

Welcome to AMS News You Can Use. Each week, we send out a sampling of recent news and items of interest in meteorology and related fields, as covered by various media outlets.

Artificial intelligence brings better hurricane predictions

EurekAlert! - September 28, 2021

A new machine learning approach improves the predictive power of hurricane models, painting a more accurate picture of rapid intensification.

The North American Monsoon Season

WeatherNation - September 25, 2021

If you live in the U.S. Southwest or northwestern Mexico, you may already be familiar with the annual climate phenomenon called the North American Monsoon, especially since rainfall in some spots has been way above average this summer.

Storm-Steering Jet Stream Could Shift Poleward in 40 Years

Scientific American - September 21, 2021

Changes in the position of the fast-moving air current could disrupt weather patterns.

Coastal Northeastern US is a global warming hotspot; 2 degrees Celsius of summer warming has already occurred

ScienceDaily - September 23, 2021

New research reveals not only that the coastal Northeast -- from Maine to Delaware -- is heating faster than most regions of North America, but that this heating is linked to drastic alterations in the ocean and atmospheric conditions over the North Atlantic.

Why We Should Use Weather Analytics Today For Our Future Climate

Forbes - September 22, 2021

This week, President Biden announced that his administration is “mobilizing an interagency effort to deal with the effects of extreme heat across the country.” The response is crucial to the heat crisis that has plagued the entire nation.

Mitigating the impacts of extreme rainfall events in a changing climate

Phys.org - September 22, 2021

With a total damage of approximately 98 billion dollars, Ida might become the seventh most expensive hurricane in recent US history.

NASA launches powerful Landsat 9 satellite to monitor climate change, forest cover and more

Space.com - September 27, 2021

The Landsat program's 50-year legacy of Earth observation continues.

The Secret War Over Pentagon Aid in Fighting Wildfires

The New York Times - September 27, 2021

The military’s satellites excel at spotting new blazes, but for decades they have been mostly off limits to civilian firefighters.

Every season except summer is getting shorter, a sign of trouble for people and the environment

The Washington Post - September 22, 2021

As summer becomes longer, fall and winter are growing shorter in the Northern Hemisphere.

Climate Scientists Created a SWAT Team for Weather Disasters

Bloomberg - October 7, 2021

Friederike Otto and her colleagues jump into action during heat waves, floods, and fires to pinpoint if global warming is to blame.

Training the Next Generation of Physical Data Scientists

Eos - October 6, 2021

Preparing a diverse new generation of scientists who can use artificial intelligence and data science to better understand and predict geoscience phenomena requires revamped training.

Too Remote, Too Wild, and Too Cold: Helping Satellites See Arctic Greening With Boots on the Ground

NASA - October 6, 2021

By combining those notes with techniques that analyze greenness from space, the team wants to gain a better understanding on the extent and nature of the impacts of climate change right at the boundary between Arctic tundra and boreal forest.

Feather phenomenon: Radar indicates stronger hurricanes trap and transport more birds

Phys.org - October 6, 2021

Whether birds get caged in the eye of a hurricane may depend on the intensity and totality of the chaos beyond the calm, says a novel study from the University of Nebraska–Lincoln's Matthew Van Den Broeke.

3 Reasons Climate Scientists Winning A Nobel Prize In Physics Matter

Forbes - October 6, 2021

The Royal Swedish Academy of Sciences announced that two climate scientists would share in the Nobel Prize in Physics this year. Syukuro “Suki” Manabe (Princeton University) and Klaus Hasselmann (Max Planck Institute for Meteorology) were recognized, according to the official press release, “for the physical modelling of Earth’s climate, quantifying variability and reliably predicting global warming.”

A Step Toward Making GPS More Resilient to Space Weather

Eos - October 5, 2021

Researchers have developed a new mathematical model to more accurately capture how irregularities in Earth's atmosphere interrupt signals from Global Navigation Satellite Systems.

Satellites View California Oil Spill

NASA Earth Observatory - October 8, 2021

Satellite imagers can make oil spills easier to detect in open water.

At least 85 percent of the world's population has been affected by human-induced climate change, new study shows

The Washington Post - October 11, 2021

Researchers used machine learning to analyze more than 100,000 studies of weather events and found four-fifths of the world's land area has suffered impacts linked to global warming.

Weather to climate: More research needed to understand sea-air influences

EurekAlert! - October 18, 2021

Yet, despite extensive research on their co-dependence, it is still not fully understood how sea-air interactions influence weather and climate and everything in between, according to a research team based in China.

Gulf Stream and Kuroshio Current found to be synchronized on decadal time scale

Phys.org - October 15, 2021

A team of researchers with members affiliated with a large number of institutions across Japan has found that the Gulf stream and Kuroshio are synchronized on a decadal time scale.

Satellites reveal the secrets of water-guzzling farms in California

NPR - October 18, 2021

In a new push to stop further depletion of California's shrinking aquifers, state regulators are turning to technology once used to count Soviet missile silos during the Cold War: satellites.

Twelfth century literature and space-age data help map 3,000 years of auroras

ScienceDaily - October 14, 2021

Researchers have published maps indicating how the auroral zone has moved over the last three millennia.

Leading Experts Weigh In On The Importance Of Climate Disclosure To Reduce Emissions

Forbes - October 18, 2021

According to the American Meteorological Society's State of the Climate report in 2020, the past decade was the hottest ever recorded.

La Niña is coming. Here's what that means for winter weather in the U.S.

NPR - October 15, 2021

The National Oceanic and Atmospheric Administration's (NOAA) Climate Prediction Center announced on Thursday that La Niña conditions have developed and are expected to continue, with an 87% chance that they will be in place from December to February.

Ancient architecture might be key to creating climate-resilient buildings

Popular Science - October 16, 2021

Vernacular architecture is a way to use a region's heritage and resources to build strong homes and cities.

Seville to become world's first city to name heat waves

The Washington Post - October 19, 2021

Can naming heat waves call more attention to them and save lives? Seville, Spain, will be the world's first laboratory to test this concept in 2022, when the city launches a new initiative to name and rank heat waves, much like weather forecasters do for hurricanes.

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Weather Eye with John Maunder

<https://www.sunlive.co.nz/blogs/16066-global-monthly-average-surface-air-temperatures-since-1979.html>

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<https://www.sunlive.co.nz/blogs/16042-solar-activity-and-next-maunder-minimum.html>

<https://www.sunlive.co.nz/blogs/16024-is-declaring-climate-emergencies-justified.html>

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