



THE OBSERVATION OF GRAVITY WAVES IN THE NOCTILUCENT CLOUDS

P. Dalin(1), S. Kirkwood(1), P. Hoffmann(2), W. Singer(2)

(1) Swedish Institute of Space Physics, Kiruna, Sweden, (2) Leibniz Institute of Atmospheric Physics, Kuhlungsborn, Germany

A case study of Noctilucent Cloud (NLC) occurrence above the north part of Sweden is examined. This occasion was characterized by clear wave dynamics and gravity waves are considered to be responsible for the observed modulation in the NLC area. With the Esrangle MST Radar data (NLC were located just above Esrangle) and Andoya MF Radar data we have managed to find gravity waves which propagated upward from the upper stratosphere to the NLC altitude and these waves should not have suffered saturation. The wave parameters estimated by the photogrammetric technique and by the radar measurements are close to the same. We conclude that gravity waves could be responsible for the observed complex wave dynamics in the NLC for this case.