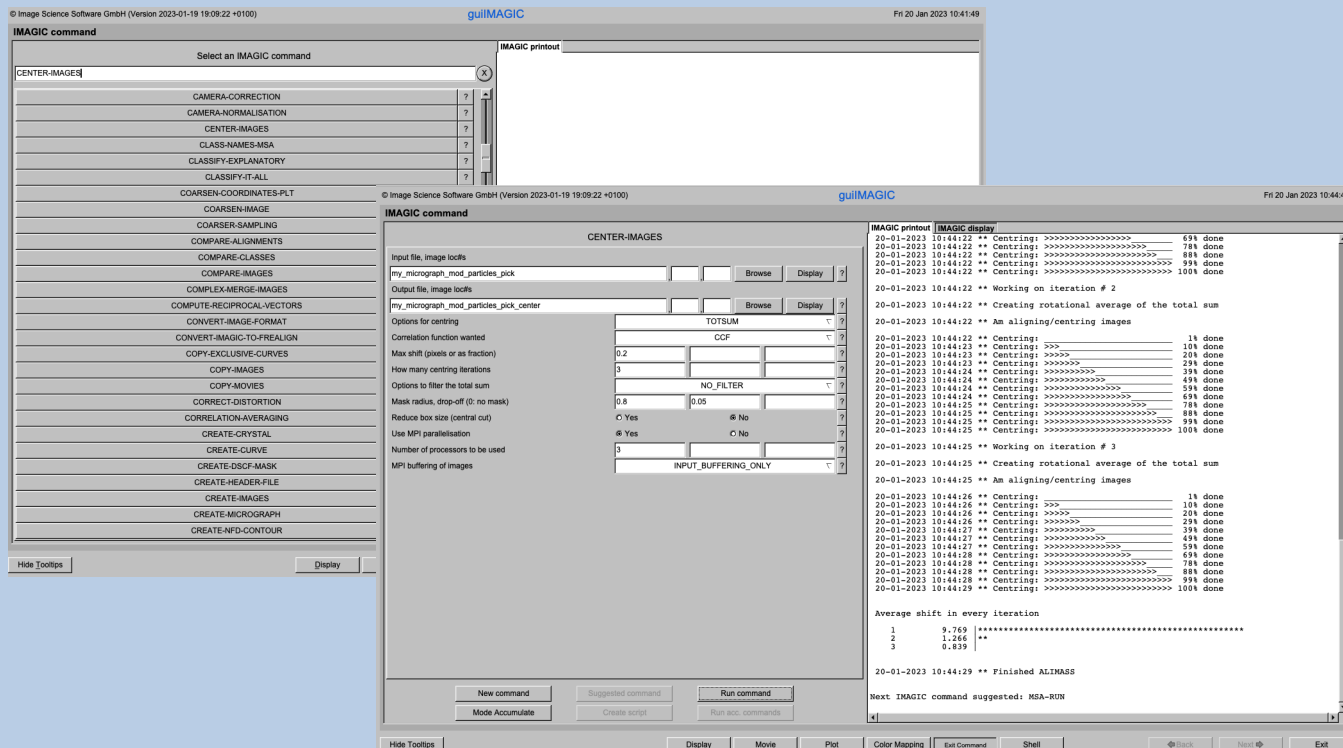




A Brief Introduction

Version 6-Dec-2023
www.ImageScience.de
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The guiMAGIC program



The **guiMAGIC** program allows you to run all **IMAGIC** commands in a GUI window.

This is a brief hands-on on how to use IMAGIC GUI oriented programs and how to work with **guiMAGIC**.

NOTE:

The number of **IMAGIC** commands which are available depends on your **IMAGIC** installations/licence.

CONTENT:

- IMAGIC GUI programs How to use IMAGIC GUI programs
- guiMAGIC How to run IMAGIC commands
- Error hints How to send us feedback



The Working Directory

If **guiIMAGIC** is called from the programs list, by using an icon or in a command line the working directory will be your default system directory.

If **guiIMAGIC** is called by an IMAGIC command in a terminal / command window

```
IMAGIC-COMMAND : guiIMAGIC
```

the working directory will be the directory used in this window.

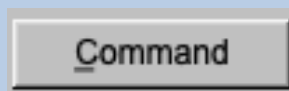
If you want to change this directory click the “Exit command” button



to navigate to the “Start” page where you can specify the working directory of **guiIMAGIC**.

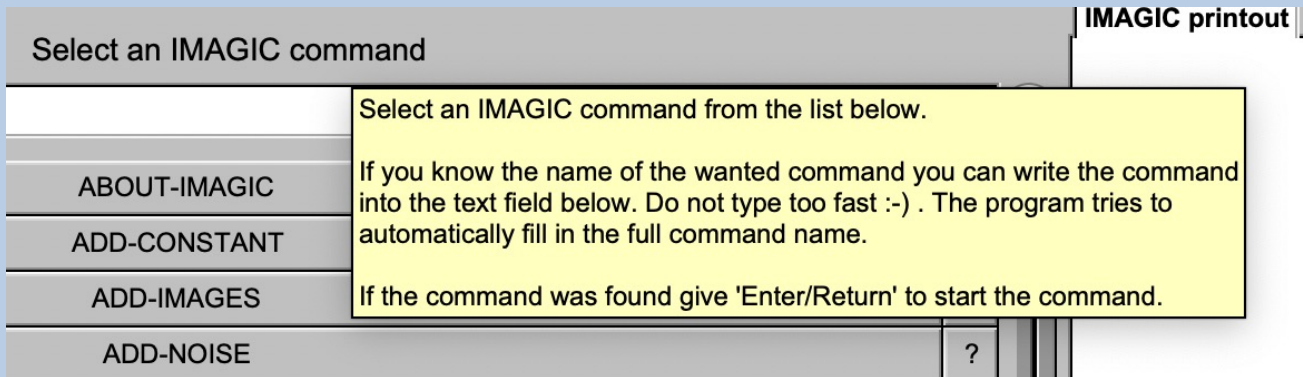
If you later do not specify directories all output files will be stored in the working directory which you have specified on the start page.

To return to the page with the list of all IMAGIC commands click the “Command” button:

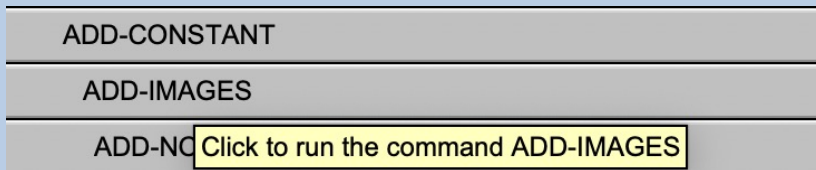


Help

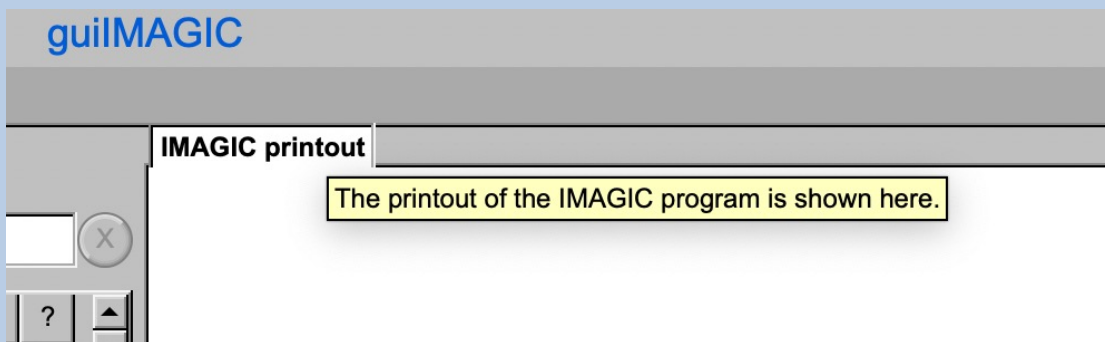
Move the cursor on (nearly) any item (questions, radio buttons, display windows...) shown on the pages and you will get context sensitive help.



The screenshot shows a dialog box titled "Select an IMAGIC command" with a list of commands: ABOUT-IMAGIC, ADD-CONSTANT, ADD-IMAGES, and ADD-NOISE. A yellow tooltip is overlaid on the list, containing the following text: "Select an IMAGIC command from the list below. If you know the name of the wanted command you can write the command into the text field below. Do not type too fast :-). The program tries to automatically fill in the full command name. If the command was found give 'Enter/Return' to start the command." A small window titled "IMAGIC printout" is visible in the top right corner.



This close-up shows the bottom part of the command list. The "ADD-IMAGES" button is highlighted with a yellow tooltip that says "Click to run the command ADD-IMAGES".



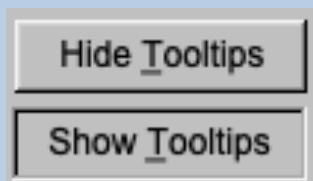
The screenshot shows the "guiIMAGIC" application window. The title bar reads "guiIMAGIC". Below the title bar is a menu bar with "IMAGIC printout". A yellow tooltip is overlaid on the printout area, stating "The printout of the IMAGIC program is shown here." The window also features a search field, a close button (X), and a help button (?).



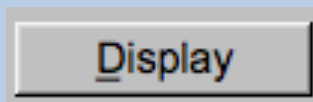
The Toolbar

There is a toolbar at the bottom of each **guiIMAGIC** page.

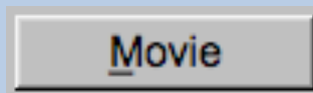
The toolbar buttons:



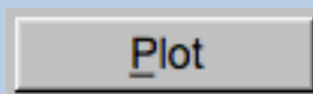
Show or hide the context sensitive tooltips (the help text may sometimes disturb)



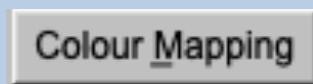
Open a DISPLAY page to visualize IMAGIC images. Refer to **guiDISPLAY**.



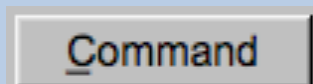
Open a MOVIE page (display in an endless loop). Refer to **guiDISPLAY**



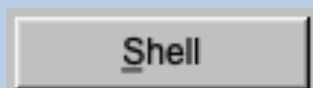
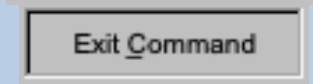
Open a PLOT page to show IMAGIC curves. Refer to **guiPLOT**



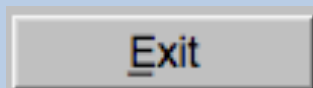
Open a DISPLAY page to visualize IMAGIC images using a colour map stored in another input.



Navigate to the Start page of **guiIMAGIC** and back to the list of commands



Run a shell / terminal page. command

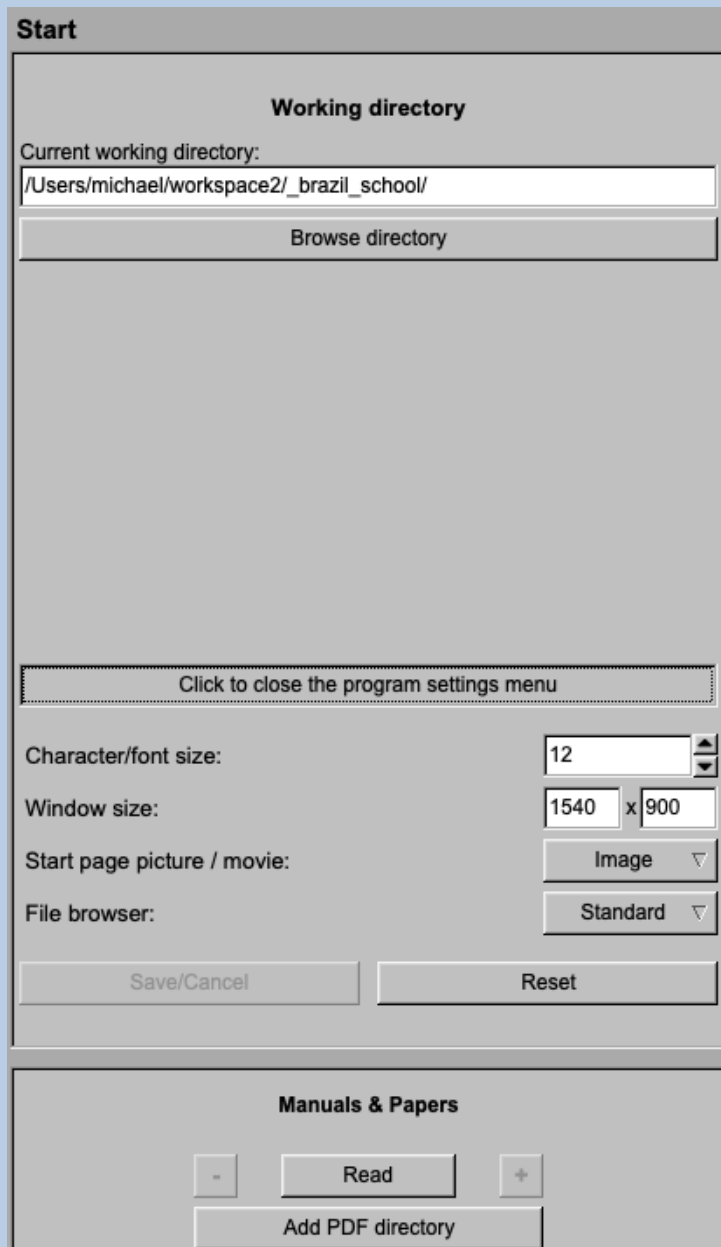


Exit **guiIMAGIC**



The “Start” Page

This page is not part of the **guiMAGIC** workflow and can only be reached using the “Exit Command” button.

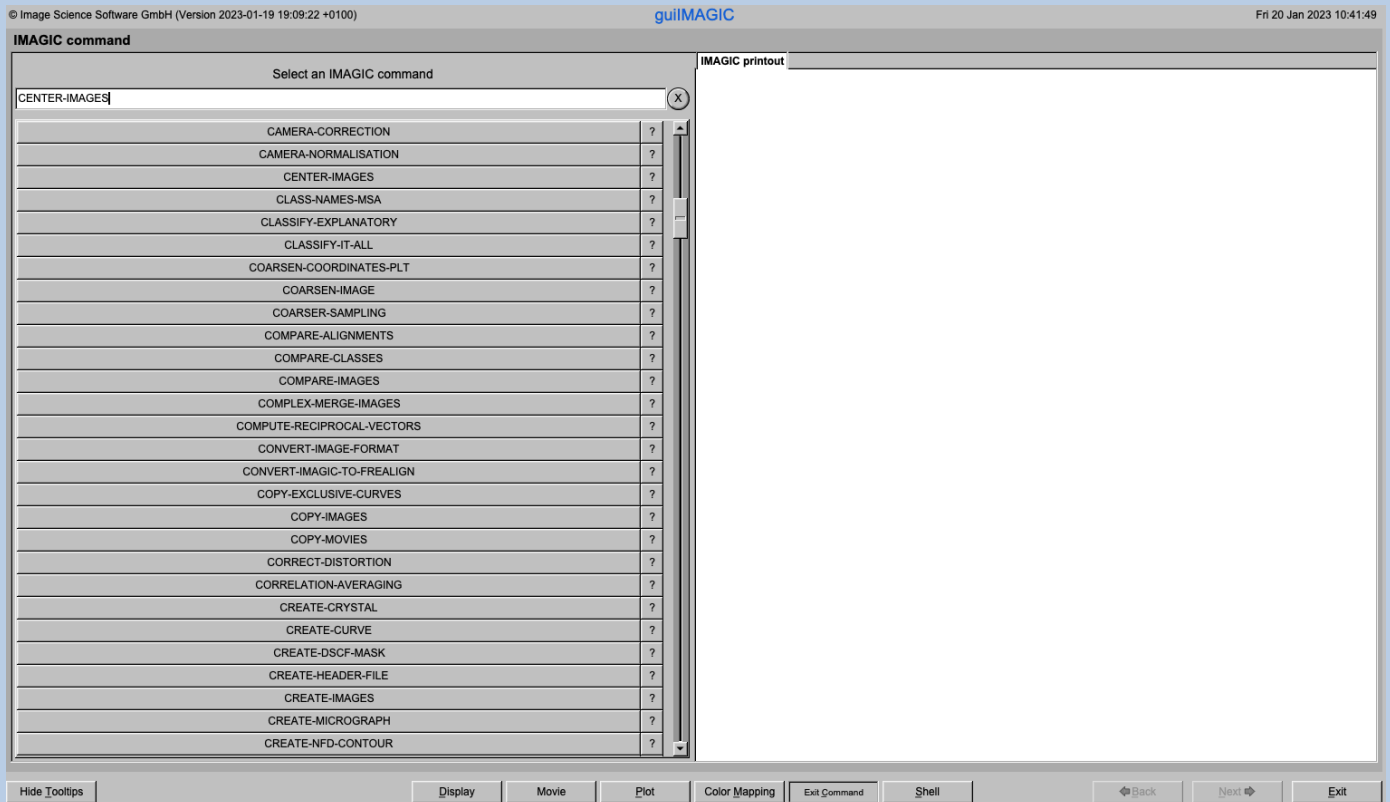


On this page you can set some program parameters:

- a) the working directory
- b) the size of the **guiMAGIC** program windows and/or text
(a re-start is needed)
- c) the type of file browser



The “Commands” Page



DESCRIPTION:

Select and run any **IMAGIC** command.

You can specify all file names by entering the name in a text field or by browsing the directory.

You can specify all command parameters.

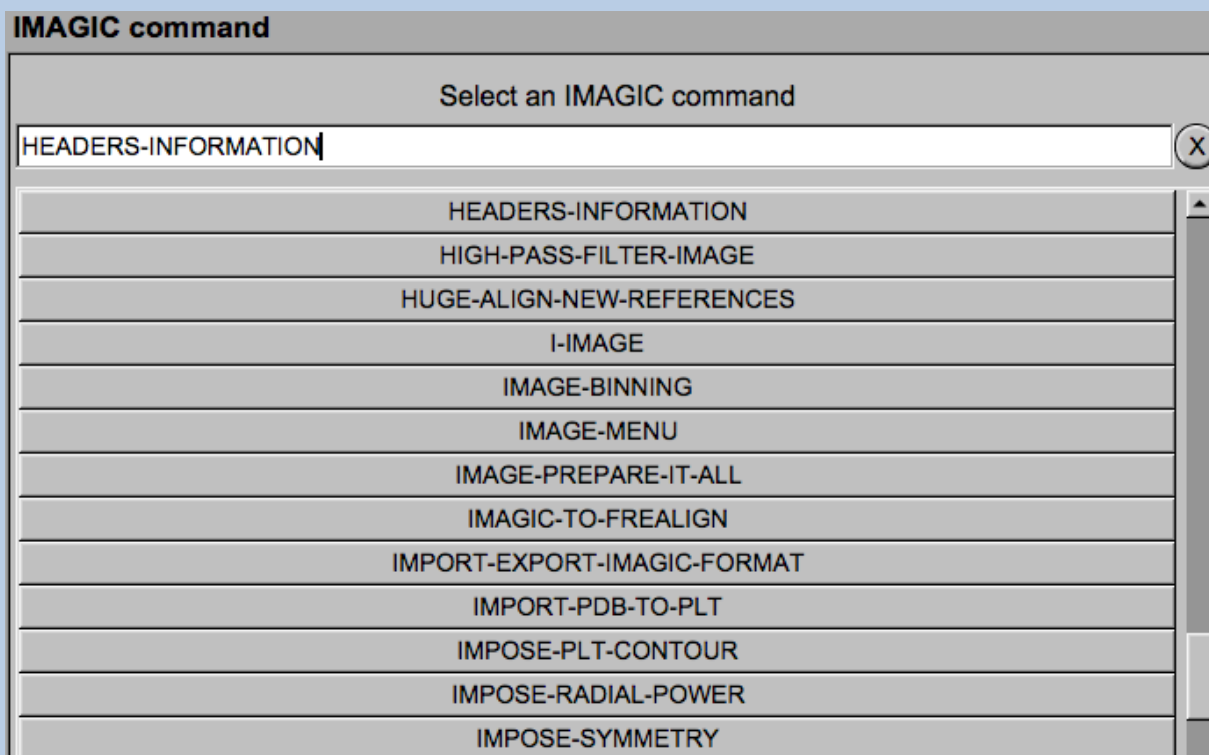
You can visualise input and output images.

NOTE:

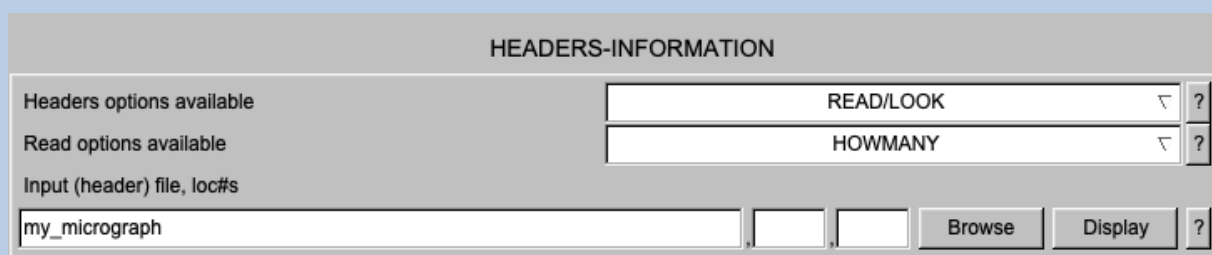
The number of **IMAGIC** commands which are available depends on your **IMAGIC** installations/licence.



Choose the wanted command by clicking into one of the command buttons. If you know the name of the wanted command you can also type the name into the text field. Do not type to fast. The program tries to automatically fill in the full command name.



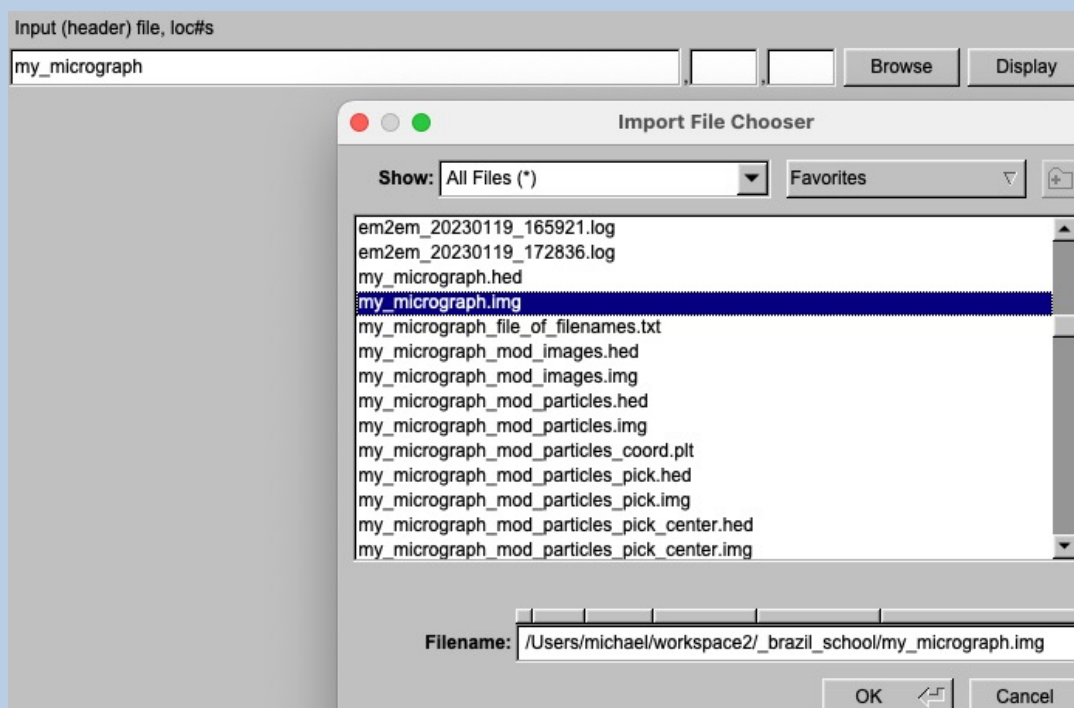
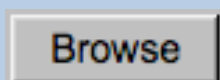
Press the Enter key of your keyboard or click the button of the wanted command to start the selected IMAGIC command.



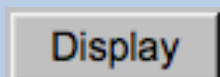
The chosen IMAGIC command now asks for all file names and parameters needed. Fill in all information asked for.



You can use the “Browse” button to specify a required file:



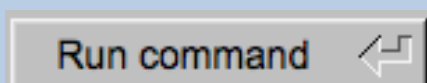
Use the “Display” button to visualise the images of the related file. The images are displayed in the “IMAGIC Display” tab on the right-hand side of the page.



The “?” button will give you context sensitive help:



Press “Run command” to start the calculations. The print-out of the command is shown in the “IMAGIC printout” tab on the right-hand side.



```

IMAGIC printout | IMAGIC display
Command.....: HEADERS-INFORMATION
Directory....: stand
Program.....: headers

=====

20-01-2023 11:43:41

=====

READ/LOOK
HOWMANY
my_micrograph
*

** HEADERS (vs. 6-Sep-2022) welcomes you **

Headers options available:
READ/LOOK WRITE/SET HOW MANY PLT_OUT TAKE_OVER
SHRINK SORT COMPARE HISTOGRAM MEANINGS
Please specify option [READ/LOOK] : READ/LOOK

Read options available:
INDEX/LABEL ACTIVE/INACTIVE
ALIGN_2D ALIGN_3D
ANGULAR-RECONSTITUTION CCC_2D/CORRELATION
CCC_3D/CORRELATION COORDINATES_MSA
DEFOCUS/CTF ELECTRON_MICROSCOPY
EULER_ANGLES DISPLAY
FABOSA HISTORY
HOWMANY MICROGRAPH_ID
MOVE_2D MOVE_3D
MSA_CLASSIFICATION NAME
REF3D/3D_MEMBERSHIP PIXEL_SIZE
POINT-GROUP PROJECTION-MATCHING
SIZE STATISTICS
THREED-RECONSTRUCTION TYPE
WAVE_NUMBER ZOOM_FACTOR
Please specify option [HOWMANY] : HOWMANY

Input (header) file, loc#s [my_micrograph] : my_micrograph

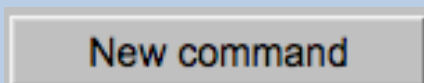
Image name: MOVIE SUM FROM whgb_c4.img (7 IMAGES) (PREPARE)
Size: 1024,1024 Loc: 1 Type: REAL Cre.Date: 20-Jan-2023 Time: 09:03:17
EM2EM;EXCOPY/PLT;EXCOPY/SELECT;CAMERA_NORM;INC2DMENU/ANISOTROPIC_MAGNIFY=1.0,1
.026;COARSE;ALIDIR;COARSE;SUMMER/MOVIE_SUM;INC2DMENU/PREPARE/BP Low=0.02 TRANS
=0.0 HIGH=0.9;CTF2D_FLIP;

Number of 2D images in file: 5

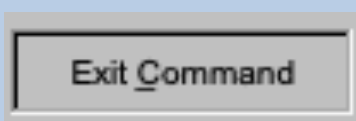
Next IMAGIC command suggested: HEADERS

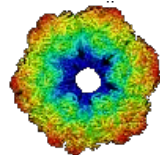
```

Press “New command” to go back to the list of IMAGIC commands:



If the “IMAGIC commands” page was open by having clicked the “Command” button you can leave the “IMAGIC commands” page and return to your GUI program by clicking the “Exit command” button in the toolbar:





IMAGIC

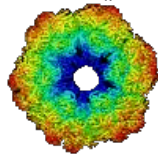
guiMAGIC

Not (yet) possible

The following options are not (yet) possible:

- Store output files and results of different pages in different sub-directories of the working directory.





IMAGIC

guiMAGIC

[Feedback / Error hints](#)

We intensively tested the **guiMAGIC** program and tried to find all possible errors and inconsistencies. But the current program is very complex and still in progress. So you may still find some problems.

We are happy to get feed-back. Please send your comments, error hints etc. to

imagic@ImageScience.de

THANK YOU VERY MUCH.



Image Science

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imagic@ImageScience.de

