
Subject: general ASCII table import (was: how to find number of lines in an ASCII file?)

Posted by [Helge.Rebhan](#) on Fri, 21 Aug 1998 07:00:00 GMT

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In article <6rhk5k\$5d0\$1@hammer.msfc.nasa.gov>,
mallors@crazyhorse.msfc.nasa.gov (Robert S. Mallozzi) wrote:

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> In article <6rdfg$756@post.gsfc.nasa.gov>,  
>     jyli@redback.gsfc.nasa.gov (Jason Li) writes:  
>> Hi,  
>>  
>> I have an ASCII text file that contains data in a nice tabular form,  
>>  
>> .  
>>  
>> I want to read them all and save into an array:  
>> data[8, numberOfLines]. But  
>> I don't know numberOfLines in the file before hand.  
>> What is the most efficient way to find that out?  
>  
> Here is yet another method:  
>  
> IDL does not need to know the number of lines in the file. It  
> will dynamically increase the array for you. Assuming you know  
> how many columns are in the file, I would read it into an array of  
> structures as follows:  
>  
> data = {c1: 0L, c2: 0L, c3: 0.0, ..., c8: 0.0}
```

Hello !

This method still has the disadvantage to fix the number of columns !
Although I'm sure there are 1299 solutions to the general problem
of ASCII table import into IDL here is my version which reads *any* regular
formatted table in a 2D-Float-Array:
(Sorry for the comments in german)

```
-----  
;liese naechste Datenzeile, Kommentarzeilen mit ';' oder '!' skippen  
FUNCTION readnextline,lun,line  
  ok=0  
  while not eof(lun) and ok eq 0 do begin  
    readf,lun,line  
    bl= byte(strtrim(line,2))  
    ok=1 ;suche Kommentarzeilen  
    if bl(0) eq 59 then ok=0 ;;  
    if bl(0) eq 33 then ok=0 ;!
```

```

        IF bl(0) eq 35 then ok=0 ; #
        if strlen(line) eq 0 then ok=0
    end
    return,ok
end
;
;
FUNCTION readtab, filename, cols=cols
;+
; NAME:
;
;   READTAB
;
; PURPOSE:
;
;   Read any kind of ASCII-tables into floating point array
;   Empty Lines or lines starting with ';','#' or '!' are ignored
;
; CATEGORY:
;
;   Input/Output
;
; CALLING SEQUENCE:
;
;   var= READTAB(filename, [cols])
;
; INPUTS:
;
;   Filename - Input Datafile
;
; KEYWORD PARAMETERS:
;
;   COLS - Vektor with column numbers to pick, otherwise all
;         columns are returned
;
; OUTPUTS:
;
;   Floating point array with dimension specified by Columns and
;   Rows in the input file
;
;-

; on_error, 2
if n_params() eq 0 then message,'*** Aufruf var=READTAB(filename)'
openr,lun,filename,/get_lun
line=""

;erste Zeile lesen

```

```

if readnextline(lun,line) eq 0 then message,'*** Keine Daten !'
bl=byte(line)
s= size(bl) & n= s(1) -1
; Anzahl der Spalten ermitteln
ncol=0 & ws=0 & wsold=1
for i=0,n do begin
  if bl(i) eq 32 or bl(i) eq 09 then ws=1 else ws=0
  if ws ne wsold then begin
    if ws eq 0 then ncol=ncol+1
    wsold=ws
  end
end
print,'File hat ',ncol,' Spalten'
datline= fltarr(ncol)

; Zeilen lesen
point_lun,lun,0
i=0
while not eof(lun) do begin
  if readnextline(lun,line) eq 1 then begin
    i=i +1
    reads,line,datline
    if i eq 1 then data=datline $
    else      data= [[data],[datline]]
  end
end
print,'      ',i,' Zeilen gelesen'
close,lun & free_lun,lun

if keyword_set(cols) then begin
  cols=cols-1      ;Spaltennr ab 1 !
  data=data([cols],*)
end
return,data
end

```

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Sorry for this but please adjust e-mail address for direct reply