

Tweek atmospherics observed during a solar eclipse on July 22 2009

Hiroyo Ohya^{1*}, Kazuo Shiokawa², Yoshizumi Miyoshi², Fuminori Tsuchiya³, Kozo Yamashita³,
Yukihiro Takahashi⁴

¹Graduate School of Eng., Chiba Univ., ²STE Lab., Nagoya Univ., ³Graduate School of Science, Tohoku Univ.,

⁴Graduate School of Sci., Hokkaido Univ.

The purpose of this study is to reveal the variations in the D-region ionosphere associated with a solar eclipse on July 22, 2009 by using tweek atmospherics. Typical tweek atmospherics can be obtained only in nighttime when the absorption is much less than daytime. Tweeks are reflected at a height where the equivalent electron densities are 20 - 30 cm⁻³. It is expected that tweeks can be observed during the solar eclipse, because of the decreases in the D-region electron density compared to usual daytime one. It has been reported that tweeks were observed during a few solar eclipses, although the detailed investigation has not been sufficiently performed yet. We use tweek data obtained at Tarumizu and Sendai, Japan, during the solar eclipse. We observed 10 tweeks from 10:00 JST to 11:00 JST on July 22. In the presentation, we will report the daytime tweeks during the solar eclipse in detail.