

OLAF User Guide

Revision history:

May 12, 2009, document created by Carol Neese.

Nov. 21, 2014, updated by Carol Neese, with suggestions from Ludmilla Kolokolova, Beatrice Mueller, Lev Nagdimunov, and Matthew Knight.

I. Before You Start – The Big Picture

Archiving data in the PDS is a collaborative process between the PDS and the data provider. Before starting to enter your data into OLAF you should inform the appropriate PDS representative so they can help you with the process as needed and arrange for the data to be reviewed and archived.

PDS representative to contact before starting to use OLAF:

For asteroids, Carol Neese, neese@psi.edu.

For comets, Ludmilla Kolokolova, ludmilla@astro.umd.edu.

Here is an overview of the process:

1. The data provider (you) enters the data and associated information into OLAF.
2. An OLAF administrator uses OLAF to "generate" the data set. This creates all the files PDS requires to support the data files and packages them, along with the data files themselves, into a volume.
3. The PDS node (such as Small Bodies Node) schedules an external peer review of a group of data sets. You will be able to attend the review of your data set by phone to participate in the discussion and give additional information to the reviewers. (Your attendance is optional, but recommended.)
4. The reviewers come up with a list of any changes that must be made to the data set and documentation before it can be archived. These required changes are called "liens". The data provider is responsible for resolving these liens within OLAF, with help from the PDS representative.
5. Once the liens are resolved, the data set is archived and posted on the PDS archive website for public use. It also receives a citation as an electronic publication in ADS.

II. Getting Started

1. Go to the front page of OLAF at <http://sbntools.psi.edu/olaf/>. Select "Read More..." under the section "What is OLAF?" to get an overview of the archiving and peer review process (similar to the information in part I above). A link to the current version of this User Guide is available in the top blue bar throughout the OLAF interface.

2. Review the file requirements appropriate to your data. There is a link to the file requirements on the front page of OLAF. If you cannot meet the file requirements, or if your type of data is not in the list, you might not be able to use OLAF to archive your data. Contact your PDS representative (listed above) for help.
3. Register as an OLAF user. In the login box is a link "Register for Site" which takes you to a registration form. Registering will give you an OLAF account and provide the OLAF administrator with information to contact you about your data if needed.
4. Log in to OLAF. You will find yourself on a page entitled "Select or Create a Data Set".
5. OLAF can get very confused if you open multiple instances of OLAF at one time. Do not do this. It will also help if you use the OLAF navigation rather than the back button of your browser where possible.

III. OLAF Site Navigation

1. In the left sidebar are links to get to the Select Data Set page (the first page you see when logging in to OLAF), the Add Data page, or other appropriate locations within OLAF. The sidebar is context sensitive so you will see various links here depending on where you are in the process.
2. At the top right is the name of the user, you. Click this to see or modify your account information.
3. At the top right under the user name is the name of the data set you are currently working on, and a link called "Contents". (This link will not appear until you create and enter a data set.) This link shows you the current content of the data set you are working on, including the supporting information. This is a good place to review what you have done so far and check for completeness or errors.
4. The blue bar near the top has a context-sensitive help button. OLAF has extensive help pages to answer your questions. OLAF also has many "?" links next to specific items which link to help information for that item. (OLAF starts a new window to display help information. Some browser settings may place the new window in a tab; open the tab to see the help information.)
5. If you can't find an answer to your question, contact OLAF support (the next button in the blue bar).
6. When you are done with your session, use the final button in the blue bar to log out. You don't have to enter your information in one session, you can log out and continue later. If you are entering information into a form, be sure to select "submit" at the bottom of the form before leaving OLAF or moving to a different page, to make sure your information is saved. The longer forms also have a "save form" button so you can save the information while the form is still incomplete. Selecting "submit" enters your information into the OLAF database, but you can always come back to the form and change it.

IV. Creating a New Data Set

1. If you have used OLAF to create data sets before, the first section of the Data Set Page is a list of your existing data sets, with links to their contents. If this is the first time you have created a data set in OLAF, this will not appear. In either case, go to the section called "Create new data set".
2. Under "Create a new data set" is a form to enter the information describing and documenting the data set. Fill in each of the blanks. Blanks without a * are optional, so you can skip them if you feel they don't apply to your data set, or leave them until later. Use the "?" links to find out more information about what is wanted.
3. References: This reference code box is for references cited in the data set description, confidence level note, and other items in this form. For references cited in other parts of the data set, you will fill in other reference code boxes later.
4. Authors/Editors: These are the authors or editors who will be listed in the citation of the data set. For any individual products (data files) within the data set that have a different list of authors, you will fill in other author/editor code boxes later.
5. The large text boxes for Data Set Abstract, Data Set Description, and Confidence Level Note may take some time and attention to fill out adequately. Click the "?" links next to these boxes to see what information PDS wants to see here. You can always come back to change or add text later, but you must first click the "Create New Data Set" button at the bottom to save the information you've entered.
6. When you've finished filling out the form, select the button at the bottom, "Create New Data Set". If you have left any required item blank you will be prompted to fill it in before proceeding. (If you want to take a break or go on to the other steps before filling in the large text boxes, enter a bit of placeholder text for now.) All the information entered in this form will eventually be archived as a supporting part of your data set.
7. To get back to this page to modify your information later, go to the front OLAF page ("Select Data Set") to the top section called "Upload to existing data sets". Select the data set you wish to modify, then select the button "Modify data set info".
8. If you have already archived an OLAF data set and later want to submit an updated version, DO NOT create a new data set in OLAF. Use the existing data set, increment the version number, and add or modify as needed for the updated version. This will save you a lot of work, as well as insuring consistency with the earlier version.

V. Adding Data to a Data Set

1. After you complete the form to create a new data set, you will be taken to a page called "Add Data". There are seven options for types of data which can be entered into OLAF. If your data doesn't seem to fit into any of these types, contact the node representative (listed above) for help. You can put multiple types of data into the same data set.

2. Select the button for the type of data you would like to add. First you will see a page describing the file requirements for the selected type of data. This is the same as the file requirements you read at the top level of OLAF. If you have not already done so, read through them and make sure that your data meets these requirements.
3. If your data does not meet the stated requirements, modify your data files to conform to the data requirements. If this is not possible, contact the PDS representative for help.
4. The process for entering each type of data is described in appendices below. We strongly recommend that you read not only the Appendix relevant to your data, but also the help pages available directly on the OLAF pages through the question mark icons.

So far, sections have been written only for General Tables and for FITS Images. Appendices have not yet been written for Telescope Spectral Tables, Laboratory Spectral Tables, Time Series Tables (Lightcurves), or Complex Tables. However, these other types of tables work somewhat similarly to General Tables, so read through the Appendix for General Tables and then use the OLAF help pages accessed through the question mark icons. If you get stuck and the help pages and this tutorial don't help you, email your SBN contact person for help.

5. To get back to the "Add data" page to add more data later, go to the first OLAF page ("Select Data Set") to the top section called "Upload to existing data sets". Select the data set you wish to modify, then select the button "Add or modify data products".

VI. Finishing your Data Set

1. On the "Select Data Set" page you will see a list of your data sets (maybe only one if this is your first one) and after each one is a link called "Contents". This link will take you to a page showing the contents of the data set so far. At any time during the process, but especially when you feel the data set is done, go to the Contents page and:
 - Read the text portions to check for errors and for completeness.
 - If you have entered instrument information, view and edit it with the link under "Instrument ID".
 - Go over the list of submitted "products" (data files) to make sure they are all there, and are divided into appropriate subdirectories if desired.
 - Check the list of references to make sure you have added all the appropriate references.
 - Finally, check the author list in the citation(s) for correctness. (The citation is provisional and may be changed in the peer review, so don't use it yet.)
2. If your review of the data set reveals any deficiencies or errors, correct them.
3. If your data set (listed on the Select Data Set page) has a yellow triangle warning next to it, click on the yellow triangle and follow the instructions to resolve it. Some yellow triangle warnings must be resolved by an OLAF administrator, in this case contact your SBN representative for help.

4. When you are satisfied with the data set, contact your PDS representative and let them know that the data set is ready for peer review.

Your work is now complete until after the peer review, when you will return to OLAF to make any changes or corrections required by the reviewers.

PDS representatives:

For asteroids, Carol Neese, neese@psi.edu.

For comets, Ludmilla Kolokolova, ludmilla@astro.umd.edu.

Appendix A: Entering General Tables into OLAF

1. “General tables” are fixed-format ASCII tables with data in columns. On the “Add Data” page, select the button “Add general tables”. This will take you to a page outlining the format requirements for general tables. If/when your data meet these requirements, select “Proceed”.

2. You may enter tables singly, or if you have one or more groups of tables all having the same format, you may enter them in batch mode, or both.

Single data files:

3. When you select “Add One Table”, you first get a form for information about the table. Fill out this form carefully. If you don’t have all the information at hand, you can come back later to add or modify your information. Use the question mark links by each box to access the help pages and find out more about what is wanted.

4. Target Information: PDS has very specific target naming requirements. Be sure to click the question mark in this section and make sure your target names conform to the PDS requirements. To get to the target section of the OLAF help pages directly, use this link: http://sbntools.psi.edu/olaf/table/index_description.jsp#targetInfo

5. The Facility Code specifies the telescope (or spacecraft) used to obtain the data. The Instrument Code specifies the instrument. Most professional groundbased observatories and telescopes are already in OLAF’s database and you will follow the instructions on the page to select the correct one. OLAF contains codes for the instruments that it has seen before, but it may not have seen yours. If your instrument is not already in OLAF, follow the instructions to enter information documenting the instrument which will be included in the archive in support of your data. There are also special facility and instrument codes for data compiled from the literature or collected from many telescopes and instruments. Choose these if they are applicable instead of a real instrument and facility.

6. References: At a later stage, you will be entering column descriptions for the columns of your table. If your column descriptions, table description, or table abstract will refer to any published papers, use “View Existing and Define New References” to find or define reference codes for these references, and include the codes on the form. If your column

descriptions, table description, or table abstract do not refer to any references, leave the reference box blank.

7. You will already have defined an Author Code for the data set as a whole. If this table should be given different authorship than the rest of the data set, enter a separate Author Code. If it is the same, use the same Author Code you defined for the data set as a whole.

8. When the form is completed, select “Proceed”. You then can specify how your table is delimited.

9. The next step is the column descriptions. Follow the instructions to fill in this form. Clicking the question mark icons will get you more information about what is wanted. There is a button at the top of the form to save what you’ve entered so far, if you want to log out and come back later.

10. When the form is complete, select “Proceed” (at the bottom of the form). If there are any mistakes, you will be prompted to correct them.

11. In the final step, you will upload your data file. OLAF will check the column information you entered in the form against the data file and if there are any format mismatches it will prompt you to correct them before accepting the file. You may have to correct either the form or the data file. Once any format mis-matches are resolved, OLAF will accept the data file.

Batches of data files:

12. Batches of data files must share the same column formats and definitions. Entering data in batches allows you to enter the column definitions only once for a group of data files.

13. When you select “Add a batch”, you will be asked to fill in a form with information about your tables. Fill this form as for a single table (as in steps 3-7 above). Next, you will see a screen called “Column Definitions”. Fill this out as for a single table (as in step 9 above).

14. When the column definitions are complete, you will be taken to a form called “Create an Index File”. The index file is a file you prepare with one line per data file to specify information that is specific to each data file. If you have only a handful of files in the batch, you can use the form on this page to enter the lines of the index file and then download it for use in submitting your batch. If you have more than a few files in the batch, it’s more convenient to prepare the index file yourself in a text editor. Enter just a line or two into the form, then download the index file and complete it with a text editor. The few lines you downloaded will serve as a template so you get the format right.

Note: After you have entered information for one line of the index file, select “Add a line” to save this information and go on to the next line. Selecting “Go on to the next step” before “Add a line” will cause the information for that line to be lost.

15. When you’re done using the index table form and have completed your index table, select “Skip this page” or “Go on to the next step” to get to the upload page. Here you can follow the instructions to upload your data along with the index file. OLAF will check the columns of all the tables in the batch against the column definitions you’ve

provided, and prompt you to correct any format errors. When any errors have been corrected and the formats match, OLAF will accept the batch.

Note that OLAF expects to find the index file at the root level of the zip or tar file, and the directory structure and filenames of the data must match that described by the path/filenames in the index file. If your submission doesn't work, read the instructions on the submission page again carefully to make sure they have been followed. If you can't find the problem, email with your zip or tar file and a screenshot of the error message to OLAF Support at olaf@psi.edu.

Appendix B: Entering FITS Images into OLAF

1. When you select the data type of FITS Images, OLAF will take you to a page describing the file requirements. OLAF accepts FITS images with no extensions which conform to the FITS Standard as specified by the NASA/Science Office of Standards and Technology at http://fits.gsfc.nasa.gov/fits_standard.html. It does not currently accept FITS images with extensions, or non-image FITS files. (If your data is of a type not accepted by OLAF, you can still archive your data. Contact your SBN representative for help.)

2. To insure that your FITS images meet the requirements, we recommend that you load them into the FITS Normalizer at <http://sbntools.psi.edu/fits/>. FITS Normalizer allows the mass validation and editing of FITS headers, and you can use it to determine whether your headers meet the requirements and correct them if they don't. FITS Normalizer is also good for catching isolated errors in the FITS headers. OLAF requires that each "batch" of FITS images have the same set of header keywords. FITS Normalizer can help you add null-value keywords to the images missing a keyword to achieve this, or you can separate your images into batches, each having the same set of keywords.

3. When your FITS images have been validated (and corrected if necessary) in the FITS Normalizer, select "Proceed" to enter the information for your first batch of images.

Some background information is important here. At this stage, OLAF will collect the information it needs to create PDS-required files called labels. A PDS label is like an external header, and is required for each data file in PDS. OLAF takes most of the information to populate the labels from your FITS headers. Any required label information which is not in the FITS header must be either entered into the OLAF form (if it is the same for all the images) or supplied in a file called "index.tab" (if the information is different for different images). The index.tab file has one line for each of your FITS images, and columns for the necessary parameters. OLAF will tell you how to create this file.

OLAF also has the capability to create a parameter table listing the values of selected keywords for each image. For example, if you would like your data set to include a file listing the RA, dec, observation mid-time, and exposure duration for each of your images, you can have OLAF create this file from the values in the FITS header.

4. If you'd like OLAF to create a parameter table for your images, select the link at the bottom "Select columns for a parameter table" and follow the instructions to select the keywords in the FITS header to be included in the table.
5. On the same page, after you're done with the parameter table (if desired), you can proceed to give OLAF the information to create the PDS labels. If you have not used OLAF to enter FITS images before, select the "Add Images" button to start the process. If you have done it before, you can select previously used settings or start a new set.
6. As you go through the process, OLAF will save all your choices so you can use them later for other batches of data. OLAF calls these your "settings". Choose a name for your settings, and later you can reload the same settings for this or for other data sets, selecting them by name. If you have multiple batches of images with different characteristics, you can use different settings for each batch. OLAF makes available to you all the settings from all your data sets, so you can re-use settings for other data sets as well.
7. When you have entered your settings name and selected "Proceed", OLAF will take you through a series of steps to collect the information to populate the label. First it will go through the parameters that are required by PDS, then the optional parameters. In the sidebar is a list of these steps. Steps in the sidebar become clickable once you have completed them, enabling you to leave the process at any time, and then when you come back to skip over the ones you've already done and work on the ones that aren't completed yet.
8. One of the last steps is "Create an index file". The index file is a file you prepare with one line per data file to specify information that is specific to each data file, other than that which OLAF can get from the FITS headers. If you have only a handful of files, you can use the form on this page to enter the lines of the index file and then download it for use in submitting. If you have more than a few files in the batch, it's more convenient to prepare the index file yourself in a text editor. Enter just a line or two into the form, then download the index file and complete it with a text editor. The few lines you downloaded will serve as a template so you get the format right.

Note: After you have entered information for one line of the index file, select "Add a line" to save this information and go on to the next line. Selecting "Go on to the next step" before "Add a line" will cause the information for that line to be lost.

9. When you're done using the index table form and have completed your index table, select "Skip this page" or "Go on to the next step" to get to the upload page. Here you can follow the instructions to upload your data along with the index file. OLAF will check the columns of all the tables in the batch against the column definitions you've provided, and prompt you to correct any format errors. When any errors have been corrected and the formats match, OLAF will accept the batch.

Note that OLAF expects to find the index file at the root level of the zip or tar file, and the directory structure and filenames of the data must match that described by the path/filenames in the index file. If your submission doesn't work, read the instructions on the submission page again carefully to make sure they have been followed. If you can't find the problem, email with your zip or tar file and a screenshot of the error message to OLAF Support at olaf@psi.edu.

10. If you have multiple batches of images, repeat the above steps to enter each of the batches. You must complete one batch all the way through successfully uploading the data before starting a new batch. You can re-do a batch after uploading data (if you want to change how you did it) by reloading the settings, modifying them as desired, modifying the index file as desired, and then re-uploading.

Frequently Asked Questions

What if I want to add data for a facility/instrument that isn't already in OLAF?

Groundbased telescopes and instruments can be added in the “Look up Facilities” and “Look up instruments” pages. (Be careful not to add instruments or telescopes that already exist in OLAF.) For space mission facilities and instruments, or to edit existing groundbased facilities or instruments, ask your SBN representative.

What if I want to delete data after I've uploaded it?

Go to the Contents page for the data set, open the relevant folder in the list of “Submitted Products”, check the checkbox next to the files to be deleted, then select “Delete Files”.

How can I move files into subdirectories?

You can move files into directories on the Contents page by checking the check box next to files in the “Submitted Products” list and selecting “Move Files To”. However, if you have submitted the files using an index table, resubmitting the data with the same index table will put the data back into the original directories. In this case it is better to update the index table itself with the changed directory structure.

I'm getting errors that don't make sense. What do I do?

Logging out and back in will often clear the problem. It may also be necessary to clear cookies. If this doesn't work, email to OLAF support (olaf@psi.edu) with a screen shot of your error message, describing what you were doing when the error occurred.

When I look at my data set description (or other text) on the Contents page, it says [INVALID_PDS_CHARACTER]. How do I fix it?

PDS requires all text to be plain ASCII. If you cut and paste from a non-plain-text document you may get non-ASCII characters. Go back to the text box where you entered the text in OLAF and replace the non-ASCII characters with an ASCII equivalent.

How do I delete an erroneous reference from my list of references?

OLAF currently has no way to delete a reference from its database. Just ignore them.

I'm getting a warning about "non-standard targets".

OLAF flags all target names it hasn't seen before as “non-standard targets”. They must be approved by an SBN representative, to avoid incorrect target names being introduced into the OLAF database. Ask your SBN representative to check and approve your target names.