Research of annual cosmic ray events using 10Be in the Dome Fuji ice core

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Cosmogenic nuclides, 14C and 10Be, are produced in the atmosphere by cosmic rays from ourside the Earth. Carbon-14 is stored in tree-rings, and beryllium-10 is stored in ice sheets. Then, we can investigate past cosmic ray intensities by analyzing concentrations of 14C or 10Be. Annual cosmic ray increase events (AD 775 and AD993 or AD994) were found in 14C data of tree-rings. These events were also shown in quasi-annual 10Be data in the ice cores from the Antarctica and the Greenlands. We analyzed quasi-annual 10Be concentration in the Dome Fuji ice core, and detected the cosmic ray events. In this presentaion, we will report the results of quasi-annual 10Be measurments, and discuss a comparison with 14C data.

Keywords: cosmogenic nuclide, annual cosmic ray event