

# Catching the Media Wave: How to Market your Research to the Press and the Public

**Gregory G. Howes**  
**University of Iowa**

**ECLIPSE**

**Ecosystem for Collaborative Leadership and Inclusive Innovation  
in Plasma Science and Engineering**

Alexandria, Virginia

9-11 Mar 2022



This work is supported by the DOE grant DE-SC0014599.

# Communicating Your Science

---

- **Inspiring the public:**

As federally funded scientists, and also often as faculty members at universities, it is part of our job to inspire the public with news of our scientific discoveries

- **Various Outreach Efforts:**

- Outreach Events to Schools
- Public Talks
- Blog Posts, Instagram, other Social Media
- Press Coverage

- **Grabbing the Attention of the Press:**

- Significant investment of time and preparation, mixed with a little luck
- Great way to reach a vast audience

# When Press Outreach Goes Well

June 7, 2021: Press Briefing at American Astronomical Society June Meeting



ARTICLE

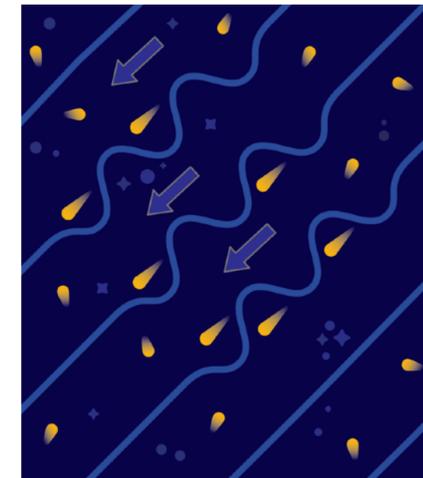
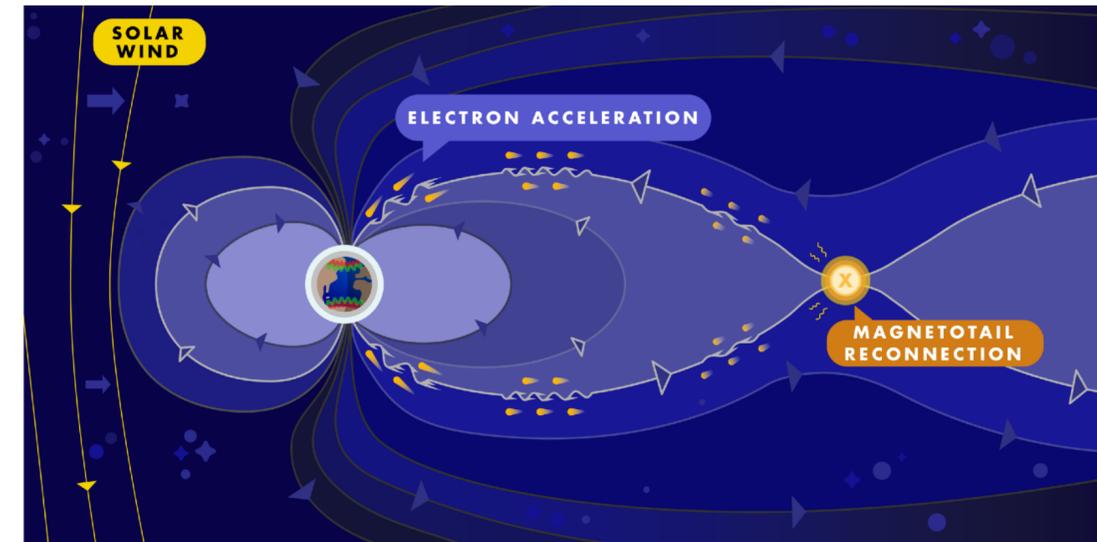
<https://doi.org/10.1038/s41467-021-23377-5>

OPEN



Laboratory measurements of the physics of auroral electron acceleration by Alfvén waves

J. W. R. Schroeder<sup>1</sup>, G. G. Howes<sup>2</sup>, C. A. Kletzing<sup>2</sup>, F. Skiff<sup>2</sup>, T. A. Carter<sup>3</sup>, S. Vincena<sup>3</sup> & S. Dorfman<sup>4</sup>



**Well planned and coordinated efforts lead to heavy coverage in the international press**

# When Press Outreach Goes Well

More than 197 News Stories across six continents

The north  
powerfu  
accelera  
per hou  
confirm

- Cosmic shimmer
- Solar flares can
- The storms bre
- Electrons 'surf'
- When the elect curtain of light

## Aurora

Physicists def

Mys  
con

Cor



Share



Tweet



Link

Testing miniature versions of the mechanisms that fuel the aurora sheds light on the phenomenon. By Tiara Walters

Think of the aurora — those lustrous shows of light pouring across polar night skies — as nature's answer to preposterous party streamers.

Displayed as sweeping greens, reds and yellows, these phenomena shoot through the heavens when air molecules and the Sun's charged particles collide above our extreme northern and southern latitudes. Especially to Scandinavia's first settlers — and to humanity since — the aurora has persisted as the stuff of untrammelled mystery.

"The lights flare up again, tongues of flame that writhe and lick the heights of the sky," muses Georgina Harding's hero in her 2007 novel, *The Solitude of Thomas Cave*, as the whaler-turned-environmentalist tries to outlast a polar winter, alone, in 17th-century Svalbard. Those lights "melt away, and in the moonlight she is no longer there", Thomas Cave observes, as he hallucinates his dead lover into being.

Now, by reproducing scaled, miniature versions of the mechanisms said to fuel the aurora, scientists say they have demonstrated the fundamentals underpinning this thing of atmospheric wonder.

**A chink in the matrix**  
The new results, published on Monday 7



the Large Plasma Device (LAPD), based at the Basic Plasma Science Facility at the University of California, Los Angeles. The University of Iowa, Wheaton College and the Space Science Institute also collaborated on this research.

Here, their idea was to recreate conditions mirroring those of Earth's auroral magnetosphere above the poles: researchers needed to measure just a small population of electrons charging down the chamber at almost the same speed as the Alfvén waves (a bit like measuring only the fastest surfers paddling to catch an ocean wave).

To calculate their measurements, the team invented, tested, developed and refined precision instruments, such as a new type of electromagnetic probe, and a high-power antenna for launching Alfvén waves. They also exploited a recently developed field-particle technique.

Next, the team launched the Alfvén waves through the LAPD, a one-metre-diameter cylinder vacuum spanning about 20m (more than double the length of an old London Routemaster bus). Wrapped in water-cooled electrical coils that can generate a force about 3,500 times stronger than Earth's magnetic field in Los Angeles, the chamber was fired up with a plasma heated to an elec-

# Radio and TV Interviews

---

- Live Interviews:
  - ABC Radio (Sydney, Australia)
  - KCBS All News Radio (San Francisco, CA)
- Pre-Taped Interviews:
  - Iowa Public Radio
  - Science Friday, National Public Radio
- TV News Coverage:
  - Iowa's News Now, KGAN CBS2 and KFXA FOX28 (Cedar Rapids, IA)
  - KCBS (Los Angeles, CA)

# When Press Outreach Goes Well

## Laboratory measurements of the physics of auroral electron acceleration by Alfvén waves

Overview of attention for article published in Nature Communications, June 2021



### ? About this Attention Score

In the top 5% of all research outputs scored by Altmetric

MORE...

### Mentioned by

-  183 news outlets
-  11 blogs
-  40 tweeters
-  1 Facebook page
-  1 Wikipedia page
-  1 video uploader

### Citations

### SUMMARY

[News](#)[Blogs](#)[Twitter](#)[Facebook](#)[Wikipedia](#)[Video](#)[Dimensions citations](#)

**Title** Laboratory measurements of the physics of auroral electron acceleration by Alfvén waves

**Published in** Nature Communications, June 2021

**DOI** 10.1038/s41467-021-23377-5 [↗](#)

**Pubmed ID** 34099653 [↗](#)

**Authors** J. W. R. Schroeder, G. G. Howes, C. A. Kletzing, F. Skiff, T. A. Carter, S. Vincena, S. Dorfman

[View on publisher site](#)[Alert me about new mentions](#)

### TWITTER DEMOGRAPHICS

### MENDELEY READERS

### ATTENTION SCORE IN CONTEXT

? This research output has an **Altmetric Attention Score** of **1544**. This is our high-level measure of the quality and quantity of online attention that it has received. This Attention Score, as well as the ranking and number of research outputs shown below, was calculated when the research output was last mentioned on **30 January 2022**.

#### ALL RESEARCH OUTPUTS

#4,934

of 20,389,631 outputs

#### OUTPUTS FROM NATURE COMMUNICATIONS

#72

of 40,309 outputs

#### OUTPUTS OF SIMILAR AGE

#317

of 344,262 outputs

#### OUTPUTS OF SIMILAR AGE FROM NATURE COMMUNICATIONS

#1

of 1 outputs

So far Altmetric has tracked 40,309 research outputs with an Attention Score of 54.4. This one

**Top 0.18%**

they typically receive a lot more attention than average, with a mean Attention Score of 154.4. This one is **more than 99% of its peers.**

# How to Catch the Media Wave

## Timing and Preparation

Below I will outline steps for staging a successful effort of outreach to the press:

1. Start early
  - Success requires a lot of coordination between many different offices
2. Reply Promptly
  - We're all busy, but don't let unnecessary delays hamper your efforts
3. Large Investment of Time and Effort
  - The payoff can be very big with an effective press outreach effort!

# Is This Result Worth Concerted Press Outreach?

## Is this result newsworthy?

- We're all excited about our work, but some results don't resonate with the public

## Be honest with yourself in assessing:

- Is this a significant result worthy of extra efforts to communicate to the public?
- Can the result be placed into the context of something important the public?
  - Astronomy results often are of broad interest
  - Clean energy and fusion power also grab the public's attention

Place the result into the context of a broader, interesting problem.

**Effective Outreach to the Press and Public is a lot of work, but worth it if executed properly**

# Present at a Professional Society Meeting

## **Biggest Bang for your Buck!**

- Coordinating the publication of your results with a major meeting helps a lot
  - APS Division of Plasma Physics Meeting
  - AAS Winter or Summer Meeting
  - AGU Fall Meeting
- Your work can be presented at a Press Briefing sponsored by the society
  - A pool of science reporters will attend, giving a broad reach
- High Impact Journals (Nature, Science, Physical Review Letters, etc.) can coordinate with the society press officer to time publication during the meeting
  - Both the society press officer and the publisher will reach out to the press

# Contact Your Institution's Communications Office

## **The Most Important First Step**

Contact your local Communications Office as soon as you have decided to outreach to the press and public

Many institutions have different names for this office:

- Office of Strategic Communication
- Press Office
- Public Affairs Office

The Communications Office staff can help guide you through the process

- How to prepare yourself to present your science clearly and concisely
- How to communicate effectively with science reporters
- What to expect during the press embargo and press briefing

# Press Embargo and Publication

The publisher will dictate the timing of publication and terms of any press embargo

If presenting at a major meeting, the publisher will coordinate with the press officer

## **Press Embargo**

- You also cannot publicly present your results before the embargo is lifted
- An embargo prevents stories on your results until a specific date and time
- For a limited time before publication, the press will be given access to the research (and you) to prepare news stories
- This enables many news outlets to release stories immediately upon lifting of the embargo
- When coordinated with a Press Briefing, the embargo is lifted and the paper is published upon commencement of the briefing

# Prepare a Press Kit

## Press Kit

- Provide detailed information, graphics, contact information to reporters
- Creating the press kit is great training:
  - Eliminate jargon
  - Practice clear and concise communication
  - Refine analogies to communicate the science content
- Make connections to topics familiar to the public
- Take the stress out of presenting all information verbally during interviews
- Likely leads to more accurate news stories about your science results
- Publisher or professional society can host Press Kit for access to reporters

# Contents of a Press Kit

---

## Key Information in Press Kit

- Clear statement of embargo Date, Time, and Time Zone at top!
- Varying Levels of Description:
  - Media “Sound bite”: 3 or 4 sentences with context, result, and implications
  - Single Paragraph Description
  - One Page Description
  - Detailed Scientific Background
- What was actually done?
- List of Funding Support
- Contact Information for primary authors
- Library of any supporting graphics, images, or movies: Include source and credit
- **Embargoed Copy of Publication**

# Contents of a Press Kit

---

## Optional Information in Press Kit

- Quotes about the work from authors, funding agency program scientists, etc.
- List of Graduate Students and Postdoctoral Researchers Trained
- Technological and Scientific Achievements
  - New instruments
  - New methods developed or used
- Other Related “Big Picture” Issues
  - Ex: “Space Physics in the Laboratory”
- References

# Images in Press Kit

## 11.9 Alaskan Aurora



Figure 9: **Alaskan Aurora:** The aurora borealis captured in Alaska by photographer Jean Beaufort. The shimmering and swirling curtains of green light are typical of discrete auroral arcs occurring during geomagnetic storms. These green sheets of light dance in the night sky at an altitude of 100–200 km (60–120 mi).

Credit: Jean Beaufort, CC0 Public Domain license.

License: CC0 Public Domain

Jean Beaufort has released this “Northern Lights” image under Public Domain license. It means that you can use and modify it for your personal and commercial projects.

File: AlaskanAurora.jpg

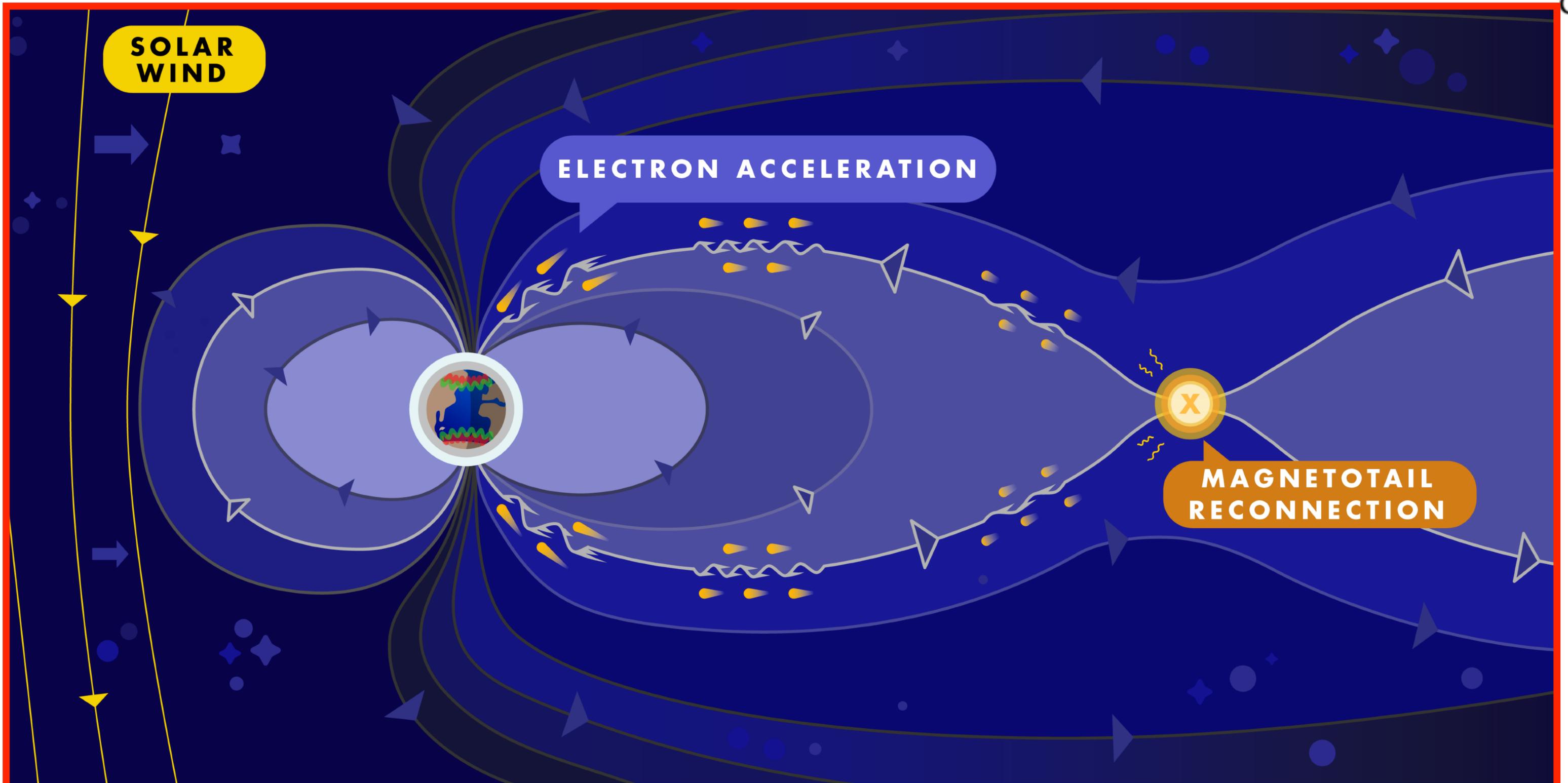
Source: <https://www.publicdomainpictures.net/en/view-image.php?image=298659&picture=northern-lights>

# Work with a Graphic Designer

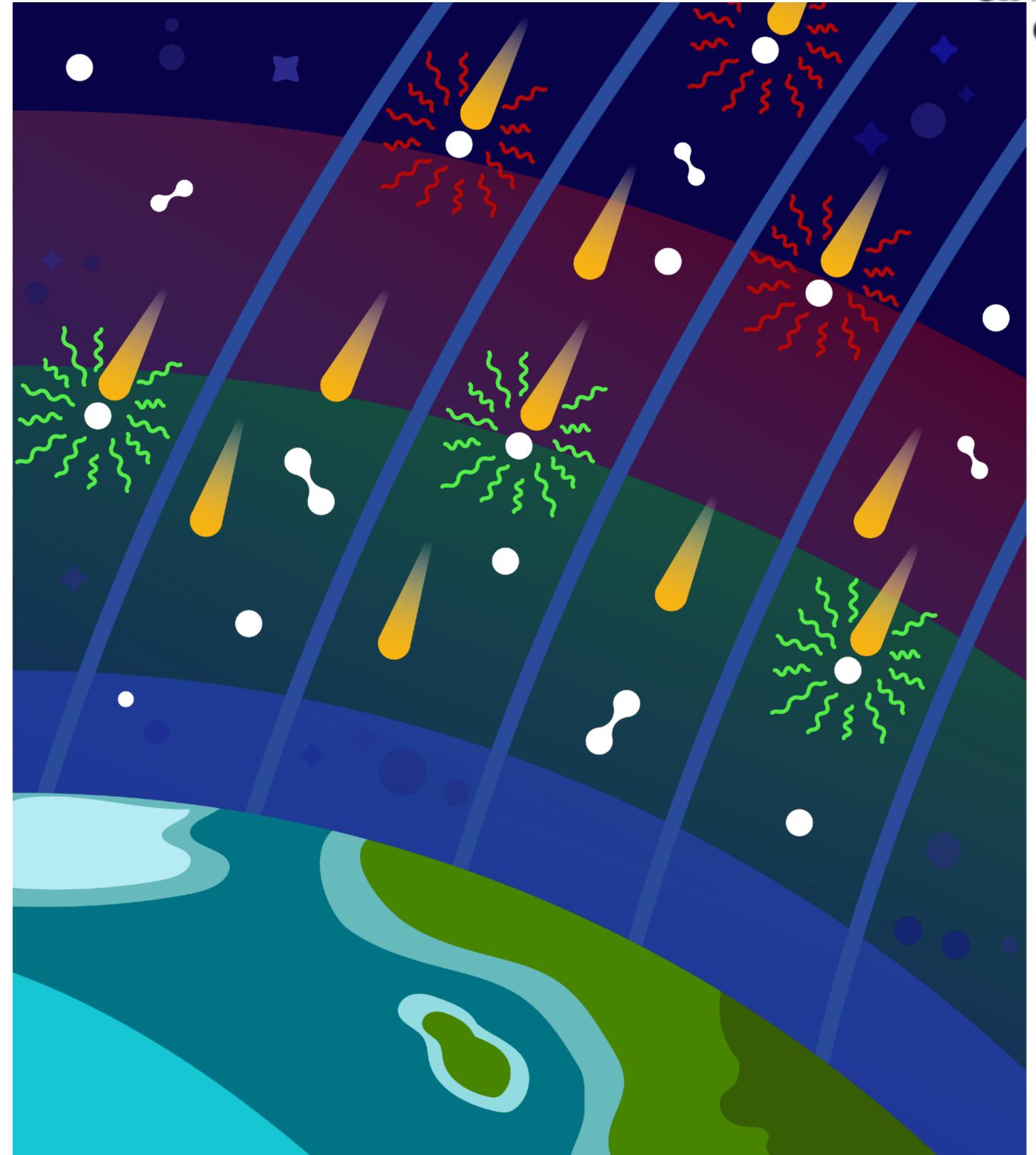
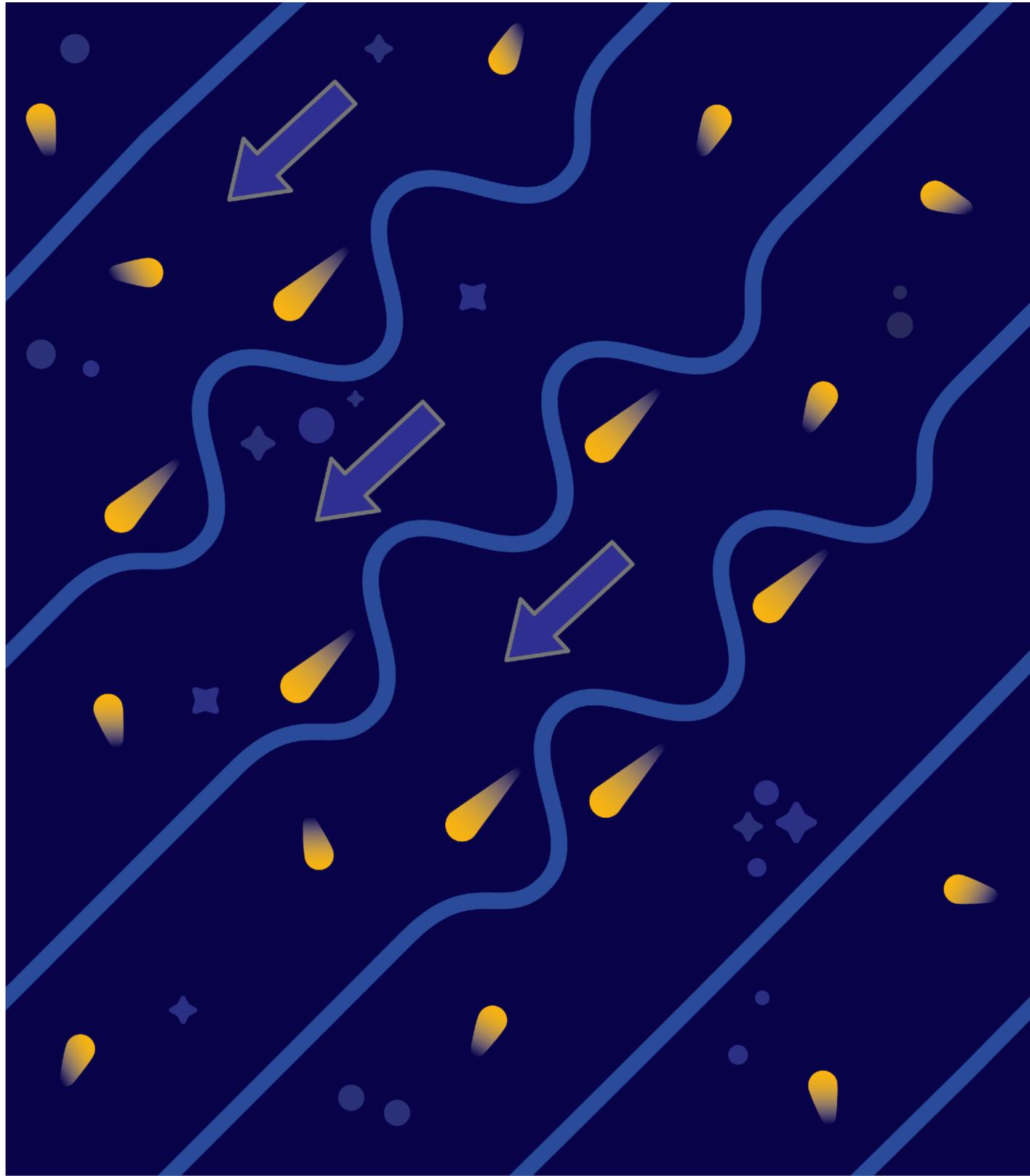
## **Many institutions employ graphic designers on staff**

- Help create beautiful promotional materials for institution
- Sometimes work with scientists on major proposal efforts: centers, missions, . . .
- Not frequently used for public relations/media outreach—but right skill set!
- Rarely have scientific training
  - Lots and lots of iteration will be necessary
  - But the outcome is fabulous graphics that tell the story of your research
    - Disseminate to the press
    - Use in public outreach talks, or even in your own research talks

# Example of Graphic Design



# Additional Graphic Design



# Media Training

## **Some Institutions provide “Media Training” to researchers**

- If available, do take advantage of this opportunity
  - At University of Iowa,
    - “*Communicating ideas: It’s not rocket science*” inaugural workshop in 2013
    - Collaboration with School of Journalism and Mass Communication
- Eliminate the jargon
- Practice a concise (few sentence) description of your work
  - Training may involve video interview and critique

# Tips on Interacting with the Press

- When contacted, respond promptly
  - Reporters have short and hard deadlines
  - If it's not fresh, they often will not run it
- Assume everything is “On the record”
  - Telling them something, and then saying “That's off the record”, may not work
- Eliminate the jargon (and NO ACRONYMS—really!)
- Devise nice analogies that the public can understand
  - Example: Turbulence when mixing cream into coffee
- For Radio/TV interviews
  - Typically they will have a pre-interview:
    - Can you speak clearly? Gives you a heads up on questions they will ask!

# Press Release

---

Your institutional Communications Officer will to craft a press release with you

- If more than one institution is involved, there may be more than 1 press release

## **How to write a good press release**

- Should read like a good news story: Important new results in the first paragraph
- Structure
  - **Headline:** Short and Pithy, but not cryptic
  - **Subhead:** Summarize story in one sentence
  - **Opening:** Paragraph with who, what, where, when, and why it's important
  - **Body:** Details, explanation, background—not more than 1000 words.

# Example Press Release: UCLA



SEARCH ARCHIVE



ADVANCED SEARCH

HOME

NEWS RELEASES

MULTIMEDIA

MEETINGS

LOGIN

REGISTER

NEWS RELEASE 7-JUN-2021

## 'Surfing' particles: Physicists solve a mystery surrounding aurora borealis

Experiments at UCLA's Basic Plasma Science Facility confirm interaction of electrons and Alfvén waves

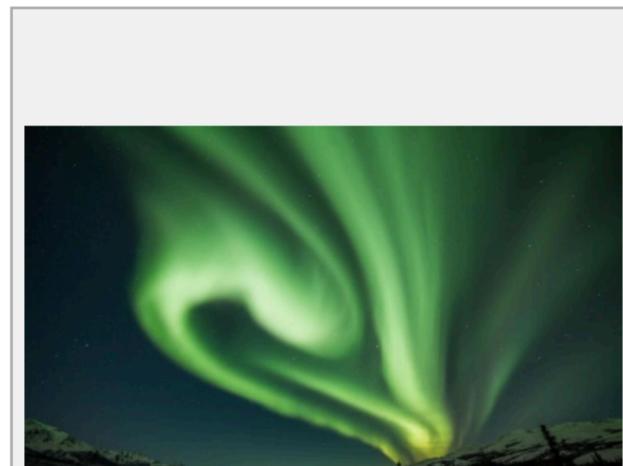
Peer-Reviewed Publication

UNIVERSITY OF CALIFORNIA - LOS ANGELES



The spectacularly colorful aurora borealis -- or northern lights -- that fills the sky in high-latitude regions has fascinated people for thousands of years. Now, a team of scientists has resolved one of the final mysteries surrounding its origin.

Scientists know that electrons and other energized particles that emanate from the sun as part of the "solar wind" speed down



### Media Contact

Stuart Wolpert

[swolpert@stratcomm.ucla.edu](mailto:swolpert@stratcomm.ucla.edu)

Office: 310-206-0511

### More on this News Release

'Surfing' particles: Physicists solve a mystery surrounding aurora borealis

UNIVERSITY OF CALIFORNIA - LOS ANGELES

JOURNAL

*Nature Communications*

DOI

10.1038/s41467-021-23377-5

### KEYWORDS

ELECTRONS

ELECTROMAGNETIC WAVES

# Timeline for Press Outreach Efforts

---

**T – 6 months:** Submit abstract to professional meeting

**T – 3 months:** Nearing, but before acceptance of your article, contact your institution's Communication Office

**T – 2.5 months:** Begin putting together your Press Kit

- Collect supporting photos/images
- Contact institutional graphic designer
- Begin drafting descriptions aimed at science reporters

**T – 2 months:** Final Manuscript corrections and formatting

# Timeline for Press Outreach Efforts

- T – 6 weeks:** Manuscript acceptance
- Note: Processing of proofs typically requires 4 weeks minimum**
- Confirm production timing with publisher
- T – 6 weeks:** Coordinate with Press Officer of professional society and Communications Manager of publisher to set date and time for press embargo, publication, and press briefing
- T – 4 weeks:** Complete First Full Draft of Press Kit
- Ask for feedback from co-authors, communications office
- T – 4 weeks:** Article Proofs
- T – 3 weeks:** Complete Graphics with graphic designer

# Timeline for Press Outreach Efforts

**T – 3 weeks:**

Get institutional communications office in touch with public affairs office at funding agency

- Communication Officers will prepare Press Releases

**T – 2 weeks:**

Solicit quotes for Press Kit (authors, funding agencies, etc.)

Determine who will host Press Kit (Publisher, society, institution)

**T – 2 weeks:**

Ensure that all relevant Communication and Public Affairs Offices are in contact.

- Be wary of “too many cooks in the kitchen”
- Stay on top of things—prod individuals when necessary

**T – 2 weeks:**

Prepare Presentation for Press Briefing

**T – 1 week:**

Press Kit is released to the media, under embargo

# Timeline for Press Outreach Efforts

- T – 4 days:** Press Officer of professional society and Communications Manager of publisher will reach out to press contacts
- Example: AAS Press Officer emails to list of 1700 reporters
  - “Squeaky wheel gets the grease!”

**Take a deep breath!**

- Liftoff! :** Embargo expires  
Paper is published  
Present at Press Briefing

- T + 1 week:** Clear your schedule (for 1 week) to respond to interview requests
- Some live interviews, some pre-taped, some for print
  - Some will just ask questions by email

**Enjoy the Ride :** Your 15 minutes of fame will be over in a flash!

## Laboratory measurements of the physics of auroral electron acceleration by Alfvén waves

Overview of attention for article published in Nature Communications, June 2021



1544

### ? About this Attention Score

In the top 5% of all research outputs scored by Altmetric

MORE...

### Mentioned by

-  183 news outlets
-  11 blogs
-  40 tweeters
-  1 Facebook page
-  1 Wikipedia page
-  1 video uploader

### Citations

-  2 Dimensions

### SUMMARY

News

Blogs

Twitter

Facebook

Wikipedia

Video

Dimensions citations

**Title** Laboratory measurements of the physics of auroral electron acceleration by Alfvén waves  
**Published in** Nature Communications, June 2021  
**DOI** 10.1038/s41467-021-23377-5 [↗](#)  
**Pubmed ID** 34099653 [↗](#)  
**Authors** J. W. R. Schroeder, G. G. Howes, C. A. Kletzing, F. Skiff, T. A. Carter, S. Vincena, S. Dorfman

[View on publisher site](#)

[Alert me about new mentions](#)

### TWITTER DEMOGRAPHICS

### MENDELEY READERS

### ATTENTION SCORE IN CONTEXT

? This research output has an **Altmetric Attention Score** of **1544**. This is our high-level measure of the quality and quantity of online attention that it has received. This Attention Score, as well as the ranking and number of research outputs shown below, was calculated when the research output was last mentioned on **30 January 2022**.

#### ALL RESEARCH OUTPUTS

#4,934

of 20,389,631 outputs

#### OUTPUTS FROM NATURE COMMUNICATIONS

#72

of 40,309 outputs

#### OUTPUTS OF SIMILAR AGE

#317

of 344,262 outputs

#### OUTPUTS OF SIMILAR AGE FROM NATURE COMMUNICATIONS

#1

of 1 outputs

So far Altmetric has tracked 40,309 research outputs from this source. They typically receive a lot more attention than average, with a mean Attention Score of 54.4. This one has done particularly well, scoring **higher than 99% of its peers**.

# Media Monitoring Service: Market Value

- Cision, Media Monitoring Service
  - Identified 477 media items (between 6/7/21-6/13/21)
  - Determines “Ad Equivalency Value”

**Total Advertising Value: \$412,824.67**

- Significant Items:
  - CNN: \$71,000
  - NPR: \$25,000
  - BBC: \$183,000
  - Daily Mail (UK): \$34,000
  - CTV News (Canada): \$10,000

# Resources

## Where Can I Access this Information?

I have posted the following information to my University of Iowa faculty webpage:

- PDF copy of this presentation
- An example of the Press Kit used for our media outreach
- A PDF of the helpful guidelines presented (still in progress)

<https://homepage.physics.uiowa.edu/~ghowes/teach/index.html>

or just search “Gregory G Howes” on Google

[gregory-howes@uiowa.edu](mailto:gregory-howes@uiowa.edu)

# The End

# Five Golden Rules for Communicating with the Media

## i) **Prep and Ponder:**

*Know the format and get ahead of it. Anticipate questions, think through and rehearse responses, out loud!*

## ii) **Frame and Focus:**

*Craft a message that includes only the points you must make. Keep focused on it.*

## iii) **Short is Sweet:**

*Understand reporter's time needs. Be "sound bite smart." Say what you need to say, then stop.*

## iv) **Jettison the Jargon:**

*Use everyday language. Clarity is king. Your message could get lost in translation.*

## v) **Good and Gracious:**

*Dress the part. Be real. Be gracious. Engage the reporter: "Do you need me to repeat anything?"*