LaTeX LPSC Abstract Template

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Introduction This template is created to help those who use LaTeX write LPSC abstracts with half-way decent figures, bibliographies, and the like. There used to be a LaTeX template and a style file for writing Lunar and Planetary Science Conference (LPSC) abstracts available on the LPSC Web site. However, in the last decade or so, no such template has been available, and we found ourselves dragging the old one out. It was full of scary TeX commands and had a date from 1996 in it, so we decided to start from scratch and write a template based on LaTeX's own article class and a short LaTeX 2_ε package file. Most of the LaTeX work is based on [1]. Fortunately, the requirements for LPSC abstracts [2] are reasonably relaxed. The most up-to-date version of this template is always available here: `https://github.com/MosesAstro/LaTeX_Templates`.

Title area The title mechanism for this template is a simple command, `\titlearea`, which takes two arguments, the title text and the author info text.

The title text is made a font size bigger and made boldface in the lpscabs package. If you would like it styled differently, it should be easy to go in to the `lpscabs.sty` file and change it.

The old style file had a fancy automatic mechanism for entering authors and putting superscripted numbers on their names to match up with their affiliations later on in the title. We contemplated doing that and then realized that maybe authors would like some other mechanism besides numbers, maybe little letters, or any of the special characters like † or ⋆ to mark their affiliations, or maybe all of the authors are from the same place, so no little super-scripted characters are needed. Possibly some authors could have more than one affiliation. So rather than try to program something that can be all things to all people, we'll just let you (the authors) do whatever you like to the text in that line, you're smart people. It is a little less convenient, but we think it is more flexible. We have commented out a few multiple author styles up near that section of this source file.

Section styles In general, people try to put lots of information into their abstracts, and want to minimize the space being taken up by section headers. We have redefined the `\section`, `\subsection`, and `\subsubsection` commands so that text does not start on a new line after the section header.

Figures Good figures are hard to make, there's no question about it. That goes double for deciding which figures to include in your space-limited abstract.

When you make the decision to create a color figure, take some time to think about the colors that you use. We think that [3, 4] make a good case for not using the typical rainbow-spectrum color scheme (e.g. Fig. 1). Don't confuse "pretty" with "meaningful."

A suggestion by [5] is that color schemes should be perceived as monotonically increasing when used to display intensity maps of various sorts (such as topography, etc.). This generally does not happen with most rainbow color schemes. A monotonically increasing color scheme also does its job whether printed in color or grayscale. See Fig. 2

If you need tables to be the full width of the page, just use their starred versions, like `\begin{table*}` instead of `\begin{table}`. However, if you want figures to be the full width and you use the starred version `\begin{figure*}`, then you'll find that the figure is either always at the top of the page or on its own page. This is a LaTeX limitation.

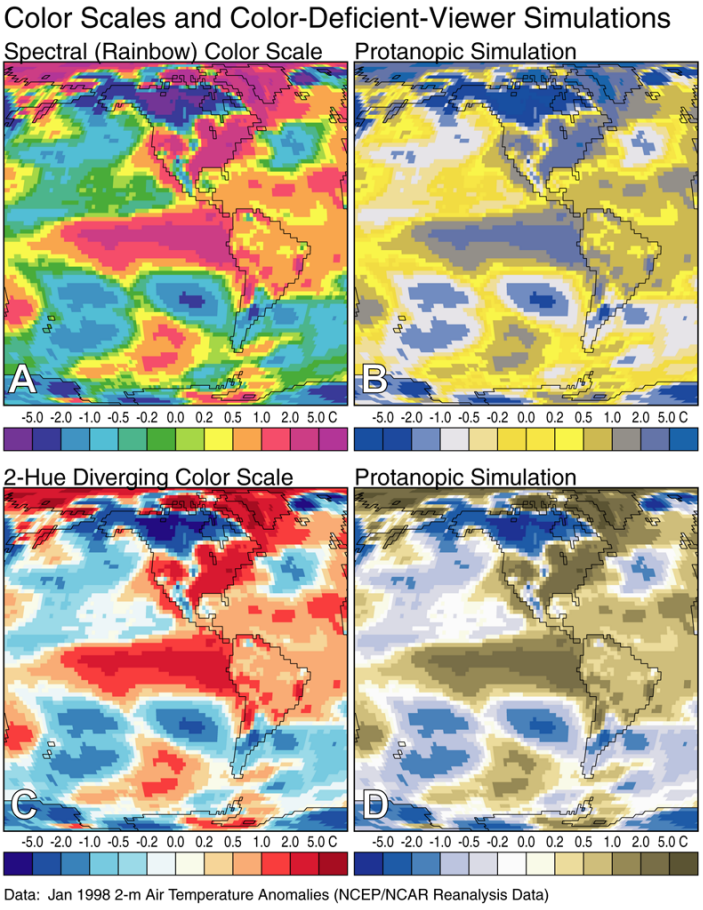

Figure 1: This is Figure 1 from [3].

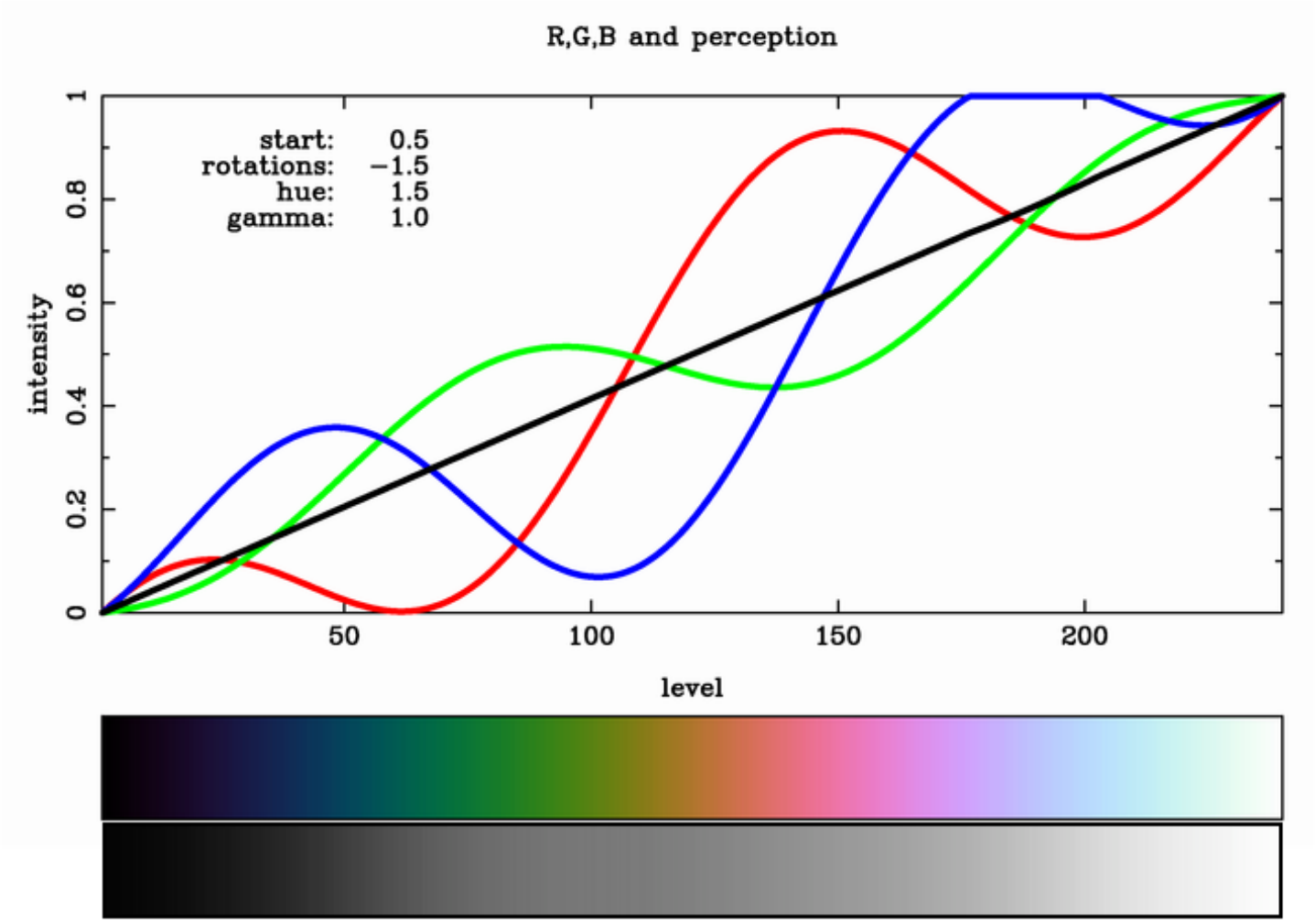

Figure 2: Modified from `https://www.mrao.cam.ac.uk/~dag/CUBEHELIX`. The color and greyscale bars are both increasing in brightness monotonically.

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Works that you reference Using `bibtex` with the `inparaenum` option and a new LPSC bibliographystyle approximates the reference-style that has emerged for LPSC abstracts over the years, but there is no hard and fast rule.

References

[1] Kopka, H and Daly, PW. *Guide to LATEX*. Pearson Education (2003). [2] Lunar and Planetary Institute. *Abstract submission instructions*. `http://www.hou.usra.edu/meetings/lpsc2014/programAbstracts/instructions/` (2014). [3] Light, A and Bartlein, PJ. *Eos, Transactions American Geophysical Union*, 85:385–391 (2004). [4] Borland, D and Taylor II, RM. *IEEE computer graphics*

and applications, 27:14–17 (2007). [5] Green, D. *arXiv preprint arXiv:1108.5083* (2011).