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Atmospheric Chemistry and Physics Discussions

Interactive comment on "Quasi-stationary planetary waves in late winter Antarctic stratosphere temperature as a possible indicator of spring total ozone" *by* V. O. Kravchenko et al.

Anonymous Referee #2

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Review of "Quasi-stationary planetary waves in later winter Antarctic stratospheric temperature as a possible indicator of spring total ozone" by V. O. Kravchenko et al.

General Comments

Kravchenko et al. present a statistical analysis of the relationship between austral later-winter dynamical disturbances in the Antarctic polar vortex region and the behavior of the ozone hole in spring. The focus of the study is on the effect of the quasi-stationary planetary wave component.

I found the paper interesting to read and conclude that it presents interesting new results. The presentation is very clear and substantial conclusions are reached. The

authors give proper credit to related work. The paper addresses relevant scientific questions within the scope of ACP and should be published subject to a few specific comments listed below.

Specific Comments

p. 28950, l. 19-20: In this study the Pearson correlation coefficient is used. However, this is a test for linear correlation, only and it is not outlier-robust. It might be worthwhile to compute the Spearman rank correlation coefficient as well, since this can be used to detect any kind of statistical association and is not sensitive to outliers.

p. 28952, l. 18-10: It would be nice to present here or at another place in the paper a scatter plot of QSW activity and TOC. Next to statistical measures (correlation coefficients) a visual inspection of the data may also help the reader to infer the degree of statistical association.

Technical Corrections

none

Interactive comment on Atmos. Chem. Phys. Discuss., 11, 28945, 2011.