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**Geoscientific
Model Development
Discussions**

Interactive comment on "Mapping the climate: guidance on appropriate techniques to map climate variables and their uncertainty" *by* N. R. Kaye et al.

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We agree that it may be surprising that the sky blue category is assigned to positive temperature anomalies between 0.4 and 1.5 degrees C. Ideally this category would be in a shade of green so as not to imply the cooling that blue suggests. However this would violate it being functional for colour blind people as the green would not be easy to distinguish between the oranges and reds. A possible alternative when the anomalies are all positive (as occurs very often in temperature projections) may be to only have four colours for the values i.e. miss out the blue at the bottom

We also agree that for anomalies such as monthly temperature anomalies for observa-

tional data (e.g. HADCRUT3 see http://hadobs.org/) a more symmetrical scale would be appropriate. The university of Oregon has a page suggesting some useful scales (http://geography.uoregon.edu/datagraphics/color_scales.htm) and like Jonathan they also suggest that a deep red through pale yellow to dark blue is a good approach for temperature anomalies.

So clearly it would be possible to use a similar "colour brewer" scale with 5 steps and desaturate it, and this is illustrated in figure 1. However as is mentioned in the paper there is not enough contrast between the desaturated colours and when appearing on a map they would be very difficult to distinguish between.

In order to increase the contrast to the scale in Figure 1, 2 alternative scales have been proposed with associated RGB values and these can be seen in Figures 2 and 3. Both of these scales employ a version of yellow in the middle (as clearly you can't deasaturate white!). The figures also show a colour blind simulation which hopefully demonstrates they work in this context as well. Both of these are given as alternatives to the temperature scale in the paper when the anomalies are more symmetrical. Possible the one in figure 3 allows better distinction of the blues for colour blind people.

Interactive comment on Geosci. Model Dev. Discuss., 4, 1875, 2011.

100%	66%	33%	0%
255,255,255	241,177,178	227,101,103	214,26,29
255,255,255	253,227,200	252,200,148	252,174,96
255,255,255	255,255,233	255,255,212	255,255,191
255,255,255	225,241,247	197,228,239	169,216,232
255,255,255	182,209,229	112,165,205	43,121,181

100%	66%	33%	0%
255,255,255	241,177,178	227,101,103	214,26,29
255,255,255	253,227,200	252,200,148	252,174,96
255,255,255	255,255,233	255,255,212	255,255,191
255,255,255	225,241,247	197,228,239	169,216,232
255,255,255	182,209,229	112,165,205	43,121,181

Fig. 1. Colour brewer scale with 5 steps from red through yellow to blue and colour blind simulation

100%	66%	33%	0%
255,255,255	226,168,181	198,84,110	170,0,40
255,255,255	249,205,192	244,157,131	240,110,70
255,255,255	255,243,202	255,231,151	255,220,100
255,255,255	209,226,239	164,198,224	120,170,210
255,255,255	185,185,219	117,117,184	50,50,150

100%	66%	33%	0%
255,255,255	226,168,181	198,84,110	170,0,40
255,255,255	249,205,192	244,157,131	240,110,70
255,255,255	255,243,202	255,231,151	255,220,100
255,255,255	209,226,239	164,198,224	120,170,210
255,255,255	185,185,219	117,117,184	50,50,150

Fig. 2. Alternative 1 to colour brewer scale, with colour blind simulation

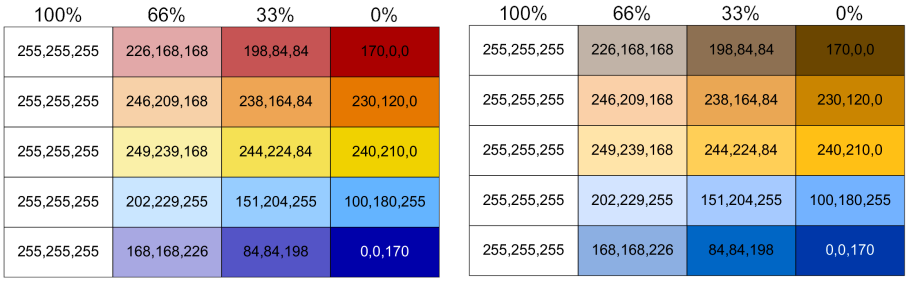

Fig. 3. Alternative 2 to colour brewer scale, with colour blind simulation