On the East Asian continent, the biggest source of aerosol is wind-blown dust (aeolian dust). Such aeolian dust invades regionally in spring on East Asia (so-called, Asian dust, or yellow sand, with local name as "Kosa" in Japanese). The invasion menaces human health and biological activity. We should research its provenance, frequency and transportation mechanism for prevention and countermeasure against all damage. We can suggest provenance of aeolian dust after considering together with their Rb/Sr ratio and Nd isotopic composition. Therefore, we present isotope data of aeolian dust collecting since January 1998, for considering about origin of aeolian dust and its seasonal and yearly variations from a chemical standpoint.

Desert sand and loess are more or less supplied from East Asian continent to Japan throughout all season as major component of aeolian dust, even in summer, by westerly wind, and volcanic ash is sometimes supplied from circum Pacific area as minor component. Heavy inorganic dust (over 2mg/m² deposition per day) was almost collected in early spring on Mt. Sefuri, North Kyushu, and shows representative compositions with high Sr and low Nd isotope ratios. The compositions are comparable with desert sand and loess of arid areas on North China and Western Beijing. Although aeolian dust with such composition is sometimes found in summer and autumn as well as winter and spring, influence of volcanic ash becomes larger relatively in isotopic compositions and makes low Sr and high Nd isotopic compositions because of decrease of dust particles transported from continent in summer season. Net weight of water-insoluble inorganic matters in aeolian dust fluctuates from year to year. This is probably influenced from difference of strength of westerly and climate condition on source arid area. Recent increase suggests that expanding of arid area on North China and Mongolia.

Sr and Nd isotope compositions of the aeolian dust in rainwater fallen on the summit of Mt. Sefuri, north Kyushu, southwest Japan

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