http://asc.harvard.edu/ciao/intro_tools.html

CIAO 2.1 Tools and Applications

Chandra Instrument Tools

acis_detect_afterglow	Identify and flag cosmic ray afterglows
acis_process_events	Produce/update ACIS coordinates, PI, GRADE, STATUS, etc.
asp_apply_sim	Add the SIM offsets to the optical axis offsets
asp_calc_offsets	Computes offsets from nominal pointing
asphist	Bin the aspect into a 3D histogram of duration vs pointing
destreak *	Identify/remove "streak" events that are generated by noise in the electronics
hrc_process_events	Correct HRC event positions, times, PHA, gain, etc.
tg_create_mask	Create a region file to define spectrum sky boundaries
tgdetect	Locate 0-order in image
tgextract	Extract the grating spectrum (wavelengths or energy)
tg_resolve_events	Assign grating coordinates (dispersion distance) & order sorting

Instrument Response Tools

mkarf	Generate an ARF for Chandra images
mkexpmap	Generate a Chandra imaging effective exposure map
mkgarf	Generate a Chandra Grating ARF for one detector element
mkinstmap	Generate a Chandra instrument map (area vs. position)
mkpsf	Extract a point spread function (PSF) image
mkrmf	Create RMF from a FEF file on a given 2-D grid plane

Source Detection

celldetect	Use an adaptive "sliding cell" to search for sources
vtpdetect	Voronoi Tessellation and Percolation (VTP) source detection
wavdetect	Mexican-Hat Wavelet source detection (wtransform+wrecon)

Utilities

dmappend	Append multiple blocks/extensions to an existing output file
dmarfadd	Add multiple ARF files together weighting by exposure
dmcontour	Make contour regions from a 2D image
dmcoords	Operations on Chandra coordinate systems
dmcopy	Filter and bin tables and images
dmextract	Make a histogram table file (e.g. PHA file) from a table
dmgroup	Group a specified column in a table, with various options
dmgti	Create a Good Time Interval from input Mission Time Line

dmhedit	Edit datamodel file headers
dmimg2jpg	Make color JPEG image (or EPS) from three image files
dmimgcalc	Perform arithmetic on images
dmimghist	make histogram of values in a 2
dmkeypar	Retrieve information about a header keyword
dmlist	List contents or structure of a file
dmmakepar	Write header keywords to a parameter file
dmmakereg *	Convert a region string to a CXC FITS region file
dmmerge	Merge two or more compatible tables into one
dmpaste	Add new columns to a table
dmreadpar	Add parameters from a .par file to a dm compatible file header
dmrega2fits	Convert a grating ASCII region into a FITS format
dmregrid	Rebin a stack of 2 dimensional images
dmsort	Sort a table
dmstat	Computes centroid, means, median, sigma, total
dmtcalc	Define new table columns as functions of old ones
dmtype2split	Create a type 1 output file for specified rows of a type 2 file
dmwritefef	Create a FITS Embedded Function (FEF) file
reproject_events	Regrid an event file (or stack)to a common tangent point
stk_build	Expands a stack listing
stk_count	Count the number of entries in a stack
stk_read_num	Returns n-th element in a stack

Miscellaneous Analysis

aconvolve	Convolve an N-dimensional image
acrosscorr	Computes auto or cross correlation of images
apowerspectrum	Compute power spectrum of an N-D image
axbary	Compute barycentric corrections to event times, GTI and headers
csmooth	Adaptively smooth a 2D image
get_src_region	Output regions that have counts higher than background
lightcurve	Bin source and background events by specified time interval
sso_freeze *	Generate a set of coordinates that is centered on the moving target

Applications

chips	Generic plotting package
filtwin	Interactive filter tool and launch pad for data analysis
firstlook	Provides quick access to Chandra datasets
guide	Sherpa plug-in to analyze spectral data
prism	Graphical file browser
sherpa	1 & 2D modeling and fitting application

* - a new addition to CIAO 2.1

All tools take advantage of the "datamodel" I/O layer which provides advanced filtering and history (aka subspace) mechanisms.
The applications chips and sherpa provide the scripting power of S-Lang to the users. This allows for arbitrary manipulation (and creation!) during the analysis session.

The various GUIs also share a common "session" thread that allows users to save and restore entire data analysis sessions. These sessions can also be shared between investigators at different institutes.