

## Observation of snow distribution in Niigata Prefecture using near real-time snow depth monitoring system

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Monitoring of temporal and spatial fluctuation of snow depth is important for prevention of snow disasters, estimation of water resource amount, and understanding the effect of an increase in air temperature on snow cover. Recently, various agencies such as national and local governments, research institutes and private companies in addition to the Japan Meteorological Agency (about 330 stations) which publish the real time data of snow depth and snowfall on the website have increased. Snow depth measurements are conducted by multiple agencies, however, these are not accessible for the reason that the measuring frequency, the data management and data publication on the website differed among the observation agencies. Against this background, we have undertaken the development of a system which can consolidate in an integrated fashion and create the database and made a test installation since the 2012 winter. In consequence, the data accession in near real-time and creation of the database against 320 stations in Niigata Prefecture are automatically made possible using the system throughout the winter. Accurate estimation of spatial distribution of snow depth using the available data and utilization of this system are issues in the future.

Keywords: snow distribution, near real-time analysis, Niigata Prefecture