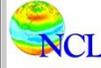


NCL functions & procedures basic reference card

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Read the corresponding web page to get more functions, procedures and information:

<http://ncl.ucar.edu/Document/Functions/index.shtml>

Printing

print

Prints the value of a variable or expression.

printFileVarSummary

Prints a summary of a file variable's information.

printMinMax

Prints the minimum and maximum values of a variable

printVarSummary

Prints a summary of a variable's information

write_matrix

Writes nicely-formatted integer, float, or double precision two-dimensional (2D) arrays to standard out or to a file

File IO

addfile

Opens a data file that is (or is to be) written in a supported file format.

addfiles

Creates a reference that spans multiple data files.

asciiread

Reads a file that contains ASCII representations of basic data types.

asciwrite

Creates an ascii text file of numeric or string data type.

cbinread

Reads binary files created using the C block I/O function write.

cbinwrite

Creates a binary file in raw C block I/O format for a numeric data type.

fbindirread

Reads binary records written by a Fortran direct access write or C write.

fbindirwrite

Writes binary records to a file in manner analogous to fortran's "access=direct".

fbinread

Reads one binary record that has been written using an UNFORMATTED FORTRAN write.

fbinrecread

Reads unformatted sequential access Fortran binary files.

fbinrewrite

Writes a single unformatted sequential access Fortran record to a file.

fbinwrite

Writes a single binary record to a file in manner analogous to fortran's "form=unformatted, access=sequential".

fileexists

Checks for existence of any UNIX file.

getfilevaratts

Returns all attribute names associated with a variable on a supported file.

getfilevardims

Returns all dimension names associated with a variable on a supported file.

getfilevardimsizes

Returns the dimension sizes of variable on a supported file.

getfilevarnames

Returns an array of file variable names in the specified supported file.

getfilevartypes

Returns the types of the named variables stored in the given supported file.

isfile

Returns True if input is of type file.

isfilepresent

Checks if a supported file exists.

isfilevar

Checks if specified file variables are defined in a file.

isfilevaratt

Checks if specified file variable attributes are defined for a file variable.

isfilevarcoord

Checks if a coordinate variable is defined in a file.

isfilevardim

Checks if file variable dimensions are defined for a file variable.

ListCount

Queries the number of element(s) in a list.

ListGetType

Queries the manner in which a variable of type list was created.

ListIndex

Queries the index of a variable in a list.

ListPop

Pop (out) an element from list.

ListPush

Push a variable into the list.

ListSetType

Specifies the manner in which a variable of type list is to be implemented.

NewList

Create a list (type variable).

numAsciiCol

Returns the number of columns in an ASCII file.

numAsciiRow

Returns the number of rows in an ASCII file.

readAsciiHead

Reads an ASCII file and returns just the header.

readAsciiTable

Reads an ASCII file given the number of lines at the beginning and end of the file to ignore.

setfileoption

Sets a number of file-format-specific options.

Date routines

cd_calendar

Converts a mixed Julian/Gregorian date to a UT-referenced date.

cd_convert

Converts a time variable from one set of units to another.

cd_inv_calendar

Converts a UT-referenced date to a mixed Julian/Gregorian date.

cd_string

Converts time values into nicely formatted strings.

isleapyear

Determines if a given year is a leap year.

time_axis_labels

Sets resources necessary to draw nice tickmark labels using a format of date/time on an axis.

yyyyddd_to_yyyymmdd

Given concatenated year and day-of-year (yyyyddd) create a one-dimensional array containing concatenated year, month and day-of-month [yyyymmdd] values.

yyyymm_time

Creates a one-dimensional array containing year-month [yyyymm] values.

yyyymm_to_yyyfrac

Converts a one dimensional array containing yyyymm values to yyyy and fractional year.

yyyymmdd_time

Creates a one-dimensional array containing year-month-day [yyyymmdd] values.

yyyymmdd_to_yyyddd

Given concatenated year-month-day_of_month (yyyymmdd) create a one-dimensional array containing concatenated year and day_of_year [yyyyddd] values.

yyyymmdd_to_yyyfrac

Converts a one dimensional array containing yyyymmdd values to yyyy and fractional year.

yyyymmddhh_time

Creates a one-dimensional array containing year-month-day [yyyymmddhh] values.

yyyymmddhh_to_yyyfrac

Converts a one dimensional array containing yyyymmddhh values to yyyy and fractional year.

Arrays

fspan

Creates an array of evenly-spaced floating point numbers.

ispan

Creates an array of equally-spaced integer, long, or int64 values.

all

Returns True if all the elements of the input evaluate as True.

any Returns True if any of the values of its input evaluate as True.

dimsizes Returns the dimension sizes of the input variable.

getind_latlon2d Finds the indices (subscripts) of two-dimensional latitude/longitude arrays closest to a user specified latitude/longitude coordinate pair.

ind Returns the indices where the input is True.

ind_nearest_coord Determine indices of locations closest to a coordinate array.

isMonotonic Check a one dimensional array to see if it is monotonic.

month_to_annual Converts monthly values to annual values.

month_to_annual_weighted Converts monthly values to annual values weighted by the number of days in a month.

monthly_total_to_daily_mean Convert monthly total values [eg, precipitation] to "per day" values.

niceLatLon2D Check two dimensional map coordinates to see if they have a "nice" structure.

num Counts the number of True values in the input.

Array manipulators

array_append_record Attaches [appends] additional records [leftmost dimension] to a previously existing array.

conform Expands an array or scalar so that it conforms to the shape of the given variable.

conform_dims Expands an array or scalar so that it conforms to the shape of the given dimension sizes.

grid2triple Converts a two-dimensional grid with one-dimensional coordinate variables to an array where each grid value is associated with its coordinates.

ind_resolve Resolves a single list of indices to their multi-dimensional representation.

mask Masks a multi-dimensional array against another given a single mask value.

ndtooned Converts a multi-dimensional array to a one-dimensional array.

onedtond Converts a one-dimensional array to a multi-dimensional array.

reshape Reshapes a multi-dimensional array to another multi-dimensional array.

reshape_ind Places values from a smaller one-dimensional array to a larger one-dimensional array, and reshapes it.

where Performs array assignments based on a conditional array.

Math functions

abs Returns the absolute value of numeric data.

acos Computes the inverse cosine of numeric types.

asin Computes the inverse sine of numeric types.

atan Computes the inverse tangent of numeric types.

atan2 Computes the inverse tangent of (y/x) for numeric types.

avg Computes the average of a variable regardless of dimensionality.

ceil Computes the smallest integer value larger than the input.

cos Computes the cosine of numeric types.

cosh Computes the hyperbolic cosine of numeric types.

exp Computes the value of e (the base of natural logarithms) raised to the power of the input.

fabs Computes the absolute value of numeric types.

floor Computes the largest integer value smaller than the input.

log Computes the natural log of a numeric type.

log10 Computes the log base 10 of a numeric type.

max Computes the maximum value of a multi-dimensional array.

min Computes the minimum value of a multi-dimensional array.

mod Remainder function which emulates the fortran "mod" intrinsic function.

product Computes the product of the input.

qsort Sorts a singly dimensioned array.

round Rounds a float or double variable to the nearest whole number.

sin Computes the sine of numeric types.

sinh Computes the hyperbolic sine of numeric types.

sqrt Computes the square root of its input.

qsort Sorts a singly dimensioned arrays of strings.

sum Sums the input.

tan Computes the tangent of numeric types.

tanh Computes the hyperbolic tangent of numeric types.

Lat/lon functions

gc_inout Determines if a list of lat/lon specified points are inside or outside of spherical lat/lon polygon(s).

gc_latlon Finds the great circle distance (true surface distance) between two points on the globe and interpolates points along the great circle.

getind_latlon2d Finds the indices (subscripts) of two-dimensional latitude/longitude arrays closest to a user specified latitude/longitude coordinate pair.

landsea_mask Returns a grid that contains a land sea mask given any latitude and longitude array.

lonFlip Reorders an array about the central longitude coordinate variable (rectilinear grids only).

niceLatLon2D Check two dimensional map coordinates to see if they have a "nice" structure.

Metadata routines

assignFillValue Transfers the _FillValue attribute from one variable to another.

copy_VarAtts Copies all of a variable's attributes from one variable to another.

copy_VarCoords Copies all named dimensions and coordinate variables from one variable to another.

copy_VarMeta Copies all attributes, named dimensions and coordinate variables from one variable to another.

default_fillvalue Returns the default missing value for the given variable type.

delete_VarAtts Deletes one or more attributes associated with a variable.

getFillValue Retrieves the _FillValue of a variable, if present.

getvaratts Returns a list of attribute names for the given variable or file pointer.

getvardims

Returns a list of dimension names for the given variable.

getVarFillValue

Retrieves the missing value of a variable, otherwise, it returns the default _FillValue.

isatt

Returns logical values indicating whether the given attributes are attached to the given variable.

iscoord

Returns True for every input string that is a coordinate variables of the given variable.

isdim

Returns True if variable dimensions are defined in the given variable.

isdimnamed

Returns True if variable dimensions have names in given variable.

ismissing

Returns True for every element of the input that contains a missing value.

isunlimited

Returns True if the given dimension name is defined as unlimited on the given file.

nameDim

Assigns given named dimensions, long_name, and units to the input variable.

set_default_fillvalue

Sets the default missing value for the given variable type.

Variable query

isbyte

Returns True if input is of type byte.

ischar

Returns True if input is of type char.

isdefined

Returns True for every element of the input that is a defined keyword, variable, or function/procedure name.

isdouble

Returns True if input is of type double.

isenumeric

Returns True if input is of type enumeric.

isfloat

Returns True if input is of type float.

isfunc

Returns True for every element of the input that is a defined function.

isgraphic

Returns True if input is of type graphic.

isin

Returns True if input is of type integer.

isint64

Returns True if input is of type int64.

isinteger

Returns True if input is of type integer.

islogical

Returns True if input is of type logical.

islong

Returns True if input is of type long.

isnan_ieee

Returns a logical array indicating which input values contain an IEEE NaN.

isnumeric

Returns True if input is of type numeric.

isproc

Returns True for every element of the input that is a defined procedure.

isshort

Returns True if input is of type short.

isnumeric

Returns True if input is of type snumeric.

isstring

Returns True if input is of type string.

isubyte

Returns True if input is of type ubyte.

isuint

Returns True if input is of type uint.

isuint64

Returns True if input is of type uint64.

isulong

Returns True if input is of type ulong.

isunsigned

Returns True if input is one of the unsigned types.

isushort

Returns True if input is of type short.

isvar

Returns True for every element of the input that is a defined variable.

list_procfncs

Lists all of the currently defined NCL functions and procedures and their argument lists.

list_vars

Lists the currently defined variables that do not reference files or HLU objects.

sizeof

Returns the total size, in bytes, of the input variable.

typeof

Returns the string name of the type of the input variable.

Variable manipulators

array_append_record

Attaches [appends] additional records [leftmost dimension] to a previously existing array.

delete

Deletes variables, attributes, and coordinate variables.

merge_levels_sfc

Merges a multiple level variable with the corresponding surface variable.

new

Creates an NCL variable.

replace_ieeeNaN

Changes all occurrences of IEEE NaN to a user-specified value.

rm_single_dims

Removes (squeezes) singleton (degenerate)

dimensions from an array while preserving meta data.

table_attach_columns

Attaches [appends] additional columns to a previously existing two-dimensional array.

table_attach_rows

Attaches [appends] additional rows to a previously existing two-dimensional array.

undef

Undefines defined NCL symbols (functions, procedures, variables).

NCL data type conversion functions

datatondc

Converts data units into normalized device coordinates (NDCs).

NhINDCToData

Converts normalized device coordinates (NDCs) into data coordinates.

time_to_newtime

Change a "udunits" recognized time unit to a new (different) "udunits" recognized time unit.

tobyte

Converts values of any snumeric data type or string to values of type (NCL) byte (unsigned char).

tochar

Converts values of any snumeric data type or string to values of type char.

todouble

Converts values of any snumeric data type or string to values of type double.

tofloat

Converts values of any snumeric data type or string to values of type float.

toint

Converts values of any snumeric data type or string to values of type integer.

toint64

Converts values of any snumeric data type or string to values of type int64 (64 bit long, or long long).

tolong

Converts values of any snumeric data type or string to values of type long.

toshort

Converts values of any snumeric data type or string to values of type short.

tosigned

Converts any kind of 8/16/32/64 integers to its corresponding signed integers.

tostring

Converts values of any snumeric data type to values of type string.

tostring_with_format

Converts values of any snumeric data type to values of type string, with specified format.

totype

Converts values of any snumeric data type or string to values of the given type.

toubyte

Converts values of any snumeric data type or string

to values of type unsigned byte.

touint
Converts values of any numeric data type or string to values of type unsigned integer.

touint64
Converts values of any numeric data type or string to values of type uint64 (unsigned 64 bit long, or unsigned long long).

toulong
Converts values of any numeric data type or string to values of type unsigned long.

tounsinged
Converts any kind of 8/16/32/64 integers to its corresponding unsigned integers.

toushort
Converts values of any numeric data type or string to values of type unsigned short.

Strings

get_file_suffix
Extract the suffix associated with a file name.

isStrSubset
Return True or False if one string is a subset of another string.

oneDtoString
Converts a 1-dimensional array to a single string.

print_table
Prints all elements from a list (to stdout).

sprint
Converts floats or doubles into formatted strings.

sprinti
Converts integers into formatted strings.

str_capital
Capitalizes all words in each string.

str_concat
Concatenates all strings into a single string.

str_fields_count
Counts the number of fields separated by the given delimiters in an array of strings.

str_get_cols
Returns an array of substrings, given a start and end index into the given string.

str_get_dq
Returns the double quote (") character as a string.

str_get_field
Returns an array of substrings given a field number and a combination of delimiters.

str_get_nl
Returns the newline (\n) character as a string.

str_get_sq
Returns the single quote (') character as a string.

str_get_tab
Returns the tab ('\t' in C) character as a string.

str_index_of_substr
Returns the start indexes where one or more occurrences of a substring is found in a string.

str_insert
Inserts a substring into the given strings.

str_is_blank
Returns True for strings that contain all blanks.

str_join
Joins all strings into one string, with each string separated by delimiter.

str_left_strip
Strips leading spaces and TABs from the input strings.

str_lower
Converts all input strings to lowercase.

str_match
Returns a list of strings that contain the given substring (case sensitive).

str_match_ic
Returns a list of strings that contain the given substring (case insensitive).

str_match_ind
Returns a list of indexes into an array of strings that contain the given substring (case sensitive).

str_match_ind_ic
Returns a list of indexes into an array of strings that contain the given substring (case insensitive).

str_right_strip
Strips ending spaces and TABs from the input strings.

str_split
Splits a string into an array of strings given a delimiter.

str_split_by_length
Splits a string or strings into an array of strings given a length, or an array of lengths.

str_split_csv
Splits strings into an array of strings using the given delimiter.

str_squeeze
Strips off leading and ending spaces and TABs, and replaces multiple spaces and/or TABs with a single space.

str_strip
Strips leading and ending spaces and TABs from the input strings.

str_sub_str
Replaces a substring with a new substring.

str_switch
Switches the case of characters in the given string(s).

str_upper
Converts all input strings to uppercase.

strlen
Returns the length of a string variable.

unique_string
Returns a unique string given the input string as a prefix.

write_table
Writes all elements from a list (to a file).

Graphics routines

boxplot
Creates a boxplot.

draw
Draws the given graphical objects.

drawNDCGrid
Draws NDC grid lines at 0.1 NDC coordinate intervals and labels them.

get_isolines
Retrieves the points that define a contour line.

gsn_add_annotation
Attaches the given annotation to the given plot.

gsn_add_polygon
Attaches a filled polygon to the given plot.

gsn_add_polyline
Attaches a polyline to the given plot.

gsn_add_polymarker
Attaches polymarkers to the given plot.

gsn_add_shapefile_polygon
Attaches shapefile polygon data to the given plot(s) using randomly-filled polygons.

gsn_add_shapefile_polylines
Attaches shapefile polyline or polygon data to the given plot(s) using polylines.

gsn_add_shapefile_polymarkers
Attaches shapefile point data to the given plot(s) using polymarkers.

gsn_add_text
Attaches text strings to the given plot.

gsn_attach_plots
Attaches a series of plots to a base plot.

gsn_blank_plot
Draws a blank plot with tickmarks pointing inward.

gsn_contour
Creates and draws a contour plot.

gsn_contour_map
Creates and draws a contour plot over a map.

gsn_contour_shade
Shades contour regions given low and/or high values using colors or patterns.

gsn_coordinates
Draws or attaches the data coordinate locations on the given plot as grid lines or markers.

gsn_create_labelbar
Creates a labelbar.

gsn_create_legend
Creates a legend.

gsn_create_text
Creates text strings.

gsn_csm_attach_zonal_means
Attaches a zonal means plot to a contour/map plot.

gsn_csm_blank_plot
Draws a blank plot with tickmarks pointing outward.

gsn_csm_contour
Creates and draws a contour plot.

gsn_csm_contour_map
Creates and draws a contour plot over a map.

gsn_csm_contour_map_overlay
Creates and draws two contour plots over a map.

gsn_csm_contour_map_polar
Creates and draws a contour plot over a polar stereographic map.

gsn_csm_hov
Creates and draws a Hovmueller (time v.s. longitude) plot.

gsn_csm_lat_time
Creates and draws a latitude versus time plot.

gsn_csm_map
Creates and draws a map.

gsn_csm_map_polar
Creates and draws a polar stereographic map.

gsn_csm_pres_hgt
Creates and draws a pressure/height plot.

gsn_csm_pres_hgt_streamline
Creates and draws a pressure/height contour plot overlaid with streamlines.

gsn_csm_pres_hgt_vector
Creates and draws a pressure/height contour plot overlaid with vectors.

gsn_csm_streamline
Creates and draws a streamline plot.

gsn_csm_streamline_contour_map
Creates and draws streamlines over a contour plot over a map.

gsn_csm_streamline_contour_map_polar
Creates and draws streamlines over a contour plot over a polar stereographic map.

gsn_csm_streamline_map
Creates and draws a streamline plot over a map.

gsn_csm_streamline_map_polar
Creates and draws a streamline plot over a polar stereographic map.

gsn_csm_time_lat
Creates and draws a time versus latitude plot.

gsn_csm_vector
Creates and draws a vector plot.

gsn_csm_vector_map
Creates and draws a vector plot over a map.

gsn_csm_vector_map_polar
Creates and draws a vector plot over a polar stereographic map.

gsn_csm_vector_scalar
Creates and draws a vector plot, and uses a scalar field to draw a separate contour plot or color the vectors.

gsn_csm_vector_scalar_map
Creates and draws a vector plot over a map, and uses a scalar field to draw a separate contour plot or color the vectors.

gsn_csm_vector_scalar_map_polar
Creates and draws a vector plot over a polar stereographic map projection, and uses a scalar field to draw a separate contour plot or color the vectors.

gsn_csm_x2y
Creates and draws an XY plot with two different X axes.

gsn_csm_x2y2
Creates and draws an XY plot with two different X and Y axes.

gsn_csm_xy
Creates and draws an XY plot.

gsn_csm_xy2
Creates and draws an XY plot with two different Y axes.

gsn_csm_xy3
Creates and draws an XY plot with three different Y axes.

gsn_csm_y
Creates and draws an XY plot, using index values for the X axis.

gsn_histogram
Draws a histogram plot on the given workstation.

gsn_labelbar_ndc
Draws a labelbar on the given workstation.

gsn_legend_ndc
Draws a legend on the given workstation.

gsn_map
Creates and draws a map.

gsn_open_wks
Opens a workstation on which to draw graphics.

gsn_panel
Draws multiple plots of identical size on a single frame.

gsn_polygon
Draws a filled polygon on the given plot.

gsn_polygon_ndc
Draws a filled polygon on the given workstation.

gsn_polyline
Draws a polyline on the given plot.

gsn_polyline_ndc
Draws a polyline on the given workstation.

gsn_polymarker
Draws polymarkers on the given plot.

gsn_polymarker_ndc
Draws polymarkers on the given workstation.

gsn_streamline
Creates and draws a streamline plot.

gsn_streamline_map
Creates and draws a streamline plot over a map.

gsn_streamline_scalar
Creates and draws a streamline plot colored by a given a scalar field.

gsn_streamline_scalar_map
Creates and draws a streamline plot over a map, and colors the streamlines using the given scalar field.

gsn_table
Draws a table with text.

gsn_text
Draws text strings on the given plot.

gsn_text_ndc
Draws text strings on the given workstation.

gsn_vector
Creates and draws a vector plot.

gsn_vector_map
Creates and draws a vector plot over a map.

gsn_vector_scalar
Creates and draws a vector plot colored by a given a scalar field.

gsn_vector_scalar_map
Creates and draws a vector plot over a map, and colors the vectors using the given scalar field.

gsn_xy
Creates and draws an XY plot.

gsn_y
Creates and draws an XY plot, using index values for the X axis.

infoTimeStamp
Draws two text strings at the bottom of the workstation to indicate the time the plot was created and other information.

maximize_output
Maximizes the sizes of a series of plots drawn in a single frame.

NhlAddAnnotation
Add annotations to a plot object as an external annotation.

NhlAddOverlay
Overlays one plot object on another.

NhlAddPrimitive
Adds a Primitive object to an existing plot.

NhlDataPolygon
Draws a polygon using data coordinates.

NhlDataPolyline
Draws a polyline using data coordinates.

NhlDataPolymarker
Draws polymarkers using data coordinates.

NhlDraw
Draws the given graphical objects.

NhlINDCPolygon
Draws a polygon using NDC coordinates.

NhlINDCPolyline
Draws a polyline using NDC coordinates.

NhlINDCPolymarker
Draws polymarkers using NDC coordinates.

NhlNewDashPattern
Adds new dash patterns to the existing table of dash patterns.

NhlNewMarker
Adds new markers to the existing table of markers.

NhlRemoveAnnotation
Remove annotations from the plot they are registered in.

NhlRemoveOverlay
Removes one or more plots from an overlay.

NhlRemovePrimitive
Removes one or more primitives from the given Transform object.

NhlSetDashPattern
Sets the dash patterns for a given list of dash pattern indexes and workstations.

NhlSetMarker
Sets the markers for a given list of marker indexes and workstations.

overlay
Overlays one plot object on another.

pie_chart
Creates a basic pie chart.

setColorContourClear
Sets the color contours between two given levels transparent.

ShadeGeLeContour
Shades contour regions given low and high values and a shade pattern.(Superceded by

gsn_contour_shade as of version 4.3.0.)

ShadeGtContour
Shades contour regions above a given value with the given fill pattern.(Superceded by gsn_contour_shade as of version 4.3.0.)

ShadeLtContour
Shades contour regions below a given value with the given fill pattern.(Superceded by gsn_contour_shade as of version 4.3.0.)

ShadeLtGtContour
Shades contour regions below a given value and above a given value with the specified fill patterns.(Superceded by gsn_contour_shade as of version 4.3.0.)

skewT_BackGround
Creates a background chart for Skew T, Log P plotting.

skewT_PlotData
Plot a sounding and (optionally) winds on Skew T, Log P charts created by skewT_BackGround.

symMinMaxPlt
Calculates the minimum/maximum values for a variable and uses nice_mnmxintvl to calculate the symmetric contour interval.

WindRoseBasic
Plots a basic wind rose.

WindRoseColor
Plot a wind rose diagram where different colors are used to differentiate speed ranges.

WindRoseThickLine
Plot a black and white wind rose diagram where different line thicknesses are used to differentiate speed ranges.

wmbarb
Draws wind barbs on the given workstation.

wmbarbmap
Draws wind barbs over maps.

wmdrft
Draws weather front lines on the given workstation.

wmgetp
Retrieves parameter values for selected Wmap routines.

wmlabs
Plots special symbols and icons for daily weather.

wmsetp
Sets parameter values for selected Wmap routines.

wmstnm
Plots station model data on the given workstation.

wmvect
Draws vectors on the given workstation.

wmvectmap
Draws vectors over maps.

wmvlbl
Draws an informational label box for plots produced by wmvect or wmvectmap.

Color routines

color_index_to_rgba
Converts an absolute color index to its equivalent RGBA quadruplet

ColorNegDashZeroPosContour

Sets the negative contours to dashed, and colors the negative, positive, and zero contours to user-specified colors.

ColorShadeLeGeContour

Shades contour regions given low and high values and two colors.(Superceded by gsn_contour_shade as of version 4.3.0.)

get_color_index

Chooses a color index for a scalar value, given a color map and a range of values.

get_color_rgba

Chooses an RGB triplet or RGBA quadruplet for a scalar value, given a color map and a range of values.

gsn_contour_shade

Shades contour regions given low and/or high values using colors or patterns.

gsn_define_colormap

Defines a color map for the given workstation.

gsn_draw_colormap

Draws the current color map for the given workstation.

gsn_draw_named_colors

Draws the given list of named colors.

gsn_merge_colormaps

Merges two color maps and sets this as the color map for the given workstation.

gsn_retrieve_colormap

Retrieves a color map for the given workstation.

gsn_reverse_colormap

Reverses the color map for the given workstation.

namedcolor2rgb

Returns the RGB triplets of the given list of named colors.

namedcolor2rgba

Returns the RGBA quadruplets of the given list of named colors.

NhlNewColor

Allocates new workstation color indexes.

read_colormap_file

Reads an NCL system colormap file or a user-defined colormap.

RGBtoCmap

Reads a text file of RGB triplets and converts them to a colormap.

setColorContourClear

Sets the color contours between two given levels transparent.

span_color_indexes

Given the number of desired color values, return an array of indexes that nicely span the given color map.

span_color_rgba

Given the number of desired color values, return an array of RGB triplets or RGBA quadruplets that nicely span the given color map.

span_named_colors

Returns an RGB array that is a span between given list of named colors.

System tools

echo_off

Disables echoing of NCL statements as they are encountered.

echo_on

Enables echoing of NCL statements as they are encountered.

exit

Forces an NCL script to exit immediately.

fileexists

Checks for existence of any UNIX file.

get_cpu_time

Returns the CPU time used by NCL.

get_ncl_version

Returns the current NCL version.

get_script_name

Returns the name of a script of commands provided to NCL for execution.

get_script_prefix_name

Returns the name of a script of commands provided to NCL for execution, if provided, with any script name tag removed.

getenv

Returns the string value of a shell environment variable.

isbigendian

Returns True if you are running NCL on a big endian machine.

isfilepresent

Checks if a supported file exists.

loadscript

Loads the given NCL script.

ncargpath

Returns the absolute pathnames of various NCAR Graphics directories.

ncargversion

Prints the NCAR Graphics version, copyright, trademark and general licensing terms.

print_clock

Prints the given string along with a current timestamp.

sleep

Pauses execution of NCL scripts for a specified number of seconds.

status_exit

Exits an NCL script passing a status code to the calling environment.

system

Executes a shell command.

systemfunc

Executes a shell command and returns the output.

unique_string

Returns a unique string given the input string as a prefix.

wallClockElapseTime

Calculates and prints elapsed 'wall clock' time.