

This newsletter is meant to bring useful and timely information to our graduate students. We hope that you will read it and contribute to it. Any ideas, suggestions, and/or contributions are encouraged and welcomed. Including announcements for thesis/dissertation defenses and highlighting graduate student accomplishments are only two examples of what we would like to include. This is your newsletter and we hope you take an active role in shaping it. Please submit your suggestions to [graduate.dept@nmt.edu](mailto:graduate.dept@nmt.edu)

Featured Research



**Relationship between sprite current and morphology**

**Luis Contreras-Vidal**  
Graduate Student - Physics Department

**Caitano da Silva**  
Advisor

**Richard Sonnenfeld**  
Co-advisor

Full Article

*Paper was nominated for the Langmuir Award in 2021*

Sprites are short-lived, large-scale electrical discharges that happen at the edge of space in response to electrical activity in underlying thunderstorms. This article shows the detailed relationship between the electrical current in sprites and its morphological shape, as detected with a high-speed camera operating at 100,000 frames per second. During two prolific nights of observations, our team collected a large data set of sprites with radio signatures of electrical currents flowing within the sprite body. Observations were carried out from New Mexico Tech's Langmuir Laboratory atop the Magdalena Mountains in central New Mexico. A statistical analysis shows — **for the first time** — a clear relationship between electrical current and the optical morphology. Sprites with more complex morphology and larger size also have larger electrical currents, and therefore a larger impact in the middle atmosphere.

**Important Dates**

**7/16**

**Completion paperwork for summer graduation**

If you are planning to graduate this summer the completed report of the advisory committee, iThenticate report from academic advisor, and ProQuest submission of the final thesis/dissertation must be submitted to the Center for Graduate Studies or one final copy of an accepted independent study paper must be submitted to the student's advisor and advisory committee.

Student degrees are not complete until final materials have been approved by the Center for Graduate Studies and the student receives final acceptance via email from the ProQuest system.

**7/30**

**End of Summer Semester**

If you are on a graduate contract, check with your advisor on when you will have a new one to make sure there are no gaps in funding.

In preparation for the Fall semester please make sure you have a course plan approved specially if you are planning to graduate that semester

**8/12**

**TA Training**

This training is mandatory for all new TAs. Since we didn't have the chance to hold a face-to-face training last year, all TAs are encouraged to attend. The afternoon section of the training will be held by three veteran TAs: John Chilleri (Mathematics), Dana Baylis (Physics), and Nelum Perera (Chemistry). You will receive a more detailed email about the event.

**8/15**

**Affordable Domestic Student Health Insurance**

If you are a domestic student, the recent Covid-Relief Bill has some very exciting opportunities for health insurance plans with very low to \$0 premiums. We highly encourage you to visit [beWellnm.org](http://beWellnm.org) to find more information and if you qualify. Special enrollment ends on 08/15/2021.

**Announcements**

**Registration is open please register**

**Don't wait till last minute**

Registration for the Fall semester is now open please register and don't wait till last minute. Not registering may result in courses being cancelled.

**Graduate Student Association**

Message from the GSA

We want to encourage students to get their vaccine during the summer, if they haven't already. Vaccination is the best protection against COVID-19 for yourself and others. According to [covidactnow.org](http://covidactnow.org), Socorro County's vaccination rate is 54.4%. With the new risk of more contagious COVID-19 variants, it's critical we do our part in increasing the county's vaccination rate. You can register for your vaccine at [vaccinenm.org](http://vaccinenm.org).

The student health center is available for all graduate students, even if you are not taking summer classes, as long as you are registered for the fall. They have a nurse practitioner on staff and can offer a wide variety of services such as sick visits, lab evaluations and family planning.

Contact the GSA at [GSA@npe.nmt.edu](mailto:GSA@npe.nmt.edu) if you have any questions or comments on graduate student resources.



Left to right in the picture: Jacob Gochenour, Luis Contreras-Vidal, Jessica Aerts, Qingqing Ling, Mariana Huckabee.

**Mariana Huckabee**  
President

**Jacob Gochenour**  
Vice President

**Luis Contreras-Vidal**  
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**Aly El-Osery**  
Dean of Graduate Studies