Subject: Re: summation problem
Posted by Paul van Delst on Thu, 05 Apr 2001 15:00:28 GMT
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Jaco van Gorkom wrote:
>
> Manish wrote:
> ...
>> I have a program which produces an array of values of sunlight flux during
>> the day. Unfortunately, it produces crazy numbers before the sunrises and
>> after it sets(as expected). I'm summing the values throughout the day to
>> get a total integrated day flux, but here's the problem - is there a way of
>> telling the TOTAL function to ignore negative numbers and NaN numbers?
>
> Yes, there is a way:
> IDL> test = [0,-1,3,4,]
> IDL> print, total(test>0,/nan)
> 7.00000
> % Program caused arithmetic error: Floating illegal operand
>
> The 'illegal operand' error appears to be harmless, caused by comparing test>0:
> IDL> print, test>0
> 0.00000 0.00000 3.00000 4.00000 NaN
> % Program caused arithmetic error: Floating illegal operand

Harmless maybe, but I for one don't like seeing illegal operand errors, let alone ignoring them. What if you add some code that tries to take the log of a -ve number, see the same error and shrug it off?

Why not do a

```
loc_finite = WHERE( FINITE( test ) EQ 1, count_finite )
IF ( count_finite GT 0 ) THEN $
  sum = TOTAL( test[ loc_finite ] > 0.0 ) $
ELSE $
  sum = !VALUES.F_NAN  ; Or some other suitable flag
```

??

```
IDL> print, sum
      7.00000
```

Oh, and make sure you set !EXCEPT = 2 in your idl setup file. That'll learn ya to remove errors from your code :o)

paulv

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A little learning is a dangerous thing;
Drink deep, or taste not the Pierian spring;
There shallow draughts intoxicate the brain,
And drinking largely sobers us again.
Alexander Pope.