
Subject: Easy question on for loops and if statements
Posted by [larosaant94](#) on Thu, 16 Jul 2015 17:15:09 GMT
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I am plotting the magnetic field longitude and using the ATAN function to do so. Though the ATAN function gives a result between the range of -180 to +180. I wish to use a range of 0 to 360.

A look at the code:

```
Bx = data(10,*)  
By = data(11,*)
```

```
longitude = 180/!Pi* atan(By, Bx)
```

```
FOR j=0,N_Elements(longitude)-1 DO BEGIN  
  IF longitude[j] lt 0 THEN BEGIN  
    longitude = 360 + longitude  
  ELSE  
    longitude = longitude  
ENDFOR
```

```
;Does the actual plotting-----
```

```
plot, time, longitude, yrange=[0, 360], yticks=4, yminor=6, $  
  ytitle='Lambda', position=[0.1, 0.24, 0.95, 0.31], xtickname=blnklb  
  plots, [min(time), max(time)], 180.0*[1,1], linestyle=2
```

I want any number less than 0 to get 360 added to it and then once this is completed plot all the data points including the ones above 0!

Thanks!

Subject: Re: Easy question on for loops and if statements
Posted by [Michael Galloy](#) on Thu, 16 Jul 2015 18:24:08 GMT
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On 7/16/15 11:15 AM, larosaant94@gmail.com wrote:

```
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> function to do so. Though the ATAN function gives a result  
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> 0 to 360.  
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>
>
>
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> this is completed plot all the data points including the ones above 0!

```

I don't see a specific question here. I do notice you had some oddities in your FOR loop, so I corrected:

```

for j = 0L, n_elements(longitude) - 1L do begin
  if (longitude[j] lt 0) then begin
    longitude[j] = 360 + longitude[j]
  endif
endfor

```

But really, I would just do the following:

```
longitude += (longitude lt 0) * 360
```

Mike

--

Michael Galloy

www.michaelgalloy.com

Modern IDL: A Guide to IDL Programming (<http://modernidl.idldev.com>)

Subject: Re: Easy question on for loops and if statements
 Posted by [larosaant94](#) on Thu, 16 Jul 2015 18:30:19 GMT
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Sorry about that...

I want to plot 0 to 360 on the y axis, but the calculation only computes -180 to 180. I need to add 360 to all values less than 0 and keep the ones 0 - 180 the same with no addition!

Subject: Re: Easy question on for loops and if statements
Posted by [Phillip Bitzer](#) on Thu, 16 Jul 2015 18:51:56 GMT
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On Thursday, July 16, 2015 at 1:30:22 PM UTC-5, [laros...@gmail.com](#) wrote:

> Sorry about that...

>

> I want to plot 0 to 360 on the y axis, but the calculation only computes -180 to 180. I need to add 360 to all values less than 0 and keep the ones 0 - 180 the same with no addition!

Did you try searching for an answer?

I found this pretty quickly....

http://www.idlcoyote.com/map_tips/lonconvert.html

Subject: Re: Easy question on for loops and if statements
Posted by [larosaant94](#) on Thu, 16 Jul 2015 20:37:42 GMT
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Apparently not hard enough -- thank you.
