
Subject: Minimum between two arrays; no, not just Min(A-B)

Posted by [leatherback](#) on Tue, 18 Sep 2007 14:19:00 GMT

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Hi All,

I am working with time series data, and image scenes. For each point in my time series I try to find the correct satellite scene to use. So I have two arrays, one with dates of observations, one with image scene dates.

These dates are in long integer (Unix timestamps).

I *could* of course replicate my image scenes array to the length of the timeseries array, calculate the difference for each date, and find out where it is, something along these lines:

```
datelist = rebin(dates, n_elements(dates),  
n_elements( fixes.timestamp))
```

```
for j=0, n_elements(dates)-1 do begin  
  datelist[j,*] = datelist[j,*]-fixes.timestamp  
endfor
```

Or even rebin both arrays, and subtract them. En then loop through them using the MIN / WHERE functions to find out where the minimum differences are.

However, this does not feel right. Besides that.. the timeseries is potentially 100,000+ observations. Add to that a few hundred image dates, and you are filling your memory for something quite simple. Anybody here have a good idea how to vectorize this problem?

Cheers,

Jelle.
