
Subject: Re: Image division causes Floating illegal operand
Posted by [Paul Van Delst\[1\]](#) on Thu, 18 May 2006 18:13:06 GMT
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elsueniero@gmail.com wrote:

> Hello,
>
> I am writing a small program to calculate NDVI from MODIS images. I
> got a mask of the valid pixels (no clouds or water) and two calibration
> coefficients. The code is
>
> partA = (b1*coef[0,1] - b0*coef[0,0])*mask
> partB = (b1*coef[0,1] + b0*coef[0,0])*mask
>
> ndviimg = partA / partB

Won't this always be 1.0 ?? :o)

>
> ind = Where(Finite(ndviimg, /NAN), count)
> IF count GT 0 THEN ndviimg[ind] = -1000.0
>
> But I allways get an "Program caused arithmetic error: Floating illegal
> operand" even if the resulting image looks good.
> The problem is in the division, because if I comment the line, it won't
> show.
>
> Any ideas how to avoid this?

You can try something like,

```
partA = (b1*coef[0,1] - b0*coef[0,0])*mask
ndviimg = (b1*coef[0,1] + b0*coef[0,0])*mask
Idx=WHERE(ABS(ndviimg) GT 0.0, Count, $
          COMPLEMENT=ZeroIdx, NCOMPLEMENT=ZeroCount)
IF (Count GT 0) THEN ndviimg[Idx] = partA[Idx] / ndviimg[Idx]
IF (ZeroCount GT 0) THEN ndviimg[ZeroIdx] = -1000.0
```

I think there's a faster way to do this though. Probably using HISTOGRAM. :o)

paulv

--

Paul van Delst Ride lots.
CIMSS @ NOAA/NCEP/EMC Eddy Merckx
Ph: (301)763-8000 x7748
Fax:(301)763-8545

Subject: Re: Image division causes Floating illegal operand
Posted by [Paul Van Delst\[1\]](#) on Thu, 18 May 2006 18:13:54 GMT
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Paul Van Delst wrote:

> elsueniero@gmail.com wrote:

>

>> Hello,

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>>

>> ndviimg = partA / partB

>

>

> Won't this always be 1.0 ?? :o)

Oops... didn't notice the +/-.

ehem.

--

Paul van Delst Ride lots.

CIMSS @ NOAA/NCEP/EMC

Eddy Merckx

Ph: (301)763-8000 x7748

Fax:(301)763-8545

Subject: Re: Image division causes Floating illegal operand
Posted by [David Streutker](#) on Fri, 19 May 2006 16:11:43 GMT
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Is your mask made up of zeros and ones? If so, you are dividing by zero in all of the masked pixels, causing the error. Because you are already masking the numerator (partA), it's redundant to mask the denominator (partB). Try using:

partA = (b1*coef[0,1] - b0*coef[0,0])*mask

partB = b1*coef[0,1] + b0*coef[0,0]

Alternatively, you could apply the mask to the NDVI image itself.
