Numerical simulation of midlatitude sporadic-E layer and field-aligned irregularities (2)

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Observations of the midlatitude E-region field-aligned irregularities (FAI) with the MU radar show that distinctive quasiperiodic (QP) echoes frequently appear in the post-sunset period in the summertime.It has been explained that the structure of QP echoes are derived from altitude modulation of sporadic-E layers by atmospheric gravity waves. The SEEK experiment in August 1996 revealed intense polarization electric field associated with the QP echoes. However, there was no clear evidence of such modulation of Es layers. In this study, we use a numerical simulation to show structures of Es layers based on the results from the SEEK experiment.