
Subject: Re: logarithmic axis labels

Posted by [Paul Van Delst\[1\]](#) on Tue, 27 Nov 2007 22:18:24 GMT

[View Forum Message](#) <> [Reply to Message](#)

Haje Korth wrote:

> Hi,
> Is there a way to convince IDL to use axis labels like 10^{-1} (10!U-1!N in
> hershey language) instead of 0.1? Plot sets this automatically to the former
> format if for very small and very large numbers, but is there a way to
> always force this format?

>
> Hints highly appreciated!

>
> Thanks,
> Haje

>
>

;+

;

;(C) Cooperative Institute for Meteorological Satellite Studies, 2000

;

; NAME:

; logticks_exp

;

; PURPOSE:

; Function to print logarithmic axis tickmarks with exponential
; output.

;

; CATEGORY:

; Graphics

;

; LANGUAGE:

; IDL v5

;

; CALLING SEQUENCE:

; PLOT, x, y, /YLOG, YICKFORMAT = 'logticks_exp'

;

; INPUTS:

; axis: the axis number. 0 for X axis, 1 for Y axis, 2 for Z axis.

; index: the tick mark index which starts at 0.

; value: the default tick mark value (a floating-point number);

;

; OUTPUTS:

; Function returns a string containing the tick mark labels.

;

; CREATION HISTORY:

; Written by: Paul van Delst, CIMSS/SSEC, 08-Nov-2000

; paul.vandelst@ssec.wisc.edu

```
;
;-
FUNCTION logticks_exp, axis, index, value
  ; Determine the base-10 exponent
  exponent = LONG( ALOG10( value ) )
  ; Construct the tickmark string based on the exponent
  tickmark = '10!E' + STRTRIM( STRING( exponent ), 2 ) + '!N'
  ; Return the formatted tickmark string
  RETURN, tickmark
END
```

Use it thusly:

```
IDL> x=dindgen(1000)+1.0d0
IDL> y=x^2
IDL> plot, x, y, /ylog,ytickformat='logticks_exp',charsize=2
```

cheers,

paulv
