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Saturn's Hyperion: A Moon with Odd Craters

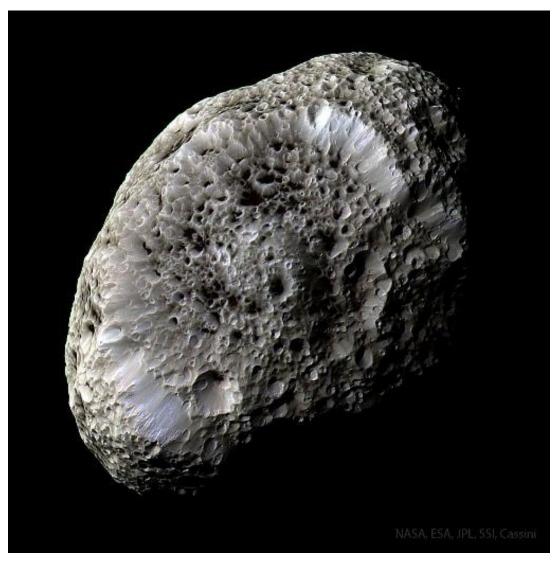


Image Credit: NASA, ESA, JPL, SSI, Cassini Imaging Team

What lies at the bottom of Hyperion's strange craters? To help find out, the robot Cassini spacecraft that once orbited Saturn swooped past the sponge-textured moon and took images of unprecedented detail.

A six-image mosaic from the 2005 pass, featured here in scientifically assigned colors, shows a remarkable world strewn with strange craters and an odd, sponge-like surface.

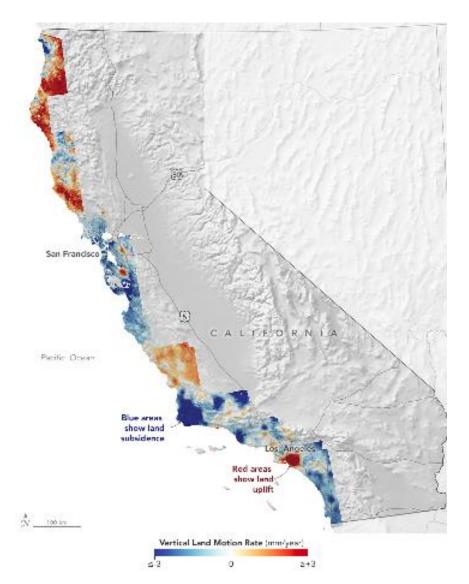
At the bottom of most craters lies some type of unknown dark reddish material. This material appears similar to that covering part of another of Saturn's moons, Iapetus, and might sink into the ice moon as it better absorbs warming sunlight.

Hyperion is about 250 kilometers across, rotates chaotically, and has a density so low that it likely houses a vast system of caverns inside.

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California's Rising and Sinking Coast

What geologists call vertical land motion—or subsidence and uplift—is a key reason why local rates of sea level rise can differ from the global rate. California offers a good example of how much sea level can vary on a local scale.



https://earthobservatory.nasa.gov/images/147439/californias-rising-and-sinking-coast

Next week's Ode will present a more detailed look at the California's North Coastal area.

Mikaela Shiffrin Breaks Alpine Skiing World Cup Race Wins Record



https://www.npr.org/2023/03/11/1162710681/mikaela-shiffrin-breaks-the-record-for-most-alpine-skiing-world-cup-race-wins

If she stays healthy, the sky's the limit.

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Where Are the Girl Scout Cookies?



Since 2020, shortages have spread across industries, but this one hits right in the sweet tooth. The Girl Scouts of the USA are in a cookie shortage.

Girl Scout troops sell <u>~200m cookies</u> per year, bringing in ~\$800m to fund activities. They're so popular, other cookie companies cut advertising and lower sales expectations during the January-to-April selling season.

But this year...

... cookies are in short supply, especially for online shoppers.

When the Girl Scouts began selling cookies in 1917, members baked them. But as sales scaled, troops turned to commercial bakers.

Today, ABC Bakers in Virginia makes ~25% of the cookies, and Ferrero-owned Little Brownie Bakers (LBB) in Kentucky makes ~75%, per CNBC.

Since January, LBB has experienced delays due to supply chain issues, labor shortages, and weather-related power outages. Ferrero maintains it's still on track to meet initial orders, but many Girl Scouts have been unable to meet their sales goals.

And then there's eBay

The saddest kind of reseller has got to be a Girl Scout cookie reseller, but here we are.

The hottest flavor is Raspberry Rally, a new limited-edition "sister" to Thin Mints. Typically, they go for \$4-\$7 per box, but the often sold-out cookies are now listed on eBay for up to 5x as much, <u>per</u> *The New York Times*.

Assuming this isn't the work of a particularly entrepreneurial middle schooler, the troops aren't benefiting financially from the increased demand.

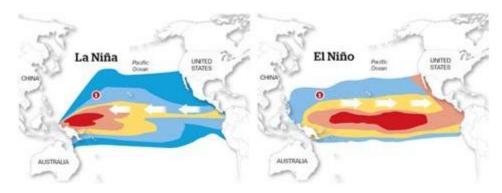
For that reason...

... and because they can't guarantee quality otherwise, the Girl Scouts have asked buyers to purchase only through local troops. Speaking of, you can find yours here

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Confused By El Niño and La Niña? This Might Help

El Niño and La Niña are climate patterns in the Pacific Ocean that can affect weather worldwide.



https://oceanservice.noaa.gov/facts/ninonina.html

Predictions? You may better off tossing dice.

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RARA Announces Air Races to Leave Reno



The Reno Air Racing Association (RARA) announced today that the 2023 National Championship Air Races (NCAR) will be the last time the air races will be hosted in Reno. RARA explained, "While we knew this day might eventually come, we had hoped it wouldn't come so soon. Citing the region's significant growth amongst other concerns, the Reno Tahoe Airport Authority has made the decision to sunset the event."

RARA goes on to say, "However, we are committed to finding a new location so that the event can continue. In fact, we are currently exploring several other possible locations to host the event in the future but it starts with making this year's event the biggest and most successful it can be. In essence, the future of the National Championship Air Races starts now. And, we need your help."

People come from all over to enjoy the event. For many, the city of Reno is synonymous the air racing. Finding a new venue will, undoubtedly, be a challenge. The races need good weather for the selected season (September keeps it out of the main consumer airshow noise) as well as sufficient open space around the airport for the course and ground support (hotels, regional airline-supported airports, restaurants) for the crews and spectators. RARA has not said what those "other possible locations" are but I'd expect to hear a lot more over the summer.

"As we take off for one last time in Reno, we are inviting the community and race fans from all over the world to join us in sending the Reno Air Races off in style," RARA said in a statement. "Consider it a celebration of six decades of thrills, history, pageantry, camaraderie and family."

The last NCAR in Reno will take place from September 13-17.

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Anthem, Arizona Veterans Memorial



Photo Mike Spinelli

At precisely 11:11 A.M., each Veterans Day (Nov. 11), the sun's rays pass through the ellipses of the five Armed Services pillars to form a perfect solar spotlight over a mosaic of The Great Seal of the United States.

The Anthem Veterans Memorial, located in Anthem, Arizona, is a monument dedicated to honoring the service and sacrifice of the United States armed forces.

The pillar provides a place of honor and reflection for veterans, their family and friends, and those who want to show their respects to those service men and women who have and continue to courageously serve the United States.

The memorial was designed by Anthem resident Renee Palmer-Jones.

The five marble pillars represent the five branches of the United States military.

They are staggered in size (from 17 feet to 6 feet) and ordered in accordance with the Department of Defense prescribed precedence, ranging from the United States Army,

the United States Marine Corps, the United States Navy, the United States Air Force and the United States Coast Guard.

Additionally, the brick pavers within the Circle of Honor are inscribed with the names of over 750 U.S. servicemen and women, symbolizing the 'support' for the Armed Forces.

The pavers are red, the pillars are white, and the sky is blue to represent America's flag.

The circle represents an unbreakable border.

Anthem resident and chief engineer, Jim Martin was responsible for aligning the memorial accurately with the sun.

Anthem Veterans Memorial
41703 N. Gavilan Peak Parkway
Anthem, AZ 85086
(623) 742-6050
Home of the free...because of the brave!

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This is why social distancing is so important, folks! It's all fun and games until somebody loses an eye.



Jellyfish Births



http://bit.ly/421cEDa

Adult jellyfish are easier to differentiate among species because they have different morphologies and coloration patterns. However, identifying ephyrae is more complicated, even for us.

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Turkey-Syria Earthquake Ripped Huge Chasm in an Olive Field



https://youtu.be/IiDvo-xTinY

In case you don't know who is boss.

Life's short. Make sure you spend as much time as possible on the Internet arguing with strangers about politics.

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AI's Powers of Political Persuasion

Researchers at Stanford University wanted to see if AI-generated arguments could change minds on controversial hot-button issues. It worked.



Scary!

http://bit.ly/3LeYrwC

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Photon-Counting Detectors Lower Contrast-Related Risks in CT Angiography





Image quality comparison Transverse and 3D cinematic rendered images from thoracoabdominal CT angiography. (Image from energy-integrating detector CT with a standard contrast media protocol. Image from photon-counting detector CT using reduced contrast media and a matched radiation dose.

(Courtesy: Radiological Society of North America)

http://bit.ly/3YyfbSv

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So Much for Bans



The Kansas City Chiefs football team was playing the Las Vegas Raiders in Kansas City. You may recall that a recent President had eliminated patriotic military flyovers at large events, so a group of men in Kansas City who do some formation flying in their own planes decided they'd volunteer to save this beautiful tradition and pick up the slack.

They invited a couple of other groups to join them and before they knew it, they had 48 men with their own airplanes signing up to join in. If they had more time, they probably would have gotten an even larger group as people kept joining and a 49th was added near the kickoff.

Be sure your speakers are turned up. Best if you watch at 'full screen'... pretty impressive and while the TV networks chose not show this but the reaction from the people at the game is a whole different story.PS: The formation is fantastic, especially with so many planes....all former Naval Aviators....!!!

https://www.youtube.com/embed/VImNBuJW3sQ?rel=0

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Barnes & Noble Is Stealing the Indie Shop Playbook, and It's Working

James Daunt launched his first indie bookshop in London 33 years ago. The Barnes & Noble CEO is now bringing the lessons he learned to the biggest bookseller in America.



https://bit.ly/3F5YXc4

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Travelers Who Don't Even Leave the Airport

"Mileage runs" allow hardcore travelers to maintain elite status. Are they worth it?



http://bit.ly/3ykiGkL

Will 'Premiumization' Disrupt the Economy?



Ever notice that when a neighborhood gets trendier and more expensive, the family-owned dessert shop <u>gets replaced</u> by a gourmet popsicle store that sells fancy Dilly Bars for \$5 each?

The same thing is happening to America's economy, <u>according to The New York Times</u>. Prepare for the gentrification of everything — or, in corporate speak: premiumization.

What is premiumization?

It's when companies emphasize luxury versions of their products and sell them at elevated prices. By attracting higher-income clientele, companies believe they'll be able to maintain or improve profits while selling fewer goods.

The trend is well under way:

- The *NYT* counted ~60 mentions of premiumization in recent earnings calls and investor meetings.
- Krispy Kreme plans to sell fancier donuts around holidays and other occasions.
- WD-40 rolled out a pricier version of its lubricant with <u>a "smart straw."</u>

There's an obvious downside

When brands prioritize selling premium goods to higher-income consumers, they may provide fewer products and experiences for the middle class.

- Across the US auto industry in 2017, 36 car models were available for less than \$25k, comprising ~13% of new car sales.
- Last year, the number of models under \$25k fell to 10, taking up 4% of new car sales.

By reducing the number of goods produced, premiumization could also keep inflation high.

Is premiumization sustainable?

In this early stage of the trend, it's difficult to gauge the long-term effects, or even a brand's likelihood of success.

Last year, for instance, Six Flags offered fewer discounts while jacking up prices. Despite a 22% increase in per-guest spending, its profits fell \sim 10%.

Then again, have you ever heard of **Popbar**?

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Migraines and Blood Sugar Share Common Genetic Risk Factors

A large genomic analysis suggests migraines and blood sugar-related conditions have a shared genetic basis.



http://bit.ly/3kVTttE

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1950s American Small Towns in Color



http://bit.ly/41YDn36

A time of fundamental change

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Physicists Use Quantum Mechanics to Pull Energy out of Nothing

The quantum energy teleportation protocol was proposed in 2008 and largely ignored. Now two independent experiments have shown that it works.



An experimental test of the teleportation protocol was run on one of IBM's quantum computers, seen here at the Consumer Electronics Show in Las Vegas in 2020.

IBM

https://bit.ly/3IGUXjw

Nayeli Rodríguez-Briones at the Institute for Quantum Computing/University of Waterloo thinks these systems can be used to study heat, energy and entanglement in quantum systems.

