



李 昆 翰 博士後研究 (2015-06-23 ~ 2018-10-31)

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Research interest: space plasma physics, numerical simulation

Education

- Ph. D. Institute of Space Science, National Central University, 2014
- M. S. Institute of Space Science, National Central University, 2008
- B. S . Department of Physics, National Central University, 2006

Experience

- Postdoctoral research fellow, Institute of Earth Sciences, Academia Sinica, 2014~2018
- Member of the Space Science Society of the Republic of China, 2016~

Awards

- Best Poster Award, The 10th International School/Symposium for Space Simulations (ISSS-10), 2011

- Second Prize in Student Paper Competition, Asia-Pacific Radio Science Conference (AP-RASC), 2013

Publications (*corresponding author)

- [1] K. H. Lee, Y. Omura, L. C. Lee*, and C. S. Wu, Nonlinear Saturation of Cyclotron Maser Instability Associated with Energetic Ring-Beam Electrons, *Phys. Rev. Lett.* **103**, 105101 (2009);
<http://link.aps.org/doi/10.1103/PhysRevLett.103.105101>
- [2] K. H. Lee, Y. Omura and L. C. Lee*, A 2D simulation study of Langmuir, whistler, and cyclotron maser instabilities induced by an electron ring-beam distribution, *Phys. Plasmas* **18**, 092110 (2011);
<http://dx.doi.org/10.1063/1.3626562>
- [3] C. S. Wu, C. B. Wang, D. J. Wu, and K. H. Lee*, Resonant wave-particle interactions modified by intrinsic Alfvénic turbulence, *Phys. Plasmas* **19**, 082902 (2012);
<http://dx.doi.org/10.1063/1.4742989>
- [4] K. H. Lee, Y. Omura and L. C. Lee*, Electron acceleration by Z-mode waves associated with cyclotron maser instability, *Phys. Plasmas* **19**, 122902 (2012);
<http://dx.doi.org/10.1063/1.4772059>
- [5] K. H. Lee, Y. Omura and L. C. Lee*, Electron acceleration by Z-mode and whistler-mode waves, *Phys. Plasmas* **20**, 112901 (2013);
<http://dx.doi.org/10.1063/1.4829439>
- [6] J. R. Shuster*, L.-J. Chen, W. S. Daughton, L. C. Lee, K. H. Lee, N. Bessho, R. B. Torbert, G. Li, and M. R. Argall, Highly structured electron anisotropy in collisionless reconnection exhausts, *Geophys. Res. Lett.* **41** (2014);
<http://dx.doi.org/10.1002/2014GL060608>
- [7] K. H. Lee, Y. Omura and L. C. Lee*, Electron Acceleration and Diffusion of Ring Distribution by Z-Mode and Whistler-Mode Waves, *The Radio Science Bulletin* **349**, 7 (2014);
- [8] B. Y. Hsupeng, K. H. Lee*, L. C. Lee* and J. K. Chao, Formation of discontinuities and expansion waves in the outflow region of magnetic reconnection in an asymmetric current sheet, *Phys. Plasmas* **22**, 102901 (2015);
<http://dx.doi.org/10.1063/1.4933128>
- [9] K. H. Lee*, and L. C. Lee, Generation of He⁺ and O⁺ EMIC waves by the bunch distribution of O⁺ ions associated with fast magnetosonic shocks in the magnetosphere, *Geophys. Res. Lett.* **43**, 9406-9414 (2016);
doi:10.1002/2016GL070465.
- [10] B. Remya*, K. H. Lee, L. C. Lee, and B. T. Tsurutani, Polarization of obliquely

- propagating whistler mode waves based on linear dispersion theory, *Physics of Plasmas* **23**, 122120 (2016);
doi: <http://dx.doi.org/10.1063/1.4972534>.
- [11] B. Remya, K. H. Lee*, L. C. Lee, and B. T. Tsurutani, Coherency and ellipticity of electromagnetic ion cyclotron waves: Satellite observations and simulations, *J. Geophys. Res. Space Physics* **122**, 3374-3396, (2017);
doi:10.1002/2016JA023588.
- [12] K. H. Lee*, Generation of parallel and quasi-perpendicular EMIC waves and mirror waves by fast magnetosonic shocks in the solar wind, *J. Geophys. Res. Space Physics*, accepted (2017).

Invited talks

- [1] K. H. Lee*, Y. Omura and L. C. Lee, Cyclotron maser instability and associated waves and electron dynamics, *The 11th International School/Symposium for Space Simulations (ISSS-11)*, 2013.
- [2] K. H. Lee* and L. C. Lee, Generation of He⁺ and O⁺ EMIC waves by the O⁺ bunch distribution associated with fast magnetosonic shocks in the magnetosphere, *Annual Meeting of the Physical Society of the Republic of China (Taiwan)*, 2017.