Subject: Re: bounding box subsetting for lat/lon
Posted by penteado on Tue, 16 Feb 2010 15:18:57 GMT
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On Feb 16, 4:27 am, mankoff <mank...@gmail.com> wrote:
> But at a minimum I want to specify 4 lat/lon elements that do not
> defined the edges of the box but the four corners, so the roi could be
> a diamond shape (when projected on, say, the /cylinder projection).
> And ideally I could define a path of n points defining a closed region
> and get the indices back that lie within that region.
>
> Anyone know if this exists? I don't see it under the ROI section, and
> searching for bounding box brings up too much noise.

For the generic problem of finding the points inside a region in a plane, I would use an ROI:

```
oroi=obj_new('idlanroi',xverts,yverts)
interior=oroi->containspoints(datax,datay)
w=where(interior ne 0,nw)
if (nw gt 0) then begin
  datax=datax[w]
  datay=datay[w]
  dataval=dataval[w]
endif else (...)
obj_destroy,oroi
```

The trouble with the coordinates being lat/lon is that they are spherical coordinates. That means if you used that for lon as x and lat as y, you would actually be dealing with a polygon in a Cartesian space (cylindrical projection). Which may be what you want, but is not the same as the closed region in the surface of the sphere that has these vertices (which would presumably be connected by great circles, not straight lines). Also, any closed shape on the surface of a sphere defines two closed regions, depending on which side of the line you consider the inside.