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20 or 30 minutes oscillations detected by HF Doppler observation at the total eclipse on July 22, 2009

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We have setup HF Doppler observation systems at Aso and Okinawa for the total solar eclipse (TSE) on July 22, 2009, to examine the influence by the solar eclipse. So we can compare radio wave propagation of a zone of totality and other places and the influence of the solar eclipse can be observed as shock wave and electron density decay along with the movement of TSE. We obtained 20-30 minutes oscillations at the observation point near the zone of totality. In this study, we will try to separate the wave shape from the other noise to analyze the influence of the TSE and weigh the differences between this analysis result and the current TSE models.

Keywords: total solar eclipse, ionosphere, 20 or 30 minutes oscillation