
Subject: Re: Overlaying gridded winds on satellite data

Posted by [Chris\[3\]](#) on Wed, 20 Jul 2005 15:45:20 GMT

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My code is attached to this message. The Imagemap procedure is the procedure by Dr. Liam Gumley which displays the satellite data to a window. Reading through the code for that procedure...I see no specific projection...I am imagining it's just the satellite projection. The Windbarb1 procedure was written by David Fanning...which draws the wind barbs. The grid on which the wind barbs are on is a 2 km resolution, so 1800 x 1800 km total, however it uses latitude and longitude for those coordinates. If you guys need any more information in helping me with this...I can certainly give it...thank you for all of your help...it's greatly appreciated.

pro barbtest2

```
;Defining all arrays needed
```

```
lat1=fltarr(900,900)
```

```
long1=fltarr(900,900)
```

```
windspeed=fltarr(900,900)
```

```
winddir=fltarr(900,900)
```

```
upert=fltarr(900,900)
```

```
vpert=fltarr(900,900)
```

```
;Opening and reading in latitude and longitude
```

```
openr, lun, 'C:\Documents and
```

```
Settings\jewett\Desktop\IDL\latitude.dat', /get_lun
```

```
readf, lun, lat1
```

```
close, lun
```

```
openr, lun, 'C:\Documents and
```

```
Settings\jewett\Desktop\IDL\longitude.dat', /get_lun
```

```
readf, lun, long1
```

```
close, lun
```

```
openr, lun, 'C:\Documents and
```

```
Settings\jewett\Desktop\IDL\1815Sept21\1000_900upert.dat', /get_lun
```

```
readf, lun, upert
```

```
close, lun
```

```
openr, lun, 'C:\Documents and
```

```
Settings\jewett\Desktop\IDL\1815Sept21\1000_900vpert.dat', /get_lun
```

```
readf, lun, vpert
```

```
close, lun
```

```
windspeed=sqrt(upert*upert+vpert*vpert)
```

```
winddir=-asin(vpert/windspeed)*57.29577951+270
```

```
windspeed=windspeed*1.94384449
```

```

windspeed1=sqrt(upert1*upert1+vpert1*vpert1)
winddir1=-asin(vpert1/windspeed1)*57.29577951+270
windspeed1=windspeed1*1.94384449
cdfid=ncdf_open("C:\Documents and
Settings\jewett\Desktop\research\netcdf\NETCDF13.nc")
glob=ncdf_inquire(cdfid)

;Finding the dimensions and variables of the netCDF file
print, 'Dimensions', glob.ndims
print, 'variables', glob.nvars
for i=0, glob.ndims-1 do begin
    ncdf_diminq, cdfid, i, name, size
    if i EQ glob.recdim then $
        print, ' ', name, size, '(Unlimited dim)' $
    else $
        print, ' ', name, size
    endfor
print, 'variables'
for i=0, glob.nvars-1 do begin
    info = ncdf_varinq(cdfid,i)
    FmtStr= '(A, "(" , A, ") Dimension Ids = [ ', 10(10, " "))'
    print, FORMAT=FmtStr, info.name, info.datatype, info.dim[*]

    for j=0, info.natts-1 do begin
        attname=ncdf_attname(cdfid,i,j)
        ncdf_attget, cdfid, i, attname, attvalue
        print, ' Attribute ', attname, '=',
string(attvalue)
    endfor
endfor

;Obtaining variables from the netCDF file
dataid=ncdf_varid(cdfid, 'data')
ncdf_varget, cdfid, dataid, satellite
latitude=ncdf_varid(cdfid, 'latitude')
ncdf_varget, cdfid, latitude, lat
longitude=ncdf_varid(cdfid, 'longitude')
ncdf_varget, cdfid, longitude, longitude
time=ncdf_varid(cdfid, 'imageTime')
ncdf_varget, cdfid, time, time

;Calling procedure which displays the visible satellite image

    imagemap, satellite, lat, longitude
    map_continents, Color=FSC_Color('Sea Green', !D.Table_Size-3),
/hires

;Begin procedure which which draws windbarbs...need longitude,

```

latitude, windspeed and wind direction

```
    Windbarb1, long1[0:*:5,0:*:5], lat1[0:*:5,0:*:5],  
windspeed[0:*:5,0:*:5], winddir[0:*:5,0:*:5], Color='Indian Red',,  
clip=clip  
end
```
