
Subject: Help with data gaps and interpolation

Posted by [zolile mtumela](#) on Fri, 20 Mar 2015 14:18:48 GMT

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Dear All,

I would to get help, sugestions on the ff program. i have tried many ways but I did not succed, any help will be highly appreciated.

1. I want to plot with data gaps which are represented by values such as 9999.99.

2. I would like to interpolate the data again to fill the data gaps.

the data look like this

06-10-2006 19:01:00.000	1.45000	-2.15000	0.120000
06-10-2006 19:02:00.000	1.36000	-2.31000	0.120000
06-10-2006 19:03:00.000	1.39000	-1.76000	0.140000
06-10-2006 19:04:00.000	9999.99	9999.99	9999.99
06-10-2006 19:05:00.000	9999.99	9999.99	9999.99
06-10-2006 19:06:00.000	1.20000	-1.91000	0.220000
06-10-2006 19:07:00.000	1.23000	-1.87000	0.230000
06-10-2006 19:08:00.000	1.22000	-1.84000	0.230000
06-10-2006 19:09:00.000	1.14000	-1.86000	0.310000
06-10-2006 19:10:00.000	1.05000	-1.86000	0.440000
06-10-2006 19:11:00.000	0.920000	-1.87000	0.660000
06-10-2006 19:12:00.000	0.790000	-1.60000	0.420000
06-10-2006 19:13:00.000	0.180000	-1.38000	0.810000
06-10-2006 19:14:00.000	0.900000	-0.970000	0.310000
06-10-2006 19:15:00.000	1.64000	-0.680000	-0.270000
06-10-2006 19:16:00.000	1.73000	-0.680000	-0.210000
06-10-2006 19:17:00.000	1.83000	-0.710000	0.0500000

The program looks like this

```
File = Dialog_PickFile(Filter='*.txt')
```

```
Date_array = 0
```

```
time_array = 0
```

```
Bx_array = 0
```

```
By_array = 0
```

```
Bz_array = 0
```

```
str = "
```

```
openR, Lun, File,/Get_Lun
```

```
readf, Lun, str
```

```
while~eof(lun) do begin
```

```

readf,lun,date,time,Bx,By,Bz
;print,date,time,Bx,By,Bz

Bx_array = [Bx_array, Bx]
By_array = [By_array, By]
Bz_array = [Bz_array, Bz]
endwhile
free_lun,lun
  Bx_array=Bx_array[1:.*]
  By_array=By_array[1:.*]
  Bz_array=Bz_array[1:.*]

index = where(Bx_array eq 9999.99, count)
  if (count gt 9999.99) then Bx_array[index] = !values.f_nan

; interpolate
if Bx_array lt 9999.99 then begin
  temp=(Bx_array, count)
  result=interpol(Bx_array[temp],temp, time[temp])
endif

Nx = n_elements(Bx_array)
time = findgen(Nx)
time = time/60

; plot with data gaps
plot, time, Bx_array[index];

plot,time, Result

end

```

Thank in advance for your time.
Zolile
