
Subject: Re: Calculate the mean of many images

Posted by [Wasit.Weather](#) on Sun, 16 Nov 2008 18:32:12 GMT

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On Nov 16, 12:30 pm, Bulrush <Wasit.Weat...@gmail.com> wrote:

> On Nov 16, 2:54 am, Craig Markwardt <cbmarkwa...@gmail.com> wrote:

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>> On Nov 16, 1:16 am, Bulrush <Wasit.Weat...@gmail.com> wrote:

>

>>> Hello,

>>> I know this topic has been posted several times. But I could not find

>>> my answer from these posted.

>>> My issue is: I have many images 2 bands in each, one image is QA image

>>> and the other one is data.

>>> I need to calculate the mean of good pixels. Let's say QA image tells

>>> me the location of good pixels, e.g. 1 for good pixels, and other for

>>> bad. There are also NaN values. So, if the pixels are "good" in 7

>>> images out of ten, then

>>> (pixel1+pixel2...+Pixel7) /7

>

>> I would loop over input images, and keep track of the cumulative sum

>> of the number of valid pixels (NPIX), and the cumulative sum of the

>> pixel values (SUM). Something like the following. Since there are

>> only a few images, there will be very little overhead in the FOR-loop.

>

>> Craig

>

>> npix = 0 & sum = 0

>> for i = 0, n_images-1 do begin

>> qa = ... the ith QA image ...

>> img = ... the ith image ...

>> mask = (qa EQ 1) AND (finite(img) EQ 1)

>

>> ;; Sum valid pixels

>> npix += mask

>> wh = where(mask, ct)

>> if ct GT 0 then sum(wh) += img(wh)

>> endfor

>

>> ;; Positions where there are good pixels

>> qa_avg = (npix GT 0)

>> wh = where(qa_avg EQ 1)

>

>> ;; Compute average for valid pixels

```
>> avg = sum*0
>> avg(wh) = sum(wh) / npix(wh)
>
> Thanks for all the comments. I think Craig's method would work for me.
> the Actual QA image contains more than one value, such as 0.00 (good
> pixel), 1.000 (between good and band), 2.000 (cloud), 3.000(snow),
> etc.
> What does finite(img) EQ 1 mean here? Can I write this statement as
> the following?
>
> mask = (qa EQ 1.000 and qa EQ 0.000 ) AND (finite(img) EQ 1.000 &&
> 0.000)
>
> Thanks- Hide quoted text -
>
> - Show quoted text -
```

Craig, is there Where routine is missing in the statement?

thanks
