Subject: IDL QUESTIONS (INTERPOLATION)
Posted by zolile mtumela on Mon, 21 Nov 2011 13:59:24 GMT
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Hi all,
I have interpolated some data, which I think I did well, the data looks like this

time (s)	velocity
24785555	-8.90000
24785675	-6.90000
24785795	-5.00000
24785915	-15.4000
24786035	-1.80000
24786155	21.5000
24786275	-2.70000
24786395	1326.90
24786515	0.100000
24786635	69.6000
24786755	-624.900
24786875	263.700
24786995	30.3000
24787115	157.000
24787235	488.300
24787355	25.6000
24787475	40.6000
24787595	32.5000
24787715	21.2000
24787835	13.6000
24787955	92.4000
24788075	37.0000
24788195	7.50000
24788315	4.80000
24788435	8.30000
24788555	43.4000
24788675	26.2000
24788795	36.7000
24788915	17.6000
24789035	-39.2000
24789155	-76.5000
24789275	-31.7000
24789395	-31.3000
24789515	-20.0000
24789635	1.10000

I want to create time axis in hours, I need help on time convetion, I wrote a program like this

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

;read the data
```

```
rows = File_lines(file)
data = Fltarr(2,rows)
openr,Lun,file,/Get_lun
ReadF,lun, data
b =floor(min(data[0,*])); start time
e = ceil(max(data[0,*])); end time
x = Scale_vector(Findgen(e-b+1),b,e)
y = interpol(data[1,*], data[0,*],x); interpolating data
;draw the plots
plot,data[0,*],data[1,*],linestyle=2       ; for original data
oplot,x,y,color=120            ; newly interpolated velocity data

end
```
I want to covert that time in two hour in the plot.

Thank you in advance for ur time
Zolile

Subject: Re: IDL QUESTIONS (INTERPOLATION)
Posted by zolile mtumela on Mon, 21 Nov 2011 20:34:58 GMT

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On Nov 21, 10:15 pm, David Fanning <n...@dfanning.com> wrote:
> zolile mtumela writes:
>> Thank so much David, for time axis it looks ok.
>> I am bit confused why at the y-axis(velocity), my program plot big
>> values which are not in the data. I got big values like(500)
>> After interpolation, Is it necessary to resample data? Are any better
>> way to use interpolation in this kind of data.
>
> I don't know. There were big values in the data you
> sent us. I don't think it is necessary to resample
> the data. It seems to track the real data exactly. :-)
>
>> Thank so much for ur tireless support and help.
>
> Yes, I was just having lunch with one of my
> sons, encouraging him to not follow in his
> father's footsteps. Rather, to find a job
> that he loves that actually pays a living
> wage. :-)
>
> --
> 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 very much David
Zolile

Subject: Re: IDL QUESTIONS (INTERPOLATION)
Posted by zolile mtumela on Tue, 22 Nov 2011 06:37:59 GMT
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On Nov 21, 10:34 pm, zolile mtumela <zolilemtum...@gmail.com> wrote:
> On Nov 21, 10:15 pm, David Fanning <n...@dfanning.com> wrote:
>
>
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> Thank very much David
> Zolile- Hide quoted text -
>
> - Show quoted text -

The original data(fit format) of this data have plotted a plot with
gaps, I wrote that data to ascii format.

I thought I will get similar plot but with gaps and fill those gaps
using interpolation function.
Any help will be highly appreciated.
Thanks
Zolile

Subject: Re: IDL QUESTIONS (INTERPOLATION)
Posted by zolile mtumela on Tue, 22 Nov 2011 07:12:07 GMT
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On Nov 22, 8:37 am, zolile mtumela <zolilemtum...@gmail.com> wrote:
> On Nov 21, 10:34 pm, zolile mtumela <zolilemtum...@gmail.com> wrote:
>
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> Thanks
> Zolile- Hide quoted text -
> a
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Actually the data suppose to take two hrs thats is 7200 seconds: From
original data in fit format, It shows me the start-end
time(2478520-2478906), in this two hrs data, sometimes there are
nodata, thats why i got few data in other data of ascii data.
I would like to plot 2 hr data even if I did get data, I think
interpolation function is ok.
1.Could I resample data to fill gaps
2.How to accomodate the 2 hours in all plots even if I got few data
Thank you
Zolile

Subject: Re: IDL QUESTIONS (INTERPOLATION)
Posted by David Fanning on Tue, 22 Nov 2011 13:21:48 GMT
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zolile mtumela writes:

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> gaps, I wrote that data to ascii format.
> I thought I will get similar plot but with gaps and fill those gaps
> using interpolation function.
> Any help will be highly appreciated.

Help of what kind? Do you need reassurance that
it doesn't matter in this case?

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 (INTERPOLATION)
Posted by David Fanning on Tue, 22 Nov 2011 13:26:58 GMT
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zolile mtumela writes:

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> 1.Could I resample data to fill gaps

Yes, if you think this is necessary. It doesn't
seem to be with the data you sent us.

> 2.How to accomodate the 2 hours in all plots even if I got few data

I am not sure what you are asking here.
Do you mean you want your X axis to always
represent two hours of time? Then set the
XRange to that span of time, and set the
XSTYLE keyword to 1 to tell IDL you really
mean it.

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 (INTERPOLATION)
Posted by zolile mtumela on Tue, 22 Nov 2011 14:13:22 GMT
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On Nov 22, 3:26 pm, David Fanning <n...@dfanning.com> wrote:

> zolile mtumela writes:
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Thanks David
Today, I was playing with these plots, looking to the one that have gaps. Mine looked different but I have adjust the rangers. I am bit convised that these ones are interpolated correctly. Thank you again. Sometimes It becomes hard to differetiate when u r not used in programming, But i am improving with ur assistance. Thank you!!

Subject: Re: IDL QUESTIONS (INTERPOLATION)
Posted by zolile mtumela on Wed, 23 Nov 2011 13:47:05 GMT
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On Nov 22, 4:13 pm, zolile mtumela <zolilemtum...@gmail.com> wrote:
> On Nov 22, 3:26 pm, David Fanning <n...@dfanning.com> wrote:
>
>
>

>
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HiDavid
I was doing FFT on this data, but I am getting fun spectrum. In the
data there are some big values(they look like outliers). Could I try
remove those big values in order to plot FFT.

Maybe I have to apply hanning window to get right spectrum, Any

suggestions are much welcome.
Many thanks
Zolile

Subject: Re: IDL QUESTIONS (INTERPOLATION)
Posted by David Fanning on Wed, 23 Nov 2011 14:27:55 GMT
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zolile mtumela writes:

> I was doing FFT on this data, but I am getting fun spectrum. In the
> data there are some big values(they look like outliers). Could I try
> remove those big values in order to plot FFT.

You could try. Then you have the bigger problem of
having to justify why you did it. :-)

> Maybe I have to apply hanning window to get right spectrum, Any
> suggestions are much welcome.

There are any number of filters that allow you to smooth data,
if that is what you want to do. It is faster to try a couple
than it is to talk about them.

Cheers,

David

--
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Sepore ma de ni thui. ("Perhaps thou speakest truth.")

Subject: Re: IDL QUESTIONS (INTERPOLATION)
Posted by Brian Wolven on Wed, 23 Nov 2011 17:58:04 GMT
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And make sure that the "outlier" is not your DC/zero frequency component - or remove it before doing the FFT. ;)
