The manuscript by Qinzeng Li and colleagues report observations of Transient Luminous Events (TLEs) above a mesoscale convective system South of the Himalaya allied by observations of atmospheric gravity waves across China. It is convincingly shown that dynamic and electrical coupling were both caused by the mesoscale convective system, albeit perhaps by different parts of it. The manuscript is well written, and the figures are informative and support the text, but the structure of the manuscript has room for improvement. The vertical electrical coupling by the same storm was described in a previous publication which is only referenced on l195. As a result, this manuscript should use the introduction to clearly describe the previous findings and how this manuscript expands on those. Similarly, the added value of the joint analyses of TLE's and gravity waves should be explained with a clear plan for the study at the end of the introduction. At present, it appears that both vertical coupling phenomena are coincidental, rather than physically related to each other. That would be fine, if it is clearly stated, but not stating it potentially results in rising expectations that are not satisfied by the manuscript. Section 2 describes instrumentation and models as part of the methodology used for the investigation rather than observations as its title implies. Section 3 starts with a summary of the results prior to describing the analyses that lead to the results. In fact, section 3 is relatively long and would be better separated into two sections, one on results and one section for discussion. The discussion section could describe uncertainties and articulate a critique of the interpretations in light of the scientific literature. Otherwise, the manuscript would benefit from more precise formulations and clarifications in places as described in more detail below.

- l3,20,65,68,167,252,287,482: Better to use one single description of the investigated region, rather changing the wording multiple times throughout the manuscript.
- l24: According to l20 and Fig. 2, the thunderstorms occur over Bangladesh, north-east India, Bhutan and Myanmar, not China. Reword accordingly.
- l35: Clarify what is meant by 'their asymmetric occurrence'. No asymmetry was mentioned before.
- l38: State whether the two vertical coupling mechanisms are thought to be coincidental, or physically related to each other.
- l41: Is overshooting necessary to produce gravity waves? Perhaps better to say '… and vertical convective motion can generate…'
- l70: State the geographic coordinates of the optical TLE observations.
- l88: Explain that these stations are remotely located from the source.
- l103: State the locations of the three cameras.
- l110: Explain the meaning of green, blue and black circles.
- l110: It would be helpful to add the TLE locations to characterise the convective storm.
- l122: Briefly explain how the temperatures are derived from the measurements.
- l130: State the meaning of the acronym 'LTE'.
- l141: Explain how the observations of the 12 spectral bands are related to the study.
- l160: Reword this sentence, as lightning activity does not extend into the middle atmosphere.
- l166: Explain how the brightness temperatures are related to the evolution of the convection.
- l170: State the time when the MCS was formed.
- l171: Explain the wording 'eastward expansion'. Fig. 2 does not indicate preferential directions.
- l173: It would be helpful to add the TLE locations to Fig. 2 to substantiate the connection.
- l178: State the height of the tropopause and its temperature for comparison with the observed brightness temperatures to provide evidence for the quoted penetration into the stratosphere.
- l183: Does 'subsequently' mean TLEs started after 21UT? Please clarify.
- l190: State the geographic coordinates of the camera.
- l199: Explain what a 'secondary gigantic jet' is, and why its luminosity is not connected to the cloud top. State the integration time of the image with the sprite cluster and explain why this is not considered to be a dancing sprite.
- l202: 'Electrical activity' could also refer to numerous lightning discharges or their intensity; what is meant here is 'significant charge removal from the thunderclouds'. Consider to reword to be more specific.
- l204: Explain how the images are obtained or processed to produce such high level of detail when compared to the images shown by Huang et al., 2025, and in Fig. 5.
- l216: Use an arrow to pinpoint the localised convection in Fig. 2 at 19:00 UT, and show its centre location in Fig. 4 for comparison.
- l223: State whether the gravity waves in Fig. 4 and Fig. 5 are thought be the same. When photographed from north to south, the gravity waves seem most pronounced to the west of the storm in Fig. 5, whereas Fig. 4 indicates more pronounced gravity wave signatures to the east of the storm.
- l237: The gravity waves appear to be coloured in red and green. Comment on whether the reddish colour is an optical illusion corresponding to a grey/green contrast in the original image and state whether the images were post-processed/enhanced in any way.

- l257: State the integration times for the images.
- l271: The determination of the wavelengths contradicts the statement on l232 that this is not possible.
- l280-282: Use arrows to indicate gravity wave detections, similar to Fig. 6, and show the direction of propagation.
- l286: State whether the other two stations shown in Fig. 1 show the same signatures.
- l289: State which station is 3,000 km away and how it was determined that no other thunderstorms, or other sources, contributed to the waves observed at such a remote distance.
- l309: Explain u and v wind directions used in Fig. 8.
- l321: Explain how the presence of ducting layers is inferred from the profiles in Fig. 9.
- l332: State how the volume emission rate is related to gravity wave properties in the context of the ducting.
- l351: Use arrows to indicate gravity wave detections, similar to Fig. 6, and show the direction of propagation. State how it was determined that no other thunderstorms, or other sources, contributed to the waves observed at these remote distances.
- l422: Show in the figure the height of thermospheric airglow observations for comparison.
- l441: Add the convergence zone in Fig. 14 b&c and explain why horizontal convergence is favoured when compared to vertical conversion. Comment on the uncertainty of the convergence zone.

Overall, a very interesting publication on dynamic and electrical vertical coupling of atmospheric layers.