Teleconnections between ENSO and the SAM, and the role of Rossby wave breaking

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The El Niño-Southern Oscillation (ENSO) has profound effects upon the atmospheric circulation of the Southern Hemisphere, modulating the extratropical mean flow, the storm tracks, blocking occurrence, and Antarctic climate. The main mechanism appears to be Rossby wave propagation from preferred genesis regions of the subtropical south Pacific. It has been noted that ENSO appears to modulate the Southern Annular Mode (SAM) over the southern summer. This presentation will review teleconnections between ENSO and the higher-latitude circulation over the Southern Hemisphere, and will discuss ENSO-SAM teleconnections in terms of Rossby wave breaking characteristics.