

## **Super-pressure balloon observation of gravity waves over the Antarctic**

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Recently super-pressure balloons (SPBs) have been developed, which can float at a constant density surface in the troposphere and stratosphere for long duration (i.e., several months). They can follow Lagrangian motions of air parcels, which is beneficial for gravity wave studies. Gravity wave is one of uncertain factors in current climate models, in which it is required to obtain its stochastic features as well as its spatial and temporal mean behavior. SPBs enable us to obtain stochastic features of gravity waves in a full frequency range from Brunt-Vaisala frequency to inertial frequency. Our group proposes new SPB observations in the Antarctic.