Subject: FFT on time series NDVI image
Posted by prasenjit acharya on Fri, 05 Dec 2014 09:22:26 GMT
View Forum Message <> Reply to Message

Hi all,
is anybody knows about the Fast Fourier Transformation (FFT) on multiband (stacked) time series NDVI image? I am a new user of IDL. I have borrowed some code over internet. but it returns some unusual results.

```
;start envi session
 envi
;get the image
envi_select, title='Choose multispectral image', $
  fid=fid, dims=dims,pos=pos

num_cols = dims[2]-dims[1]+1
num_rows = dims[4]-dims[3]+1
num_bands = n_elements(pos)

; BIL array
image = fltarr(num_bands,num_cols,num_rows)

for i=0,num_bands-1 do image[i,*,*] = $
  envi_get_data(fid=fid,dims=dims,pos=pos[i])

;create empty data matrix to store the transformed image
image2 = fltarr(num_bands,num_cols,num_rows)

;fft on image
for S=0,num_bands-1 do image2[*,S] = FFT(image[*,S])
real = FLOAT(image2)
imagin = ATAN(IMAGINARY(image2), FLOAT(image2))

; the data back in BSQ format
image3 = fltarr(num_bands,num_cols,num_rows)
for i = 0, num_bands-1 do image3[*,*,i] = $
  reform(real[i,*],num_cols,num_rows)

; get the map info of the original data
map_info = ENVI_GET_MAP_INFO(fid=fid)

;set output directory
output_dir = 'H:\'
filename = output_dir+'FFTR1'+'.tif'
;write file
ENVI_WRITE_ENVI_FILE, real, out_name=filename,map_info=map_info

end
```

any suggestion to modify the code is welcome.
thank you
Prasenjit
