
Subject: Re: lat - lon

Posted by [Kelly Dean](#) on Fri, 04 Oct 2002 00:15:40 GMT

[View Forum Message](#) <> [Reply to Message](#)

Using the satellite projection in IDL's MAP_SET routine will get you in the ballpark. A simple plotting routine is listed below. CONVERT_COORD can be used to create the 2-D latitude and longitude information.

Otherwise, visit Dennis Chesters' web site for the GOES Earth Location User Guide. It has FORTRAN code to do more accurate GOES satellite navigation.

<http://rsd.gsfc.nasa.gov/goes/text/goestechnotes.html#navigation>

Kelly Dean
CSU/CIRA

```
=====
; RobSatMap
=====
PRO RobSatMap, Region=Region
;
;
; Example:
;   Simple map overlay
;   RobSatMap
;   Full GOES-East Projection with region plotted
;   RobSatMap, /Region
;
SWcorner = [ -25.09, -52.39]
NWcorner = [ -19.65, -53.48]
NEcorner = [ -19.87, -44.95]
SEcorner = [ -25.42, -43.27]
;
NadirLat = 0.0
NadirLon = -75.0 ; Assuming GOES-East
P = 6.6107650
Omege = 0.0
Gamma = 0.0
IF ( KEYWORD_SET(Region) )THEN BEGIN
  WINDOW, 0, XSize=500,YSize=500, Title="GOES-East"
  MAP_SET, NadirLat, NadirLon, 0, $
    sat_p = [p, Omege, Gamma], $
    /Satellite
  lats = [ -25.09, -19.65, -19.87, -25.42 ]
  lons = [ -52.39, -53.48, -44.95, -43.27 ]

; Fill the polygon with color index 175:
POLYFILL, lons, lats, COLOR = 175, /Data
```

```

ENDIF ELSE BEGIN
  WINDOW, 0, XSize=326,YSize=132, Title="GOES-East"
  MAP_SET, NadirLat, NadirLon, 0, $
    sat_p = [p, Omega, Gamma], $
    /Satellite, $
    XMARGIN = [0.0,0.0], $
    YMARGIN = [0.0,0.0], $
    Limit = [ SWcorner, NWcorner, NEcorner, SEcorner ];, $
ENDELSE
MAP_CONTINENTS, /HiRes, /Coast
MAP_GRID, LonDel=5.0, LatDel=5.0
END

```

Robinson wrote:

- > Dear Sirs,
- > I would like to ask you a suggestion to solve a problem.
- > I have GOES images, however I do not have neither the latitude
- > nor longitude 2D files. Each image has 326 columns and 132 rows, and its
- > coordinates (corners) are showed below. As you can see lat as well as
- > lon coordinates vary from one to another row and from one to another
- > column. How Could I construct both the lat and lon 2D files?
- > (-19.65i½S, 53.48i½W) _____ (-19.87i½S, 44.95i½W)
- > | 326 |
- > |132 |
- > |_____ |
- > (-25.09i½S, 52.39i½W) (-25.42i½S, 43.27i½W)
- >
- > In advance, thank you very much.
- > Robinson