Initial report of DELTA2 rocket campaign: results from the EISCAT radar observations

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The high-latitude lower thermosphere is influenced by aurora disturbances such as Joule heating, ion-drag, and particle precipitation. Much is already revealed about the qualitative characteristics of the mechanism, but the subject has not yet been adequately investigated, particularly in quantitative manner. To advance our understanding of the response of the lower thermosphere to the aurora disturbances, the DELTA-2 (Dynamics and Energetic of Lower Thermosphere in Aurora -2) rocket campaign was conducted in northern Scandinavia for January 14-26, 2009. The rocket was successfully launched at 00:15 UT on January 26. During the campaign interval, the EISCAT UHF radar at Tromsoe (69.6N, 19.2E) was operated for about 96 hours in total with a CP-2 (monostatic) mode. This paper will present an observational summary of the EISCAT UHF radar observations during the DELTA-2 campaign interval.