



A FEED BACK MECHANISM WHICH MAKES THE STRONG YEARLY VARIATION AT HIGH LATITUDE STRATOSPHERE

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There are large yearly variations of winter stratosphere in northern high latitudes. Correlation between yearly variations of the yearly variations and other various indexes by using the NCEP reanalyzed data at past 50 years. We can see not the Gaussian single peak but double peaks in frequency distribution of strength of winter mean zonal mean westerly wind ([u]) in latitude-height section. This double peak structure may imply a positive feed back mechanism. It was found that time-series of deceleration index of the [u] at high latitude stratosphere has not only strong positive correlation with the time-series of [u] at subtropical troposphere but also strong negative correlation with the time series of [u] at mid latitude stratosphere. And it was found that the deceleration time-series has much more strong correlation with the joint index of these two kind of time-series of [u].