
Subject: Re: HDF viewer available?

Posted by [rivers](#) on Tue, 15 Aug 1995 07:00:00 GMT

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In article <40qna9\$pl3@lace.Colorado.EDU>, afl@cdc.noaa.gov (Andy Loughie) writes:

> In article <DDD2oC.2uH@midway.uchicago.edu>, rivers@cars3.uchicago.edu (Mark
> Rivers) writes:

> |>

> |> Has anyone written an IDL "generic" viewer for HDF files? For now I would

> |> be

> |> happy to just be able to view the "structure" of the HDF file (vgroups, SDs,

> |> etc.) rather than actually view the content as plots or images.

> |>

>

> I am also VERY interested in such a tool!

RSI pointed out to me that \$IDL_DIR/examples/hdf_ncdf/hdf_info.pro
does a basic HDF file dump, showing the contents of the HDF file. Note that
there is a minor problem with that routine: the file name of the file is
hdf_info.pro (with underscore), while the name of the routine is hdfinfo
(without underscore). It is helpful for getting basic information on the file.

While on the subject of HDF, has anyone gotten the routine HDF_VG_ADDTR
to work? If so, please let me know. I think I am calling it correctly with
valid arguments, but I am getting an error.

Mark Rivers	(312) 702-2279 (office)
CARS	(312) 702-9951 (secretary)
Univ. of Chicago	(312) 702-5454 (FAX)
5640 S. Ellis Ave.	(708) 922-0499 (home)
Chicago, IL 60637	rivers@cars3.uchicago.edu (Internet)

Subject: Re: HDF viewer available?

Posted by [afl](#) on Tue, 15 Aug 1995 07:00:00 GMT

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Rivers) writes:

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Subject: Re: HDF viewer available?

Posted by [afl](#) on Wed, 16 Aug 1995 07:00:00 GMT

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To view the contents of an HDF SDS one can use netCDF's ncdump utility, or hdp which I believe is a new HDF dump utility from NCSA.

Here is something I wrote for specific HDF SDS files.
I must add that I have been very impressed with RSI's new HDF interface. Good job!

```
;
;
; Function to obtain information on NASA Goddard's GEOS-1 HDF files.
;
; Originator: Andrew F. Loughe
;
; History: Written 4/28/95
;
```

```
FUNCTION GET_HDF_INFO, filename, varname, $
    varnames=varnames, coordnames=coordnames, $
    lons=lons, lats=lats, levels=levels, times=times, $
    title=title, units=units, format=format, id=id, dims=dims
```

```
on_error, 2
```

```
; Help string
USAGE1='err = get_hdf_info(filename, varname, ' + $
    'varnames=varnames, coordnames=coordnames,'
USAGE2='    lons=lons, lats=lats, levels=levels, times=times,'
USAGE3='    title=title, units=units, format=format, id=id, ' + $
    'dims=dims)'
```

```
; Need at least one parameter passed in.
```

```
if (N_params() lt 1) then begin
```

```
    print, ''
```

```
    print, USAGE1
```

```
    print, USAGE2
```

```
    print, USAGE3
```

```
    return, -1
```

```
endif
```

```
; Supply nonsense varname.
```

```
if ( n_elements(varname) eq 0 ) then varname='ZxYzXy'
```

```
varname = strlowercase(varname)
```

```
; Assign dummy values to ERR and ID.
```

```
ERR = -1
```

ID = -9999

; Check that file is in HDF.

```
if HDF_ISHDF( filename ) ne 1 then $  
  message, "File " + filename + " is not an HDF file."
```

; Open HDF file and initialize the SD interface.

```
sd_id = HDF_SD_START( filename, /read )
```

; Get number of datasets and global attributes in this file.

```
HDF_SD_FILEINFO, sd_id, nmfsds, nglobatts
```

; Loop through all datasets until correct SDS_NAME (and SDS_ID) is found.

```
if nmfsds gt 0 then begin
```

```
  varnames = "
```

```
  coordnames = "
```

```
  for i = 0, nmfsds-1 do begin
```

```
    sds_id = HDF_SD_SELECT(sd_id, i)
```

```
    HDF_SD_GETINFO, sds_id, name=n, ndims=r, type=t, $  
      natts=nats, dims=dimensions
```

```
; Collect all variable names.
```

```
  if ( HDF_SD_ISCOORDVAR(sds_id) ne 1 ) then $  
    varnames = [varnames, n + ' '; ]
```

; If desired variable name is found, get more information.

```
  if ( strpos( strlowercase(n), varname) ge 0 ) then begin
```

```
    ERR = 0
```

```
    ID = sds_id
```

```
    dims = dimensions
```

```
    for j = 0, nats-1 do begin
```

```
      HDF_SD_ATTRINFO, sds_id, j, name=n, data=d
```

```
      if (n eq 'long_name') then title=d
```

```
      if (n eq 'units') then units=d
```

```
      if (n eq 'format') then format=d
```

```
    endfor
```

```
  endif
```

; Get information on coordinate variables.

```
  if ( HDF_SD_ISCOORDVAR(sds_id) eq 1 ) then begin
```

```
    coordnames = [coordnames, n + ' '; ]
```

```
    if ( strpos(strlowercase(n), 'longitude') ge 0 ) then $
```

```
      HDF_SD_GETDATA, sds_id, lons
```

```
    if ( strpos(strlowercase(n), 'latitude') ge 0 ) then $
```

```
      HDF_SD_GETDATA, sds_id, lats
```

```
    if ( strpos(strlowercase(n), 'level') ge 0 ) then $
```

```
      HDF_SD_GETDATA, sds_id, levels
```

```
        if ( strpos(strlowercase(n), 'time') ge 0 ) then $
            HDF_SD_GETDATA, sds_id, times
        endif

        HDF_SD_ENDACCESS, sds_id
    endfor
endif

; Omit first varname and coordname which is set to a dummy value.
if ( N_elements(varnames) gt 0 ) then $
    varnames=varnames( indgen(N_elements(varnames)-1) + 1 )

if ( N_elements(coordnames) gt 0 ) then $
    coordnames=coordnames( indgen(N_elements(coordnames)-1) + 1 )

; Close the HDF file.
HDF_SD_END, sd_id

return, err
end
```
