

Recent decrease of the atmospheric potential gradient in Japan

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Recent decrease of the atmospheric potential gradient (PG) at Kakioka (KAK) and Memambetsu (MMB) in Japan since 1990 until 2006 was studied including its local time and seasonal features. It was found that PG decreases at KAK throughout the period, but the decrease is more prominent after 2000, and PG at MMB also decreases after 2000. The ratio of PG at KAK to that at MMB is also decreasing almost throughout the period but the decrease is prominent after 2000. The decrease of the ratio means that the decrease of PG at KAK is not caused by the ionospheric potential decrease but at least partly due to the variation of the regional conductivity structure close to KAK, although it is possible that the decrease after 2000 reflects that of the global ionospheric potential.