survey period. Although the infrared data showed a remarkable peak around midnight, the microwave data did not. It suggests that the microwave data do not always depend on the infrared data which are said to measure the surface physical temperatures. Another experiment to survey the relationship between water equivalent and brightness temperature by microwave was made on 30 January. The result showed that brightness temperature increased with increase of water equivalent. However, a field experiment at Moshiri in 1983 showed an opposite result, that is, brightness temperature decreased with increase of water equivalent. It is not definite but most likely that the difference between the two results is caused by the difference of the condition of the ground under snow cover.

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DISTRIBUTION OF SURFACE MORPHOLOGICAL FEATURES OF THE ICE SHEET, EAST QUEEN MAUD LAND, ANTARCTICA (ABSTRACT)

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Surface morphological features of the ice sheet of the East Queen Maud Land were observed visually from an oversnow vehicle along the routes from 0 to 3400 m a.s.l. The oversnow traverse was conducted from October to December 1984. Surface features were morphologically classified and described with the areal ratio of each feature. The distributional boundaries were recorded with a resolution of 10 m.

The distribution of surface features in the area above dry snow line below 3400 m is characterized as follows. 1) The ice sheet surface is divided into three altitudinal zones. 2) The region above dry snow line (700 m) to 1800 m: Smooth surface develops because of high snow accumulation. 3) The region above 1800 m below 2400–2800 m: Rough surface composed of lager scale sastrugi more than 30 cm in height develops. This region is in the active stage of deposition-erosion process of snow. 4) The region above 2400–2800 m to at least 3400 m: Glazed surface composed of multi-layered ice crust dominates. Because of the long-term absence of snow accumulation and sublimation on the glazed surface, area of negative mass balance, is extensive.

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