PUBLICATION LIST (updated: 20250117)

Journal Publications

1) **Li, Dongshuai (CA)**, Alejandro Luque, Farhad Rachidi, ... Paul R. Krehbiel. Propagation Effects of Slanted Narrow Bipolar Events: A Rebounding-wave Model Study (2024). Journal of Geophysical Research: Atmospheres, 129, e2023JD040497.
2) **Li, Dongshuai (CA)**, Torsten Neubert, Lasse Skaaning Husbjerg, ... Víctor Reglero. Observation of Blue Corona Discharges and Cloud Microphysics in the Top of Thunderstorm Cells in Cyclone Fani (2023). Journal of Geophysical Research: Atmospheres, 128, e2022JD038328.
3) **Li, Dongshuai (CA)**, Luque, Alejandro, Gordillo-Vazquez, FJ, Pérez-Invernón, FJ, Husbjerg, Lasse, Neubert, Torsten, . . . Han, Jing. (2023). Different types of corona discharges associated with high-altitude positive Narrow Bipolar Events near cloud top. *Journal of Geophysical Research: Atmospheres*, 128, e2022JD037883.
4) **Li, Dongshuai (CA)**, Luque, Alejandro, Lehtinen, Nikolai G, Gordillo-Vázquez, Francisco J, Neubert, Torsten, Lu, Gaopeng, . . . Reglero, Víctor. (2022). Multi-Pulse Corona Discharges in Thunderclouds Observed in Optical and Radio Bands. *Geophysical Research Letters*, 49(13), e2022GL098938.
5) **Li, Dongshuai (CA)**, Luque, Alejandro, Gordillo-Vázquez, Francisco J, Silva, Caitano da, Krehbiel, Paul R, Rachidi, Farhad, & Rubinstein, Marcos. (2022). Secondary fast breakdown in narrow bipolar events. *Geophysical Research Letters*, 49(7), e2021GL097452.
6) **Li, Dongshuai (CA)**, Luque, Alejandro, Gordillo-Vázquez, Francisco J, Liu, Feifan, Lu, Gaopeng, Neubert, Torsten, . . . Reglero, Víctor. (2021). Blue flashes as counterparts to narrow bipolar events: The optical signal of shallow in-cloud discharges. *Journal of Geophysical Research: Atmospheres*, 126(13), e2021JD035013.
7) **Li, Dongshuai (CA)**, Liu, Feifan, Pérez-Invernón, Francisco J, Lu, Gaopeng, Qin, Zilong, Zhu, Baoyou, & Luque, Alejandro. (2020). On the Accuracy of ray-theory methods to determine the altitudes of intracloud electric discharges and ionospheric reflections: Application to narrow bipolar events. *Journal of Geophysical Research: Atmospheres*, 125(9), e2019JD032099.
8) **Li, Dongshuai (CA)**, Luque, Alejandro, Rachidi, Farhad, Rubinstein, Marcos, Azadifar, Mohammad, Diendorfer, Gerhard, & Pichler, Hannes. (2019). The propagation effects of lightning electromagnetic fields over mountainous terrain in the earth-Ionosphere waveguide. *Journal of Geophysical Research: Atmospheres*, 124(24), 14198-14219.
9) **Li, Dongshuai (CA)**, Rubinstein, Marcos, Rachidi, Farhad, Diendorfer, Gerhard, Schulz, Wolfgang, & Lu, Gaopeng. (2017). Location Accuracy Evaluation of ToA-Based Lightning Location Systems Over Mountainous Terrain. *Journal of Geophysical Research: Atmospheres*, 122.
10) **Li, Dongshuai (CA)**, Azadifar, Mohammad, Rachidi, Farhad, Rubinstein, Marcos, Diendorfer, Gerhard, Sheshyekani, Keyhan, . . . Wang, Zhenhui. (2016). Analysis of lightning electromagnetic field propagation in mountainous terrain and its effects on ToA-based lightning location systems. *Journal of Geophysical Research: Atmospheres*, 121(2), 895-911.
11) **Li, Dongshuai (CA)**, Azadifar, Mohammad, Rachidi, Farhad, Rubinstein, Marcos, Paolone, Mario, Pavanello, Davide, . . . Wang, Zhenhui. (2015). On lightning electromagnetic field propagation along an irregular terrain. *IEEE Transactions on Electromagnetic Compatibility*, 58(1), 161-171.
12) **Li, Dongshuai (CA)**, Zhang, Qilin, Wang, Zhenhui, & Liu, Tao. (2013). Computation of lightning horizontal field over the two-dimensional rough ground by using the three-dimensional FDTD. *IEEE Transactions on Electromagnetic Compatibility*, 56(1), 143-148.

13) **Li, Dongshuai (CA)**, Zhang, Qilin, Liu, Tao, & Wang, Zhenhui. (2013). Validation of the Cooray-Rubinstein (C-R) formula for a rough ground surface by using three-dimensional (3-D) FDTD. *Journal of Geophysical Research: Atmospheres*, 118(22), 12,749-712,754.

14) Zhang, Qilin, **Li, Dongshuai (CA)**, Fan, Yanfeng, Zhang, Yuanyuan, & Gao, Jinge. (2012). Examination of the Cooray-Rubinstein (C-R) formula for a mixed propagation path by using FDTD. *Journal of Geophysical Research: Atmospheres*, 117(D15).

15) Azadifar, Mohammad, **Li, Dongshuai**, Rachidi, Farhad, Rubinstein, Marcos, Diendorfer, Gerhard, Schulz, Wolfgang, . . . Pavanello, Davide. (2017). Analysis of lightning-ionosphere interaction using simultaneous records of source current and 380 km distant electric field. *Journal of Atmospheric and Solar-Terrestrial Physics*, 159, 48-56.

16) Liu, Tao, **Li, Dongshuai**, & Zhang, Qilin. (2016). The New Formula for Calculating Lightning-Radiated Horizontal Electric Field of Two-Dimensional (2-D) Rough Ground Surface (in Chinese). *Insulators and Surge Arresters*, (06), 68-72.

17) Zhang, Qilin, **Li, Dongshuai**, Tang, Xiao, & Wang, Zhenhui. (2013). Lightning-radiated horizontal electric field over a rough-and ocean-land mixed propagation path. *IEEE Transactions on Electromagnetic Compatibility*, 55(4), 733-738.

18) Zhang, Qilin, **Li, Dongshuai**, Zhang, Yuanyuan, Gao, Jinge, & Wang, Zhenhui. (2012). On the accuracy of Wait's formula along a mixed propagation path within 1 km from the lightning channel. *IEEE Transactions on Electromagnetic Compatibility*, 54(5), 1042-1047.

19) Zhang, Qilin, **Li, Dongshuai**, Fan, Yanfeng, Zhang, Yuanyuan, & Gao, Jinge. (2012). Examination of the Cooray-Rubinstein (C-R) formula for a mixed propagation path by using FDTD. *Journal of Geophysical Research: Atmospheres*, 117(D15).

20) Feifan Liu, Torsten Neubert, Olivier Chanrion, Gaopeng Lu, Ting Wu, Fanchao Lyu, Weitao Lyu, Christoph Köhn, **Dongshuai Li**, Baoyou Zhu, Jiuhou Lei. Polarity transitions of narrow bipolar events in thundercloud tops reaching the lower stratosphere. *Nat Commun* 15, 7344 (2024).

21) Feifan Liu, Gaopeng Lu, Torsten Neubert, Jiuhou Lei, Oliver Chanrion, Nikolai Østgaard, **Dongshuai Li**, Alejandro Luque, Francisco J Gordillo-Vázquez, Victor Reglero, Weitao Lyu, Baoyou Zhu. Optical emissions associated with narrow bipolar events from thunderstorm clouds penetrating into the stratosphere. *Nat Commun* 12, 6631 (2021).

22) Soler, S, Gordillo-Vázquez, FJ, Pérez-Invernón, FJ, Luque, A, **Li, Dongshuai**, Neubert, T, . . . Østgaard, N. (2022). Global distribution of key features of streamer corona discharges in thunderclouds. *Journal of Geophysical Research: Atmospheres, e2022JD037535*.

23) Husbjerg, Lasse Staining, Neubert, Torsten, Chanrion, Olivier, Dimitriadou, Krystallia, **Li, Dongshuai**, Stendel, Martin, . . . Reglero, Victor. (2022). Observations of blue corona discharges in thunderclouds. *Geophysical Research Letters*, 49(12), e2022GL099064.

24) Zhang, Hongbo, Lu, Gaopeng, Lyu, Fanchao, Xiong, Shaolin, Ahmad, Mohd Riduan, Yi, Qibin, **Li, Dongshuai**, . . . Liu, Feifan. (2021). On the Terrestrial Gamma-Ray Flashes Preceding Narrow Bipolar Events. *Geophysical Research Letters*, 48(8), e2020GL092160.

25) Soler, Sergio, Gordillo-Vázquez, Francisco J, Pérez-Invernón, FJ, Luque, Alejandro, **Li, Dongshuai**, Neubert, Torsten, . . . Østgaard, Nikolai. (2021). Global frequency and geographical distribution of nighttime streamer corona discharges (BLUEs) in thunderclouds. *Geophysical Research Letters*, 48(18), e2021GL094657.

26) Liu, Feifan, Lu, Gaopeng, Neubert, Torsten, Lei, Jiuhou, Chanrion, Oliver, Østgaard, Nikolai, **Li, Dongshuai**, . . . Reglero, Victor. (2021). Optical emissions associated with narrow bipolar events from thunderstorm clouds penetrating into the stratosphere. *Nature Communications*, 12(1), 6631.

27) Soler, S, Pérez-Invernón, Francisco J, Gordillo-Vázquez, FJ, Luque, Alejandro, **Li, Dongshuai**, Malagón-Romero, Alejandro, . . . Navarro-Gonzalez, J. (2020). Blue optical observations of narrow bipolar events by ASIM suggest corona streamer activity in thunderstorms. *Journal of Geophysical Research: Atmospheres*, 125(16), e2020JD032708.

28) Lyu, Fanchao, Yang, Jing, Zhu, Baoyou, **Li, Dongshuai,** Xiong, Shaoling, Liu, Feifan, . . . Zhang, Hongbo. (2020). Terrestrial gamma-ray flashes as the high-energy effect of tropospheric thunderstorms in near-Earth space. *SCIENTIA SINICA Physica, Mechanica & Astronomica*, 50(12), 129506.

29) Luque, Alejandro, Gordillo-Vázquez, Francisco José, **Li, Dongshuai**, Malagón-Romero, Alejandro, Pérez-Invernón, Francisco Javier, Schmalzried, Anthony, . . . Neubert, Torsten. (2020). Modeling lightning observations from space-based platforms (CloudScat. jl 1.0). *Geoscientific Model Development*, 13(11), 5549-5566.

30) Ren, Huan, Tian, Ye, Lu, Gaopeng, Zhang, Yunfeng, Fan, Yanfeng, Jiang, Rubin, Liu, Mingyuan, **Li, Dongshuai** . . . Qie, Xiushu. (2019). Examining the influence of current waveform on the lightning electromagnetic field at the altitude of halo formation. *Journal of Atmospheric and Solar-Terrestrial Physics*, 189, 114-122.

31) Mostajabi, Amirhossein, **Li, Dongshuai,** Azadifar, Mohammad, Rachidi, Farhad, Rubinstein, Marcos, Diendorfer, Gerhard, . . . Pavanello, Davide. (2019). Analysis of a bipolar upward lightning flash based on simultaneous records of currents and 380-km distant electric fields. *Electric Power Systems Research*, 174, 105845.

32) Li, Xiao, Lu, Gaopeng, Fan, Yanfeng, Jiang, Rubin, Zhang, Hongbo, **Li, Dongshuai**, . . . Ren, Huan. (2019). Underground measurement of magnetic field pulses during the early stage of rocket-triggered lightning. *Journal of Geophysical Research: Atmospheres*, 124(6), 3168-3179.

33) Ma, Lina, Li, Qing, Jiang, Sulin, Lei, Lianfa, **Li, Dongshuai**, & Wang, Zhenhui. (2018). Consistency Analysis of Experimental and Simulated Brightness Temperature based on Ground-based Microwave Radiometer and Cloud Detection (in Chinese). *Remote Sensing Technology and Application*, 33(1), 68-77.

34) Lu, Gaopeng, Cummer, Steven A, Chen, Alfred B, Lyu, Fanchao, **Li, Dongshuai**, Liu, Fei, . . . Su, Han-Tzong. (2017). Analysis of lightning strokes associated with sprites observed by ISUAL in the vicinity of North America. *TAO: Terrestrial, Atmospheric and Oceanic Sciences*, 28(4), 5.

35) Li, Qing, Lei, Lianfa, Wang, Zhenhui, Wei, Ming, & **Li, Dongshuai**. (2017). The Status of Lightning Thermal Effect Observation by Remote Sensing (in Chinese). *Advances in Earth Science*, 32(5), 481.

36) Yan, Fengfan, Zhang, Qilin, **Li, Dongshuai**, Gao, Jinge, & Shen, yuan. (2017a). Application and accuracy validation of the Cooray-Rubinstein formula for different soil conductivity (in English). *Transitions of Atmospheric Sciences*, 40(1):118-126.

37) Yan, Fengfan, Zhang, Qilin, **Li, Dongshuai**, Gao, Jinge, & Shen, yuan. (2017b). Application and accuracy validation of the Cooray-Rubinstein formula for different soil conductivity (in Chinese). *Transitions of Atmospheric Sciences*, 40(1):118-126.

38) Tang, Xiao, Zhang, Qilin, & **Li, Dongshuai**. (2015). Calculation and analysis of lightning induced overvoltage with stratified ground structure. *High Voltage Engineering*, 41(1), 84-93.

39) Paknahad, Javad, Sheshyekani, Keyhan, Hamzeh, Mohsen, **Li, Dongshuai**, & Rachidi, Farhad. (2015). The influence of the slope angle of the ocean–land mixed propagation path on the lightning electromagnetic fields. *IEEE Transactions on Electromagnetic Compatibility*, 57(5), 1086-1095.

40) Tang, Xiao, Zhang, Qilin, **Li, Dongshuai**, Zhang, Liang, & Gao, Jinge. (2015). Calculation and Analysis of Lightning Induced Overvoltage with Stratified Ground Structure (in Chinese). *High Voltage Engineering*, 41(1), 84-93.

41) Zhang, Qilin, Tang, Xiao, Gao, Jinge, Zhang, Liang, & **Li, Dongshuai**. (2013). The influence of the horizontally stratified conducting ground on the lightning-induced voltages. *IEEE Transactions on Electromagnetic Compatibility*, 56(2), 435-443.

42) Zhang,Qilin, Zhang, Yuanyuan, **Li, Dongshuai**, Fan, Yanfeng, & Gao, Jinge. (2013). Effect of irregular terrain on propagation of lightning electromagnetic field (in Chinese). *Journal of Meteorological Research*, 71(2), 357-365.

43) Ouyang, Shuang, Zhang, Qilin, Li, Ying, **Li, Dongshuai**, & Zhang, Yuanyuan. (2013). Impact on Lightning Electromagnetic Field Propagation of Soil Electrical Parameter Variation Induced by Varying Surface Soil Moisture (in Chinese). *Meteorological Science and Technology*, 40(6), 1018-1024.

44) Gao, Jinge, Zhang, Qilin, **Li, Dongshuai**, Zhang, Yuanyuan, & Fan, Yanfeng. (2013). Propagation effects of the rough surface on the lightning horizontal electric field (in Chinese). *Journal of the Meteorological Science*, 33(6), 627-633.

45) Zhang, Qilin, Yang, Jing, **Li, Dongshuai**, & Wang, Zhenhui. (2012). Propagation effects of a fractal rough ocean surface on the vertical electric field generated by lightning return strokes. *Journal of electrostatics*, 70(1), 54-59.

46) Zhang, Qilin, Yang, Jing, Jing, Xiaoqin, **Li, Dongshuai**, & Wang, Zhenhui. (2012). Propagation effect of a fractal rough ground boundary on the lightning-radiated vertical electric field. *Atmospheric research*, 104, 202-208.

47) Zhang, Qilin, Jing, Xiaoqin, Yang, Jing, **Li, Dongshuai**, & Tang, Xiao. (2012). Numerical simulation of the lightning electromagnetic fields along a rough and ocean-land mixed propagation path. *Journal of Geophysical Research: Atmospheres*, 117(D20).

Book chapters

1) **Li, Dongshuai (CA)**, Alejandro Luque, Farhad Rachidi, Marcos Rubinstein, 2022. Advanced Time Domain Modelling for Electrical Engineering - Chapter 11: The Application of The Finite-Difference Time-Domain (FDTD) Technique to Lightning Studies. *The Institution of Engineering and Technology (IET)*. ISBN: 9781839531538.
2) **Li, Dongshuai (CA)**, Alejandro Luque, Marcos Rubinstein, Farhad Rachidi, 2023. Lightning Electromagnetics, 2nd Edition - Chapter 10: Lightning interaction with the ionosphere. *The Institution of Engineering and Technology (IET)*. ISBN: 9781785615412.

Peer-reviewed articles published in conference proceedings

1) **Li, Dongshuai (CA)**, Torsten Neubert, Lasse Skaaning Husbjerg, Olivier Chanrion, ..., Víctor Reglero. (2024). Blue Corona Discharges Detected by ASIM. In Proceedings of the 37th International Conference on Lightning Protection (ICLP), Dresden, Germany.
2) **Li, Dongshuai (CA)**, Azadifar, Mohammad, Sunjerga, Antonio, Rachidi, Farhad, Rubinstein, Marcos, Luque, Alejandro, . . . Pichler, Hannes. (2022). Analysis of lightning electromagnetic field propagation over mountainous terrain using simultaneous records of current and its electric field at 380-km distance. Paper presented at the Proceedings of Global EM 2022, *Global Electromagnetics Conference*, Abu Dhabi, United Arab Emirates.
3) **Li, Dongshuai (CA)**, Rachidi, Farhad, & Rubinstein, Marcos. (2019). FDTD Modeling of lightning electromagnetic field propagation over mountainous terrain. Paper presented at *the 2019 International Applied Computational Electromagnetics Society Symposium (ACES)*, Miami (FL), USA.
4) **Li, Dongshuai (CA)**, Rubinstein, Marcos, Rachidi, Farhad, Diendorfer, Gerhard, & Schulz, Wolfgang. (2018). Analysis of location accuracy of ToA-based lightning location systems in mountainous terrain. Paper presented at *the XVI International Conference on Atmospheric Electricity*, Nara, Japan.
5) **Li, Dongshuai (CA)**, Rachidi, Farhad, Rubinstein, Marcos, Diendorfer, Gerhard, & Wang, Zhenhui. (2016). Location Accuracy Evaluation of ToA-Based Lightning Location Systems over Mountainous Terrain. Paper presented at *the International Lightning Detection Conference/International Lightning Meteorology Conference - ILDC/ILMC* 2016, San Diego, California, USA.
6) **Li, Dongshuai (CA)**, Paknahad, Javad, Rachidi, Farhad, Rubinstein, Marcos, Sheshyekani, Keyhan, Zhang, Qilin, & Wang, Z. (2015). Propagation effects on lightning magnetic fields over hilly and mountainous terrain. Paper presented at *the 2015 IEEE International Symposium on Electromagnetic Compatibility (EMC)*, Dresden, Germany.
7) Azadifar, Mohammad, **Li, Dongshuai**, Rubinstein, Marcos, & Rachidi, Farhad. (2017). A semi-analytical simplified approach to compute lightning radiated electric fields at long distances taking into account ionospheric reflection. Paper presented at *the 2017 XXXIInd General Assembly and Scientific Symposium of the International Union of Radio Science (URSI GASS)*, Montreal, Quebec, Canada.
8) Azadifar, Mohammad, **Li, Dongshuai**, Rachidi, Farhad, Rubinstein, Marcos, Diendorfer, Gerhard, Pichler, Hannes, . . . Pavanello, Davide. (2016). Simultaneous Current and Distant Electric Field Waveforms from Upward Lightning: Effect of Ionospheric Reflection. Paper presented at *the 24th International Lightning Detection Conference (ILDC)*, San Diego, California.
9) Azadifar, Mohammad, **Li, Dongshuai**, Paolone, Mario, Pavanello, Davide, Rachidi, Farhad, & Rubinstein, Marcos. (2016). An update on the measurements of lightning currents and electromagnetic fields associated with flashes to the Säntis tower in Switzerland. Paper presented at *the Proceedings of International Colloquium on Lightning and Power Systems*, 27-29 June 2016, Bologna, Italy.
10) Ma, Lina, Li, Wang, Zhenhui, Qing, Jiang, Sulin, Lei, Lianfa, & **Li, Dongshuai** (2017). Consistency Analysis of Experimental and Simulated Brightness Temperature based on Ground-based Microwave Radiometer and Cloud Detection. Paper presented at *the 34th Chinese Meteorological Society*, Beijing, China.
11) Gao, Jinge, Zhang, Qilin, **Li, Dongshuai**, Fan, Yanfeng, & Zhang, Yuanyuan. (2012). Propagation effects of the rough surface on the lightning horizontal electric field. Paper presented at *the10th Lightning Protection and Disaster Mitigation Forum, Liaoning (S13)*, Shenyang, China.