Chandra X-ray Center

AHELP for CIAO 3.4   **get**   Context: sherpa

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Synopsis

Summary of Sherpa/S−Lang module functions that retrieve settings or data.

Description

The get functions of the Sherpa/S−Lang module:

- Retrieve numerical data from Sherpa so that, e.g., they may be manipulated using S−Lang operators and/or functions. (These data may be put back into Sherpa using analogous set functions.)
- Retrieve Sherpa settings. (Quantities may be set using analogous set functions.)

Note that not all get functions have set function analogues: for instance, while it makes sense to retrieve, change, and set estimated errors, it makes little sense to put new arrays of residuals or predicted model amplitudes into Sherpa.

Summary of Sherpa/S−Lang Module set Functions

Name	Description
get_data | get_back	Retrieves amplitudes of source and background datasets
get_fluxed_spectrum | get_back	Retrieve a fluxed spectrum (counts divided by ARF)
get_errors | get_berrors	Retrieves error estimates of source and background datasets
get_syserrors | get_bsyserrors	Retrieves systematic errors of source and background datasets
get_weights | get_bweights	Retrieves statistical weights for source and background datasets
get_mcounts | get_bmcounts	Retrieves predicted source and background model counts amplitudes
get_residuals | get_bresiduals	Retrieves the fit residuals for source and background datasets
get_delchi | get_bdelchi	Retrieves the fit sigma residuals for source and background datasets
get_ratio | get_bratio	Retrieves the ratio of data to model for source and background datasets
get_statistics | get_bstatistics	Retrieves the contribution to the current statistic value from each bin, for source and background datasets
get_source | get_bg	Retrieves predicted source and background model photon amplitudes

get_groups	get_bgroups	Retrieves grouping arrays associated with source and background dataset
get_quality	get_bquality	Retrieves quality arrays associated with source and background dataset
get_filter	get_bfilter	Retrieves filter arrays associated with source and background datasets
get_axes	get_baxes	Retrieves the energy/wavelength/channel grid of source and background datasets
get_energy_axes	get_energy_baxes	Retrieves the energy grid of source and background datasets
get_wave_axes	get_wave_baxes	Retrieves the wavelength grid of source and background datasets
get_raw_axes	get_raw_baxes	Retrieves the raw channel grid of source and background datasets
get_photon_axes	get_bphoton_axes	Retrieves photon–space grids over which models are evaluated
get_photon_energy_axes | get_photon_energy_baxes	Retrieves photon–space energy grids over which models are evaluated
get_photon_wave_axes | get_photon_wave_baxes	Retrieves photon–space wavelength grids over which models are evaluated
get_arf_axes	get_arf_baxes	Retrieves the energy/wavelength grid of an ARF associated with source and background datasets
get_analysis	Retrieves the current analysis setting.
get_coord	Retrieves the current coord setting.
get_fit	get_goodness	Retrieves information about the quality of a fit
get_statistic	get_bstatistic	Retrieves the current value of the statistic comparing source and background data and model values
get_record	Returns a record of model parameter values at the end of each iteration of the fitting process
get_flux	get_bflux	Returns the unconvolved photon flux for source or background datasets
get_pflux2d	Returns photon fluxes in 2–D images
get_eflux	get_beflux	Returns the unconvolved energy flux for source or background datasets
get_eflux2d	Returns energy fluxes in 2–D images
get_mcounts_sum	get_bmcounts_sum	Returns the sum of convolved model counts in source and background datasets
get_mcounts_sum2d	Returns sums of model counts in 2–D images
get_dcounts_sum | get_bdcounts_sum | get_net_counts_sum	Returns the sum of observed counts in source and background datasets
get_dcounts_sum2d	Returns sums of observed counts in 2–D images
get_eqwidth	get_beqwidth	Returns the equivalent width of a line in source or background data
get_par	Retrieve model parameter values, etc.
get_unc	Retrieves parameter bounds
get_proj	Retrieves parameter bounds
get_cov	Retrieves parameter bounds
get_intunc	Retrieves parameter value and best–fit statistic arrays
get_intproj	Retrieves parameter value and best–fit statistic arrays
get_regunc	Retrieves parameter value and best–fit statistic arrays

get_regproj	Retrieves parameter value and best−fit statistic arrays
get_dimension	Retrieve the dimensionality of source data
get_exptime | get_bexptime	Retrieve source and background exposure times
get_backscale | get_bbackscale	Retrieve source and background extraction region areas
get_qvalue	Returns the statistical significance computed as a q−value
get_ftest	Returns the statistical significance computed with the F test
get_lfactorial	Returns the natural logarithm of the factorial of the input quantity
get_source_expr | get_bg_expr	Get the source and background model stack expression
get_inst_expr | get_sinst_expr | get_binst_expr	Get the source and background instrument model stack expression
get_filter_expr | get_bfilter_expr	Retrieves description of filters applied to source and background datasets
get_method_expr	Returns the name of the current optimization method
get_stat_expr	Returns the name of the current statistic
get_defined_models | get_defined_inst_models	Retrives lists of defined source and instrument models
get_models | get_inst_models	Returns lists of available source and instrument models
get_model_params | get_inst_model_params	Returns lists of parameter names for source and instrument models
get_num_par | get_num_par_frozen | get_num_par_thawed	Reports the total number of parameters for all defined models, including instrument models
get_filename | get_bfilename | get_arf_filename | get_rmf_filename	Retrieve filenames associated with a dataset
get_dir	Returns the name of the current directory
get_verbose	Returns Sherpa's verbosity

Bugs

See the Sherpa bug pages online for an up−to−date listing of known bugs.

See Also

chandra
> guide

sherpa
> bye, calc_kcorr, dataspace, dcounts, dollarsign, echo, eflux, eqwidth, erase, flux, get_dcounts_sum, get_dir, get_eflux, get_eqwidth, get_filename, get_flux2d, get_flux_str, get_lfactorial, get_mcounts_sum, get_pflux, get_source_components, get_verbose, groupbycounts, guess, is, journal, list, list_par, mcounts, numbersign, paramest, plot_eprof, plot_rprof, prompt, reset, run, set, set_analysis, set_axes, set_coord, set_dataspace, set_dir, set_verbose, setplot, sherpa−module, sherpa_plotfns, sherpa_utils, show, simspec, use, version

Bugs