Abstract Review

Review of the Abstract (current Status)

Atmospheric Pressure Patterns in the Last Decade at King George Island

*** Alberto Setzer**

INPE/CPTEC, Brazil

This paper summarizes the analyses and discussion of the series of atmospheric pressure data measured at the Brazilian Antarctic station Com. Ferraz, King George Island, since 1986. An increase of about 3.5 hPa/10 years is evident for the period, indicating significant and unexpected changes in the surface field of pressure at the latitude of 62o South. This positive pressure gradient is also present in other data series of stations in the north of the Antarctic Peninsula. Spectral density wavelet techniques pointed to cycles with periods in years of about 2.7, 1.6 and 1; shorter periods of about 80, 40, and between 20 to 30 days are also noticed. The long-term pressure variations is interpreted as possibly related to changes in the latitudinal position of the regional jet stream; the use of the observed tendency is recommended in numerical weather forecasting. The effect of large-scale perturbations in El-Nino and La-Nina events is supposedly seen in the data. Variations in the periods of 20 to 40 days are explained as related to the size and zonal displacement of the clusters of low pressure systems in the region.

Presenting Author:
Dr Alberto Setzer / CPTEC/INPE Center for Weather Forecast and Climate Studies / 12245-97 Sao Jose dos campos, SP / C. Postal 515 / Brazil / ++55(12) 3945-6464 / asetzer@cptec.inpe.br

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