

A pilot study based on ALOS/PALSAR for Hydrological monitoring of snowy highland Oze marsh

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We have not monitored hydrological environment of highland marsh with heavy snow, because the snow has prevented from our entering it in winter. One of the most famous highland marshes, Oze, has heavy snow more than 2 m in depth every year. We have analyzed data products of a kind of L-band radar, PALSAR/ALOS, from July in 2006 to April in 2011. This analysis showed existence of a water body under the snow. Although some researchers have reported the liquid water under the thick snow, this would be the first report for seasonal change of its distribution. Because we found a larger water body in midwinter season than that in snow-melt season, this water would be squeezed out from peat layers by the load of heavy snow, not melted snow.

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