

2.16 IT'S TIME FOR COLOR VISION DEFICIENCY FRIENDLY COLOR MAPS IN THE RADAR COMMUNITY

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Color blindness, or color vision deficiency (CVD), impacts 1 in 12 men and 1 in 200 women. There are numerous examples in the atmospheric sciences and in radar meteorology in particular of CVD. The radar community is particular when it comes to the choice of colors used to represent numerical values (ie color maps) with the choice of color map often being an institutional choice. Some color maps, such as those used by the USA National Weather Service for reflectivity as well as other variables, are particularly unaccommodating with numerous perceptual duplications when viewed by those with CVD. The challenge is to build a colormap that has a monotonically increasing, decreasing, or diverging luminosity while remaining visually pleasing and able to convey scientific meaning. For presentation purposes these colormaps also need to be perceptually uniform, in order to remain meaningful when printed in greyscale. This presentation will showcase several examples of existing colormaps in the Python ARM Radar Toolkit (Py-ART) as seen by CVD individuals illustrating this issue, and demonstrate the improvements in data interpretation using CVD friendly versions. By using an online survey this presentation aims to collect the views of the radar community and provide a recommended set of color maps that make displays, presentations, and publications accessible to a wider audience.