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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 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 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 -
```

```
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

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