Atmos. Chem. Phys. Discuss., 6, S2142–S2143, 2006
www.atmos-chem-phys-discuss.net/6/S2142/2006/

Atmospheric Chemistry and Physics Discussions

Interactive comment on "Some experimental constraints for spectral parameters used in the Warner and McIntyre gravity wave parameterization scheme" *by* M. Ern et al.

Anonymous Referee #2

Received and published: 1 August 2006

This is an interesting paper that tackles an important, if extremely difficult, problem. The CRISTA observations represent one of the few global data sets that can provide information about the gravity wave field in the middle atmosphere, and so it is appropriate to use these data to constrain gravity wave parameterizations. The information available from CRISTA is limited, however, and only the geographical variation of the total of the absolute values of the momentum flux are used to constrain the parameterization. The authors do a good job at exploiting this information and make a reasonable case for their approach.

1. The question of how well the observations could constrain the amplitude of the

Full Screen / Esc
Printer-friendly Version
Interactive Discussion
Discussion Paper

waves at the launch level is not really examined. It appears that all the calculations presented employed beta=0.1 (although this point could be more explicitly stated). On page 4774 the authors state that perhaps a higher value might be more appropriate, but there are no actual calculations for such a case presented.

2. Fig. 3. It is hard to see the contour labels even when the panels are expanded on my computer screen to a very large size. Also no indication in the caption is given of the units for the contour label values. This is a a particular problem since according to the caption the color codes change among the different panels. These problems affect other figures in the paper as well.

3. I am not sure that I understand what the term "inevitable" means as employed in the last sentence of the Abstract.

Interactive comment on Atmos. Chem. Phys. Discuss., 6, 4755, 2006.