
Subject: Help needed in remapping data using IDL
Posted by [kaba](#) on Tue, 04 May 2010 21:30:16 GMT
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Hello Guys, I am relative a new IDL programer who would appreciate some help in how to remap a sample data from satellite projection to Lambert Conformal.

Here are the detail of What I have done so far:

```
;;INPUTS are 2D- arrays of : DATA, LAT & LON   ;; each 1600*600
inproj = 7   ;Satellite projection
indatum = 0   ; Clarke 1866
yy=WHERE(LAT GE -90.0 AND LAT LE 90.0)
zz=WHERE(LON GE -180.0 AND LON LE 180.0)

inclat=MEAN(lat(yy)) & inclon=MEAN(lon(zz))      ;;input central
lat,lon
inlimit=[MIN(LAT(yy)), MIN(LON(zz)), MAX(LAT(yy)), MAX(LON(zz))]
LAT1=REVERSE(LAT,2) & LON=REVERSE(LON, 2) & DATA=REVERSE(DATA,
2)
```

```
;;;Desired output 2D ARRAY of DATA, LAT & LON   ;;each 1073* 689
;;; I want the LAT/LON values of the corners of the grid to be :
```

```
outproj=104   ; /GCTP lambert conformal conic
outdatum = 0   ; Clarke 1866
outlimit=[238.4459,20.1919, 229.8965,49.9396, 299.1145,50.1054,
290.7919, 20.3317]
outsp1 = 25.0   ; Out standard parallel 1
outsp2 = 25.0   ; Out standard parallel 2
outclat = 37.9   ; Out standard parallel 2
outclon = -97.0   ; Out standard parallel 2
```

```
;;Define the malp projections
```

```
mapin=MAP_PROJ_INIT(inproj, ELLIPSOID=indatum, CENTER_LATITUDE=inclat,
$
    CENTER_LONGITUDE=inclon, limit=inlimit)

mapout= MAP_PROJ_INIT(outproj, /GCTP, ELLIPSOID=outdatum,
STANDARD_PAR1=outsp1,
    STANDARD_PAR2=outsp2, CENTER_LATITUDE=outclat,
$
    CENTER_LONGITUDE=outclon,
```

limit=outlimit)

;;;converting lat/lon to UV coord with some help from Mr. Fanning's
docs online

```
xx=MAP_PROJ_FORWARD(LON(*,0), LAT(*,0),  
MAP_STRUCTURE=mapout)  
yy=MAP_PROJ_FORWARD(LON(0,*), LAT(0,*),  
MAP_STRUCTURE=mapout)
```

```
xvec=REFORM(xx[0,*]) & yvec=REFORM(yy[1,*])  
xhalf=(xvec[1]-xvec[0])/2.0 & yhalf=(yvec[1]-yvec[0])/2.0  
xrange=[xvec[0]-xhalf, xvec[N_ELEMENTS(xvec)-1] +xhalf]  
yrange=[yvec[0]-yhalf, yvec[N_ELEMENTS(yvec)-1] +yhalf]  
newrange=[xrange[0], yrange[0], xrange[1], yrange[1]]
```

;;Question: I actually wanted to use "outlimit" which is an 8
element not 4, how
;;can I use that instead?

;;; Remap the data

```
timgout=MAP_PROJ_IMAGE(data, MAP_STRUCTURE=mapin) ;,  
UVRANGE=uvrange) ; inlimit, IMAGE_STRUCTURE=mapin,
```

```
imgout=MAP_PROJ_IMAGE(data, newrange, MAP_STRUCTURE=mapout,  
UVRANGE=uvrange,  
IMAGE_STRUCTURE=mapout)
```

When I plot this using on a window, the map projection looks right but
the data does not seem to be remapped correctly.
This is my first time using map_proj_init and map_pro_image. Please
help.

Thanks
