320

ATMOSPHERIC CONDITIONS AT PATRIOT HILLS AT THE END OF THE AUSTRAL SPRING SEASON

J.F. Carrasco, G. Casassa

[1]Direccion Meteorologica de Chile, Santiago, Chile, [2]Centro de Estudios Cientificos, Valdivia, Chile

For about one month, the Chilean Air Force and the Chilean Antarctic Institute (INACH) established a camp field to conduct research activities in the interior of the continent in the vicinity of Patriot Hills (80º18`S, 81º22´W) for1995, 1996 and 1997. Weather observations were carried out during these campaigns to better understand the behaviour of the atmospheric variables and to compare con model outputs. The south-southwesterly wind (204º) with constancy about 0.85, concurs with the model simulation that indicate that Patriot Hills is affected by katabatic airflow that descends from interior of West Antarctica. Snow events reveal that weak passing frontal bands coming form the northwest eventually penetrate toward the interior of the continent. During the 1997 campaign, a 3-day period with maximum surface air temperature above 0°C was observed. This is 7 to10 degrees higher than the average temperature for November-December in the neighbourhood of Patriot Hills. This warm event made the ice along the hills melted, forming small lagoons at the foot of the slope. The synoptic-scale analysis reveals that a ridge extended southward to the interior of the continent bringing warm air to the Patriot Hills area. The frequency of these kind of events are analysed.