

## Preliminarily environmental magnetic results from packed snow along the roadside at Mt. Tateyama, Toyama, Japan.

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Environmental magnetic techniques have been shown to be useful for investigating roadside pollution. There are several reports that show a positive correlation between the distance from a road and magnetic susceptibility. Only a few studies have been reported for such magnetic monitoring using packed snow along a roadside. Here, environmental magnetic studies are reported for the Bijyodaira area of Mt. Tateyama in Toyama. The Tateyama Kurobe sightseeing Alpine route is the only available road through the area and only authorized vehicles are allowed to drive on it. Four profiles were set up with a length away from the roadside that depended on the available space beside the roadside, with maximum length of 30 m. Uppermost packed snow was collected along the Tateyama Kurobe Alpine road using a plastic scraper and 7 cc plastic cubes. The collected snow melt to water at room temperature and then it was solidified using a superabsorbent polymer. Rock magnetic measurements of these solidified specimens indicate that the major magnetic mineral in the snow is maghemite and its composition is nearly the same at different distances from the roadside. The observed saturation isothermal remanent magnetization intensity curves against distance from the roadside show rapid decay patterns near the roadside in three profiles although there are some abnormal peaks along the profiles. The results show that environmental magnetic techniques can be applied to packed snow by using a superabsorbent polymer and this is an effective method for monitoring pollution associated with vehicle traffic.

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