Subject: Re: IDL QUESTIONS(time convection)
Posted by David Fanning on Tue, 29 Nov 2011 13:56:15 GMT
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zolile mtumela writes:

> I tried to convert time axis to hours in the ff program, but all my
> efforts are not working. I need some help and suggestion on this
> convection.I have tried may ways but they are not converting in a
> right way.

Well, there are a couple of ways to do this. You could
use the function LABEL_DATE to set up the time axis the
way you wanted to display the time. For example:

```
void = Label_Date(Date_Format='%D %M, %Y')
plot, time, vel, linestyle = 2, xtickformat='label_date'
```

Or, you can just use the calendar date formating codes
directly with the XTickFormat keyword:

```
plot, time, vel, linestyle = 2, xtickformat='(C(CDI,x,CMoA,x,CYI2))'
```

These formats obviously aren't correct with this data,
but I can't tell how the data should be formatted without
more information about what these Julian numbers 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: IDL QUESTIONS(time convection)
Posted by zolile mtumela on Tue, 29 Nov 2011 16:16:58 GMT
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On Nov 29, 3:56 pm, David Fanning <n...@dfanning.com> wrote:
> zolile mtumela writes:
>> I tried to convert time axis to hours in the ff program, but all my
>> efforts are not working. I need some help and suggestion on this
>> convection.I have tried may ways but they are not converting in a
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>

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> more information about what these Julian numbers 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.")

Hello David
the time is 2 hour but given in second

Subject: Re: IDL QUESTIONS(time convection)
Posted by David Fanning on Tue, 29 Nov 2011 16:34:49 GMT
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zolile mtumela writes:

> the time is 2 hour but given in second

Well, then, why don't you just do this:

plot, (time-time[0])/3600., vel, linestyle = 2, xtitle='Hours'

Cheers,

David

--

David Fanning, Ph.D.
Fanning Software Consulting, Inc.
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Subject: Re: IDL QUESTIONS(time convection)
Posted by zolile mtumela on Tue, 29 Nov 2011 16:35:19 GMT
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On Nov 29, 3:56 pm, David Fanning <n...@dfanning.com> wrote:
> zolile mtumela writes:
>> I tried to convert time axis to hours in the ff program, but all my
>> efforts are not working. I need some help and suggestion on this
>> convection.I have tried may ways but they are not converting in a
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>
> Well, there are a couple of ways to do this. You could
> use the function LABEL_DATE to set up the time axis the
> way you wanted to display the time. For example:
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> plot, time, vel, linestyle = 2, xtickformat='label_date'
>
> Or, you can just use the calendar date formating codes
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>
> plot, time, vel, linestyle = 2, xtickformat='(C(CDI,x,CMoA,x,CYI2))'
>
> These formats obviously aren't correct with this data,
> but I can't tell how the data should be formatted without
> more information about what these Julian numbers mean.
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> Cheers,
>
> David
> --
> David Fanning, Ph.D.
> Fanning Software Consulting, Inc.
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> Sepore ma de ni thui. ("Perhaps thou speakest truth.")

Hello David.
The times is 2 hours but given in seconds starting 24782520 ending
24789706 roughly around 7200 seconds.
but the sampling rate is 120 seconds which gives 60 elements.
I want to use 120 sec and as spacing of this data so that I can have
60 number of elements instead of this number 7081.

I think even in x I have to change the way of putting that statement.
the actualy program that we wrote is the ff.

```
;select the data file
File = Dialog_pickfile(Filter = '*.txt')
;read the data
rows = File_lines(file)
data = dblarr(2,rows)
openr,Lun,file,/Get_lun
ReadF,lun, data
data[0,*] = data[0,*]-min(data[0,*]); elapsed time
b = floor(min(data[0,*])); start time
e = ceil(max(data[0,*])); end time
x = Findgen(e-b+1); time
interp_vel = interpol(data[1,*], data[0,*],x); interpolating data
T=120.0

;draw the plots

plot,data[0,*]/3600.,data[1,*],linestyle=2
N=n_elements(interp_vel)

;han = hanning(N, /double)

spec = fft(interp_vel)
freq_axis = findgen(N)/(N*T)
spec=fft(interp_vel)

;N=n_elements(interp_vel)

freq_axis=findgen(N)/(N*T)
plot,freq_axis[0:N/2],abs(spec[0:N/2]),xrange=[0.001,0.005]
end
```

I can put the above data as it is, in the given format:

```
24782555     0.200000
   24782675     -12.0000
   24782795     -6.70000
   24782915      2.40000
   24783035     -11.4000
   24783155      3.40000
   24783275      1.30000
   24783395     -2.80000
   24783515     -8.60000
   24783635      1.30000
   24783755    -0.600000
   24783875     -2.70000
```

24783995	-7.40000
24784115	-8.40000
24784235	0.100000
24784355	53.5000
24784475	23.9000
24784595	-5.60000
24784715	-2.10000
24784835	-10.2000
24784955	-8.20000
24785075	2.30000
24785195	-15.3000
24785315	5.70000
24785435	0.00000
24785555	-9.80000
24785675	54.3000
24785795	-8.60000
24785915	0.00000
24786035	29.6000
24786155	-32.5000
24786275	8.50000
24786515	60.1000
24786635	0.00000
24786755	59.8000
24786875	58.0000
24786995	52.4000
24787115	0.00000
24787235	0.00000
24787355	0.00000
24787475	0.00000
24787595	43.4000
24787715	55.4000
24787835	7.10000
24787955	-2.90000
24788075	22.0000
24788195	13.1000
24788315	-2.60000
24788435	31.5000
24788555	57.2000
24788675	41.8000
24788795	27.8000
24788915	31.4000
24789035	0.400000
24789155	24.6000
24789275	16.3000
24789395	-3.10000
24789515	4.00000
24789635	4.20000

By the above first program I thought it will be simple when using

interpol, but I guess i was wrong.
The aims of these plots are find the spetral peaks. Now I can't read
the spectrum. It is important for me do sampling rate of 120 seconds.
Lack of understanding is killing me.
I need help and suggestions about solving this problem.
Thank you for ur help
Zolile

Subject: Re: IDL QUESTIONS(time convection)
Posted by David Fanning on Tue, 29 Nov 2011 17:31:49 GMT
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zolile mtumela writes:

> Lack of understanding is killing me.

Yes, those of us who practice science find this to be
the bane of our existence. :-)

Cheers,

David

--
David Fanning, Ph.D.
Fanning Software Consulting, Inc.
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Sepore ma de ni thui. ("Perhaps thou speakest truth.")

Subject: Re: IDL QUESTIONS(time convection)
Posted by David Fanning on Tue, 29 Nov 2011 17:44:32 GMT
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zolile mtumela writes:

> The aims of these plots are find the spetral peaks. Now I can't read
> the spectrum. It is important for me do sampling rate of 120 seconds.
> Lack of understanding is killing me.
> I need help and suggestions about solving this problem.

Well, I don't know. This code seems to do what you want
to do, with the data you provided this morning.

```
!p.multi=[0,1,2]
Result = interpol(vel,time,U)
cgplot, (time-time[0])/3600., vel, $
   linestyle = 2, xtitle='Hours'
cgplot, (u-u[0])/3600., result, /overplot, $
    psym=2, color='red'
N = n_elements(result)
print, N
T = 120
Spec = fft(result)
freq_axis =findgen(N)/(N*T)
cgplot, freq_axis[0:N/2],abs(spec[0:N/2]), $
  xrange =[0.001,0.005], xstyle=1
!p.multi=0
end
```

Cheers,

David

--
David Fanning, Ph.D.
Fanning Software Consulting, Inc.
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Subject: Re: IDL QUESTIONS(time convection)
Posted by zolile mtumela on Tue, 29 Nov 2011 17:49:52 GMT
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On Nov 29, 7:44 pm, David Fanning <n...@dfanning.com> wrote:
> zolile mtumela writes:
>> The aims of these plots are find the spetral peaks. Now I can't read
>> the spectrum. It is important for me do sampling rate of 120 seconds.
>> Lack of understanding is killing me.
>> I need help and suggestions about solving this problem.
>
> Well, I don't know. This code seems to do what you want
> to do, with the data you provided this morning.
>
> !p.multi=[0,1,2]
> Result = interpol(vel,time,U)
> cgplot, (time-time[0])/3600., vel, $
>   linestyle = 2, xtitle='Hours'
> cgplot, (u-u[0])/3600., result, /overplot, $
>   psym=2, color='red'

> N = n_elements(result)
> print, N
> T = 120
> Spec = fft(result)
> freq_axis =findgen(N)/(N*T)
> cgplot, freq_axis[0:N/2],abs(spec[0:N/2]), $
> xrange =[0.001,0.005], xstyle=1
> !p.multi=0
> end
>
> 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.")

Thank you so David
