
Subject: FFT on time series NDVI image

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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
