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.

The Nobel Prize in Physics 2021

Nobel Prize - October 5, 2021

The Nobel Prize in Physics 2021 was awarded "for groundbreaking contributions to our understanding of complex systems" with one half jointly to Syukuro Manabe and Klaus Hasselmann "for the physical modelling of Earth's climate, quantifying variability and reliably predicting global warming" and the other half to Giorgio Parisi "for the discovery of the interplay of disorder and fluctuations in physical systems from atomic to planetary scales."

US inks $20 million deal to launch high-tech weather satellites in space

CNN - October 1, 2021

The United States is aiming to launch a group of small satellites to fill a critical gap in the ability to foresee precipitation dangers, like the deluge that overwhelmed Northeastern cities at the start of September.

Exposure to deadly urban heat worldwide has tripled in recent decades, says study

ScienceDaily - October 4, 2021

A new study of more than 13,000 cities worldwide has found that the number of person-days in which inhabitants are exposed to extreme combinations of heat and humidity has tripled since the 1980s.

Skilful precipitation nowcasting using deep generative models of radar

Nature - September 29, 2021

Precipitation nowcasting, the high-resolution forecasting of precipitation up to two hours ahead, supports the real-world socioeconomic needs of many sectors reliant on weather-dependent decision-making.

How Do You Know If You've Experienced Global Warming?

Eos - September 30, 2021

Answering this question can help policymakers, scientists, and climate communicators develop more effective strategies to reach skeptics and deniers.

New model simplifies orbital radar trade-off studies for environmental monitoring

Phys.org - October 4, 2021

Skoltech researchers Alessandro Golkar and Ksenia Osipova, and former Massachusetts Institute of Technology (MIT) student Giuseppe Cataldo (now working at NASA's Goddard Space Flight Center) have developed, within the framework of a Skoltech-MIT collaboration, a model to help engineers create and select the most promising conceptual designs of satellite radar systems.

NASA-Born Software Helps Weather Forecasting Around the Globe

NASA - September 30, 2021

To help prevent unnecessary losses, the National Weather Service mission of NOAA makes observations from space to track weather events and issue the appropriate watches and warnings.

Latinx AMS committee leads the charge for diversity in meteorology

Madison.com - September 28, 2021

As the American Meteorological Society works to increase diversity in the field, a Latinx committee headed by Joseph Trujillo Falcón is helping to amplify the voices of underrepresented groups.

Attribution science: Linking climate change to extreme weather

Phys.org - October 5, 2021

Today a new type of research called attribution science can determine, not if climate change caused an event, but if climate change made some extreme events more severe and more likely to occur, and if so, by how much.

The next 30 years of extreme weather

Axios - October 2, 2021

This year's extreme weather is a preview of even more turbulent times that will bedevil us for at least the span of a 30-year mortgage.

New forecasting models could help prevent heat-related deaths

Phys.org - September 16, 2021

For parts of southern Europe, extreme heatwaves are now the rule, not the exception. New accurate and reliable weather prediction models could help regions better 'anticipate, prepare for, respond to and recover from' these increasingly extreme weather events.

NASA Sends Robots to Study Climate Change in the Arctic

NASA Earth Expeditions - September 17, 2021

On July 7, 2021, NASA sent two robotic explorers to the Arctic to collect sea surface temperature data and improve estimates of ocean temperatures in that region. Pairing up with Saildrone, a designer and manufacturer of non-crewed surface vehicles or USVs, researchers hope to use the results to better understand the impacts of climate change in the Arctic.

When Wild Weather Blew Old Sea Ice South

Eos - September 16, 2021

Last winter, an unprecedented high-pressure system over the Arctic drove nearly a quarter of old sea ice into warmer waters, putting it at greater risk of melting.

Hurricanes, Floods, Wildfires And Extreme Heat: A Timeline Of Devastating Weather Events In The U.S. This Summer—The Hottest On Record

Forbes - September 20, 2021

This summer, the United States was ravaged by an alarming number of climate-related catastrophes, which affected millions of Americans, and the time line below lists noteworthy extreme weather events the country has experienced over the past few months.

The world's breathtaking weather events

MSN - September 20, 2021

From record-breaking cyclones and dramatic snowstorms to deadly wildfires and colossal icebergs, Mother Nature is as incredible as it is terrifying. With the help of the new book Weather by Robert J Ford, take a look at these jaw-dropping images of the world’s most breathtaking weather events.

How do higher waves cause more ice clouds? Research expedition into arctic sea explains

ScienceDaily - September 17, 2021

Scientists explain the peculiar interplay that exists between sea-ice decline, wave height, and ice cloud formation over the Arctic.

The named tropical system to watch is the one not named yet

CNN - September 20, 2021

While the tropics continue to pump out storms, the US coast has been spared during the last week. Nicholas has dissipated, but lingering moisture is still pumping into the Southeast, bringing pesky showers that won't seem to go away.

A warm Indian Ocean drives anomalous weather events in East Asia

Phys.org - September 15, 2021

An unusually warm winter in 2019/20 in central China and Japan was followed by a summer that saw record-breaking rainfall in the region, triggering severe flooding and landslides.

How Larry socked Greenland and unleashed an unusual blizzard

The Washington Post - September 15, 2021

The massive storm trucked copious tropical moisture onto the eastern side of the island — rare for this time of the year.

Better weather forecasting through satellite isotope data assimilation

Phys.org - September 14, 2021

As global climate continues to change and extreme weather events increasingly threaten regions all over the world, accurate weather forecasting is becoming more important than ever.

China launches hyperspectral Earth observation satellite

Space.com - September 10, 2021

China launched the Gaofen 5 (02) hyperspectral Earth observation satellite on Tuesday as the country races towards carrying out 40 missions in 2021.

The radar and the reporter: The legendary broadcast that changed hurricane coverage

Yahoo!News - September 10, 2021

For 60 years now, Hurricane Carla has been the benchmark for landfalling hurricanes in Texas -- even the devastating Hurricane Harvey in 2017 failed to match Carla's intensity.

Scientists gain better understanding of icy plumes associated with violent tornadoes

University of Wisconsin–Madison News - September 9, 2021

High-resolution supercomputer simulations developed at the University of Wisconsin–Madison are giving scientists a closer look at an atmospheric phenomenon that may be associated with some of the planet's most destructive tornadoes.

Public will pay over $500 million a year for hurricane forecast improvements, study finds

Phys.org - September 13, 2021

The study, led by a group of atmospheric scientists and economists at the University of Miami (UM) Rosenstiel School of Marine and Atmospheric Science, comes at a time when Hurricane Ida's path caused widespread damage across U.S. states.

Rapid Arctic warming likely drives extreme winter weather events in the US

National Science Foundation - September 13, 2021

Amid debate about the influence of changes in the Arctic on extreme weather, a new study reports that rapid warming in the Arctic is a likely driver of recent extreme winter weather in the United States.

Retiring National Weather Service Director Contributed To Changing Role Of Meteorologists

Forbes - September 13, 2021

The recent retirement announcement of long-time, National Weather Service director, Louis Uccellini, brings to light the many contributions he made to meteorology and guiding the growth of the practice during his 50-year career as a meteorologist.

New insights into sea ice and climate change

ScienceDaily - September 9, 2021

A 170 m record of marine sediment cores extracted from Adélie Land in Antarctica is yielding new insights into the complicated relationship between sea ice and climate change.

Extreme flooding to increase as temperatures rise, study finds

The Washington Post - September 13, 2021

Climate change will exacerbate extreme flood events but may decrease the number of moderate floods.

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Weather Eye with John Maunder

https://www.sunlive.co.nz/blogs/16009-tauranga-september-rainfalls-18982021-and-afternoon-temperatures-19132020.html

https://www.sunlive.co.nz/blogs/15991-ten-big-climate-questions-answered.html

https://www.sunlive.co.nz/blogs/15976-tropospheric-temperatures-january-1979-to-august-2021.html

and a recollection of a Rotary Conference Discussion held in 2008 on “Climate Change: Both Sides of the story”:

https://thebfd.co.nz/2021/09/16/weather-eye-with-john-maunder-22/?utm_source=envelope&utm_medium=website&utm_campaign=SocialSnap

That’s all for now