

## REFERENCES AND CITATIONS

---

- Achat, S., Y. Teisseyre, and E. Marode (1992), The scaling of the streamer-to-arc transition in a positive point-to-plane gap with pressure, *J. Phys. D: Appl. Phys.*, *25*(4), 661–668.
- Aleksandrov, N. L., A. E. Bazelyan, E. M. Bazelyan, and I. V. Kochetov (1995), Modeling of long streamers in atmospheric-pressure air, *Plasma Phys. Rep.*, *21*(60), 57–75.
- Aleksandrov, N. L., E. M. Bazelyan, I. V. Kochetov, and N. A. Dyatko (1997), The ionization kinetics and electric field in the leader channel in long air gaps, *J. Phys. D: Appl. Phys.*, *30*(11), 1616–1624, doi:10.1088/0022-3727/30/11/011.
- Aleksandrov, N. L., E. M. Bazelyan, N. A. Dyatko, and I. V. Kochetov (1998), Streamer breakdown of long air gaps, *Plasma Phys. Rep.*, *24*(7), 541–555.
- BASTIEN, F., and E. Marode (1985), Breakdown simulation of electronegative gases in non-uniform field, *J. Phys. D: Appl. Phys.*, *18*(3), 377–393.
- Benilov, M. S., and G. V. Naidis (2003), Modelling of low-current discharges in atmospheric-pressure air taking account of non-equilibrium effects, *J. Phys. D: Appl. Phys.*, *36*(15), 1834–1841, doi:10.1088/0022-3727/36/15/314.
- Boeck, W. L., O. H. Vaughan, R. J. Blakeslee, B. Vonnegut, M. Brook, and J. McKune (1995), Observations of lightning in the stratosphere, *J. Geophys. Res.*, *100*, 1465.
- Briels, T. M. P., J. Kos, E. M. van Veldhuizen, and U. Ebert (2006), Circuit dependence of the diameter of pulsed positive streamers in air, *J. Phys. D: Appl. Phys.*, *39*, 5201–5210.
- Comtois, D., H. Pépin, F. Vidal, F. A. Rizk, C. Y. Chien, T. W. Johnston, J. C. Kieffer, B. La Fontaine, C. Potvin, P. Couture, H. P. Mercure, A. Bondiou-Clergerie, P. Lalande, and I. Gallimberti (2003), Triggering and guiding of an upward positive leader from a ground rod with an ultrashort laser pulse - II: Modeling, *IEEE Trans. Plasma Sci.*, *31*(3), 387–395, doi:10.1109/TPS.2003.811649.
- Farges, T. (2008), Infrasound from lightning and sprites, *Lightning: Principles, Instruments and Applications*, pp. 417–432.
- Gallimberti, I., G. Bacchiega, A. Bondiou-Clergerie, and P. Lalande (2002), Fundamental processes in long air gap discharges, *C. R. Physique*, *3*(10), 1335–1359, doi:10.1016/S1631-0705(02)01414-7.
- Gerken, E. A., and U. S. Inan (2003), Observations of decameter-scale morphologies in sprites, *J. Atmos. Solar Terr. Phys.*, *65*, 567–572, doi:10.1016/S1364-6826(02)00333-4.
- Kossyi, I. A., A. Y. Kostinsky, A. A. Matveyev, and V. P. Silakov (1992), Kinetic scheme of the non-equilibrium discharge in nitrogen-oxygen mixtures, *Plasma Sources Sci. Technol.*, *1*(3), 207–220.
- Krehbiel, P. R., J. A. Riousset, V. P. Pasko, R. J. Thomas, W. Rison, M. A. Stanley, and H. E. Edens (2008), Upward Electrical Discharges from Thunderstorms, *Nature Geoscience*, *1*(4), 233–237, doi:10.1038/ngeo162.
- Kuo, C. L., A. B. Chen, J. K. Chou, L. Y. Tsai, R. R. Hsu, H. T. Su, H. U. Frey, S. B. Mende, Y. Takahashi, and L. C. Lee (2008), Radiative emission and energy deposition in transient luminous events, *Journal of Physics D: Applied Physics*, *41*(23), 234,014 (14pp).
- Larsson, A., A. Bondiou-Clergerie, and I. Gallimberti (1998), Numerical modelling of inhibited electrical discharges in air, *J. Phys. D: Appl. Phys.*, *31*(15), 1831–1840, doi:10.1088/0022-3727/31/15/011.
- Liu, N., V. P. Pasko, H. U. Frey, S. B. Mende, H.-T. Su, A. B. Chen, R.-R. Hsu, and L.-C. Lee (2009), Assessment of sprite initiating electric fields and quenching altitude of a(1)Pi(g) state of N-2 using sprite streamer modeling and ISUAL spectrophotometric measurements, *J. Geophys. Res.*, *114*, doi:10.1029/2008JA013735.
- Liu, N. Y., and V. P. Pasko (2004), Effects of photoionization on propagation and branching of positive and negative streamers in sprites, *J. Geophys. Res.*, *109*, A04301, doi:10.1029/2003JA010064.
- Lowke, J. J. (1992), Theory of electrical breakdown in air - the role of metastable oxygen molecules, *J. Phys. D: Appl. Phys.*, *25*, 202–210.

- Lyons, W. A., CCM, T. E. Nelson, R. A. Armstrong, V. P. Pasko, and M. A. Stanley (2003), Upward electrical discharges from thunderstorm tops, *Bull. Am. Meteorol. Soc.*, *84*(4), 445–454, doi:10.1175/BAMS-84-4-445.
- Marode, E., F. Bastien, and M. Bakker (1979), Model of the streamer-induced spark formation based on neutral dynamics, *J. Appl. Phys.*, *50*(1), 140–146.
- McHarg, M. G., H. C. Stenbaek-Nielsen, and T. Kammae (2007), Streamer development in sprites, *Geophys. Res. Lett.*, *34*, L06804, doi:10.1029/2006GL027854.
- Mnatsakanyan, A. K., and G. V. Naidis (1985), The vibrational-energy balance in a discharge in air, *High Temp.*, *23*(4), 506–513.
- Morrow, R., and J. J. Lowke (1997), Streamer propagation in air, *J. Phys. D: Appl. Phys.*, *30*, 614–627.
- Naidis, G. V. (1999), Simulation of streamer-to-spark transition in short non-uniform air gaps, *J. Phys. D: Appl. Phys.*, *32*, 2649–2654.
- Naidis, G. V. (2005), Conditions for inception of positive corona discharges in air, *J. Phys. D: Appl. Phys.*, *38*, 2211–2214.
- Pasko, V. P. (2007), Red sprite discharges in the atmosphere at high altitude: the molecular physics and the similarity with laboratory discharges, *Plasma Sources Sci. Technol.*, *16*, S13–S29, doi:10.1088/0963-0252/16/1/S02.
- Pasko, V. P., and J. J. George (2002), Three-dimensional modeling of blue jets and blue starters, *J. Geophys. Res.*, *107*(A12), 1458, doi:10.1029/2002JA009473.
- Pasko, V. P., M. A. Stanley, J. D. Matthews, U. S. Inan, and T. G. Wood (2002), Electrical discharge from a thundercloud top to the lower ionosphere, *Nature*, *416*, 152–154, doi:10.1038/416152a.
- Popov, N. A. (2001), Investigation of the mechanism for rapid heating of nitrogen and air in gas discharges, *Plasma Phys. Rep.*, *27*(10), 886–896, doi:10.1134/1.1409722.
- Popov, N. A. (2003), Formation and development of a leader channel in air, *Plasma Phys. Rep.*, *29*(8), 695–708, doi:10.1134/1.1601648.
- Stenbaek-Nielsen, H. C., M. G. McHarg, T. Kammae, and D. D. Sentman (2007), Observed emission rates in sprite streamer heads, *Geophys. Res. Lett.*, *34*, L11105, doi:10.1029/2007GL029881.
- Su, H. T., R. R. Hsu, A. B. Chen, Y. C. Wang, W. S. Hsiao, W. C. Lai, L. C. Lee, M. Sato, and H. Fukunishi (2003), Gigantic jets between a thundercloud and the ionosphere, *Nature*, *423*, 974–976, doi:10.1038/nature01759.
- Tardiveau, P., E. Marode, A. Agneray, and M. Cheaib (2001), Pressure effects on the development of an electric discharge in non-uniform fields, *J. Phys. D: Appl. Phys.*, *34*, 1690–1696.
- Vallance-Jones, A. V. (1974), *Aurora*, D. Reidel Publishing Co., Norwell, Mass.
- van der Velde, O. A., W. A. Lyons, T. E. Nelson, S. A. Cummer, J. Li, and J. Bunnell (2007), Analysis of the first gigantic jet recorded over continental north america, *J. Geophys. Res.*, *112*, D20104, doi:10.1029/2007JD008575.
- Vidal, F., I. Gallimberti, F. A. M. Rizk, T. W. Johnston, A. Bondiou-Clergerie, D. Comtois, J. C. Kieffer, B. La Fontaine, H. P. Mercure, and H. Pépin (2002), Modeling of the air plasma near the tip of the positive leader, *IEEE Trans. Plasma Sci.*, *30*(3), 1339–1349, doi:10.1109/TPS.2002.801538.
- Walter, C. W., P. C. Cosby, and H. Helm (1994), Predissociation quantum yields of singlet nitrogen, *Phys. Rev. A*, *50*, 2930–2936.
- Wescott, E. M., D. Sentman, D. Osborne, D. Hampton, and M. Heavner (1995), Preliminary results from the Sprites94 aircraft campaign: 2. Blue jets, *Geophys. Res. Lett.*, *22*(10), 1209–1212.
- Wescott, E. M., D. Sentman, H. C. Stenbaek-Nielsen, P. Huet, M. J. Heavner, and D. R. Moudry (2001), New evidence for the brightness and ionization of blue jets and blue starters, *J. Geophys. Res.*, *106*(A10), 21,549–21,554, doi:10.1029/2000JA000429.
- Zhao, X. M., J. C. Diels, C. Y. Wang, and J. M. Elizondo (1995), Femtosecond ultraviolet laser pulse induced lightning discharge in gases, *IEEE J. Quantum Electronics*, *31*, 599–612.