
Subject: Re: subset an image by coordinates

Posted by [Jeremy Bailin](#) on Sun, 20 Sep 2009 12:12:57 GMT

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On Sep 19, 11:14 pm, "Alvaro Paredes L." <alvaropared...@gmail.com> wrote:

> Hi all

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> I was searching on the web, but i didn't find an answer to my problem.

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> Thanks!

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Do you mean like:

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newimage = oldimage[x0:x1,y0:y1]
```

?

-Jeremy.

Subject: Re: subset an image by coordinates

Posted by [Robert Moss, PhD](#) on Sun, 20 Sep 2009 14:24:11 GMT

On Sep 20, 8:12 am, Jeremy Bailin <astroco...@gmail.com> wrote:

> On Sep 19, 11:14 pm, "Alvaro Paredes L." <alvaropared...@gmail.com>
> wrote:

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ENVI_CONVERT_FILE_COORDINATES, FID, XF, YF, XMap, YMap

to convert the corners of his image in map coordinates to file coordinates. Once he has the proper file coordinates, he can subset the image. If you give us a little more specifics of what you are trying to do, we can probably provide more information.

r

Subject: Re: subset an image by coordinates
Posted by [Alvaro Paredes L.](#) on Sun, 20 Sep 2009 17:00:11 GMT
[View Forum Message](#) <> [Reply to Message](#)

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forward_function ENVI_CONVERT_FILE_COORDINATES
pro SUBSET
envi, /restore_base_save_files
envi_batch_init, log_file='batch.txt'

; define the image to be opened
img_file='F:\IMAGE\NDVI-HDF\try\NDVI_2008_03_02.img'
envi_open_file, img_file, r_fid=fid
print, 'fid=', fid

; define coordinates to make the subset
YMap=[-32.6030694, -32.9797194]
XMap=[-71.0580916, -70.5006694]

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ENVI_CONVERT_FILE_COORDINATES, FID, XF, YF, XMap, YMap

;rounds the pixel value to its closest integer.

XF=ROUND(XF)

YF=ROUND(YF)

;verify the conversion

print, 'X pixel ',XF

print, 'Y pixel ',YF

;making the subset?????

image=img_file[XF,YF]

; Exit Envi

envi_batch_exit

end

Finally, and maybe this is a basic question, how i save this "subset"
in a .img file?

Thanks!

Alvaro

Subject: Re: subset an image by coordinates

Posted by [Jeremy Bailin](#) on Mon, 21 Sep 2009 02:27:39 GMT

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On Sep 20, 1:00 pm, "Alvaro Paredes L." <alvaropared...@gmail.com>
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-Jeremy.

Subject: Re: subset an image by coordinates

Posted by [Alvaro Paredes L.](#) on Mon, 21 Sep 2009 14:51:54 GMT

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On 20 sep, 22:27, Jeremy Bailin <astroco...@gmail.com> wrote:

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Subject: Re: subset an image by coordinates
 Posted by [Robert Moss, PhD](#) on Mon, 21 Sep 2009 19:25:30 GMT

On Sep 21, 10:51 am, "Alvaro Paredes L." <alvaropared...@gmail.com> wrote:

> On 20 sep, 22:27, Jeremy Bailin <astroco...@gmail.com> wrote:

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Subject: Re: subset an image by coordinates
Posted by [Alvaro Paredes L.](#) on Mon, 21 Sep 2009 21:26:38 GMT
[View Forum Message](#) <> [Reply to Message](#)

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```

I already check the coordinates. The image that i'm using to test is a modis autoref with the MCTK toolkit, so there should be no problem with the coord system. Also, i checked it in google earth. With ENVI, i made a subset via map coordinates. The samples and lines matched well with the ones I got on the other procedure (by ENVI_CONVERT_FILE_COORDINATES). Also, i used the pixel locator (on ENVI) to find the pixels samples and lines converted, and all are inside the image (image is 2509 x 1195... my samples and lines are (867:934),(311:356) respectively).

I think that the problem is specifically with the line `image=img_file[XF[0]:XF[1], YF[0]:YF[1]]`... maybe i need to transform the image or the values. I tried to extract a single values like `image=img_file[x,y]` and i get the same error, so i believe the problem is with `img_file` that isn't recognized as an array.

Thanks again!

Alvaro.

Subject: Re: subset an image by coordinates
Posted by [penteado](#) on Mon, 21 Sep 2009 21:58:09 GMT
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On Sep 20, 2:00 pm, "Alvaro Paredes L." <alvaropared...@gmail.com> wrote:

```
> ; define the image to be opened
> img_file='F:\IMAGE\NDVI-HDF\try\NDVI_2008_03_02.img'
...
> image=img_file[XF,YF]
```

Are you trying to subscript the file name? Trying to have a conversation with an address (<http://groups.google.com/group/comp.lang.idl-pvwave/msg/b0859e67a0ff6d51>)?

Subject: Re: subset an image by coordinates
Posted by [Alvaro Paredes L.](#) on Tue, 22 Sep 2009 15:40:36 GMT
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On 21 sep, 17:58, pp <pp.pente...@gmail.com> wrote:

```
> On Sep 20, 2:00 pm, "Alvaro Paredes L." <alvaropared...@gmail.com>
```

```

> wrote:
>
>> ; define the image to be opened
>> img_file='F:\IMAGE\NDVI-HDF\try\NDVI_2008_03_02.img'
> ...
>> image=img_file[XF,YF]
>
> Are you trying to subscript the file name? Trying to have a
> conversation with an address (http://groups.google.com/group/
> comp.lang.idl-pvwave/msg/b0859e67a0ff6d51)?

```

Well, thank you very much... I finally found my mother and talked to her :-)

As I say before, sometimes it's hard to understand how a program works, specially if you aren't a programmer (this was a nooby mistake...). There is only one problem with the output coordinates data (0.0 on the subset, has the same coordinates that 0.0 in the original image), but i hope i can fix it soon. Anyway, any help is welcome.

The finally routine is this:

```

forward_function ENVI_CONVERT_FILE_COORDINATES
pro SUBSET
  envi, /restore_base_save_files
  envi_batch_init, log_file='batch.txt'

  ; define the image to be opened
  img_file='F:\IMAGE\NDVI-HDF\try\NDVI_2008_03_02.img'
  envi_open_file, img_file, r_fid=fid
  if (fid eq -1) then begin
    envi_batch_exit
    return
  endif

```

```

XMap=[-71.0580916, -70.5006694]
YMap=[-32.6030694, -32.9797194]

```

```

ENVI_CONVERT_FILE_COORDINATES, FID, XF, YF, XMap, YMap

```

```

XF=ROUND(XF)
YF=ROUND(YF)

```

```

envi_file_query, fid, DIMS=DIMS, NB=NB, NL=NL, NS=NS
pos = lindgen(nb)

```

```

image=fltarr(NS, NL, NB)
FOR i=0, NB-1 DO BEGIN

```

```
image[*,*,i]= envi_get_data(fid=fid, dims=dims, pos=pos[i])
endfor

imagen= image[XF[0]:XF[1],YF[0]:YF[1]]

nl2=YF[1]-YF[0]
ns2=XF[1]-XF[0]

map_info=envi_get_map_info(fid=fid)

envi_write_envi_file, imagen, data_type=4, $
descrip = 'testing', $
map_info = map_info, $
nl=nl2, ns=ns2, nb=nb, r_fid=r_fid, $
OUT_NAME = 'F:\IMAGE\NDVI-HDF\try\trying.hdf'

; Exit Envi
envi_batch_exit
end
```

Thanks again to everyone who helped me! :)
