Subject: Re: Conditional averaging
Posted by thompson on Wed, 06 Nov 2002 22:04:37 GMT
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klassen@rowan.edu (David Klassen) writes:

> I have a set of arrays which I wish to average in a pixel-by-pixel fashion;
> that is, I want to create an average array. The problem is that there are
> points I wish to exclude from the averaging procedure (all of them have
> been given a particular value, say, -100).

> I think I can get them to add so that the 'bad pixel' flags don't contribute
> to the sum, however, I can't simply divide by the number of arrays, as each
> point in the array has had a different number of good pixels put into its
> sum. Is there an easy way to keep track of the number points which went
> into to the sum?

```
A = RANDOMN(SEED, 100, 100, 10)  ;Simulated data
A(20:30,20:30) = -100
AVG = TOTAL(A,3) / TOTAL(A NE -100,3)
```

William Thompson

Subject: Re: Conditional averaging
Posted by Craig Markwardt on Wed, 06 Nov 2002 23:33:04 GMT
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thompson@orpheus.nascom.nasa.gov (William Thompson) writes:

> klassen@rowan.edu (David Klassen) writes:
>
>> I have a set of arrays which I wish to average in a pixel-by-pixel fashion;
>> that is, I want to create an average array. The problem is that there are
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>
> A = RANDOMN(SEED, 100, 100, 10) ;Simulated data
> A(20:30,20:30) = -100
> AVG = TOTAL(A,3) / TOTAL(A NE -100,3)

Hmm, you probably don't want to leave those -100s in there do you?

How about this?

```
nval = total(a NE -100,3)  ;; Figure out number of valid pixels
wh = where(a EQ -100, ct)  ;; Now zero-out the invalid pixels
if ct GT 0 then a(wh) = 0
avg = total(a,3)/npix
```

Of course, there is would be further checking needed when there are no
valid pixels for a given position. If you can set your invalid values
to NaN, then you can avoid some of those steps and use TOTAL(...,/NAN).

Craig

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Astrophysics, IDL, Finance, Derivatives | Remove "net" for better response
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