



## Formation of chromospheric Moreton waves near the solar limb

P. F. Chen, Y. W. Ni

School of Astronomy & Space Science, Nanjing University

e-mail (speaker): chenpf@nju.edu.cn

Moreton waves are observed as propagating dark fronts in the Ha red wing and bright fronts in the Ha center and blue wing, generally following big flares. They were initially believed to be due to blast waves excited by the pressure pulses in solar flares, and were later proposed to be due to the piston-driven shock waves above coronal mass ejections (CMEs). In the framework of these models, Moreton waves are formed as a result of Doppler effect when shock waves sweep the solar chromosphere and the chromosphere starts to move downward. However, with the Ha spectroscopic observations from the Chinese CHASE mission, we found a Moreton wave event near the solar limb, which

is difficult to be interpreted as the Doppler effect. In this talk, I will introduce the observational features and provide tentative explanations.

### References

- [1] Chen, P. F., Ding, M. D., Fang, C. 2005, Space Sci. Rev., 121, 201
- [2] Chen, P. F., Fang, C., Shibata, K. 2005, ApJ, 622, 1202
- [3] Chen, P. F. 2016, Geophysical Monograph Series, 216, 381