

M39b      **Investigation of the Abundances of Polar Jets as the Solar Wind Source  
Using Hinode**

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With X-ray observations, we can detect many jets in the Sun's polar region, and it has been suggested that they could be a fast solar wind source. The plasma ejected along the jets could, in principle, contribute mass to the solar wind. From in-situ measurements in the magnetosphere, it has been found that the fast solar wind has photospheric abundances while the slow solar wind has coronal abundances. Therefore, we investigated the abundances of polar jets to determine whether they are the same as that of the fast solar wind. For this study, we selected 26 jets in the polar region observed by Hinode/EIS and XRT simultaneously on 2007 November 1-3. We calculated the FIP bias factor from the ratio of the intensity between high (S) and low (Si, Fe) FIP elements using the EIS spectra. The values of the FIP bias factors for the polar jets are around  $0.9 \sim 1.6$ , which indicates that they have photospheric abundances similar to the fast solar wind. The results are consistent with the reconnection jet model where photospheric plasma emerges and is rapidly ejected into the fast wind.