Subject: Angstrom symbol
Posted by egami on Wed, 15 Sep 1993 09:59:23 GMT
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I'm wondering if there's a way to print out an angstrom symbol in a
title of a plot with PostScript font. I know this is possible with
X-window fonts, because the symbol is encoded with an octal number,
which can be found by using "xfd". However, this symbol is not
explicitly encoded in PostScript, so I don't know how to access it
even though my printer has the font.

Currently, I'm using the following sequence of positioning commands
to construct the symbol with PostScript font:

"!SA!R !A!9\260!N"

However, this still looks awkward.

Is there a way to print out this symbol directly in PostScript?
Someone might have asked this question already, but I couldn't
find any answer in the FAQ. I would appreciate any suggestions.
Thanks in advance.

Eiichi Egami
Institute for Astronomy
University of Hawaii

Subject: Re: Angstrom symbol
Posted by jacobsen on Thu, 16 Sep 1993 23:58:50 GMT
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There's a way to do it. Look in the release notes on your
computer. If you're on Unix, I think you can do
cd /usr/local/lib/idl/lib/doc
grep ngstrom *
or something like that. Sorry I can't get it at it at the moment...
--
**********
Chris Jacobsen, Department of Physics, SUNY at Stony Brook
Phone (516) 632-8093, FAX -8101 Bitnet: cjacobsen@sbccmail
jacobsen@xray1.physics.sunysb.edu ALL-IN_ONE: CJACOBSEN
**********

Subject: Re: Angstrom symbol

Posted by claflin on Thu, 23 Sep 1993 04:19:09 GMT
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In article <JACOBSEN.93Sep16195850@xray1.physics.sunysb.edu>,
jacobsen@xray1.physics.sunysb.edu (Chris Jacobsen) writes:
> There's a way to do it. Look in the release notes on your
> computer. If you're on Unix, I think you can do
> cd /usr/local/lib/idl/lib/doc
> grep ngstrom *
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> ********************

As I recall, the original question was, "How do I get an Angstrom symbol in PostScript output." Version 3.1 of IDL incorporated Adobe ISO-LATIN 1 font encoding. With that Version or later one can use

```
SET_PLOT,'PS'
DEVICE,/HELVETICA,/ISOLATIN1
```

and insert the Angstrom symbol in character strings with STRING(197B) .

Reference: IDL News, Spring, 1993.

Scott Claflin
LMSC

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Subject: Re: Angstrom symbol
Posted by nicholas on Wed, 24 May 1995 07:00:00 GMT
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I use two different methods:

```
ang = string(197b)

   or

ang = '!6!sA!r!u!9 %!6!n'
```

The !6 is just my favorite font, !S saves the position, A is the "A" in angstrom, !r returns to saved position, !u is superscript, !9 changes to math font, ' %' is a space and the degree symbol, !6 back to my font, !n is normal size. It is a hack but it works.....

-Andy

---
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Subject: Re: Angstrom symbol
Posted by Eric Deutsch on Thu, 25 May 1995 07:00:00 GMT
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abraham@ast.cam.ac.uk (Roberto Abraham) wrote:
> Hi, I'm a new user of IDL so apologies if this is a FAQ (although I
> did do a quick check of the FAQ List so hopefully it isn't!). Can somebody
> tell me how to make IDL print out an Angstrom symbol? It seems to be
> part of the default font table if one knows how to use the ISO
> encoding to specify the character, which unfortunately I don't and can't
> figure out from the documentation.

If you are interested in generating PostScript plots using the printer's
hardware font and hardware Angstrom symbol, my solution to this problem
can be found at

http://www.astro.washington.edu/deutsch/local_IDL.html

If you can't access this site, here's one of the program examples that
is there. The program shows a little bit how to deal with the difference
between vector fonts and printer hardware fonts. Hope this helps...

Eric

```
; This MAIN_PROGRAM is a demo of how to make publication quality output in
; IDL using Postscript fonts.  The program can also be run on X displays
; with the Hershey Triplex font, but special characters will not come out
; looking the same (the price you pay for better quality printed output.)
; See also charsets.pro which prints out the characters sets to the printer.
; Send comments or changes to: deutsch@astro.washington.edu (Eric Deutsch)
;
```

```
; You can run this program with something like:
;   IDL> setps,/landscape  ; direct output to landscape Postscript
;   IDL> .run psspecxmpl.pro  ; run this program to generate spectrum
;   IDL> psclose,auto='sol'  ; send output to printer queue sol

  wl=indgen(2000)*4+1000  ; generate wavelength array
  spec=sin(wl/1850.)*3+4+randomu(seed,2000) ; generate a noisy sine wave

  if (!d.name eq 'PS') then begin ; If Postscript output mode
    !p.font=0     ; select hardware fonts
    device,/helv,/isolatin1   ; Helvetica ISOLatin fontset
    ang=string(197B)    ; Angstrom sym char string
    thk=4     ; thick borders are nice
  endif else begin   ; If screen or other output mode
    !p.font=-1     ; select Hershey fonts
    xyouts,0,0,/norm,'!17'   ; Set to Triplex Roman font
    ang='!3'+string(197b)+'!X'   ; only Simplex Angstrom
    thk=1     ; use regular thickness
    endelse

; Now create the plot.  Note that !U is for superscript (Up) and !N is
; for Normal letter sizes.

  plot,wl,spec,yr=[0,10],xstyle=1, $
    xtitle='Wavelength ('+ang+')', $
    ytitle='Flux (10!U-13!N erg cm!U-2!N s!U-1!N '+ang+'!U-1!N)', $
    title='Artificial Spectrum', $
    xcharsize=1.5, ycharsize=1.5, xthick=thk, ythick=thk

; print a legend-style string with some fancy characters.  !9 switches to
; the Postscript Symbol font.  !X switches back to the initial font.
; string(nnnB) is a way to generate a string containing a character of
; ASCII value nnn (You NEED the 'B').

  xyouts,2000,9,/data,'H!9b!X: !9s '+string(179B)+'!X 4.23'+string(215B)+ $
    '10!U-13!N '+string(177B)+' 0.54',charsize=2

; also here's a fancy example of printing world coordinates.  !S is save
; a position and !R is to restore to that position.

  degsym='!9'+string(176B)+'!X'
  minsym='!9'+string(162B)+'!X'
  secsym='!S.!R!9'+string(178B)+'!X'

   xyouts,2000,8.2,/data,charsize=2,'!9a!X(1950)=15!Uh!N37!Um!N 23!S.!R!Us!N31'+$
     '   !9d!X(1950)=+56'+degsym+'34'+minsym+'15'+secsym+'2'

end
```

--
Eric Deutsch

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Subject: Re: Angstrom symbol
Posted by soc on Thu, 25 May 1995 07:00:00 GMT
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Roberto Abraham (abraham@ast.cam.ac.uk) wrote:
: Hi, I'm a new user of IDL so apologies if this is a FAQ (although I
: did do a quick check of the FAQ List so hopefully it isn't!). Can somebody
: tell me how to make IDL print out an Angstrom symbol? It seems to be
: part of the default font table if one knows how to use the ISO
: encoding to specify the character, which unfortunately I don't and can't
: figure out from the documentation.

This probably isnt the easiest way to  do it, but I find it useful:
you can use string(194b)  - I set it up in my idlstartup as
angst=string(194b).  Works on UNIX and VAX Alpha.

Rob O'Connell

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