Subject: Stretching MODIS data
Posted by titan on Tue, 31 Jan 2012 11:36:23 GMT
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Hi everybody,
I'm trying to obtain an RGB image using MODIS data channel 01,02,06 (daytime) and channels 20, 21 and 32 (night time).

My code is working fine except for the stretching result in the sense that for the images obtained using "daytime channels" are darker than the ones obtained with the "nighttime channels" and this happens only for images belonging to winter season.

In the following you can find a piece of the code I'm using

```
ch01_modis_meteo_fname='ch01'
RESTORE, path+ch01_modis_meteo_fname

ch01_v=ch01[where(ch01 gt 0.0)]
  print, 'min(ch01_v)', MIN(ch01_v)
  print, 'max(ch01_v)', MAX(ch01_v)
 ch01_modis_meteo_fname_ENVI_format_outname='modis_meteo_ch01 '

ENVI_WRITE_ENVI_FILE, ch01, DATA_TYPE=4,NS=4400, NL=3300, NB=1,
OFFSET=0, INTERLEAVE=0, PIXEL_SIZE=ch01_fname_ps,$
                  MAP_INFO=ch01_map_info_create,
OUT_NAME=ch01_modis_meteo_fname_ENVI_format_outname,
R_FID=ch01_modis_meteo_fname_ENVI_format_r_fid


ch01_bs=BYTSCL(ch01, min = MIN(ch01_v), max = MAX(ch01_v))
 ch01_modis_meteo_fname_ENVI_format_bs_outname='modis_meteo_c h01_bs'
ENVI_WRITE_ENVI_FILE, ch01_bs, DATA_TYPE=1,NS=4400, NL=3300, NB=1,
OFFSET=0, INTERLEAVE=0, PIXEL_SIZE=ch01_fname_ps,$
                  MAP_INFO=ch01_map_info_create,
OUT_NAME=ch01_modis_meteo_fname_ENVI_format_bs_outname,
R_FID=ch01_modis_meteo_fname_ENVI_format_bs_r_fid


ch01_bs2 = BYTSCL(ch01_bs, min = 3, max = 157)

 ch01_modis_meteo_fname_ENVI_format_bs2_outname='modis_meteo_ ch01_bs2'
ENVI_WRITE_ENVI_FILE, ch01_bs2, DATA_TYPE=1,NS=4400, NL=3300, NB=1,
OFFSET=0, INTERLEAVE=0, PIXEL_SIZE=ch01_fname_ps,$
                  MAP_INFO=ch01_map_info_create,
OUT_NAME=ch01_modis_meteo_fname_ENVI_format_bs2_outname,
R_FID=ch01_modis_meteo_fname_ENVI_format_bs2_r_fid
```

the same code is used for the other channels except for the value in
the bytscl function
  ch02_bs = bytscl(ch02_bs, min = 3, max = 169)
  ch06_bs = bytscl(ch06_bs, min = 2, max = 121)

Since at this moment I'm only interested in a visual inspection of my
result, Is there a way to harmonize the different results?

If you need other info please let me know

thanks in advance

Subject: Re: Stretching MODIS data
Posted by David Fanning on Tue, 07 Feb 2012 06:34:42 GMT
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titan writes:

> Since I would like to have a standard reference color is there a way
> to define an histogram of reference to which all the images can be
> referred??

I don't know what this means. You could certainly
take a histogram of a "standard image" and use
that for the histogram matching. Is that what you
mean?

Cheers,

David

--
David Fanning, Ph.D.
Fanning Software Consulting, Inc.
Coyote's Guide to IDL Programming: http://www.idlcoyote.com/
Sepore ma de ni thui. ("Perhaps thou speakest truth.")

Subject: Re: Stretching MODIS data
Posted by titan on Tue, 07 Feb 2012 15:58:25 GMT
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On 7 Feb, 07:34, David Fanning <n...@idlcoyote.com> wrote:

> titan writes:
>> Since I would like to have a standard reference color is there a way
>> to define an histogram of reference to which all the images can be
>> referred??
>
> I don't know what this means. You could certainly
> take a histogram of a "standard image" and use
> that for the histogram matching. Is that what you
> mean?
>
> Cheers,
>
> David
>
> --
> David Fanning, Ph.D.
> Fanning Software Consulting, Inc.
> Coyote's Guide to IDL Programming:http://www.idlcoyote.com/
> Sepore ma de ni thui. ("Perhaps thou speakest truth.")

Yes you are right. I was thinking that the difficulty is in
determining a "standard image" containing all the value you can find
in a meteo image (clouds, snow, land, sea ....).
Because it is problematic to find an image including all the features
and to be used as template with respect to its histogram.
For example I cannot choose a cloudy image or a cloud free image as
template because in this (extreme) case the histogram will be affected
by this.
Am I correct??

I hope I was able to describe better my doubt and now it is clearer!!

Cheers,

titan

Subject: Re: Stretching MODIS data
Posted by titan on Mon, 13 Feb 2012 10:34:42 GMT
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On 7 Feb, 07:34, David Fanning <n...@idlcoyote.com> wrote:
> titan writes:
>> Since I would like to have a standard reference color is there a way
>> to define an histogram of reference to which all the images can be
>> referred??
>
> I don't know what this means. You could certainly

> take a histogram of a "standard image" and use
> that for the histogram matching. Is that what you
> mean?
>
> Cheers,
>
> David
>
> --
> David Fanning, Ph.D.
> Fanning Software Consulting, Inc.
> Coyote's Guide to IDL Programming:http://www.idlcoyote.com/
> Sepore ma de ni thui. ("Perhaps thou speakest truth.")

Yes you are right. I was thinking that the difficulty is in
determining a "standard image" containing all the value you can find
in a meteo image (clouds, snow, land, sea ....) because, in my
opinion,it could be feasible to compare the histogram of images
belonging to the same area in the same period (or season) but not if
they belong to different period of the year.
Am I correct??

Anyway if I apply the scalemodis code the result I obtain is
characterized by yellow cloud and not white like the one you obtain
in your example..
do you have any idea why I obtain this result?

thanks a lot

cheers,

titan

Subject: Re: Stretching MODIS data
Posted by David Fanning on Mon, 13 Feb 2012 13:45:52 GMT
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titan writes:

> Anyway if I apply the scalemodis code the result I obtain is
> characterized by yellow cloud and not white like the one you obtain
> in your example..
> do you have any idea why I obtain this result?

I would guess maybe the range of data in your
images is different from the range of data in
the MODIS images I was using. I've never seen

yellow clouds in MODIS images I processed with
ScaleModis. :-)

Cheers,

David

--
David Fanning, Ph.D.
Fanning Software Consulting, Inc.
Coyote's Guide to IDL Programming: http://www.idlcoyote.com/
Sepore ma de ni thui. ("Perhaps thou speakest truth.")
