

Methods to Enhance Climate Change Imagery for Communication

earthobservatory.nasa.gov

U11B-0017

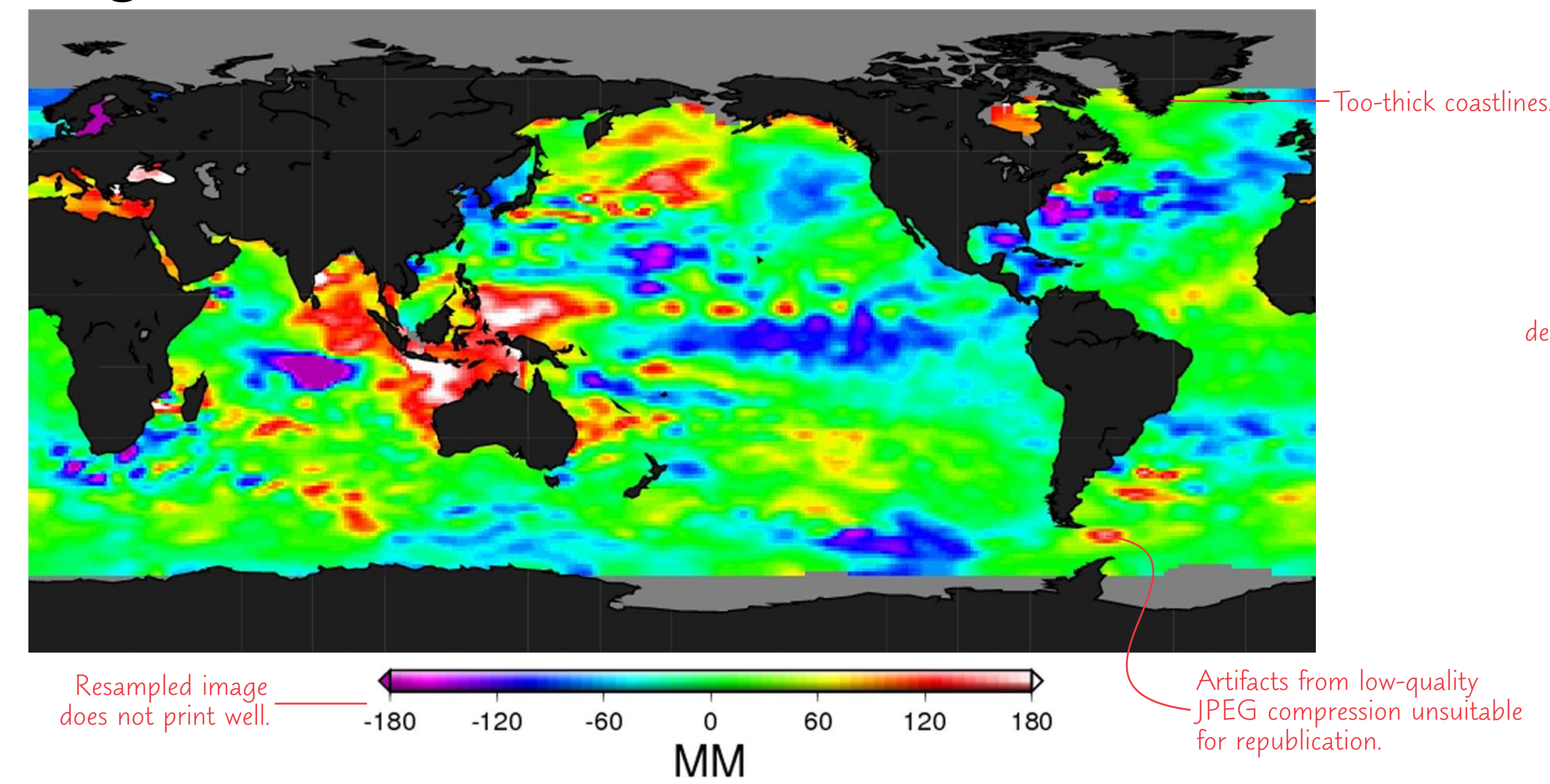
Robert Simmon¹; Kevin Ward¹; Michael J. Carlowicz¹; Jesse Allen¹; Holli Riebeek¹; Paul Przyborski¹; Michon Scott²

1. Sigma Space Corporation, Goddard Space Flight Center, Greenbelt, MD, USA.
2. University of Colorado, Boulder, CO, USA.

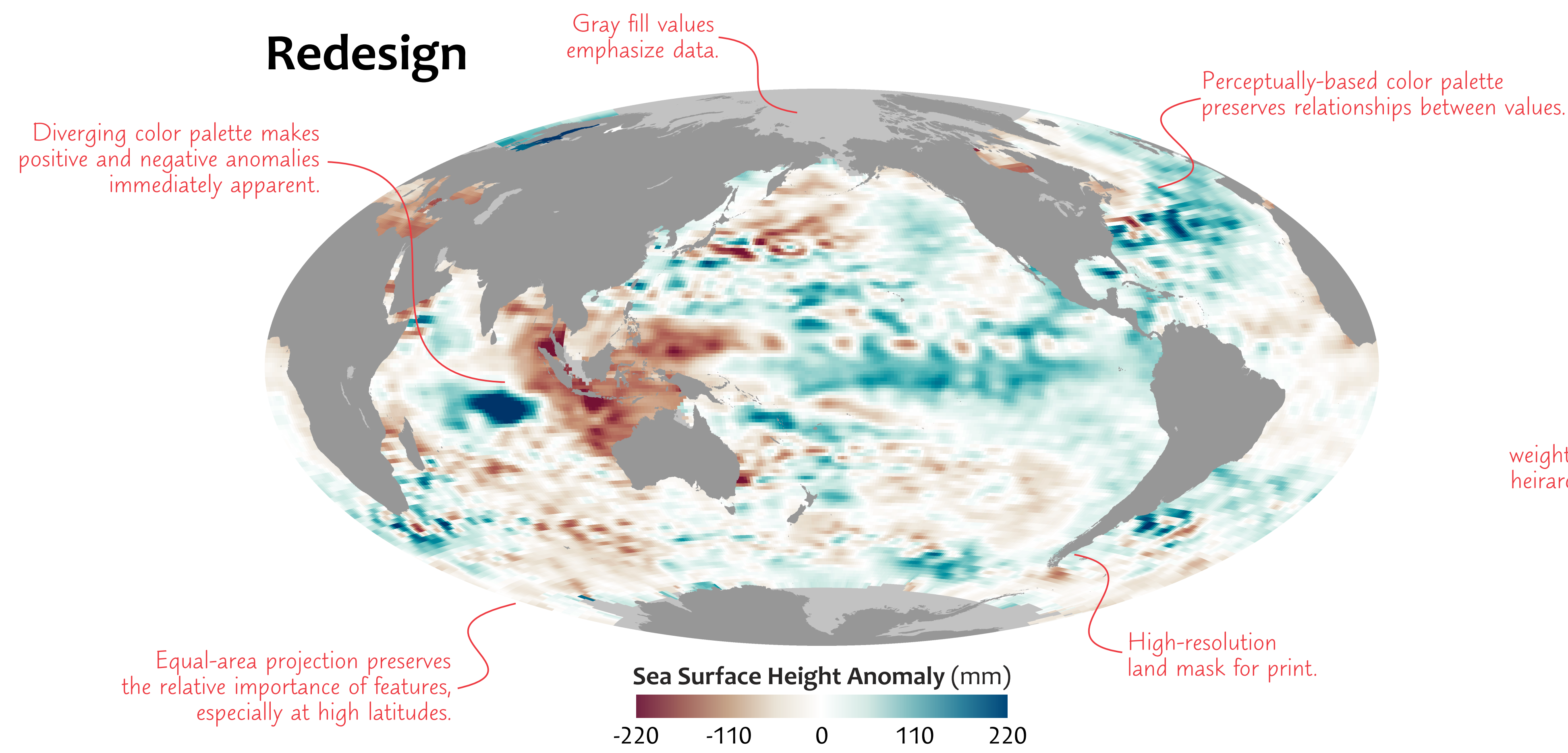
robert.simmon@nasa.gov

Images of measurements, model results, and physical processes can be powerful for enhancing understanding of complex scientific topics. However, many of the graphics that are used in public communication were designed for scientific peers, and not lay audiences. These graphics can often be improved by applying principles drawn from graphic design and information visualization. Redesigned graphics from a NASA press release and the IPCC Fourth Assessment Report demonstrate some of these concepts. Examples drawn from NASA's Earth Observatory web site provide additional illustrations.

Original

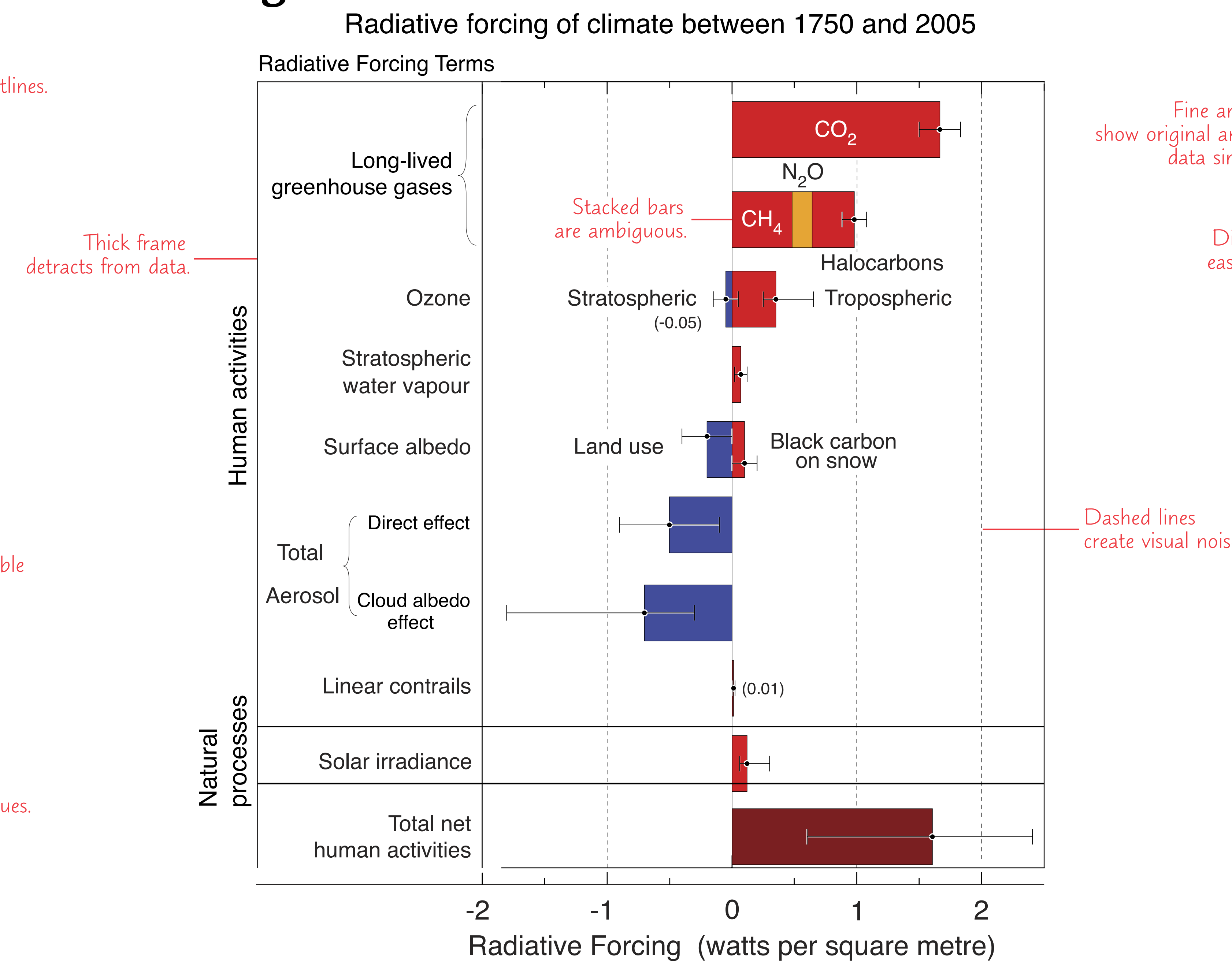


Redesign

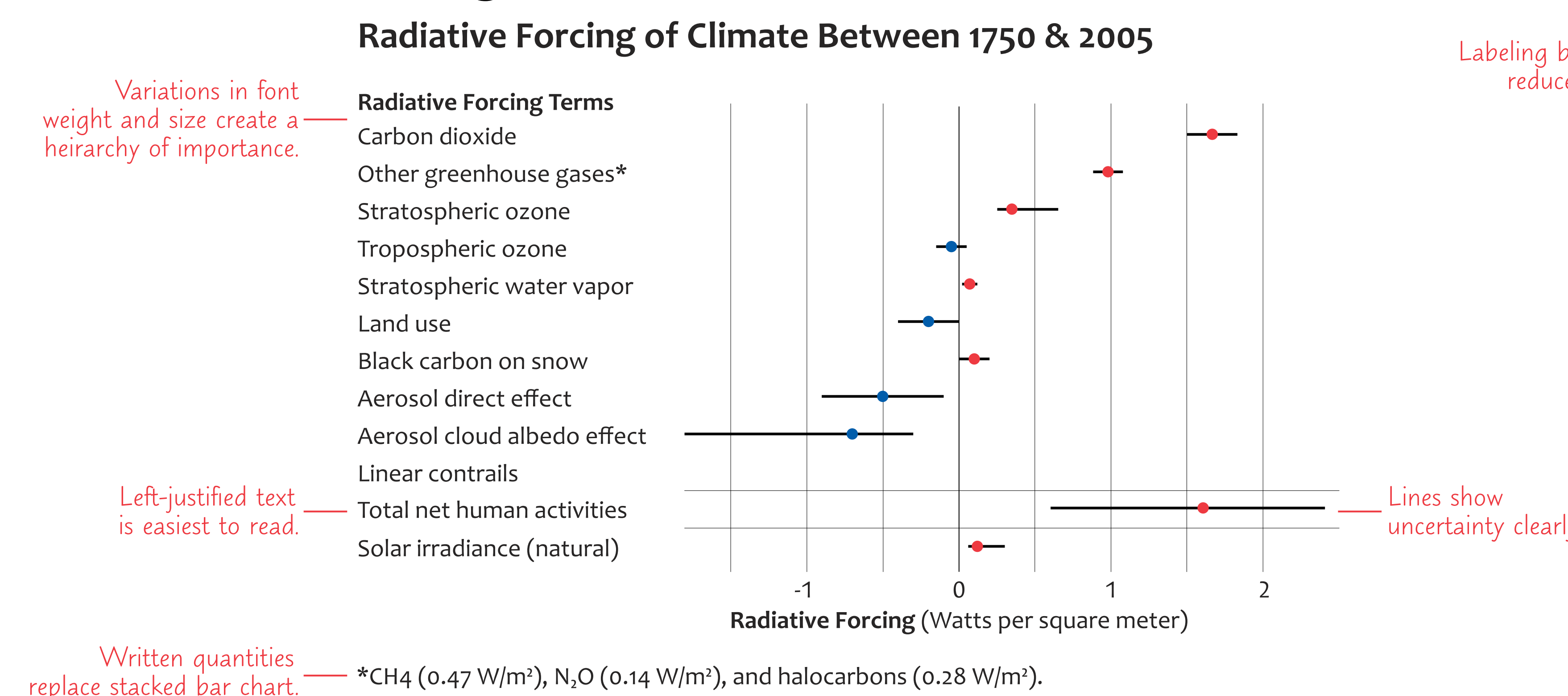


Cutro, Rob. (2011, January 13). NASA Satellites Capture a Stronger La Niña. Accessed November 28, 2011. <http://www.nasa.gov/topics/earth/features/strong-la-nina.html>

Original

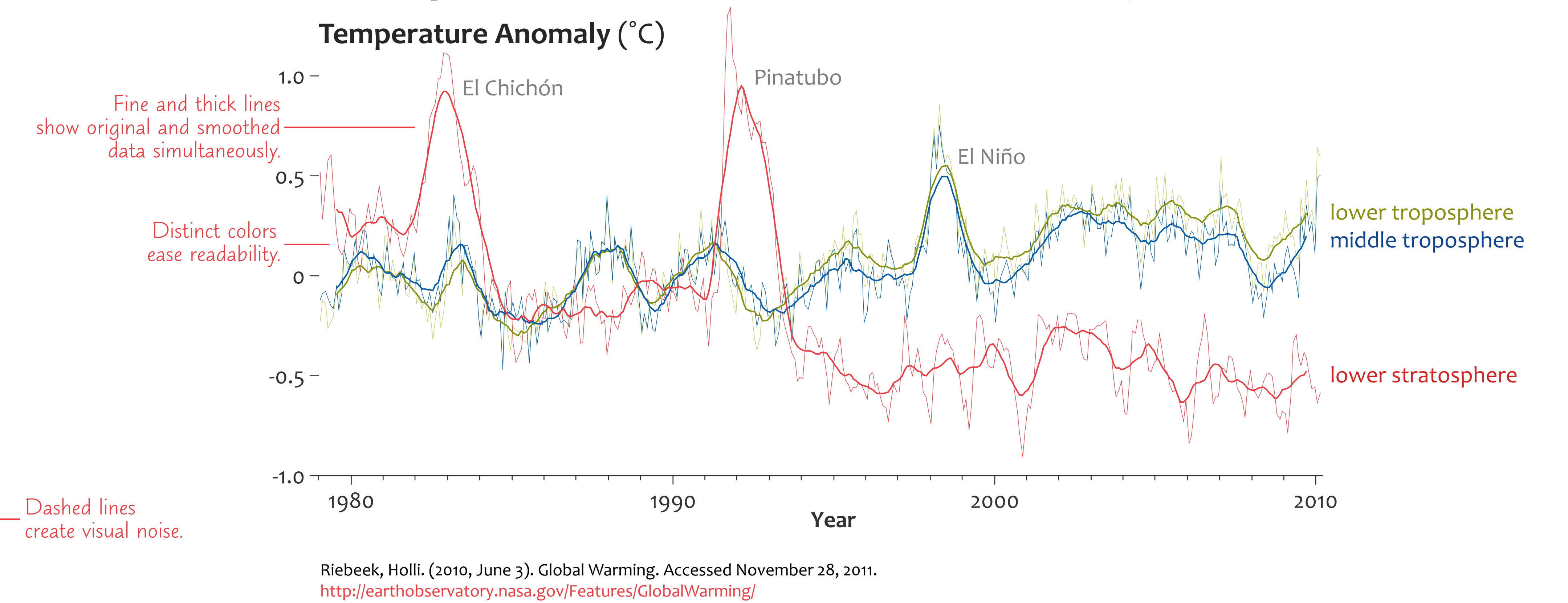


Redesign

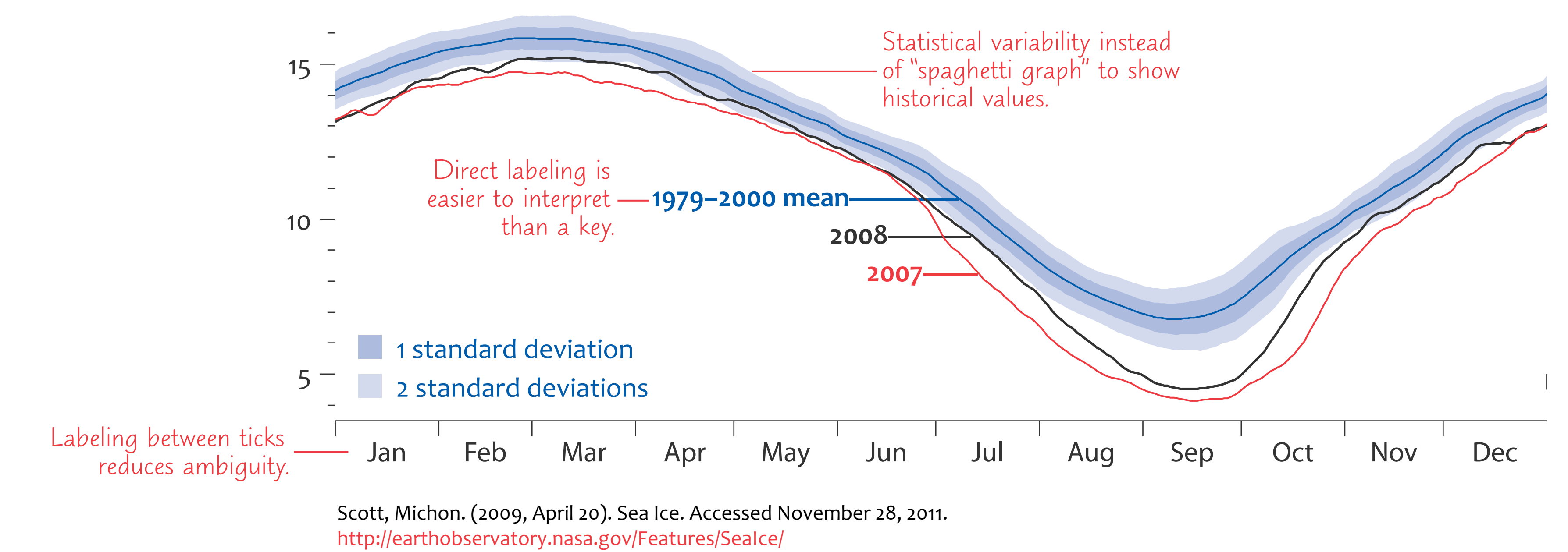


Forster, P., et al. 2007. Changes in Atmospheric Constituents and in Radiative Forcing. In: *Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change* [Solomon, S., D. et al. (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA. 136.

Examples from NASA's Earth Observatory



Arctic Daily Sea Ice Extent (millions of square kilometers)



Bibliography

- Brewer, Cynthia. *Designing Better Maps: A Guide for GIS Users*. Redlands: ESRI Press, 2005.
- Bringhurst, Robert. *The Elements of Typographic Style. Third Edition*. Vancouver: Hartley and Marks Publishers, 2004.
- Ellen Lupton and Jennifer Cole Phillips. *Graphic Design: The New Basics*. New York: Princeton Architectural Press, 2008.
- Tufte, Edward. *Envisioning Information*. Cheshire: Graphics Press, 1990.
- Tufte, Edward. *The Visual Display of Quantitative Information. Second Edition*. Cheshire: Graphics Press, 2001.
- Ware, Colin. *Information Visualization, Perception for Design. Second Edition*. San Francisco: Elsevier, 2004.