

# **Variations in surface beryllium-7 concentration with solar activity**

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Be-7 radionuclide (half life 53.3 days) is produced by nuclear interactions of galactic cosmic rays (GCR) with N and O nuclei in the upper atmosphere. It is a potentially useful tracer of atmospheric air mass motions. The Be-7 production rate varies with the solar activity because GCR in the heliosphere are modulated by the solar magnetic field carried out by the solar wind plasma. Be-7 produced in the upper atmosphere is transported by complex atmospheric processes and falls to the Earth's surface. We analyzed the long-term data of Be-7 concentration in surface air in Japan and tried to study whether the variations in the Be-7 concentration are associated with the 11-year cycle of solar activity.