

First: an email form Don Grainger of Otago Uni (now working in Oxford, England):
don.grainger@physics.ox.ac.uk

Let him know if you can help:

I wondered if you could circulate the following request to Met Soc Members. It is a bit of a long shot ...

I am seeking samples of ashfall from the Australian bushfires. If you could collect a sample of the ash and send it to me then that would be very helpful. My interest is in the composition and ageing of the aerosol.

To collect material when it is settling then put out a clean sheet of something like newspaper or plastic (that the particles won't stick to) then decant the powder into a small clean plastic phial. Please record the type and size of the sheet, its location and how long it was left out for. Please keep the sample dry.

Samples can be sent to

Don Grainger

Clarendon Laboratory

Parks Road

Oxford OX1 3PU

UK

I'm afraid I can't pay the postage but next time I'm in NZ I'm happy to look you up and buy you a coffee/beer as thanks.

Thanks

Don

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New Zealand weather and climate news

Courtesy of MetService Library

MetService mentions

Unseasonable chill set to give way to weekend warmth

Much of the country is experiencing unseasonably cold weather today, with parts of the South Island up to 6C below average, but things are expected to warm up by the weekend.

Tree blown onto power line starts fire in Marlborough

Stuff.co.nz

MetService meteorologist Lisa Murray said there were "persistent" winds across the country, with the station in Woodbourne, just north of Renwick, ...

Crews working to reconnect power in towns throughout region

New Zealand Herald

MetService meteorologist Lisa Murray said gusts of 78km/h were recorded in Whanganui on Sunday night and gusts of 83km/h were recorded at ...

Record temperature in Ranfurly as smoke from Australian fires arrives above New Zealand

New Zealand Herald

As Ranfurly recorded its hottest ever December temperature on Tuesday, MetService has warned that smoke from Australia's bush fires is coming our ...

Power companies work on restoring lines after heavy winds

Power has been restored to thousands of homes in Dunedin, Manawatū and Whanganui, where strong or severe winds downed trees and power lines yesterday.

Falling tree injures woman and roofs lift off houses as high winds batter Dunedin

A woman has been taken to hospital with serious injuries after a tree fell on her in Dunedin.

Severe winds lift roofs, cut power across in Dunedin

TVNZ

While winds have eased over Southland and Clutha, MetService says severe gales are forecast for exposed parts of the South Island and lower North ...

More wild winds could hit South

The cleanup continued for Dunedin yesterday after wild winds caused damage across the city.

Trees were cleared and power was restored to more than 2500 homes. Debris from the storm was scattered citywide.

Weather: 'Widespread damage' as Manawatū hit with gale-force winds

Powerlines across Manawatū are down as strong winds blast through the region, causing widespread damage and loss of electricity.

Light at the end of the (wind) tunnel for Taranaki

The capital may be known as Windy Wellington, but Taranaki has come close to challenging for the title.

Over the last month, average hourly wind speed in the region has regularly been over 20-30 kilometres per hour - a higher figure than last year - and ticked over 30 or 40kmh several times, even hitting 52kmh on January 4.

Snow falls on hills in Southland

Southlanders could be forgiven for thinking it was the middle of winter as they woke to snow on the hills on Monday morning.

Unseasonable chill not likely to hang around

Otago Daily Times

MetService meteorologist Lewis Ferris said much of the South Island was below the average for January, with Queenstown and Wanaka standing out ...

Mid-summer frost possible for Otago this week

Stuff.co.nz

MetService meteorologist Lisa Murray said the below average temperatures, caused by a cool southwesterly, were "unusual" and "spring like".

Central Otago fire danger level reaches extreme

People in Central Otago are being urged to postpone lighting fires as the danger level reaches extreme.

Weather: Low 'bigger than Australia' bringing New Zealand a cold, windy week

Newshub

MetService advises people to factor in the wind chill when making outdoor plans. "The cool southwest flow is really making itself known, dropping the

['That's ridiculous': Huge 196km/h gust near Hawke's Bay stuns meteorologist](#)

Newstalk ZB

A windy landmark at the southernmost point of Hawke's Bay is already a challenger for strongest gust of the year after a blow of 196km/h on Sunday.

MetOcean (and oceanmet, marine weather etc)

[The Story Of A Wave: From Wind-Blown Ripples To Breaking On The Beach](#)

Gizmodo Australia

Around 20 million Australians live within 50 kilometres of the coast. As summer temperatures soar, we flock to the ocean to splash, swim, surf, paddle, ...

[GNS asks the public to help it find earthquake equipment lost at sea](#)

GNS Science is asking the public to help it find five important earthquake recording instruments lost at sea.

NIWA

[NIWA reveals New Zealand's wildest weather moments of the 2010 - 2019 decade](#)

Newshub

The decade is drawing to a close and it's had with its extreme highs and lows - in temperatures, that is. Meteorologists at NIWA have compiled a list of ...

[Places in New Zealand for which 2019 was the warmest year on record](#)

Parts of New Zealand experienced their warmest year on record in 2019, with some records going back more than a 150 years.

University of Tasmania research associate and former NIWA climate scientist Jim Salinger, said warmer years were becoming more frequent as the Earth continued to experience the effects of greenhouse gas emissions.

[Otago-Southland prominent in Niwa's extreme weather review](#)

Many of New Zealand's most extreme weather events over the past decade have been recorded in Otago and Southland.

Niwa climate scientists have compiled the "stand out" weather statistics of the past 10 years, which shows the hottest, coldest, wettest and windiest places across the country.

ECMWF

ECMWF scientists to simulate global weather at 1 km resolution

ECMWF

A group of ECMWF scientists have been awarded time on the world's most powerful supercomputer to carry out ground-breaking global weather and ...

WeatherWatch

WeatherWatch's 3 biggest moments of 2019 - and list our positive plans for 2020

WeatherWatch.co.nz

Commerce Commission (ComCom) launches investigation into Government Agencies Niwa and MetService. As many of you know (and are rightfully ...

Volcano alert/watch

Whakaari/White Island remains active, no-go zone reduced

Whakaari/White Island remains active, with hot gas and steam coming from vents opened by the December eruption.

Extreme weather (and other news) – Australia and Pacific

How Fires In Australia Could Alter Weather Elsewhere Too

Forbes

El Nino is associated with anomalously warm waters in the equatorial Pacific Ocean. This surface “heat source” and associated changes in ...

Rains bring very temporary relief to Australia's fires

Phys.Org

NASA satellite data continues to provide a look at the smoke and aerosols ... with a vengeance by Thursday when hot, dry weather and winds return.

Australians Should Brace for Protracted Summer of Catastrophic Fires | Voice of America - English

Voice of America

GENEVA - The World Meteorological Organization warns Australians should brace for a protracted ... A report by the Australian Bureau of Meteorology says climate change is causing temperatures to rise and ... East Asia Pacific.

Australia weather bureau says no sign of cooler weather or rain on horizon

CNA

The Sydney Opera House and Sydney Harbour Bridge are seen through smoke haze from bushfires as passengers ride a ferry in Sydney, Australia, ...

Cyclone warnings issued in the Northern Territory as tropical low intensifies

A tropical low intensifying in the Arafura Sea is expected to develop into a tropical cyclone in the early hours of Thursday morning, with several Northern Territory communities predicted to be affected by severe weather.

Tropical Cyclone Blake forms off coast of WA, but fire relief in the east unlikely

Tropical Cyclone Blake, the first for the Australian cyclone season, has formed off Western Australia's West Kimberley coast.

Christmas day hail storm destroys crops in PNG Highlands

More than 3000 people in the Western Highlands of Papua New Guinea could soon be starving after a freak hail storm destroyed their food gardens on Christmas day.

Weather and ocean monitoring systems boost Tonga's disaster preparedness

The installation of new automated weather stations and two sea level monitors in Tonga is expected to boost disaster preparedness and climate resilience in the kingdom.

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

Indonesia succeeds in modifying weather to stop flooding

Independent Online

Authorities started cloud-seeding operations by shooting salt flares at clouds on the Java Sea and the Sunda Strait to induce rain over waters off Java ...

China offers receiving station for meteorological data to Mozambique

Macauhub

China has donated a reception station for data collected by the meteorological satellite Fengyun – 2H to Mozambique, to help the country to follow the ...

Extreme weather (and other news) – Americas and Europe

Smoke From Australian Wildfires Reaches Southern Brazil – Meteorologists

Sputnik International

MOSCOW (Sputnik) – Smoke from devastating bushfires in Australia that have led to the death of over two dozen people has reached southern Brazil, ...

BBC Weather: Extreme snowstorm risks Europe travel chaos amid freak Mediterranean freeze

Express.co.uk

The BBC weather presenter said: “We have had some really strong winds, some heavy rain and snow across Croatia and Greece. “And that is moving ...

International news and research

Israeli, German Scientists Double El Niño Warning Time, Predict Storm in 2020

Haaretz

Weather havoc is likely to hit around Christmas 2020, say scientists after identifying correlation between warming events around the world.

First Alert Meteorologist Brandon Beck looks at leaps in weather technology in the 2010s

KY3

Perhaps the greatest leap in our technology in detecting real-time weather is dual polarity Doppler radar. This is a step up from “regular” Doppler, ...

20 Experts Predict The Most Significant Weather And Climate Advances Of The Next Decade

Forbes

Phased-array weather radar systems will also gain traction. Satellite ... That would be a significant leap for the climate research community. Dr. Victor ...

Applying physics principle yields grim prediction on hurricane destruction in era of global warming

Global warming could well lead to hurricanes more powerful than meteorologists currently forecast. A physicist noticed that one of the principles of physics -- phase transition -- did not appear in the scientific literature of meteorology. Using 60 years of published data, he demonstrated that the destructive power of tropical hurricanes increased linearly and rapidly as water temperature increased. The destructive energy could therefore treble if water temperatures rise by 2 degrees.

Deep and crisp and living: How snow sustains amazing hidden life

Snow may look pristine but even the freshly fallen variety is teeming with microscopic life. This vast and mysterious ecosystem could have a big impact on Earth

Craig Kelly apologises to UK meteorologist he dubbed 'ignorant Pommy weather girl'

SBS

A UK meteorologist has hit back at Liberal backbencher Craig Kelly for calling her an "ignorant Pommy weather girl" following an interview about ...

Weather companies

Global Weather teams with Here for forecasts

just-auto.com

Here Technologies says the Global Weather Corporation (GWC) has joined its Marketplace option to provide RoadWX weather data service, ...

ClimaCell Announces Collaboration With Google Cloud on Weather Forecasting With 5X Jump in ...

PRNewswire (press release)

ClimaCell is committed to making critical data free and accessible, fostering innovation. Starting in India, ClimaCell's models will be available to the ...

Irish consultancy boosts offshore wind team

reNEWS

Bonar will work on advanced design of floating substructures and optimisation of mooring and anchor systems, as well as work on metocean analysis ...

Air quality / air pollution

Smokey orange skies: The health effects and science behind it

New Zealand is unlikely to be much affected by ash from Australia's bushfires but vulnerable people should be sensible, and care should be taken around untreated drinking water, a physicist says.

Fire

National fire risk assessment requested to prevent disaster like Australia

Defence Minister Ron Mark has asked the Defence Force for a national fire risk assessment to prevent a disaster like Australia's bushfires.

Australia's bushfire crisis is so big that it's useless trying to predict how blazes will behave, incident controller says

Scientific modelling used to predict how bushfires will behave is "not coping" with the current fire situation in south-eastern Australia because the fires are so big, an incident controller says.

Rain isn't always helpful fighting bushfires, so what will it take to put them out?

The heavens have reluctantly opened, bringing a few millimetres of rain to the scorched south-east, but authorities say it can actually hinder their efforts to fight bushfires.

Fires misinformation being spread through social media

Australia's bushfire emergency is being exploited on social media, as misinformation is spread through cyberspace via hundreds of thousands of posts.

Australian bushfires: How climate change and other factors worsen fires

Stuff.co.nz

Australia bushfires: Severe losses loom as fire conditions ease ... likely Australian fires start and spread from lightning and human-caused ignition, ...

Understanding bushfire-triggered thunderstorms may save lives

Phys.Org

With more extreme weather predicted to result from climate change, the team's findings highlighted the importance of combining weather radar and ...

Health

Scientists link La Niña climate cycle to increased diarrhea

A study finds that spikes in cases of life-threatening diarrhea in young children are associated with La Niña climate conditions. The findings could provide the basis for an early-warning system that would allow public health officials to prepare for periods of increased diarrhea cases as long as seven months ahead of time.

Lightning

Uluru lookout lightning strike injures six people

The Guardian

Six people have been injured including two women who were hospitalised when lightning struck a sunset lookout area at the Ayers Rock Resort.

Two struck by lightning 'extraordinary' Sydney storm

9News

"Water is a great conductor of electricity as you can imagine, so it's quite dangerous to be in any type of water when we do have lightning strikes," ...

Heroic Brother Saves Surfer Struck By Lightning

10 daily

A man was struck by a lightning bolt while getting out of the water at Sydney's Dee Why beach on Monday afternoon, one of two people struck by ...

Weather in pictures

The magic of the perfect surf photo – in pictures

The Guardian

We study wind and wave charts like meteorologists. We factor in family and jobs, dropping responsibilities more than we should when conditions are ...

Journal and articles online

Pressure dependence of reference deep-ocean thermometers

Wukchul Joung, Keesool Gam, Jonathan V. Pearce

Version of Record online: 17 December 2019

In this work, the pressure dependence of the temperature readings of reference deep-ocean thermometers (i.e. SBE 35, Sea-Bird Electronics) was investigated in a thermostatically controlled and pressurized environment. The results indicated that the pressure dependence of the reference deep-ocean thermometers is significant, and the pressure dependence is not the same for all SBE 35 devices but specific to each individual device.

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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 7, 2020

News

[Understanding bushfire-triggered thunderstorms may save lives](#)

January 6, 2020 - Phys.org

Researchers say a better understanding of the dangerous yet surprisingly common phenomenon of wildfires triggering supercell thunderstorms could reduce risk to life and property.

[Boston Hosts America's Largest Weather Conference Next Week - Is That Risky Weatherwise?](#)

January 4, 2020 - Forbes

One of the world's largest gatherings of meteorologists is in Boston next week. Will weather spoil the 100th AMS meeting?

[Read MORE](#)

[Australia's massive fires, as seen from space](#)

January 3, 2020 - Vox

Maps and images show where the fires are, and how much smoke they've created.

[Read MORE](#)

[China's space contractor plans more than 40 launches in 2020](#)

January 3, 2020 - SpaceNews

Other activities will include launches of the Apstar-6D communications satellite based on a new DFH-4E bus, Hongyan low-Earth orbit internet satellites, remote sensing and weather satellites and commercial payloads.

[Read MORE](#)

[These are the biggest climate wins of the decade](#)

January 3, 2020 - Fast Company

Fighting the climate crisis can feel like a losing battle. There's still an incredible amount of work to be done, but it's good to look to the successes of the past for inspiration.

[Read MORE](#)

[Study confirms climate change impacted Hurricane Florence's precipitation and size](#)

January 3, 2020 - Phys.org

A study led by Kevin Reed, Ph.D., Assistant Professor in the School of Marine and Atmospheric Sciences (SoMAS) at Stony Brook University, and published in Science Advances, found that Hurricane Florence produced more extreme rainfall and was spatially larger due to human-induced climate change.

[Read MORE](#)

[Tests measure solar panel performance beyond established standards](#)

January 2, 2020 - EurekAlert!

In a series of tests over five years, key parameters in solar panel performance were measured, producing data for better error correction factors and for choosing the most efficient panel.

[Read MORE](#)

[NASA finds heavy rain potential in Tropical Cyclone Blake](#)

January 6, 2020 - Phys.org

NASA's Aqua satellite provided a near visible image and analyzed the cloud top temperatures in Tropical Cyclone Blake, located along the northern coast of Western Australia.

[Read MORE](#)

[Australian bushfire cloud visible in Chile and Argentina](#)

January 6, 2020 - Yahoo! News

NASA's Aqua satellite provided a near visible image and analyzed the cloud top temperatures in Tropical Cyclone Blake, located along the northern coast of Western Australia.

[Read MORE](#)

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Thanks to all our contributors

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