

# FORUM

## Parentheses Are (Are Not) for References and Clarification (Saving Space)

PAGE 419

If you do not understand the title of this article, then join the crowd. I am writing to urge authors, editors, and reviewers to join a movement to stomp out the practice of using parentheses to indicate the opposite of an idea or to intersperse multiple values in a sentence with the idea of saving space. In this electronic age, we have plenty of space. Making a journal article a few words longer for clarity and to avoid confusion is well worth the expense in extra bits of storage. Parentheses should be reserved for clarification and (in non-AGU journals) for references.

The editor has asked me not to use real examples so as not to specifically criticize

individuals, so here is a sentence very much like an example I read this year in an AGU journal: "The horizontal pseudoenergy flux of the scattered (reflected) wave is the flux that moves upward (downward) through the level of  $p = 30$  mbar ( $p = 28.9$  mbar) shown by the blue (upper yellow) solid (dashed) curve in Figure 3, which is used to compute the scattering (reflection) coefficient in the next paragraph." Do you know what this sentence means? How many times would you have to read it to understand it? If the sentence were written out, wouldn't it be much clearer and quicker for the reader to comprehend?

In another example, this type of parentheses usage appeared only once near the beginning of a paper. As I read the rest

of it, I paused at every set of parentheses to figure out if it was used in a conventional or opposite sense. In the same paragraph the authors used parentheses in a normal way. It was confusing to see parentheses mean one thing on one line and mean something else just a few lines away. (I have even seen parentheses used in the opposite and conventional sense within the same sentence.) For this paper, it turned out that the authors only once used parentheses for this opposite sense, but I kept on my guard. I would have taken much less time to read the paper if the authors had not used that construction.

I plead with you, comrades: authors, editors, reviewers all. Join the movement. Stop using parentheses to mean the opposite. Only use them (parentheses) for clarification. It will make science easier, faster, and much less annoying to communicate.

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# LETTER

## Comment on "Mount St. Helens: A 30-Year Legacy of Volcanism"

PAGE 419

I read with great interest "Mount St. Helens: A 30-year legacy of volcanism," by J. W. Vallance et al., the feature in the 11 May 2010 issue of *Eos* (91(19), 169–170). This well-written article is about the volcano itself and ash and aircraft incidents but not about far-field effects such as traveling ionospheric disturbances (disturbances in the

ionosphere that act like traveling waves) that were caused by the explosion.

I have a personal interest in the 1980 Mount St. Helens volcanic eruption. At that time I was working as a physicist at the U.S. Air Force Geophysics Laboratory (AFGL) at Hanscom Air Force Base, in Massachusetts. AFGL had a magnetometer array located across the United States, from which I and other scientists at Hanscom observed

perturbations in the Earth's magnetic field, which we related directly to the explosion. These perturbations were observed at stations as far away from Mount St. Helens as Mount Clemens, Mich., 3122 kilometers distant. We were able to measure the velocity of the resulting disturbance at about 316 meters per second, in reasonable agreement with velocities of the pressure wave (from 305 to 309 meters per second) that was observed on microbarometers by the Japan Meteorological Agency.

C. W. Tsacoyeanes and I wrote an article about this entitled "AFGL magnetometer observations of Mount St. Helens eruption," which subsequently appeared in *Eos* (61(50), 1209–1210, 1980).

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