

Precise dating of cosmic ray events in the 17th century found by the analysis of beryllium-10 content in Antarctic ice core

*宮原 ひろ子¹、堀内 一穂²、門叶 冬樹³、森谷 透³、横山 祐典⁴、松崎 浩之⁴、本山 秀明⁵

*Hiroko Miyahara¹, Kazuho Horiuchi², Fuyuki Tokanai³, Toru Moriya³, Yusuke Yokoyama⁴, Hiroyuki Matsuzaki⁴, Hideaki Motoyama⁵

1. 武蔵野美術大学、2. 弘前大学、3. 山形大学、4. 東京大学、5. 国立極地研究所

1. Musashino Art University, 2. Hirosaki Univ., 3. Yamagata Univ., 4. The Univ. of Tokyo, 5. National Institute of Polar Research

The records of beryllium-10 content in ice cores from Greenland and Antarctica have indicated five events of cosmic ray flux enhancement around the Maunder Minimum from the late 17th century to the early 18th century. These events are suggested to have occurred associated with the change in the heliospheric environment due to the disappearance of sunspots. In order to determine absolute ages of these events, we conducted high precision measurements of carbon-14 in tree rings. Although the peaks in carbon-14 content is strongly attenuated in carbon cycle, they have been detected by the measurement with 0.1% precision.

キーワード：氷床コア、宇宙線生成核種、太陽活動

Keywords: Ice core, Cosmogenic nuclide, Solar activity