Subject: Satellite remapping with map_patch Posted by Leon.Majewski on Sun, 25 Jun 2006 05:03:48 GMT View Forum Message <> Reply to Message

Hi

I've got a lot of satellite data (3000 MODIS passes) that I want to remap to a standard lat/lon grid. It's easy enough to do this with map_patch after setting the appropriate map projection with map_set:

map_set, 0, mean(area[[1,3]]), 0, /noerase,/noborder,/cylindrical, limit=area mapped = map_patch(product,lons, lats, xsize=xsz, ysize=ysz, xstart=xst, ystart=yst, missing=-999)

The disadvantages are a) generation of interpolated values b) I need to remap multiple (~15) products for each overpass (ie same transformation is calulated muliple times).

I'd like to generate an array of indices that are remapped and then use these to subscript the original data (basically generate the transform once, apply many times):

index = lonarr(xdim, ydim) ; same size as the input array
transindex = map_patch(index,lons, lats, xsize=xsz, ysize=ysz,
xstart=xst, ystart=yst, missing=-999)
mapped0 = product0[transindex]
mapped1 = product1[transindex]

This doesn't work.

Often there are points in the transindex that missing (-999) - ie the idl subsrcipt is invalid, but this doesn't matter. A simplified example that does work (the way I think the above should, including ~missing points) is:

data = congrid(dist(256), dims[0], dims[1])
index=lindgen(dims[0], dims[1])
index2 = long(rot(congrid(index, xsize, ysize),20)) ;shink and spin to
fake a transform
bp = where(index2 gt 300000L AND index2 lt 400000L)
index2[bp] = -999 ;add some ~missing values
tv, data[index2] ;rescaled, spun array

So, what's the difference between transindex (map_patch) and rot/congrid of the index arrays? Have I missed something?

Cheers, Leon