

For **cloud enthusiasts** everywhere: 'Cloud Spotting for Beginners': lecture by Gavin Pretor-Pinney via AMS..

or [https://www.ametsoc.org/index.cfm/ams/meetings-events/eye-towards-the-sky-lecture-series/?utm\\_source=Subscribers&utm\\_medium=Email&utm\\_campaign=Newsletter&\\_zs=3xihc1&\\_zl=I2006](https://www.ametsoc.org/index.cfm/ams/meetings-events/eye-towards-the-sky-lecture-series/?utm_source=Subscribers&utm_medium=Email&utm_campaign=Newsletter&_zs=3xihc1&_zl=I2006)

Hard to hear at times, but nice pics/videos mixed in. thanks to AMS and James Lunny from MetService for this link.

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### **New Zealand weather and climate news**

Courtesy of MetService library

#### **MetService mentions**

Fog rolls back into Wellington, flights diverted again

Stuff.co.nz

Fog has rolled back into the capital, with flights starting to be diverted away from Wellington Airport. MetService meteorologist Andy Best said fog ...

Fog disrupts flights at Wellington Airport for third day

TVNZ

A MetService spokesperson told 1 NEWS there is around 400 metres of visibility at the airport. All of Air New Zealand's domestic flights into Wellington ...

Wellington Airport may still be covered in fog tomorrow morning

New Zealand Herald

MetService forecaster Sonja Farmer said the low cloud lurking offshore may move into the area again. The low cloud and patchy drizzle expected in ...

Thick fog continues to blanket over Wellington after causing flight delays and diversions

Stuff.co.nz

On Monday morning MetService said the cloud was sitting at about 200ft and expected it to clear by 11am. Wellington Airport communications ...

## Weather system 'blocking' warmer temperatures reaching Wellington

Stuff.co.nz

The capital has been plagued by cloudy days and low temperatures reminiscent of winter most of January, and according to MetService this summer

## Sunny weekend weather to remain for the week

New Zealand Herald

This weekend's cracking weather is expected to see out the week, with warm, sunny conditions for the country. MetService meteorologist Ciaran ...

## Farmers, wildlife and residents alike face water shortages as regions dry up fast

Water cuts are looming in pockets of the country drying up fast.

## Big Science: Will 'feedback loops' worsen climate change?

As part of five-part series on major new Kiwi research projects, science reporter Jamie Morton speaks with the University of Auckland mathematician Professor Bernd Krauskopf about an effort to unravel the complex causes of El Niño.

## 'Widespread extreme dryness': Why drought has come to NZ

A drought affecting parched pockets of the country is expected to widen across the northern North Island over the next week, and there is no decent rain in sight. Science reporter Jamie Morton looks at some of the big questions.

## **MetOcean**

### Raglan sea temperature debate shows need for better data

Stuff.co.nz

In an email to MetService on December 30, Lim said the company was showing the water temperature at Raglan to be 20 degrees Celsius, when he ...

## Beachgoers urged to watch out for large, 'rogue' waves from ex-tropical cyclone Tino

Stuff.co.nz

MetService meteorologist Tahlia Crabtree said Tino had been downgraded to an extratropical low on Monday. At this stage, the swells around New ...

### Oceans reached record temperatures again in 2019

The heat in the world's oceans reached a new record last year, reveals a new analysis.

The authors - a team of US and Chinese scientists who compiled data from nearly 4000 sensors across the oceans - say it shows the irrefutable and accelerating heat of the planet.

## **ECMWF**

### AMD EPYC CPUs Planned for European Weather-Predicting Supercomputer

Wccftech

This supercomputer is planned to be installed for the European Centre for Medium-Range Weather Forecasts (ECMWF) research center. The center ...

### ECMWF releases 40-year dataset on weather-induced thermal stress

ECMWF

High heat stress values were seen during the June 2019 heatwave in Europe. ECMWF has released global data on weather-induced, outdoor thermal ...

## **Extreme weather (and other news) – Australia and Pacific**

### Giant dust storm, hailstones hit two fire-ravaged states in Australia

A huge dust storm has swept through Dubbo, in New South Wales' central west, with wind gusts of over 100 km/hr while Melbourne was struck by lightning and golfball-sized hailstones.

### Australia's wildfires will lead to GDP falloff in the billions, AccuWeather predicts

AccuWeather.com

The Australian wildfires that have scarred more than 20 million acres of land also figure to damage the country's economy. AccuWeather predicts ...

### Canberra scientist tells of fear as giant hailstones rained down on CSIRO glasshouse

As an unprecedented hailstorm bore down on dozens of greenhouses containing national research projects on Monday, researchers working inside the vulnerable buildings were faced with a split-second decision.

#### What has made the hail so bad over the past few days?

From extreme heat to severe storms, Australia has been through the weather wringer in recent weeks.

#### Rain has helped slow Australia's fires, but it's far from a knockout blow

Rain across firegrounds in south-eastern Australia has slowed several blazes, but failed to provide the knockout blow authorities had hoped for.

#### Severe hailstorm hammers Melbourne's eastern suburbs

A severe thunderstorm struck Melbourne's suburbs on Sunday, bringing golf ball-sized hailstones that damaged cars, houses and ceilings in one supermarket and brought freeway traffic to a standstill.

#### Roads and crops damaged in Tonga by Cyclone Tino

Top officials from Tonga's Ha'apai group say infrastructure is in urgent need of repair in the islands after Cyclone Tino swept past overnight.

#### Listen for cyclone warnings – Met Service

Cook Islands News

Cook Islanders are being urged to take heed of cyclone warnings from the Cook Islands Meteorological Service over the next few days as cyclone ...

#### Post-cyclone: Fiji govt to consider relocating Rotuma wharf

The Oinafa Wharf in Rotuma could be relocated if recommendations delivered to the Fiji government are adopted.

#### Stormy weather disrupts parts of Samoa

RNZ

Hundreds of passengers and vehicles were stranded on Mulifanua and Salelologa wharves on Saturday when the Samoa Shipping Corporation ...

#### Storms brewing: Pacific outlook for 2020

Jan 17, 2020 04:55 pm

As a new decade dawns much of the Pacific is grappling with major upheavals from climate and health crises to political disruption and self-determination struggles. What's on the cards for 2020?

Extreme weather (and other news) – Asia and the Middle East, Africa

45 million people threatened by famine in Southern Africa

The Brussels Times

... aggravated by repeated episodes of the climatic anomaly known as El Nino, which affect agricultural crops in sixteen countries, mostly very poor.

Saudi Arabia's north-west desert covered in snow after unusual winter storm

A powerful storm bringing sub-zero temperatures has transformed parts of the Saudi Arabian desert into a winter wonderland.

**Extreme weather (and other news) – Americas and Europe**

Conditions from 'Gloria' weather front claim three victims across Spain

EL PAÍS in English

A weather front that has been dubbed “Gloria” has seen very heavy ... The ports of Valencia and Gandia have been closed to shipping traffic as a ...

Weather: UK records highest air pressure in 63 years, Met Office reveals

Sky News

A reading of 1050.5 hectoPascals (hPa) was seen in the Mumbles in Swansea on Sunday night, the highest UK reading since January 1957.

Toronto already at 126% of its normal snowfall even without consistent cold

The Weather Network

... we will also see some sunshine on Wednesday as temperature rise just above freezing," says Weather Network meteorologist Dr. Doug Gillham.

## **Aviation**

### Originair brings back Nelson to Wellington route

A Nelson-based commuter airline is re-introducing a Cook Strait service to its schedule.

### Oamaru could be the next destination for flights into space

Flights into space could be taking off from Oamaru Airport as early as this year.

Christchurch-based space launch company Dawn Aerospace today signed a memorandum with Waitaki District Council which will allow the company to begin test launches of its unmanned rocket-propelled space plane.

### Baron launches new API weather website for aviation

CAPA - Centre for Aviation

Baron announced (15-Jan-2020) the launch of its new 'Baron Weather API for Aviation' website. The API allows the integration of quality-controlled ...

## **Communications/social media**

### The ever-changing broadcast meteorology industry

9News.com KUSA

Mark Mancuso and Cheryl Nelson discuss how the industry has changed at the American Meteorological Society's 100th annual conference in Boston ...

## **Clouds**

Eye Towards the Sky Lecture Series

In celebration of its 100th Anniversary, the American Meteorological Society announces The Eye Towards the Sky lecture series.

Watch the Inaugural Lecture - New!

The inaugural lecture, "Cloudspotting for Beginners", features Gavin Pretor-Pinney, founder of the Cloud Appreciation Society who will take you on an illustrated tour of the sky. He will

explain why the clouds look the way they do and how they reveal the invisible movements of our atmosphere.

Farming/horticulture/Aquaculture

Dry heat in Northland worries farmers already hit by dry winter

Farmers in Northland are becoming increasingly worried about water and feed reserves, as the region tracks toward a drought, they say.

Project aims to give vineyard managers more information in a hail storm

Researchers are working to fill the information gap for winegrowers hit by extreme weather events.

## **Fire**

NZ firefighters prepare for new climate era: Here's what you need to know

New Zealand firefighters are preparing for the growing risks posed by climate change, Fire and Emergency's chief executive says, but there are also steps the public can take.

Government (regional and national)

Optimism in the labour market, pessimism in job prospects

Workers are feeling a touch more optimistic about the labour market, helped by a rise in wages, but are downbeat on their chances of finding a job.

## **History**

'Nevertheless, the marcher went on': How weather played a constant role in the civil rights movement

AccuWeather.com

Jefferson Drew was one of those activists and, as he told AccuWeather, the marches and protests he participated in helped shape who he is as a man.

## **Lightning**

### Teen hit by lightning in Blue Mountains

Yahoo News Australia

An afternoon hike near an Australian landmark has taken a terrifying turn for a ... Two other people have been struck by lightning in NSW this year, ...

### Young female tradie in her 20s is struck by lightning while operating a crane during a severe ...

Daily Mail

Young female tradie in her 20s is struck by lightning while operating a crane ... A young woman has been rushed to hospital after being struck by lightning ... mass power outages and theme parks underwater: Australia's east coast is ...

### World's most advanced lightning network records 223 million lightning events in the continental US ...

## **International Environmental Technology**

Vaisala has released its 2019 Annual Lightning Report at the 100th ... Vaisala's National Lightning Detection Network (NLDN) detected a total of ... exclusive distributor in Australia and New Zealand - USA appointments underpin Sig.

Space weather

### 'Space weather' center opens in Thailand

NHK WORLD

Forecasting what's known as "space weather" is the mission of a new project in Thailand that could change how many industries operate down here ...

Innovation and technologies and AI

### Google claims its 'nowcast' short-term weather predictions are more accurate than advanced models

Tech Xplore

While modern weather predictions are far more accurate than those in the past, they still leave a lot to be desired—especially locally and in the short ...

Climate change / global warming / sea level rise

Govt focus on mitigating climate change, not climate refugees

The government remains focused on mitigating climate change impacts rather than preparing for climate refugees, despite a recent United Nations ruling.

Teaming up to tackle sea level rise

Sea level rise is an imminent threat to certain areas of the Wellington Region, so how will locals adapt to changing landscapes – four university students from the US are here to find out.

### **Cloud seeding / Geoengineering**

UAE aims to boost cloud seeding via artificial clouds, says top meteorologist

The National

One of the UAE's leading meteorologists has said research is currently underway to help create artificial clouds. Dr Omar Al Yazeedi, a director at the ...

Cloud seeds carried out in Kedah, Penang | Malaysia

gotech daily (press release) (blog)

Met Malaysia today launched a cloud seeding operation to address water shortages in the northern states of the Malaysian peninsula. – Picture by KE ...

### **Journal and articles online**

Winter 2019/20 Newsletter published

ECMWF

The winter 2019/20 issue of the ECMWF Newsletter is now available. As well as news about ECMWF staff and events, it features articles about new ...

Craig L. Stevens, Kura Paul-Burke (Ngāti AwaNgāti Whakahemo) & Peter Russell (Ngāpuhi) (2020) Pūtahitanga: the intersection of western science and mātauranga Māori in the context of Aotearoa New Zealand's physical oceanography, New Zealand Journal of Marine and Freshwater Research, DOI: [10.1080/00288330.2019.1698621](https://doi.org/10.1080/00288330.2019.1698621)

Aotearoa New Zealand is a land and cultures surrounded by one of the planet's larger marine exclusive economic zones per capita. Understanding, living within and utilising this domain requires a well-developed knowledge of the physical oceanography – fate, provenance and transfer of ocean-water, material and energy. In the Aotearoa New Zealand context, understanding and utilising the environment through science also requires that Māori have a stake in the science and a pathway to connecting with their mātauranga. The pūtahitanga (intersection) of mātauranga Māori and western science perspectives brings challenges for implementation of the Vision Mātauranga framework for physical oceanographic science. Here we discuss the drivers and key themes for the pūtahitanga and propose a mahere kaupapa/plan bound by: (i) climate, (ii) decolonisation, (iii) shared language, (iv) data sovereignty, and (v) developing a cohort who can lead the field in the coming decades.

[A tornado daily impacts simulator for the central and southern United States](#)

Joshua J. Hatzis, Jennifer Koch, Harold E. Brooks

Version of Record online: 18 January 2020

Monte Carlo simulations of tornado risk enable a broader assessment of risk than the historical record owing to the rarity of tornadoes and the short period of record. Previous tornado risk models have distributed tornadoes randomly or used climatology to generate realistic tornado patterns on annual time scales. The tornado impacts model described in the paper distributes tornadoes on a daily time step to enable the forecasting of potential tornado impacts on a given day.

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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.

January 21, 2020

News

[Destructive Hail And A Massive Dust Storm Descend On Fire-Ravaged Australia](#)

January 20, 2020 - National Public Radio

The Bureau of Meteorology in New South Wales, the country's most populous state, warned residents of "damaging winds, large, possibly giant hailstones and heavy rainfall" as it issued severe thunderstorm warnings in the east and northeast.

[Read MORE](#)

### [Morning Show Insider: Visiting an American landmark](#)

January 20, 2020 - WDIV ClickOnDetroit

AMS Executive Director Keith Seitter graciously hosted a reception for broadcast meteorologists at headquarters on Monday evening.

[Read MORE](#)

### [Can A 'Crowdsourcing' Approach Make The American Weather Model Best In The World?](#)

January 17, 2020 - Forbes

What is EPIC and why do some people think it is a game-changer for weather forecasting?

[Read MORE](#)

### [Amazon Web Services enlists AI to help NASA get ahead of solar superstorms](#)

January 17, 2020 - GeekWire

If the sun throws out a radiation blast of satellite-killing proportions someday, Amazon Web Services may well play a role in heading off a technological doomsday.

[Read MORE](#)

### [Weather shows evidence of climate change every single day since 2012](#)

January 16, 2020 - [MSN.com](#)

A single, torrential rainstorm one day in June. An unseasonably warm day in January. A cold snap in late April. The wind, sun, humidity, and all the other things we experience when we walk outside every day: that's weather.

[Read MORE](#)

#### [Weather Blog: Meteorologists Gather in Boston for Annual Conference](#)

January 16, 2020 - News 13

The largest gathering of meteorologists anywhere in the world took place this week in Boston, Massachusetts, the birthplace of the American Meteorological Society.

[Read MORE](#)

#### [NRL researching rivers in the sky](#)

January 16, 2020 - [Phys.org](#)

Meteorologists at the U.S. Naval Research Laboratory plan to take a harder look in 2020 at a prime, yet difficult to model, component of the global water cycle known as atmospheric rivers.

[Read MORE](#)

#### [When bushfires create their own weather system](#)

January 16, 2020 - [Phys.org](#)

Australia's devastating bushfire season has made us more aware of the weather conditions involved in sparking, spreading and suppressing bushfires.

[Read MORE](#)

#### [NOAA signals strong appetite for radio occultation](#)

January 15, 2020 - SpaceNews

The National Oceanic and Atmospheric Administration seeks to dramatically increase the supply of radio occultation soundings it feeds into weather forecast models.

[Read MORE](#)

[2019 ended Earth's warmest decade since record-keeping began, scientists say](#)

January 15, 2020 - USA Today

Scientists from the National Oceanic and Atmospheric Administration and NASA made the announcement at the annual meeting of the American Meteorological Society in Boston.

[Read MORE](#)

[Your local TV weathercaster wants to tell you about climate change](#)

January 15, 2020 - The Boston Globe

This week — after a weekend of record-shattering warm weather in Boston — hundreds of TV meteorologists from across the country gathered at the Boston Convention & Exhibition Center in South Boston for the American Meteorological Society conference, many of them focused on their new reality.

[Read MORE](#)

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My latest Weather Eye .... from John Maunder

<https://www.sunlive.co.nz/blogs/14276-tauranga-average-afternoon-temperatures-december-19132019.html>

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Thanks to all our contributors

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