Subject: Re: Five days mean values
Posted by Michael Wallace on Thu, 06 Oct 2005 14:23:18 GMT

I wouldn't have thought of using rebin, but rebin will do the job for you as Ken describes. Rebin is used to resize arrays. When you compress an array, rebin take averages of the data points in the array.   You can use rebin to compress your temperature array and when it does so, averages will automatically be taken.

In order for the results to be accurate, you can neither have any missing days nor can your temperature array size not be a multiple of five. The array has to be a multiple of five because the compression and averaging is occurring over every five data points.

; temp is your temperature array
avgtemp = rebin(temp, n_elements(temp) / 5)

The n_elements(temp) / 5 tells us how many five element groups there are in your temperature array. The first five elements will be averaged and stored in avgtemp[0]. The second five elements will be averaged and stored in avgtemp[1], etc.

-Mike

Julio wrote:
> Hi Kenneth,
>
> I don't see how rebin can help me... An example, considering the
> meteorological data below, I want to find the temp(max) mean values
> from 01/08/2001 to 05/08/2001 and from 06/08/2001 to 10/08/2001...
>
> So I have Temp (max) = 27.2 and 27.4
>
> The problem is I have a very large amount of data. I can't see a way to
> find the mean value every five days.
>
> Any comments welcome!
>
> Regards,
> Jï¿½lio
>
> Kenneth Bowman escreveu:
>
>
>> In article <1128546470.965721.312300@g49g2000cwa.googlegroups.com>,
>> "Julio" <julio@cpa.unicamp.br> wrote:

>>
>>
>>> Hello people,
>>>
>>> I have meteorological data from several years, like these:
>>>
>>> Date   Temp (max) Temp (min)
>>> 01/08/2001 27.2 12.7
>>> 02/08/2001 27.8 12.4
>>> 03/08/2001 26.8 16.3
>>> 04/08/2001 26.6 12
>>> 05/08/2001 27.4 11
>>> 06/08/2001 27.6 16.1
>>> 07/08/2001 27.6 11.2
>>> 08/08/2001 28.4 13.4
>>> 09/08/2001 27.2 10.9
>>> 10/08/2001 26 9.7
>>>
>>> I want to calculate mean value from 01-05 days, 05-10 days, 10-15 days
>>> and so on.
>>> In other words, I must get the mean value at each five days.
>>> I'm trying to make some code to get it automatically. I think this kind
>>> of work is trivial for meteorological data users. Does anybody have
>>> some idea?
>>>
>>> Regards,
>>> Jï¿½lio
>>
>> If the data are in an array T, this is a very quick way to compute averages
>>
>> IDL> T = findgen(15)
>> IDL> print, T
>>   0.00000   1.00000   2.00000   3.00000   4.00000   5.00000
>> 6.00000
>>   7.00000   8.00000   9.00000   10.0000   11.0000   12.0000
>> 13.0000
>>   14.0000
>> IDL> print, rebin(T, 3)
>>   2.00000   7.00000   12.0000
>>
>> but make sure that the number of days is a multiple of 5 and that you have no
>> missing data. Also, watch out for leap days.
>>
>> Ken Bowman
>
>