

## ***Interactive comment on “Satellite Measurements of Stratospheric GravityWaves over the Andes/Drake Passage Region Using a 3D S-Transform Technique” by Corwin J. Wright et al.***

**Anonymous Referee #2**

Received and published: 7 April 2017

This paper presents a new method for describing the 3D distribution of atmospheric gravity waves on the basis of an extension of the Stockwell transform to three dimensions. This method could give us more precise gravity wave parameters, such as amplitude, propagation direction, wavelength, momentum fluxes, and so on, than those based on any previous techniques, which would contribute significantly to studies on detailed momentum budget of the middle atmosphere circulation. Actually, the authors apply the method to 3D atmospheric temperature measurements from the Atmospheric InfraRed Sounder (AIRS) satellite instrument, in order to investigate gravity wave activity over the Andes/Drake Passage, showing successfully detailed characteristics of 3D momentum flux vectors consistent with previous studies. The proposed method is

C1

also expected to contribute to overcoming various deficiencies of general circulation models. The manuscript is well written and the overall description is to be satisfactory. Hence, the paper is suitable for the Atmos. Chem. Phys. and acceptable after minor revisions.

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Interactive comment on Atmos. Chem. Phys. Discuss., doi:10.5194/acp-2017-128, 2017.

C2