Subject: Re: Saving to netCDF
Posted by agraps on Fri, 17 Jan 1997 08:00:00 GMT
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mal3p@faraday.clas.Virginia.EDU (Michael A. Lefsky) writes:

> This is probably a no-brainer, but I don't have time right
> now to figure how to do this: I'd like to be able to save variables-
> including arrays and arrays of structures, to one of the public
> domain scientific formats. Ideally, I would like to be able to "save"
> the session's current variables to such a file.

Actually I thought netCDF was a really nonintuitive format, so I wouldn't call it a no-brainer. It seems unneccessarily complicated to me. I spent a day or so trying to understand how reading and writing in netCDF works.

I cannibalized one of my programs to give you this netCDF example. It should work, but I haven't tested these code fragments, so no guarantees. Here it goes.

Amara

Say you have a volume of data: call it "freqcube" dimensions float(x,y,f).
And say that you have a long string that describes the data, say "header"
And say that you want to create a netCDF file called "freq.nc"

```
;-----------------------
;Write out netCDF data
;-----------------------

;Create file
cd,'/tmp20/amara/'
newfile = 'freq.nc'

id_main = NCDF_CREATE(newfile,/CLOBBER)
IF (id_main eq -1) THEN BEGIN
      PRINT, 'Unable to create file ', newfile
      RETURN
END

;I will write out one attribute of "header" and one of "data".

;-----------------
;Header Definition
;-----------------
```

```
hsize = N_ELEMENTS(header)
dimheader = NCDF_DIMDEF(id_main, 'dimheader', /unlimited)
id_header = NCDF_VARDEF(id_main, 'header', dimheader, /char)

;---------------
;Data Definition
;---------------

sz = SIZE(freqcube)
xdim = sz(1)
ydim = sz(2)
zdim = sz(3)
xid = NCDF_DIMDEF(id_main,'x',xdim)
yid = NCDF_DIMDEF(id_main,'y',ydim)
zid = NCDF_DIMDEF(id_main,'z',zdim)
id_freq = NCDF_VARDEF(id_main,'freqcube',[xid,yid,zid],/FLOAT)

;End Definition
NCDF_CONTROL, id_main, /endef

print, ' '
print, 'Writing Variable Information..'
print, ' '

;------------
;Header Write
;------------

;Write header line into the one netCDF 'header' variable.

NCDF_VARPUT, id_main, id_header, header

;----------
;Data Write
;----------

print, ' '
print, 'Writing Variable Data..'
print, ' '
NCDF_VARPUT, id_main, id_freq, freqcube


NCDF_CLOSE, id_main

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```

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Amara Graps email: agraps@netcom.com
Computational Physics vita: finger agraps@best.com
Multiplex Answers URL: http://www.amara.com/
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