
Subject: Re: Please, please, please can we have a missing data color for image()
Posted by [Gordon Farquharson](#) on Mon, 16 Jun 2014 19:27:28 GMT
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Hi Chris

Thanks very much for the test code. I've included a diff below just to make sure that I inserted it correctly.

The new code definitely works. The missing data is displayed in the background color on the screen. As you said, it produces incorrect results if you don't use the BITMAP keyword with the save method.

```
--- idlitvisimage__define.pro.orig 2014-06-16 12:04:40.000000000 -0700
+++ idlitvisimage__define.pro 2014-06-16 12:08:29.000000000 -0700
@@ -1965,6 +1965,18 @@
     self->EnsurePalette, red, green, blue
```

```
+ ; Handle float images with missing data.
+ if (~self._isByteData && nPlanes eq 1) then begin
+   good = FINITE(*pImgData)
+   if (~ARRAY_EQUAL(good, 1b)) then begin
+     nPlanes = 2
+     d = TEMPORARY(data)
+     data = BYTARR(imgDims[0], imgDims[1], 2)
+     data[0,0,0] = TEMPORARY(d)
+     data[0,0,1] = 255b*good
+   endif
+ endif
+
+ ; Map projections. This may modify both the data and nPlanes.
+ self->_UpdateMapProjection, data, nPlanes, red, green, blue
+ imgDims = (SIZE(data, /DIMENSIONS))[0:1]
```

Gordon

On Friday, June 13, 2014 2:48:14 PM UTC-7, Chris Torrence wrote:

> On Thursday, June 12, 2014 2:38:39 AM UTC-6, Fabien wrote:

>

>> Thanks Gordon! I completely agree

>

>

>

> Okay, here's some code to try. I didn't add the MISSING_VALUE/COLOR keywords yet. Instead, I'm just keying off of NaN values.

>

```

>
>
> Open up lib/components/idlitvisimage__define.pro, and navigate to around line 1965. Modify
the following block of code (I've included bits of code before & after for reference).
>
>
>
>   plImageData = self->ByteScaleData(plmgData, data, nPlanes)
>
>   ; Single-channel images must have a palette.
>
>   ; This will also retrieve the red, green, blue values.
>
>   if (nPlanes eq 1) then $
>
>       self->EnsurePalette, red, green, blue
>
>
>
> **** NEW CODE
>
>   ; Handle float images with missing data.
>
>   if (~self._isByteData && nPlanes eq 1) then begin
>
>       good = FINITE(*plmgData)
>
>       if (~ARRAY_EQUAL(good, 1b)) then begin
>
>           nPlanes = 2
>
>           d = TEMPORARY(data)
>
>           data = BYTARR(imgDims[0], imgDims[1], 2)
>
>           data[0,0,0] = TEMPORARY(d)
>
>           data[0,0,1] = 255b*good
>
>       endif
>
>   endif
>
> **** END NEW CODE
>
>
>
>   ; Map projections. This may modify both the data and nPlanes.

```

```
>
> self->_UpdateMapProjection, data, nPlanes, red, green, blue
>
> imgDims = (SIZE(data, /DIMENSIONS))[0:1]
>
>
>
> Then, try your test case, but be sure to use /BITMAP when writing to the PDF file (to avoid
alpha channel issues):
>
>
>
> data = findgen(100, 100) - 5000.
>
> data[30:60,30:60] = !values.f_nan
>
> im1 = image(data, RGB_TABLE=70, POSITION=[0.1, 0.1, 0.9, 0.9])
>
> cb1 = colorbar(TARGET=im1)
>
> im1.save,'test.pdf',/bitmap
>
>
>
> Let me know if this works. If it does, I'll think about adding the MISSING_* keywords.
>
>
>
> Cheers,
>
> Chris
>
> ExelisVIS
```
