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Local scale impact of ablation processes on snow accumulation in Antarctic plateau inferred from meteorological data

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The understanding of mechanisms which rules the Surface Mass Balance (SMB) on Antarctic continent can give valuables information about the sea level rise. SMB on Antarctic plateau is ruled by the equilibrium between precipitation and ablation processes. For scales of hundred of kilometers snowfall variability dominates the snow accumulation processes, on the other hand, at smaller scales, post depositional process such as wind borne redistribution, surface and snowdrift sublimation becomes more important. In recent years sublimation phenomenon attracted much interest of the glacial-meteorological community and some theoretical studies tries modeling it. However cause to the extreme condition and the largeness of continent only few field Antarctic campaign tries to underline the effective power of sublimation processes. Surface mass balance experiment has been set up and some meteorological and acustic instruments has been positioned at the MidPoint camp area (MdPt, 75° 32'S, 145° 51'E) under different surface features and snow accumulation zones. Surface energy mass balance and drifting measurements has been analyzed to detect the real role of ablation processes on snow accumulation and its high variability at local scale in east Antarctic interior plateau.