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Effect of snow depth on hydrology of highland marshes - Analysis of PALSAR/ALOS data at Kiritappu, Sarobetsu and Oze -

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It is basically very difficult to monitor the hydrological environment of highland marsh with snow in winter. We lastly reported that the most famous highland marshes Oze keeps a largest amount of liquid water body under the thick snow layer (more than 2 m) in midwinter based on our analysis of PALSAR/ALOS data, a kind of L-band radar. We concluded that such liquid water would be squeezed out from peat layers by the load of heavy snow and not the meltwater. In this presentation, we show our new analysis results at Kiritappu and Sarobetsu, both of which are highland marshes locating in Hokkaido, where it snows a lot but not as much as Oze in winter. The PALSAR/ALOS data is used again. This time we find almost no liquid water body in midwinter and recognize the singularity of Oze. We try to evaluate the effect of snow depth, peat depth on hydrology of highland marshes in winter.

Keywords: highland marsh, hydrology, PALSAR, remote sensing, snow, peat