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Subject: Any suggestions for a B&W colour scheme for publication images?

Posted by [Tyler](#) on Tue, 25 Sep 2007 14:25:02 GMT

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Hello All:

I am in the process of submitting some figures to a journal for publication (it has been accepted). I intend to save my supervisor cash by submitting B&W figures for print, and keep the colour images for the electronic version.

Here is my problem. Originally, I've been using one of the EOS colour schemes and the figures turn out great. There is excellent contrast between regions, and the positive/negative values are clearly distinguished. Sadly, switching the colour scheme to B&W tends to blur these crucial distinct regions.

I have tried several values for STRETCH. Perhaps I was not using the STRETCH command properly. Does anyone have any suggestions for values of STRETCH or GAMMA\_CT that have worked for their own publications in the past? This problem is only further compounded by the fact that XLOADCT seems to not want to load from my IDL script file, so I'm limited to what I can do from the within the script.

For what it's worth, I have several figures to convert to B&W, all of which have different maximums and minimums. Can I use that knowledge to control STRETCH/GAMMA\_CT with these values?

I have two example PNG files I can send to anyone if they would like to see what I am talking about. Just email me with "GAMMA\_CT" in the subject heading.

Any ideas are greatly appreciated.

Cheers,

t.

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Subject: Re: Any suggestions for a B&W colour scheme for publication images?

Posted by [little davey](#) on Thu, 27 Sep 2007 21:42:14 GMT

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On Sep 25, 9:25 am, Tyler <hayes.ty...@gmail.com> wrote:

> Hello All:

>

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> publication (it has been accepted). I intend to save my supervisor

> cash by submitting B&W figures for print, and keep the colour images  
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> I have two example PNG files I can send to anyone if they would like  
> to see what I am talking about. Just email me with "GAMMA\_CT" in the  
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>  
> Any ideas are greatly appreciated.  
>  
> Cheers,  
>  
> t.

My non-expert observation is that B&W is different from color in that as soon as you put black pixels on the page or screen, it is DARKER than you think it would be. That is, if you have say 5 regions, shading them at 20%, 40%, 60%, 80%, and 100% appears to be awfully dark. It ends up better doing something like 10% 20% 35% 55% 75%. Just having a black speck in a small area seems to make it "blacker" than you might have expected.

Also, I found it hard to have even 6 different gray shades, but you may have better luck.

-- Dave K --

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Subject: [My SOLUTION] Any suggestions for a B&W colour scheme for publication images?

Posted by [Tyler](#) on Tue, 02 Oct 2007 00:14:13 GMT

First off, thanks for the numerous replies. I'm posting below what works for my purposes, albeit somewhat crude.

Basically, what I did was shift every 8th colour to be darker by "8", i.e.,

TVLCT, 0,0,0,7  
TVLCT, 7,7,7,15 .... &c.

I had thought about reversing the colours, e.g.,

TVLCT, 248,248,248,7  
TVLCT, 239,239,239,15 .... &c.

But reckoned it made the plot a little too motley.

Here is the code snippet that works for my purposes contouring the data set I have. Let me know what you think and I hope it helps someone else.

Cheers,

t.

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```
ctable = 0          ; B&W colour scheme....  
LOADCT, ctable  
PRINT,'Creating B&W plot suitable for print with LaTeX'
```

```
;; Shift middle colours only  
FOR i = 1, 30 DO BEGIN  
  ncol = (i*8) - 1  
  ocol = (i-1)*8 - 1  
  IF (ncol LT 0) THEN ocol = 0  
  TVLCT, ocol, ocol, ocol, ncol-1  
  TVLCT, ocol, ocol, ocol, ncol+1  
  TVLCT, ocol, ocol, ocol, ncol  
ENDFOR
```

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Subject: Re: Any suggestions for a B&W colour scheme for publication images?  
Posted by [Vince Hradil](#) on Tue, 02 Oct 2007 15:25:36 GMT  
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On Oct 2, 9:45 am, Tyler <hayes.ty...@gmail.com> wrote:

> Oops.

>

> IF (ncol LT 0) THEN ocol = 0

>

> should have read,

>

> IF (ocol LT 0) THEN ocol = 0

>

> Cheers,

>

> t.

FYI

this can be replaced with:

ocol = ocol > 0

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