Subject: Re: Inconsistent Mean Calculation
Posted by Mark Hadfield on Tue, 21 May 2002 01:00:59 GMT
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"Phil" <plmcelwee@yahoo.com> wrote in message
news:a3589d11.0205201557.1a92499f@posting.google.com...
> I have 5000 frames of video in a NetCDF file, and I want to
> calculate the average of frame 2557. I have read the video file
> into both IDL v5.1 and Matlab v6.1. Additionally I have extracted
> frame 2557 and copied it into Excel. Here are the mean calculations
> I get for this frame:
>
> Matlab: 4092.6805
> Excel: 4092.6805
> IDL: 4093.6165
>
> Can anyone offer any suggestions as to why the IDL calculation is
> different?

Matlab uses double-precision real numbers whereas IDL by default uses
single-precision. Try repeating your IDL calculations using
double precision (for example, if you are using IDL's TOTAL function,
set its DOUBLE keyword).

--
Mark Hadfield   "Ka puwaha et tai nei, Hoea tatou"
m.hadfield@niwa.co.nz
National Institute for Water and Atmospheric Research (NIWA)

>

Subject: Re: Inconsistent Mean Calculation
Posted by Kenneth P. Bowman on Tue, 21 May 2002 01:59:45 GMT
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In article <a3589d11.0205201557.1a92499f@posting.google.com>,
 plmcelwee@yahoo.com (Phil) wrote:

> I have 5000 frames of video in a NetCDF file, and I want to calculate
> the average of frame 2557. I have read the video file into both IDL
> v5.1 and
> Matlab v6.1. Additionally I have extracted frame 2557 and copied it
> into Excel. Here are the mean calculations I get for this frame:
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> Matlab: 4092.6805
> Excel: 4092.6805

> IDL: 4093.6165
>
> Can anyone offer any suggestions as to why the IDL calculation is
> different? Maybe there is a bug in IDL 5.1? Yeah I know it's a
> really old version. :)

Excel is doing the calculation in double precision; Matlab probably
likewise. Try TOTAL(image, /DOUBLE)/n or MOMENTS(image, /DOUBLE) in IDL
and let us know what you get.

5.1 is really old? Oh, maybe it's me that's really old.

Ken

Subject: Re: Inconsistent Mean Calculation
Posted by plmcelwee on Tue, 21 May 2002 17:39:46 GMT
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"Mark Hadfield" <m.hadfield@niwa.co.nz> wrote in message
news:<accajn$q28$1@newsreader.mailgate.org>...
> "Phil" <plmcelwee@yahoo.com> wrote in message
> news:a3589d11.0205201557.1a92499f@posting.google.com...
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> Matlab uses double-precision real numbers whereas IDL by default uses
> single-precision. Try repeating your IDL calculations using
> double precision (for example, if you are using IDL's TOTAL function,
> set its DOUBLE keyword).

Mark and Ken, thanks for the help! Using double precision I get

IDL: 4092.6804

This is certainly close enough for what I'm doing.