this occurs, quit X11, execute the command below in a terminal window, and then restart X11. This will change the mouse behavior until you reset it with a different defaults command.

```
defaults write com.apple.x11 wm_click_through -bool true
```

### **Installing MINX on Windows:**

To install MINX, double-click on MINXInstaller.exe and follow the on-screen instructions. Note that you must have administrative privileges to install; if you do not, the installer will generate an error when it tries to copy files onto your hard drive. Your alternative is to install MINX in another directory, preferably in a new folder in your "My Documents" folder. Note that all the files installed by MINXInstaller.exe must remain together in the same folder.

### **Running MINX on the Mac:**

To run MINX, double-click the MINX icon, then click anywhere inside the IDL virtual machine (VM) banner.

Complete MINX documentation is available from the initial dialog box by clicking on the "Load Documentation" option. After it is loaded, you can save the PDF file to another location if you wish.

### **Running MINX on Windows:**

MINX can be launched from the Start Menu by clicking on Start->Programs->MINX->MINX, and then by clicking anywhere inside the IDL virtual machine (VM) banner. You can also create a link to MINX on your desktop if you wish.

Complete MINX documentation is available from the initial dialog box by clicking on the "Load Documentation" option. After it is loaded, you can save the PDF file to another location.

## **Installing the Sample and Tutorial data**

These zip files should be moved to a new folder on your computer. Use your system's unzip facility (often as easy as double-clicking the filename) to extract the contents to your new folder. Then open the README\_Sample.txt and README\_Tutorial.txt files in each unzipped folder using your text editor to learn how to proceed.

## **New Features:**

V1.1:

- Added support for Windows: added new 'C' libraries, backslash directory delimiters, GUI tweaks, Plume Utility ftp files, etc.
- Added calculation of plume quality flag as well as other parameters to write to output text file. E.g. number of pts in table, area per point, standard deviation metric, wind direction relative to along direction, etc.
- Added all the input/output files and directories in Plume Utilities to the list of directories to save between sessions so user doesn't need to reenter them each time MINX is loaded.
- Changed animation code for generation of MPEG. When no IDL license is available and capturing digitized region, 9 JPEGs are created instead.
- Added ability to display 4-bands of data in BRF plot utility rather than only the red-band.
- Added ability to use MISR block-subsetted files in "Process Plumes" and "Animate Cameras" options.

V1.0:

- This was the initial delivery of MINX.

## **Resolved Issues:**

V1.1:

- Fixed zero-wind height retrieval problem when terrain is higher than 2500 meters.
- Fixed bug that caused crash when large height or wind range produced more than 60 bins in height/wind histogram.
- Fixed a crash when Restoring a Saved session and there are 2 orbits loaded.
- Set the "2 Orbits" button and made it insensitive along with BlkBeg and BlkEnd text controls.
- Fixed a bug in the plume utility that reports available MISR products. It previously reported a product file was available if it contained the SCF .subset... string.
- Fixed bug that reset region type to smoke plume whenever a plume being digitized was canceled.
- Fixed bug that created black histogram window if there were no zero-wind heights less than the maximum specified height.
- Fixed bug that caused failure when fire pixels were loaded under IDL 7.0. Added a message to make it clear when a L1B2 file is corrupted and needs to be reordered.
- Changed plume utility that reports on available MISR orbits so that all products with version number  $\geq$  the template value will be reported on.

- Changed maximum absolute wind speed in height/wind retrieval to 75 m/s.
- Fixed MPEG animation when grayscale images are selected.

V1.0:

- This was the initial delivery of MINX.

**Known Problems:**

- MINX may crash on a PowerPC Mac the first time after login that a secondary window displaying plume height retrieval results is closed. The solution is to reload the program and continue working.
- IDL does not follow symbolic links unless the files pointed to by the links are on local disks or are on auto-mounted networked disks. If the disks containing the files MINX needs to read are manually mounted, the solution is have your system administrator auto-mount them.