Subject: difficulty using "linterp" command - need help making loop to exclude a value yet average others
Posted by Emily Anne Moravec on Fri, 12 Aug 2011 20:26:28 GMT
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We are writing a program for our supervisor to take 8 spectra which are each a matrix of 16384 by 2. The part of the program we have already splits the matrices into single matrices. Which is the code below:

```
fitfilename1 = '/Users/quasargroup/NGC3783/NGC3783 new data/X1dsum
files/lbgu19010_x1dsum.fits'
  data1 = mrdfits(fitfilename1,1,hdr)
  w1 = data1.wavelength
  w1a=w1(*, 0)
  w1b=w1(*, 1)
  f1= data1.flux
  f1a=f1(*, 0)
  f1b=f1(*, 1)
.... etc. through 8
```

Then we must get a new graph with a span of wavelengths and interpolated flux values.
Here is the wavelength grid for the eventual interpolation:

```
wgrid=findgen(58400)*.01+1227  ; from 1227.00 to 1811.00
  help, /str, wgrid
```

Here is where we are trying to interpolate:

```
  linterp, w1a, f1a, wgrid, fint1a
  linterp, w1b, f2b, wgrid, fint1b
  linterp, w2a, f2a, wgrid, fint2a

..... etc through 8
```

But we get this error.

```
% Compiled module: INTERPOLATEDSIXTEEN.
MRDFITS: Binary table.  12 columns by  2 rows.
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MRDFITS: Binary table.  12 columns by  2 rows.
MRDFITS: Binary table.  12 columns by  2 rows.
 Parameter 3 (New X Vector or Scalar)  of routine LINTERP  is
undefined.
```

Valid dimensions are: scalar 1
Valid types are: byte int*2 int*4 real*4 real*8 Unsigned(i*2)
Unsigned(i*4) int*8 Unsigned(i*8)

Do we need to do something to our wgrid or to the interpolate command
to get it to work?

Also, in each of our 8 data sets, there is an increment of wavelength
values where the value of the flux is 0, which will make the average
of all 8 messed up. Do you have any ideas how to write a loop that
goes through all of the wgrid values and averages the values of the
interpolated flux values, but skips the flux values that are 0 and
continues to the next? Is there a skip command? Would a where command
work the best?

Here is what I started with :
for i=1227.00, (1227.00+58400*.01), 0.01 do ???
