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Subject: add a period axis?

Posted by [web](#) on Wed, 10 Oct 2001 13:37:11 GMT

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Hi,

I wonder how to add another axis. First create a frequency-power plot:

```
plot,fre,power,xrange=[1,10],yrange=[0,10],xtitle='Frequency '
```

I hope to add an axis on the top but with period(=1/frequency) ticks. Maybe like following:

```
axs,1,10,/xaxis,xrange=[1,0.1], xtitle='Period',.....???
```

Would you please help me to finish the above?

Best,

Jiali

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Subject: Re: add a period axis?

Posted by [web](#) on Fri, 12 Oct 2001 02:15:38 GMT

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Hi, Why are there not answer? Is it possible to add a period axis? Hope to get your reply soon. Jiali

"jiali" <jiali3@21cn.com> wrote in message  
news:9q2p35\$8oa\$1@mail.cn99.com...

> Hi,

>

> I wonder how to add another axis. First create a frequency-power plot:

>

> plot,fre,power,xrange=[1,10],yrange=[0,10],xtitle='Frequency '

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Maybe

> like following:

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>

> Would you please help me to finish the above?

>

> Best,

> Jiali

>

>

>

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Subject: Re: add a period axis?

Posted by [nobody@nowhere.com](mailto:nobody@nowhere.com) (S on Fri, 12 Oct 2001 15:06:11 GMT

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On Fri, 12 Oct 2001 10:15:38 +0800, jiali <jiali3@21cn.com> wrote:

> Hi, Why are there not answer? Is it possible to add a period axis? Hope to

> get your reply soon. Jiali

>

> "jiali" <jiali3@21cn.com> wrote in message

> news:9q2p35\$8oa\$1@mail.cn99.com...

>> Hi,

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>> I wonder how to add another axis. First create a frequency-power plot:

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> Maybe

>> like following:

>>

>> axis,1,10,/xaxis,xrange=[1,0.1], xtitle='Period',.....???

>>

I would make an array of labels you'd like to use say label[], then something like:

axis, xaxis=1,xticks=5,xminor=0,xtickn=label,xtitle='Period'

should work fine.

>> Would you please help me to finish the above?

>>

>> Best,

>> Jiali

>>

>>

>>

>

>

--

Steve S.

[steve@NOSPAMmailaps.org](mailto:steve@NOSPAMmailaps.org)

remove NOSPAM before replying

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Subject: Re: add a period axis?

Posted by [Pavel A. Romashkin](#) on Fri, 12 Oct 2001 15:29:38 GMT

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jiali wrote:

>

> Hi, Why are there not answer? Is it possible to add a period axis? Hope to  
> get your reply soon. Jiali

We all thought you are switching to Matlab, since there are a lot more  
.m files out there.

Pavel

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Subject: Re: add a period axis?

Posted by [Craig Markwardt](#) on Sat, 13 Oct 2001 03:27:56 GMT

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jeyadev@wrc.xerox.com (Surendar Jeyadev) writes:

> In article <MPG.162ed391d0e34c3c989704@news.frii.com>,  
> David Fanning <david@dfanning.com> wrote:

>> jiali (jiali3@21cn.com) writes:

>>

>>> I wonder how to add another axis. First create a frequency-power plot:

>>>

>>> plot,fre,power,xrange=[1,10],yrange=[0,10],xtitle='Frequency '

>>>

>>> I hope to add an axis on the top but with period(=1/frequency) ticks. Maybe  
>>> like following:

>>>

>>> aixs,1,10,/xaxis,xrange=[1,0.1], xtitle='Period',.....???

>>>

>>> Would you please help me to finish the above?

>>

>> Well, it will be something like this:

>>

>> plot,fre,power,xrange=[1,10],yrange=[0,10], \$

>> xtitle='Frequency', xstyle=8, \$

>> position=[0.15, 0.15, 0.95, 0.85]

>> axis, xaxis=1, xrange=[1,0.1], xtitle='Period', /save

>

> Awww! This is too easy! It does help that 1.0 lines up with 0.1, 2.0 with  
> 0.2, ... etc. Things look nice. How about when you want to have  
> xrange = [0,15], but you want the upper axis to be some specific values  
> that are calculated from the lower axis. I run into this typically in  
> trying to have two different ways of specifying the same underlying

> variable. For a no so moronic example, let the x axis be some length  
> in metres. Now, for some people's benefit, I would like to have  
> feet on the upper scale. But, it is ugly to have 1.5432, 2.1793, ...  
> labels. One would like that hash marks to be laid at 1.5, 2.0, etc.  
> Any chance of a routine out there?

Ummm, and this doesn't do the trick with no fuss or muss?

```
plot, findgen(10), xstyle=8, xrange=[0,10] ;; X axis in meters  
axis, xrange=[0,10]*3.281, xaxis=1, xstyle=1 ;; X axis in feet
```

Craig

--

-----  
Craig B. Markwardt, Ph.D.      EMAIL:    craigmnet@cow.physics.wisc.edu  
Astrophysics, IDL, Finance, Derivatives | Remove "net" for better response  
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Subject: Re: add a period axis?  
Posted by [web](#) on Sat, 13 Oct 2001 11:10:39 GMT  
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The following can do:

```
x=findgen(100)/100.  
xrange=[0.1,1]  
!p.position=[0.2,0.2,0.8,0.8]  
xticks=9 & xtickv=[0.1,0.2,0.3,0.4,0.5,0.6,0.7,0.8,0.9,1.0]  
plot,x,sin(x*20),xstyle=9,ystyle=1,yrange=[-1,1],xrange=xrange,xticks=xticks  
,xtickv=xtickv  
axis,xaxis=1,xrange=xrange,xticks=xticks,xtickname=string(1./xtickv,format='  
(f4.1)'),xstyle=1  
end
```

Then period 2 is coressponded to frequency 0.5. But I hope  
tickv=[10,9,8,7,6,5,4,3,2,1] for period axis. How to do then? Maybe '/xlog'  
will be used, because log(period)=-log(frequency). But I failed to do that,  
although I tried again and again.

"Steve Smith<steven\_smith>" <nobody@nowhere.com> wrote in message  
news:slrn9se1lj.mo2.nobody@pooh.nrel.gov...

> On Fri, 12 Oct 2001 10:15:38 +0800, jiali <jiali3@21cn.com> wrote:  
>> Hi, Why are there not answer? Is it possible to add a period axis? Hope  
to  
>> get your reply soon. Jiali  
>>

```
>> "jiali" <jiali3@21cn.com> wrote in message
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>>> Hi,
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>>> like following:
>>>
>>> aivs,1,10,/xaxis,xrange=[1,0.1], xtitle='Period',.....???
>>>
>
> I would make an array of labels you'd like to use say label[], then
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> axis, xaxis=1,xticks=5,xminor=0,xtickn=label,xtitle='Period'
> should work fine.
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>>> Would you please help me to finish the above?
>>>
>>> Best,
>>> Jiali
>>>
>>>
>>>
>>
>>
>
>
> --
> Steve S.
>
> steve@NOSPAMmailaps.org
> remove NOSPAM before replying
```

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Subject: Re: add a period axis?  
Posted by [jeyadev](#) on Mon, 15 Oct 2001 22:20:02 GMT  
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In article <onbsjci5hf.fsf@cow.physics.wisc.edu>,  
Craig Markwardt <craigmnet@cow.physics.wisc.edu> wrote:  
> jeyadev@wrc.xerox.com (Surendar Jeyadev) writes:  
>  
>> Awww! This is too easy! It does help that 1.0 lines up with 0.1, 2.0 with

```
>> 0.2, ... etc. Things look nice. How about when you want to have
>> xrange = [0,15], but you want the upper axis to be some specific values
>> that are calculated from the lower axis. I run into this typically in
>> trying to have two different ways of specifying the same underlying
>> variable. For a no so moronic example, let the x axis be some length
>> in metres. Now, for some people's benefit, I would like to have
>> feet on the upper scale. But, it is ugly to have 1.5432, 2.1793, ...
>> labels. One would like that hash marks to be laid at 1.5, 2.0, etc.
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>
> Ummm, and this doesn't do the trick with no fuss or muss?
>
> plot, findgen(10), xstyle=8, xrange=[0,10] ;; X axis in meters
> axis, xrange=[0,10]*3.281, xaxis=1, xstyle=1 ;; X axis in feet
  ^^^^^^^^^^^^^^^^^
```

You really meant

```
xrange = !x.crange*3.281
```

didn't you?!!!!

Thanks for the dash of cold water! Late Friday evening and a hurry to get out did result in a moronic example!

I picked a linear relationship (in PV-Wave the example of plotting temperature in F and C is given :-(' ), but what is the relationship is not linear? For example, velocity and power so that the upper axis is the square of the lower one? Is there a nifty way to do that?

--

Surendar Jeyadev      jeyadev@wrc.xerox.com

Subject: Re: add a period axis?

Posted by [Craig Markwardt](#) on Tue, 16 Oct 2001 15:07:13 GMT

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jeyadev@wrc.xerox.com (Surendar Jeyadev) writes:

```
> In article <onbsjci5hf.fsf@cow.physics.wisc.edu>,
> Craig Markwardt <craigmnet@cow.physics.wisc.edu> wrote:
>> jeyadev@wrc.xerox.com (Surendar Jeyadev) writes:
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```

```

>>> that are calculated from the lower axis. I run into this typically in
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>>> variable. For a no so moronic example, let the x axis be some length
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>>
>> plot, findgen(10), xstyle=8, xrange=[0,10] ;; X axis in meters
>> axis, xrange=[0,10]*3.281, xaxis=1, xstyle=1 ;; X axis in feet
>      ^^^^^^^^^^^^^^^^^^
>
> You really meant
>
>      xrange = !x.crange*3.281
>
> didn't you?!!!!

```

Well, I didn't really mean that when I wrote it, but since I had just done X RANGE=[0,10] in the previous command, they are essentially the same.

```

> I picked a linear relationship (in PV-Wave the example of plotting
> temperature in F and C is given :-(' ), but what is the relationship
> is not linear? For example, velocity and power so that the upper
> axis is the square of the lower one? Is there a nifty way to do
> that?

```

I don't see why it's any different. You can pass any range you wish to the X RANGE keyword of AXIS, and nice tick marks will come out.

Craig

--

```

-----
Craig B. Markwardt, Ph.D.      EMAIL:  craigmnet@cow.physics.wisc.edu
Astrophysics, IDL, Finance, Derivatives | Remove "net" for better response
-----

```

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Subject: Re: add a period axis?  
 Posted by [jeyadev](#) on Tue, 16 Oct 2001 20:20:29 GMT  
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In article <onbsj7zkri.fsf@cow.physics.wisc.edu>,  
 Craig Markwardt <craigmnet@cow.physics.wisc.edu> wrote:

>  
> jeyadev@wrc.xerox.com (Surendar Jeyadev) writes:  
>  
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>> that?  
>  
> I don't see why it's any different. You can pass any range you wish  
> to the XRANGE keyword of AXIS, and nice tick marks will come out.

But, things do not line up right. I guess that I am not explaining  
what I am looking for. Suppose we did have xrange = [0,5] with  
ticks at 1, 2, 3 and 4. Now, the other other axis should have  
1 lining up with 1, 4 lining up with 2, 9 with 3, etc. One can  
readily have a second axis that runs from [0,25] in a \*linear\*  
fashion, but I do not know of a way of getting a nonlinear  
relationship without having to putting in the labels yourself.

--

Surendar Jeyadev      jeyadev@wrc.xerox.com

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