

DiscoveryStore
CHANNEL
What Will You Discover?
SHOP NOW >

Discovery News > Space News > Otherworldly Sprites May Signal Alien Life

OTHERWORLDLY SPRITES MAY SIGNAL ALIEN LIFE



Analysis by Jason Major
Wed Nov 23, 2011 02:39 AM ET
(2) Comments | [Leave a Comment](#)

[Print](#) [Email](#)

[Like](#) **f** 249 likes. Sign Up to see what your friends like.

[Share](#) **88** [Tweet](#)



Enigmatic and exotic, sprites are large electrical discharges that flash high in the upper atmosphere -- usually above powerful lightning storms. Often bright red in color with streaming tendrils of blue and purple stretching down beneath, they hadn't even been photographed in color until 1995!

Sprites are one of the most elusive phenomena occurring in Earth's atmosphere -- and researchers at Tel Aviv University now suggest they may also be found on other worlds as well.

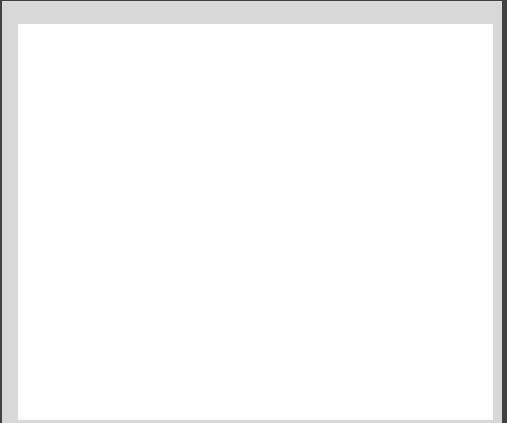
SCIENCE CHANNEL: What are the chances of being struck by lightning?

Although sprites are fairly common on Earth they have not been well documented because of their location high in the mesosphere, well above the range of weather balloons. They only last a few tens of milliseconds and are basically high-altitude offshoots of lightning events closer to the ground. Lighting is not only found in large quantity on Earth but also on other planets in our solar system.

Venus has been shown to have Earthlike lightning, while



WATCH VIDEO: Will the real ET be little green men or little green bacteria?



ADVERTISEMENT

THE DISCOVERNATOR
CRAZY AMAZING FACTS SERVED UP HOT

To find a hidden triple rainbow after a storm, look toward the sun.

More, Please!

DISCOVERY NEWS DELIVERED

SIGN UP FOR DISCOVERY NEWS DAILY HEADLINES NOW!

Email:

VIDEOS

OUT THERE: THE SOLAR SYSTEM AND BEYOND

Jupiter and Saturn experience lightning a thousand times more powerful than Earth's.

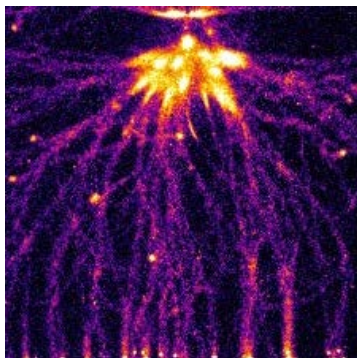
Tel Aviv University Ph.D. student Daria Dubrovin, along with her supervisors Colin Price of TAU's Department of Geophysics and Planetary Sciences, and Professor Yoav Yair of the Open University of Israel, as well as collaborators Ute Ebert and Sander Nijdam from the Eindhoven Technical University in Holland, have re-created other planetary atmospheres in the lab to study the presence of extraterrestrial sprites.

ANALYSIS: Thunderstorms as Nature's Particle Accelerators

Using chemical mixtures that mimic the atmospheres of Venus, Jupiter and Saturn, and electrical circuits that simulate lightning, Dubrovin's team studied how sprites would be created -- and what they would look like -- on other worlds.

"We make sprites-in-a-bottle," Dubrovin said.

Because sprites are connected to lightning, and lightning plays a key role in many theories concerning how life first developed on Earth, it stands to reason that the existence of sprites on other planets (both in our own solar system and others) may be something to look out for when searching for signs of alien life, according to Dubrovin.



ANALYSIS: NASA Spots Signs of Life... On Earth

Not only would sprites indicate lightning further down in a planet's atmosphere but also what kinds of molecules exist there, and may explain the presence of exotic compounds. Sprites would also provide information on the conductivity of a planet's atmosphere.

The team's research was presented in October at the European Planetary Science Congress in France.

Dubrovin's research is funded by the Israeli Science Foundation and by an Ilan Ramon Scholarship and Endowment, which is named after the Israeli astronaut who flew on the STS-107 Columbia shuttle mission that ended in tragedy on Feb. 1, 2003. Part of the scientific research aboard that shuttle was on sprites, and Dubrovin is proud to continue Ramon's legacy.

Read more on the American Friends of Tel Aviv University site.

Top image: A sprite captured on video over a thunderstorm above the U.S. midwest on July 3, 1995. The top of the sprite is 280,000 feet (85 km) above the Earth. Credit: Geophysical Institute, University of Alaska Fairbanks. Inset image: TAU lab-created sprite streamers as they would appear on Saturn.

SIGN UP FOR DISCOVERY NEWS DAILY

Email:

Like 249 likes. Sign Up to see what your friends like.

Share Tweet

YOU MIGHT ALSO LIKE



[Extreme Campsite Dangles From Tree, Cliff](#)



[Super Cool New H2O Discovered](#)



[Sleep Talkin' Man Is A Hit In Bed, Sort Of](#)



[Nude Soap Stars Protest Ageism](#)

MOST VIEWED STORIES

- [Great White Shark Seen On North Carolina Coast](#)
- [Manly Science Man Gift Guide](#)
- [The Discoverator](#)
- [10 Gadgets That Defined 2011](#)
- [Nude Soap Stars Protest Ageism](#)
- [Powerful Puzzles](#)
- [Puzzle of the Week! Ice Cave Adventure](#)
- [Dog Shoots Owner in Behind](#)
- [Wasps Never Forget a Face](#)
- [Top Five New Military Robots](#)

FOLLOW US ON...



SPACE CONTRIBUTORS

- [Nicole Gugliucci](#)
- [Irene Klotz](#)
- [Robert Lamb](#)
- [Jason Major](#)
- [Jennifer Ouellette](#)
- [Mark Thompson](#)
- [Ray Villard](#)

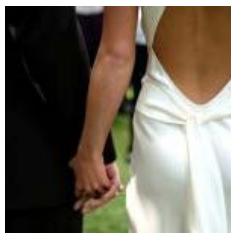
BLOGROLL

- [arXiv blog](#)
- [Astroengine](#)
- [Bad Astronomy](#)
- [Centauri Dreams](#)
- [Cocktail Party Physics](#)
- [Cosmic Variance](#)
- [HowStuffWorks - Space](#)
- [HubbleSite](#)
- [io9](#)
- [Lights in the Dark](#)
- [New Scientist](#)
- [One Astronomer's Noise](#)
- [Starts With A Bang](#)
- [Universe Today](#)
- [Weird Things](#)





Naked Woman Captured By Google Street View



Thinner Wife Makes Happier Marriage




Russian Dead Alien Video Surfaces








Don't Call The Guatemala Sinkhole a Sinkhole


Powered by Vertical Acuity

COMMENTS (2)

 **Login** Login required, click here to begin

Share  This Page

B **I** **U**    

 Add images



Paul Purcell

Informative video demonstrating how internal heat of Europa interacts with the ice surface. Many scientists believe this is where to look for life in our solar system. Many believe the basic requirements for life have been statified here.

http://www.youtube.com/watch?v=ldzRCO55cUw&feature=digest_fri

A cost effective concept for the construction of a spacecraft made from moduals. The same construction methods of the International Space Station.<http://www.hobbyspace.com/nucleus/index.php?itemid=26786>

Saturday, November 26, 2011, 16:48:43 – Flag – Reply

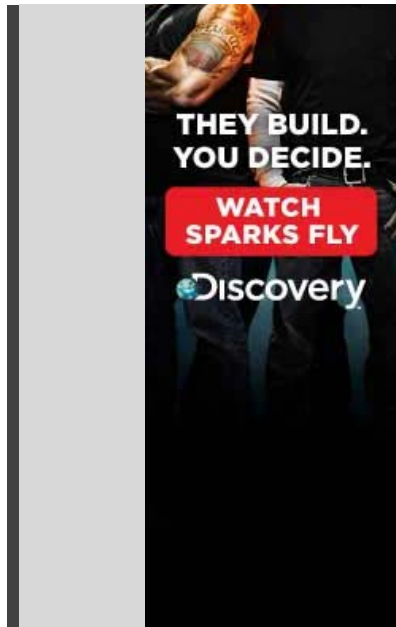


Lindsey Prks

/alien sounds.

<http://wtfilindseyp.blogspot.com/>

Wednesday, November 23, 2011, 20:18:59 – Flag – Reply



ADVERTISEMENT

Ads by Google

Energie voor de Toekomst

Atoomstroom: Goedkoop, CO2-vrij enonafhankelijk. Nu direct afsluiten! www.atoomstroom.nl

Brain Test™

Developed by NeuroscientistsImprove Memory and Attention www.lumosity.com

Top Russian Dating Sites

Russian Dating in Top Gear! 24000+Girls to Get Your Motor Running. AnastasiaDates.com

OUR SITES

- Animal Planet
- Discovery Channel
- Discovery Kids
- Discovery Fit & Health
- HD Theater
- Investigation Discovery
- Military Channel
- Oprah Winfrey Network
- Planet Green
- Science Channel
- TLC
- Turbo
- Velocity

- Consumer Guide Auto
- Consumer Guide Products
- Discovery Education
- Discovery News
- HowStuffWorks
- MyDiscovery
- Petfinder
- Student Competitions
- TreeHugger

VIDEO

- Discovery News Video

SHOP

- Discovery Store
- DVDs & Books
- Custom Gear
- Toys & Games
- Gift Sets
- Sale
- Discovery Adventures
- Student Adventures
- Discovery TS
- Discovery Corporate Sales

STAY CONNECTED

- Email Newsletters
- RSS
- Twitter
- Facebook

CORPORATE

- Discovery Communications, LLC
- Viewer Relations
- Advertising
- Careers @ Discovery
- Privacy Policy
- Visitor Agreement

Image Credits DCL

Copyright © 2011 Discovery Communications, LLC. The number-one nonfiction media company.