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Initial reports of DELTA-2 campaign: results from FPI

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An important aspect of the polar dynamics in the lower thermosphere (90-120 km) is to know wind and temperature modulations associated with enhancements of the auroral activity. While much is already known about the qualitative characteristics of the system in this field, the subject has not yet been adequately investigated, particularly in quantitative manner. Fabry-Perot Interferometer (FPI) is one of the powerful instruments to measure the thermospheric wind from the ground. To progress our understanding of mechanism to generate perturbations in the lower thermosphere at high latitudes, we installed FPI at the EISCAT (European Incoherent Scatter) radar site in January 2009. The FPI has been operated with the automatic system since January 12, 2009. The FPI participated DELTA-2 (Dynamics and Energetic of Lower Thermosphere in Aurora -2) rocket campaign conducted at northern Scandinavia in January 2009. The rocket was launched at 00:15 UT on January 26. The FPI was operated with 557.7-nm filter. The line-of-sight was sequentially changed among four cardinal points with zenith angle of 15 degree along with the vertical. The integration time at each point was 15 seconds, and one sequence was 2 minutes 45 seconds. The laser fringe was monitored every cycle. The paper will present the initial result of the new FPI during the rocket campaign.