Subject: Re: interpolation between different files
Posted by Helder Marchetto on Wed, 16 Jan 2013 13:28:46 GMT
View Forum Message <> Reply to Message

On Wednesday, January 16, 2013 1:47:05 PM UTC+1, idlhelp wrote:
> Hello All,
>
> I was trying to interpolate different model spectra w.r.t metallicity at a step of 0.1. In each model atmosphere I am having wave and flux w.r.t metallicity that ranges from -0.5 to +0.5 at a step of 0.5. The name of the files I am having is like that
>
>
>
> 2000K-0.5.txt
>
> 2000K-0.0.txt
>
> 2000K+0.5.txt
>
> 2100K-0.0.txt
>
> 2100K+0.5.txt
>
> .....
>
> .....
>
> 4000K-0.0.txt
>
>
>
> First I want to interpolate for 2000K files between -0.5 to +0.5 at a step of 0.1 and in order to do so I am interpolations first between 1st and 2nd file and then 2nd and 3rd file and so on. In order to do that I have wrote a code. It works fine when I just read the first two files separately but as I have 100's of such file I am reading all the file at once and then performing the following calculations. But I am not sure that the code always keep 2000K constant and doing the interpolation and then for 2100K .....and so on.
>
>
>
> Here is the code
>
>
>
> readcol,'list.txt',fna,format='A' ; reading list of files
>
> nl = n_elements(fna)
>

```
>  nm = 268522                    ; number of elements in one file
>
>  all_w = fltarr(nm,nl)
>
>  all_f = fltarr(nm,nl)
>
>     for i=0,nl-1 do begin
>
>       fname = fna(i)
>
>   readcol,fname,temp1,temp2
>
>     all_w(*,i) = temp1
>
>      all_f(*,i) = temp2
>
>     endfor
>
>  alpha = (nl)-1
>
>  alpha = long(alpha)
>
>     for k = 0L, alpha do begin
>
>      w1 = all_w(*,k)
>
>      w2 = all_w(*,k+1)
>
>      f1 = all_f(*,k)
>
>      f2 = all_f(*,k+1)
>
>      linterp,w1,f1,w2,f1_2
>
>  frac = findgen(5*0.01)+0.5 ;Fractional distance between 0.0 and -0.5
>
>  for l = 0,4 do begin
>
>  finterp = f1_2*frac(l)+f2*(1-frac(l));interpolated function
>
>  endfor
>
>  endfor
>
>  end
>
>
>
```

>
>
> I am also getting an error "Attempt to subscript FRAC with L is out of range".
>
> Is there any how can I do that
>
>
>
> thanks in advance

I didn't go through the whole code, but it seems that you are trying to make an array with the command
frac = findgen(5*0.01)+0.5
I don't see why you don't get an error before the one you mentioned... because that will give you an error.
I think that what you should have wrote is:
frac = findgen(5)*0.01+0.5
Is this what you want:

```
IDL> PRINT,  findgen(5)*0.01+0.5
     0.500000     0.510000     0.520000     0.530000     0.540000
```

or do you want this:

```
IDL> PRINT,  -findgen(5)*0.1
    -0.000000    -0.100000    -0.200000    -0.300000    -0.400000
```

or what should frac be?

[for sure indexing a number that is not a number won't get you anywhere...]

Cheers,
Helder