

# **Plausible causes of LQP Echoes observed in Chung-Li**

C.L. Chen<sup>1</sup>, C.J. Pan<sup>2</sup>

<sup>1</sup> Department of Computer Science and Information, Tajen University

<sup>2</sup> Institute of Space Science, National Central University

## **Abstract**

Spatial interferometry using the Chung-Li VHF radar allowed measuring the exact height of LQP echoes. We deduced the mean radial velocity of the scatterers which we assume to be carried with the mean background wind at altitudes below 100 km. During the time of our observations the general echo occurrence moved downward. We estimated the Brunt-Vaisaelae frequency from MSIS-E-90 atmosphere model with neutral temperature profile. The observed period distributed mainly less than 1.5 min before 19:15, much lesser than Estimated from Brunt-Vaisaelae frequency about 3-7 min. After 19:15, the observed period distributed period mainly between 1.5 min to 3 min, which are a little close to the estimated Brunt-Vaisaelae frequency about 3-4 min. The wind shear is estimated to be sufficient to cause Kelvin-Helmholtz Instability (KHI), which we regard responsible for the generation of short-period striations in the LQP echoes.