Tasks

The **FITSH** suite consists 15 main tasks which are listed below with their intended use case and types their respective input and outputs. See the Features page for more specific details about the features of these tasks.

Program/Task	Main purpose	Type of input(s)	Type of output(s)	Manual page
fiarith	Evaluates arithmetic expressions on images as operands.	One on more FITS image(s), having the same dimension.	A single FITS image.	man/fiarith
ficalib	Performs various calibration steps on the input images.	A set of raw FITS images.	A set of calibrated FITS images.	man/ficalib
ficombine	Combines (most frequently, averages) a set of images.	A set of FITS images.	A single FITS image.	man/ficombine
ficonv	Obtains an optimal convolution transformation between two images or use an existing convolution transformation to convolve an image.	Two FITS images or a single image and a convolution transformation.	A convolution transformation or a single image.	man/ficonv
fiheader	Manipulates, i.e. reads, sets, alters or removes some FITS header keywords and/or their values.	A single FITS image (alternation) or more FITS images (if header contents are just read).	A FITS file with altered header or a series of keywords/values from the headers.	man/fiheader
fiign	Performs low-level manipulations on masks associated to FITS images.	A single FITS image (with some optional mask).	A single FITS image (with an altered mask).	man/fiign
fiinfo	Gives some information about the FITS image in a human-readable form or creates image stamps in a conventional format.	A single FITS image.	Basic information or PNM images.	man/fiinfo
fiphot	Performs photometry on normal, convolved or subtracted images.	A single FITS image (with additional reference photometric information if the image is a subtracted one).	Instrumental photometric data.	man/fiphot
firandom	Generates artificial object lists and/or artificial (astronomical) images.	List of sources to be drawn to the image or an arithmetic expression that describes how the list of sources is to be created.	List of sources and/or a single FITS image.	man/firandom
fistar	Detects and characterizes point-like sources from astronomical images.	A single FITS image.	List of detected sources and an optional PSF image (in FITS format).	man/fistar
fitrans	Performs generic geometric (spatial) transformations on the input image.	A single FITS image.	A single, transformed FITS image.	man/fitrans
grcollect	Performs data transposition on the input tabulated data or do some sort of statistics on the input data.	A set of files containing tabulated ASCII and/or numeric data.	A set of files containing the transposed tabulated data or a single file for the statistics, also in a tabulated form.	man/grcollect
grmatch	Matches lines read from two input files of tabulated data, using various criteria (point matching, coordinate matching or identifier matching).	Two files containing tabulated ASCII and/or numeric data (that must be two point sets in the case of point or coordinate matching).	One file containing the matched lines and in the case of point matching, an additional file that describes the best fit geometric transformation between the two point sets.	man/grmatch

grtrans	Transforms a single coordinate list or derives a best-fit transformation between two coordinate lists.	A single file containing a coordinate list and a file that describes the transformation or two files, each one is containing a coordinate list.	A file with the transformed coordinate list in tabulated from or a file that contains the best-fit transformation.	man/grtrans
lfit	General purpose arithmetic evaluation, regression and data analysis tool.	File(s) containing data to be analyzed in a tabulated form.	Regression parameters, analysis results or results of the arithmetic evaluation.	man/lfit