
Subject: Re: JHU/APL/S1R library update
Posted by [rosentha](#) on Tue, 15 Nov 1994 11:30:53 GMT
[View Forum Message](#) <> [Reply to Message](#)

Ray Sterner (sterner@strdev.jhuapl.edu) wrote:

: JHU/APL/S1R IDL anonymous ftp site update notice
: The latest update was made on 1994 Nov 14.
: The last update was made on 1994 July 1.

: fermi.jhuapl.edu IDL library ftp site description

: Purpose of this ftp site

: -----
: This ftp site contains several JHU/APL/S1R IDL libraries.

: The library routines fall into the following broad categories:
: Text Files, Text strings, Date & time routines, Information,
: Plotting/Graphics, Imaging, Array processing, Math, Programming,
: Widget tools, Library maintenance and documentation, and Miscellaneous.
: One demonstration library is currently included for the eqv routine.

: Accessing the ftp site (Make sure you use ftp, not telnet)

: -----
: ftp fermi.jhuapl.edu (128.244.147.18)
: For Name type: anonymous
: For Password enter: your email address (ex: sterner@tesla.jhuapl.edu).
: Change directory by entering: cd pub/idl
: Set the correct transfer type: ascii (for README, cat.one, doc_guide.txt)
: or binary (for the *.Z files).
: To get a file enter: get filename
: When finished enter: bye.

: Get the ascii file README (~7.0k byte) for a guide to this ftp site.

: You may also want to get the one line description file cat.one (~31kb).

: What's New

: -----
: New date/time string formatting codes: In the routine DT_TM_MAK, which
: may be used to convert a Julian day number and seconds into a
: date/time string (like Mon Nov 14 07:23:20 1994), two new formatting
: codes are available. I\$, was available but not mentioned in the
: help text, displays the total time interval in day with 2 decimal places.
: H\$ is new and displays the total time interval in integer hours. It is
: intended to be used with m\$ and s\$ as in H\$:m\$:s\$ and will not wrap
: around to 0 at multiples of 24 hours. This allows a time axis to
: be labeled from 0:00 to 24:00 if desired. All the formatting codes
: in dt_tm_mak may be listed by the IDL command: help,dt_tm_mak(/help).
: DT_TM_MAK is used to format the date/time labels used by the routine

: TIMEAXIS, which is used by JSPLLOT (time series plots).
 : Color bar upgrade: The labeled axis on the color bar drawn by the routine
 : CBAR may now be positioned on any side using the new keywords
 : /LEFT,/RIGHT,/TOP,/BOTTOM.
 : New routine to draw a curve: The new routine XCURVE may be used to draw
 : a curve in the display window in one of the three standard coordinate
 : systems: data, device, normalized.
 : Legend routine upgrades: Dick Jackson (djackson@ibdnrc.ca) added the
 : FONT keyword and passed the thickness values on to the plot calls so
 : symbols have the correct thickness.
 : Easy access to top color index: New routine, TOPC, returns the top color
 : index. Useful for statements like tv,bytsc1(z,top=topc()).
 : String editing routine upgrade: Trevor Harris (harris@hfrd.dstogov.au)
 : upgraded STRESS, one of the earliest routines in the library, to allow
 : target and replacement substrings to be arrays. This is done using
 : recursion.
 : Obsolete routines dropped: the following routines were dropped from the
 : library since they have become obsolete: CRS, DATACRS, DEVCRS, NORMCRS,
 : AVE2D, SUM2D, CEIL, FLOOR. I would guess that if you have IDL v3.0
 : or later you will not need these. Old code will have to be modified.
 : Consider keeping a copy of the old JHU/APL/S1R library around until
 : your routines are all updated.
 : New box color added: Sometimes an interactive box is hard (or impossible)
 : to see because it's color does not contrast with the underlying image.
 : This should now be less of a problem as color=-2 is used. This color
 : number plots the box outline using alternating dashes of 0 and the last
 : color index, usually contrasting colors.
 : New routine to scramble integers: A new routine, SCRAMBLE, returns an array
 : of N scrambled integers from 0 to N-1.
 : Inverse bilinear interpolation: The new routine, IBILIN, does inverse
 : bilinear interpolation. Here is the problem: Assume a rectangular
 : image with known 2-d coordinates at the corners. Bilinear interpolation
 : may be used to find the 2-d coordinates at any point in the image
 : (from the pixel coordinates). However, knowing the 2-d coordinates
 : of a point, finding the corresponding pixel coordinates is not so
 : straightforward. This routine solves that problem with a consistent,
 : linear mapping.
 : Finding the intersection of two great circles: A new routine, SPHGC, finds
 : the intersection coordinates of two great circles on a sphere. This is
 : the same as finding the poles of some coordinates system given
 : segments along two meridians.
 : Adding brightness shading to an image: The new routine SHADE_IMG may be
 : used to shade a given image based on a given shading array. The shading
 : array is same size as image and ranges from 0 (black) to 1 (brightest).
 : The given image has its brightness modified by the shading array.
 : The resulting color image is returned along with the corresponding
 : color tables.
 : Exploring an unknown data file: The new routine XDATAFILE may be used to

: explore a data file of unknown format. Displays a selected section of
 : data as ASCII text, bytes, integers, long integers, floats, and doubles
 : all at the same time. Allows byte swapping.

: Pick one of the color table colors: The new routine PICKCOLOR allows the
 : selection of a color from the current color table.

: Displaying text as an image: A new routine XTEXTIMG allows text from a
 : text file to be displayed in an image window. This is a widget based
 : interactive routine that allows text size, position, font, thickness,
 : foreground and background color, and so on to be adjusted using widgets.
 : This routine was designed to make viewgraph captions and works quite
 : well for that purpose. It saves the resulting images in TIFF format
 : (use XVIEW to convert to something else).

: Converting between Julian Days and Julian Seconds: two new routines,
 : JD2JS and JS2JD do conversion between these two time systems. Many
 : of the new JHU/APL/S1R routines that deal with time are based on
 : Julian Seconds (do help,dt_tm_tojs(/help)).

: TV-like adjustments to a displayed image: A currently displayed image
 : may be enhanced using the new routine XHSBC to adjust overall image hue,
 : saturation, brightness, and contrast. Uses draw widgets instead of slider
 : bars. This allows a 256 color image to be viewed during adjustment,
 : slider bars would not. Brightness and contrast together adjust value:
 : brightness is an offset in value, contrast is the deviation from
 : the mean value.

: Drawing ellipses: A new routine, ELLIPSE, is a modification of ARCS
 : by David Steele, Department of Physics and Astronomy, The University
 : of Calgary. It makes it easy to draw ellipses in any of the coordinate
 : systems. May specify semi-major axes, orientation, colors, centers,
 : and line-styles. Inputs may be arrays making it very easy to draw
 : very interesting figures.

: Preserving image shape: A new routine, IMGWINDOW, makes it easy to
 : display an image anywhere in the window and keep the true shape.
 : IMGWINDOW is used to find a normalized position value given three
 : of the four position elements. The resulting position may be used
 : with IZOOM to display an image with labeled axes.

: Zero padding on spectra: Zero padding was added to the two routines
 : RSPEC (ensemble averaged spectrum of real 1-d data) and CSPEC
 : (ensemble averaged spectrum of complex 1-d data). Zero padding
 : gives finer spacing on the frequency axis but not more actual
 : frequency resolution.

: World coastline (low resolution): The world coastline data has been moved
 : from worldxdr.save2 to worldxdr.res. The old format was a save2 file,
 : non-self-documenting. The new is a res file which is self-documenting.
 : To access: resopen,'worldxdr.res',/xdr
 : rescom
 : resget,'lat',lat
 : resget,'long',lng
 : resget,'pen',pen
 : resclose

: plot,[-180,180],[-90,90],/nodata
: plotp, lng, lat, pen

: Ray Sterner sterner@tesla.jhuapl.edu
: Johns Hopkins University North latitude 39.16 degrees.
: Applied Physics Laboratory West longitude 76.90 degrees.
: Laurel, MD 20723-6099

--
Colin Rosenthal rosentha@obs.aau.dk
Teoretisk Astrofysik Center telephone 8942 3609
Aarhus Universitet fax 8612 0740
DK - 8000 Aarhus C
Denmark

`` Everyone knows the right answer is to hold a knife to the man's
throat until he gives you the car, then knee the producer in the nuts and
drive out through the studio's rear entrance! With both goats! "
(Terry Pratchett solves the Monty Hall Problem.)
