SUB-ANTARCTIC SURFACE AIR CIRCULATION AND THE WEATHER IN SE OF SOUTH AMERICA

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Cold and humid air masses moving northward originated from cyclones in the Weddell and Bellingshausen Seas at low tropospheric levels reach lower latitudes, down to ~10S, causing steep temperature decreases and rain, mainly in the coastal areas of SE South America. Such air intrusions are frequent and their frequency and intensity cause specific seasons to depart the regional climatology. This paper presents case examples of this unique circulation and explains its effects in the climate variations in SE South America during the last five years. In particular, the average monthly position of the sub-polar jet stream is analyzed, indicating how it relates to the south-to-north air surface flow.