

Development of a simple snow load gauge using plastic bottles (part 2)

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Imanishi and Oi (2015) developed a simple snow load gauge using plastic bottles with the purpose of correcting hydrological effects on precise gravity observations. So far we have made laboratory tests by artificially loading the instrument as well as field experiments near the Kamioka gravity station. However, there have been no opportunities of comparing it with other instruments or visually inspecting the status of the instrument under snow load. In this winter, we have installed the instrument at the Oshirakawa Meteorological Station, jointly maintained by Niigata University and East Japan Railway Company, in order to make parallel observations with a snow pressure pillow (metal wafer). As of this writing, the plastic bottle instrument is indicating temporal increase of load that is likely to correctly reflect accumulation of snow. Results of detailed comparison with the snow pressure pillow will be presented.

Keywords: snow load gauge, superconducting gravimeter, plastic bottle