
Subject: Re: IDL QUESTIONS (INTERPOLATION)

Posted by [Jeremy Bailin](#) on Mon, 21 Nov 2011 16:13:19 GMT

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On 11/21/11 8:59 AM, zolile mtumela wrote:

> 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 conversion, 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
>
>
>
>

```

Divide by 3600.0?

-Jeremy.

Subject: Re: IDL QUESTIONS (INTERPOLATION)
 Posted by [David Fanning](#) on Mon, 21 Nov 2011 17:54:15 GMT
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zolile mtumela writes:

```

>
> Hi all,
> I have interpolated some data, which I think I did well, the data
> looks like this
>   time (s)    velocity
> 24785555    -8.90000
> ...
> I want to create time axis in hours, I need help on time convetion, I
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>
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> rows = File_lines(file)
> data = Fltarr(2,rows)

```

```

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> oplot,x,y,color=120                      ; newly interpolated velocity data
>
> end
> I want to covert that time in two hour in the plot.

```

Maybe you want something like this:

```

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 = Scale_vector(Findgen(e-b+1),b,e)
y = interpol(data[1,*], data[0,*],x); interpolating data
;draw the plots
cgplot,data[0,*]/3600.,data[1,*], xtitle='Hours' ; for original data
cgplots,x/3600.,y,color='red', PSYM=3          ; newly interpolated
velocity data

end

```

--

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 [zolile mtumela](#) on Mon, 21 Nov 2011 18:50:36 GMT
[View Forum Message](#) <> [Reply to Message](#)

On Nov 21, 7:54 pm, David Fanning <n...@dfanning.com> wrote:
 > zolile mtumela writes:
 >
 >> Hi all,
 >> I have interpolated some data, which I think I did well, the data

```

>> looks like this
>>     time (s)    velocity
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>> ...
>> I want to create time axis in hours, I need help on time conversion, 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
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>> 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 convert that time in two hour in the plot.
>
> Maybe you want something like this:
>
> 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 = Scale_vector(Findgen(e-b+1),b,e)
> y = interpol(data[1,*], data[0,*],x); interpolating data
> ;draw the plots
> cgplot,data[0,*]/3600.,data[1,*], xtitle='Hours' ; for original data
> cgplots,x/3600.,y,color='red', PSYM=3      ; newly interpolated
> velocity data
>
> end
>
> --
> 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.")- Hide quoted text -
>

```

> - Show quoted text -

Thank you David it looks ok for time.

Based to data the y-axis(velocity axis), It plotted big values for y-axis but in my data there are no big values such as 500.

I am bit confused on resampling data, Is it necessary to resample data after interpolation.

In my program is any better way to use interpolation

Thank so much for ur tireless support and help

Many thanks

Zolile

Subject: Re: IDL QUESTIONS (INTERPOLATION)

Posted by [zolile mtumela](#) on Mon, 21 Nov 2011 19:00:31 GMT

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On Nov 21, 7:54 pm, David Fanning <n...@dfanning.com> wrote:

> zolile mtumela writes:

>

>> Hi all,

>> I have interpolated some data, which I think I did well, the data

>> looks like this

>> time (s) velocity

>> 24785555 -8.90000

>> ...

>> I want to create time axis in hours, I need help on time convetion, I

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>> ReadF,lun, data

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>> end

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

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> Maybe you want something like this:

>

```

> rows = File_lines(file)
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> cgplots,x/3600.,y,color='red', PSYM=3 ; newly interpolated
> velocity data
>
> end
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> David Fanning, Ph.D.
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> Sepore ma de ni thui. ("Perhaps thou speakest truth.")- Hide quoted text -
>
> - Show quoted text -

```

```

cgplot,data[0,*]/3600.,data[1,*], xtitle='Hours' ; for original data
cgplots,x/3600.,y,color='red', PSYM=3 ; newly interpolated
velocity data

```

end

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.

Thank so much for ur tireless support and help
Zolile

Subject: Re: IDL QUESTIONS (INTERPOLATION)
Posted by [David Fanning](#) on Mon, 21 Nov 2011 20:15:56 GMT
[View Forum Message](#) <> [Reply to Message](#)

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.
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