Subject: Re: Where vs Histogram vs ??
Posted by Craig Markwardt on Fri, 18 Oct 2002 03:21:44 GMT
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Andrew Cool <andrew.cool@dsto.defence.gov.au> writes:
> At the moment I'm doing something like this :-
>
> start_year = 2000
> end_year = 2002
> start_day = 120
> end_day = 133
> start_half_hr = 0
> end_half_hr = 47
> WRF = 1
> FREQ = 2
> start_beam = 0
> end_beam = 3
> nominated_parameter = 2
>
> index = Where(!database.year GE start_year AND $
> !database.year LE end_year AND $
> !database.day GE start_day AND $
> !database.day LE end_day AND $
> !database.beam GE start_beam AND $
> !database.beam LE end_beam AND $
> !database.half_hr GE start_half_hr AND $
> !database.half_hr LE end_half_hr AND $
> !database.WRF EQ WRF AND $
> !database.FREQ EQ FREQ AND $
> !database.parameter(nominated_parameter) NE
> bad_data_value)

I'll be the broken record, and agree with everybody else that
structure access is slow.

I think this could be much faster to access as *gasp* a common block.
If each parameter were an array variable in a common, then you would
save the considerable time involved in extracting the fields from the
structures in each comparison.

You also definitely want to make a field which is Julian day, since
that reduces the number of comparisons for the date/time from three to
one, and I think it will save space. Or, are you *really* interested
in data from days 120-133 in years 2000, 2001 and 2002 combined?

Finally, if you can, try to thin the array first by applying the most
stringent selection. For example, if you are only looking in a narrow
date range, then first extract only those records fromt the date

range, then go back and apply the other criteria.

With 15 million samples, anything you do will take quite a bit of time. However, I regularly do operations on 3 million sample arrays and it isn't *too* bad.

Hope that helps!

Craig

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