

Changes in atmospheric electricity over about eighty years

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The Japan Meteorological Agency has observed atmospheric electric field at Kakioka magnetic observatory (KMO) since 1929. This observation has been carried out by a water-dropper instrument without replacing. Meteorological observations at KMO stopped in 1997, and fair-weather days of atmospheric electricity have been extracted from data of atmospheric electricity itself and precipitations. We extracted clear weather days with weather satellite images and all-sky photos at KMO, and derived diurnal variation of the atmospheric electric field in calm days. In this presentation, we will show the diurnal curve at present and past, from 1931 to 1935, and discuss changes in atmospheric electricity over about eighty years.

Keywords: atmospheric electricity, diurnal variation, fair weather, water dropper, cloud grid information