

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

*Clips courtesy of MetService Library*

### ***MetService focus***

#### **Kawhia blaze shows rapid rate ground dries sparking fears of long fire season**

A blazing scrub fire along the water's edge at Kawhia is a sign the ground is drying rapidly and a long fire season is fast approaching, firefighters say.

<https://www.stuff.co.nz/national/107012012/kawhia-blaze-shows-rapid-rate-ground-drys-sparking-fears-of-long-fire-season>

#### **Spring brings much-needed sunshine**

MetService duty forecaster Larissa Marintchenko said this week's forecast was a vast improvement on last week's temperature when there was a cold southerly lurking about.

[https://www.nzherald.co.nz/nz/news/article.cfm?c\\_id=1&objectid=12123311](https://www.nzherald.co.nz/nz/news/article.cfm?c_id=1&objectid=12123311)

#### **Your weather: Snow, gale force winds and heavy rain hammer South Island**

However, the MetService meteorologist Andy Best said the system should clear the South Island this evening.

"The low-pressure system which brought this snow event is currently heading southeast and should clear the South Island this evening.

[https://www.nzherald.co.nz/nz/news/article.cfm?c\\_id=1&objectid=12126364](https://www.nzherald.co.nz/nz/news/article.cfm?c_id=1&objectid=12126364)

#### **West Coast communities warned they must move from flood and erosion zones**

Residents in a small West Coast town have paid more than \$10,000 each for protection from the sea, but experts say they will still have to leave their homes.

<https://www.stuff.co.nz/national/107020776/west-coast-communities-warned-they-must-move-from-flood-and-erosion-zones>

#### **\$11.5 million grant to help safeguard New Zealand's blue economy - MetService New Zealand**

A new research project spearheaded by MetService's oceanography division, MetOcean Solutions will shed new light on the performance of New Zealand's oceans to support the seafood sector.

[Read more here](#)

### **Many without power following heavy dumping of snow**

MetService is predicting more snow next Monday.

<http://www.channel39.co.nz/news/many-without-power-following-heavy-dumping-snow>

### **Fog causing delays and cancellations at Christchurch Airport**

MetService forecast the fog to lift by late morning turning to a fine day with variable high cloud. Temperatures were forecast to peak at 19 degrees Celsius by early afternoon.

<https://www.stuff.co.nz/national/107225766/Fog-causing-delays-and-cancellations-at-Christchurch-Airport>

### **Weather assessment tool gains govt funding**

A team led by an Alexandra-based research company has secured funding to create a world-leading, near real-time assessment tool to the public that will analyse extreme weather events and their link to climate change.

Bodeker Scientific, along with Niwa and MetService, will develop the tool - called Extreme Weather Event Real-time Attribution Machine (Eweram) - that would show how an extreme weather event, such as the heavy snowfall in Queenstown and Wanaka earlier this week, would have occurred in the atmospheric conditions of 1750.

<https://www.odt.co.nz/regions/central-otago/weather-assessment-tool-gains-govt-funding>

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

#### **Bureau of Meteorology predicts possible cyclone, El Nino this Wet season**

LONG-range weather forecasters are warning Top Enders to brace themselves for another eventful Wet season with a possible cyclone and heavy rains predicted.

[Read more here](#)

#### **Heatwatch: extreme heat in Rockhampton**

19 Sep 2018

Mark Ogge, Travis Hughes

The Australia Institute

At temperatures above 35 degrees the human body's ability to cool itself reduces, making it a common benchmark temperature for occupational health and safety experts, academic and government researchers. Combined with 70% humidity, conditions over 35 degrees are considered 'extremely dangerous' by government agencies such as the US Government National Oceanic and Atmospheric Administration.

[http://www.tai.org.au/sites/default/files/P597%20Rockhampton%20Heatwatch%20%5BWEB%5D\\_0.pdf](http://www.tai.org.au/sites/default/files/P597%20Rockhampton%20Heatwatch%20%5BWEB%5D_0.pdf)

### **Australia's FIVE seasons revealed - and how they explain spring's unpredictable weather and our extra-long summers**

A top botanist believes Australia has five seasons, explaining Australian weather

Dr Tim Entwisle says visitors at Melbourne's Botanic Gardens gave him the idea

They would frequently say plants in bloom were because of an 'early spring'

He argues 'Sprinter and Sprummer' bridge a gap between winter and summer

<https://www.dailymail.co.uk/news/article-6174763/Australias-FIVE-seasons-revealed-explain-Springs-unpredictable-weather.html>

### **Australia weather bureau says dry conditions likely to persist for rest of year**

35 pct chance of average rain across east coast -weather bureau

\* Outlook threatens rural production, broader economy

\* Australia is a major supplier of grains, beef

<http://news.trust.org/item/20180913020922-iogel/>

### **Prescribed burning debate rages as Australia finds there's no time to burn going into peak fire season**

There is a lot more to prescribed burning, also known as controlled burning, than just lighting the match as a changing climate and environment poses new challenges for fire authorities.

<http://www.abc.net.au/news/2018-09-13/is-the-prescribed-burn-window-closing-in-australia/10236048>

### **China says it will help Samoa with climate change**

China says it will work with Samoa to tackle climate change and wishes to deepen ties between the two countries.

<https://www.radionz.co.nz/international/pacific-news/366851/china-says-it-will-help-samoa-with-climate-change>

### **ADB opens several new missions in Pacific**

The Asian Development Bank is expanding its Pacific presence with strengthened offices in 11 countries.

<https://www.radionz.co.nz/international/pacific-news/366729/adb-opens-several-new-missions-in-pacific>

### **Hospitalisations increase and asphalt hits 60 degrees without Darwin heat mitigation strategy**

Unmitigated heat during hot Darwin days is driving up energy consumption and threatening lives, according to research by the University of New South Wales.

<http://www.abc.net.au/news/2018-09-19/hospitalisations-spike-asphalt-hits-60c-on-hot-darwin-days/10246398>

### **'Black Swan' events: Natural disasters without precedent**

Mr Goodwin was part of the response team for both Black Saturday and the 2013 Blue Mountains fires.

So how do we prepare for and manage these events beyond living memory, and will they become more common?

<http://www.abc.net.au/news/2018-09-15/black-swan-disaster-events-and-how-we-need-to-prepare-for-them/10242864>

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

## **Typhoon pounds south China after killing 64 in Philippines**

HONG KONG — Typhoon Mangkhut barreled into southern China on Sunday, killing two people after lashing the Philippines with strong winds and heavy rain that left at least 64 dead and dozens more feared buried in a landslide.

[https://www.wacotrib.com/townnews/meteorology/typhoon-pounds-south-china-after-killing-in-philippines/article\\_8d1c0fc2-3ef1-5b3c-86ba-42e730044fe7.html](https://www.wacotrib.com/townnews/meteorology/typhoon-pounds-south-china-after-killing-in-philippines/article_8d1c0fc2-3ef1-5b3c-86ba-42e730044fe7.html)

## **Macau | Gov't appoint Tang Iu Man as Acting Director for Weather Bureau to replace Raymond Tam**

The Macau SAR Government has appointed Tang Iu Man as the Acting Director of the Meteorological and Geophysical Bureau to replace Raymond Tam Wai Man, according to a dispatch on Wednesday's Official Gazette

<http://www.macaubusiness.com/macau-govt-appointed-tang-iu-man-as-acting-director-for-weather-bureau-to-replace-raymond-tam/>

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

### **Storm names for 2018-19 announced**

The Met Office and Met Éireann, today reveal the list of storm names for the coming season.

<https://www.metoffice.gov.uk/news/releases/2018/storm-names-2018-19>

### **Visualizing Hurricane Florence**

Hurricane Florence may have been downgraded to a post-tropical cyclone as of 5 a.m. Tuesday, but the Carolinas are still reeling from one of the worst storms to hit the area in recent memory, with the death toll reaching 32, around 500,000 homes still without power and a record-breaking 30 inches of rain since Thursday.

<https://www.forbes.com/sites/charlestowersclark/2018/09/18/visualizing-hurricane-florence/#73a3a3a52f94>

### **AccuWeather narrows economic toll prediction for Hurricane Florence to \$50-60 billion**

AccuWeather predicted Florence would make landfall as a Category 1 or 2 hurricane, which it did, and cause between \$30 and 60 billion in damage. We have narrowed our estimate of the total economic toll from Florence to \$50-60 billion once all factors are considered such as damage

to homes, cars, lost property and valuables in addition to lost wages, medical and other costs resulting from the inevitable disease and ill health effects that follow a storm of this nature.

<https://www.accuweather.com/en/weather-news/accuweather-narrows-economic-toll-prediction-for-hurricane-florence-to-50-60-billion/70006101>

### **Government of Canada opens new, state-of-the-art enterprise data centre**

BORDEN, ON, Sept. 17, 2018 /CNW/ - Canadians expect modern, reliable and secure online Government of Canada services. Shared Services Canada (SSC), Defence Construction Canada (DCC) and the Department of National Defence (DND) are proud to officially open a new enterprise data centre (EDC) in Borden, Ontario.

<https://markets.businessinsider.com/news/stocks/government-of-canada-opens-new-state-of-the-art-enterprise-data-centre-1027540324>

### **Train punctuality at 12-year low amid weather and timetable chaos**

One in seven trains missed target of arriving within five minutes of scheduled time

<https://www.theguardian.com/business/2018/sep/17/train-punctuality-reaches-12-year-low-amid-weather-and-timetable-chaos>

### **International news and research**

#### **Should Meteorologists Be Making The Climate Connection?**

As hurricane Florence approached the east coast this past week, weather forecasters warned of an historic disaster. But, they didn't say a lot about why this storm had gotten so big or so powerful.

<http://www.capeandislands.org/post/should-meteorologists-be-making-climate-connection#stream/0>

#### **Weather Channel's frightening augmented reality videos show 'worst-case' storm surge**

A storm surge of 9 or 12 feet has the power to wreak havoc, sweeping away cars, humans and debris in devastating fashion. But often, people choose to face down a hurricane rather than evacuate.

<http://www.foxnews.com/tech/2018/09/17/weather-channels-frightening-augmented-reality-videos-show-worst-case-storm-surge.html>

### **Coping with the 50 degree city**

The Northern Hemisphere just had one of the hottest summers on record and in Quebec, in a little over a week, 90 people died because of the heat.

<http://www.abc.net.au/radionational/programs/blueprintforliving/coping-with-the-50-degree-city/10246356>

### **Here's how climate change is fueling Hurricane Florence**

A novel forecast looks at the size and fury of the storm with and without human-caused warming

<https://www.sciencenews.org/article/how-climate-change-fueling-hurricane-florence>

### **AccuWeather donates weather station to the American Meteorological Society chapter in Puerto Rico**

AccuWeather, a global leader in digital media and weather-related big data, donated a new meteorological station to a local chapter of the American Meteorological Society in Puerto Rico.

<https://www.accuweather.com/en/weather-news/accuweather-donates-weather-station-to-the-puerto-rico-meteorological-society/70005995>

### **U-Md. used a private company for a tornado warning. That can be problematic.**

No twisters materialized after the warning that was prompted by guidance from AccuWeather.

[https://www.washingtonpost.com/weather/2018/09/18/u-md-used-private-company-tornado-warning-that-can-be-problematic/?utm\\_term=.c1ae85243499](https://www.washingtonpost.com/weather/2018/09/18/u-md-used-private-company-tornado-warning-that-can-be-problematic/?utm_term=.c1ae85243499)

### **More ships and more clouds mean cooling in the arctic**

Researchers recently modeled the future of trans-Arctic shipping routes and found that the accompanying increase in emissions may offset some of the overall warming trend in that region. Though the researchers stress this is in no way an endorsement to trans-Arctic shipping or a means to mitigate climate change, the results illustrate the complexities in understanding how human activities impact the climate.

<https://www.sciencedaily.com/releases/2018/09/180917153652.htm>

### **Tropics are widening as predicted by climate models, research finds**

Scientists have observed for years that Earth's tropics are widening in connection with complex changes in climate and weather patterns. But in recent years, it appeared the widening was outpacing what models predicted, suggesting other factors were at work. But a new paper finds that the most up-to-date models and the best data match up reasonably well.

<https://www.sciencedaily.com/releases/2018/09/180917153615.htm>

### **World's first passive anti-frosting surface fights ice with ice**

Nothing foretells the coming of winter like frost on windshields. While the inconvenience of scraping or defrosting car windows may define cold mornings for many drivers, the toll frost takes on the larger economy is more than just a nuisance. From delayed flights to power outages, ice buildup can cost consumers and companies billions of dollars every year in lost efficiency and mechanical breakdown.

<https://www.sciencedaily.com/releases/2018/09/180917090901.htm>

### **Europe's Triumphs and Troubles Are Written in Swiss Ice**

As plague swept through Europe in the mid-1300s, wiping out more than a third of the region's population, a glacier in the Alps was recording the upheaval of medieval society.

<https://www.nytimes.com/2018/09/17/science/icecore-europe-pollen.html>

### **If Hurricane Florence is the new norm, here's how to redesign our cities to cope with climate change**

Miami, Shanghai, Osaka and scores of other cities could be mostly underwater in 100 years. What's our plan?

<https://www.wired.co.uk/article/hurricane-florence-climate-change-city-design>

### **Weather trackers' budget to be slashed**

Schumer pushes back on Trump plan to cut funding for NOAA

<https://www.timesunion.com/news/article/Weather-trackers-budget-to-be-slashed-13234232.php>

### **Modelling with Tornado Charts in Excel**

Liam Bastick is one of only 104 people in the world recognised as an Excel MVP. Ahead of his appearance at the World Congress of Accountants (WCOA), Bastick outlines how he uses Excel and a two-stage technique he has developed using “tornado” charts and sensitivity analysis.

<https://www.intheblack.com/articles/2018/09/18/modelling-tornado-charts-excel>

### **Business development / commodities / infrastructure etc**

#### **Intellisense Systems Awarded \$4.89M U.S. Air Force contract for Micro Weather Sensor™**

Micro Weather Sensor™ technology provides real-time situational awareness to USAF and Department of Defense.

<https://www.prnewswire.com/news-releases/intellisense-systems-awarded-4-89m-us-air-force-contract-for-micro-weather-sensor-300714252.html>

#### **NOAA Invests in a Second Round of Commercial Weather Data**

The National Oceanic and Atmospheric Administration announced nearly \$8.4 million in contract awards to private satellite operators for the second round of its Commercial Weather Data Pilot.

<https://www.nextgov.com/analytics-data/2018/09/noaa-invests-second-round-commercial-weather-data/151357/>

#### **Zalando blames it on the sunshine as cuts forecasts again**

Zalando, Europe's biggest online only fashion retailer, today cut its 2018 outlook for a second time in as many months, saying a long, hot summer had taken its toll.

The news wiped as much as 20% off the value of its shares today.

<https://www.rte.ie/news/business/2018/0918/994508-zalando-results/>

### **Advertising/promotion**

#### **Candidate Buys Weather Channel Ads Ahead of Hurricane**

The Republican candidate for Ohio governor has paid for ad time on The Weather Channel as it gears up for Hurricane Florence coverage.

<https://www.usnews.com/news/best-states/ohio/articles/2018-09-13/candidate-buys-weather-channel-ads-ahead-of-hurricane>

## **Aviation**

### **Science: Changing the Launch Equation: Q&A with Rocket Lab CEO Peter Beck**

SAN FRANCISCO — Rocket Lab is aiming high.

The California-based company plans to make space much more accessible via its 57-foot-tall (17 meters) Electron rocket, which can loft about 500 lbs. (225 kilograms) of payload to Earth orbit on each \$5 million liftoff.

[http://infosurhoy.com/cocoon/saii/xhtml/en\\_GB/science/science-changing-the-launch-equation-qa-with-rocket-lab-ceo-peter-beck/](http://infosurhoy.com/cocoon/saii/xhtml/en_GB/science/science-changing-the-launch-equation-qa-with-rocket-lab-ceo-peter-beck/)

### **10,000 drone pilots register to fly in New Zealand airspace**

More than 10,000 drone pilots are now registered with Airshare to fly in New Zealand airspace. The online hub for drone pilots operated by Airways announced today that its database of registered pilots has topped the milestone mark.

<http://www.scoop.co.nz/stories/BU1809/S00332/10000-drone-pilots-register-to-fly-in-new-zealand-airspace.htm>

### **CANSO: Climate change to impact aviation, understanding weather 'vital' to efficiency**

CAPA publishes more than 400 global News Briefs every weekday, covering all aspects of the aviation and travel industry. It's the most comprehensive source of market intelligence in the world, with around 50 per cent of content translated from non-English sources. The breadth of our coverage means you won't need any other news sources to monitor competitors and stay informed about the latest developments in the wider aviation sector.

<https://centreforaviation.com/news/canso-climate-change-to-impact-aviation-understanding-weather-vital-to-efficiency-839445>

### **Dangerous landing at Christchurch Airport caused by Virgin Australia's landing policy, investigation finds**

An aeroplane crew with a "high workload" mistook a wet runway for one that was merely damp, landing dangerously close to the end of it, an investigation has found.

<https://www.stuff.co.nz/travel/travel-troubles/107181601/dangerous-landing-at-christchurch-airport-caused-by-virgin-australias-landing-policy-investigation-finds>

### **Call out for Wairoa and Māhia students to apply for Rocket Lab scholarship**

Budding rocket scientists and engineers can apply for thousands of dollars worth of education fees, as Rocket Lab again looks to help boost Wairoa's technical expertise.

[https://www.nzherald.co.nz/hawkes-bay-today/news/article.cfm?c\\_id=1503462&objectid=12126687](https://www.nzherald.co.nz/hawkes-bay-today/news/article.cfm?c_id=1503462&objectid=12126687)

### **Communications/social media**

#### **How the Tech in the Viral Weather Channel Graphic Will Change Newscasting**

As the East Coast propped for Hurricane Florence to make landfall on Thursday, The Weather Channel caught the web's consideration with another blended reality application that breathed life into the anticipated tempest floods. The video, saw in excess of six million times by Friday evening, showed the limit with respect to computer game like designs to make a viral blended reality climate report.

<https://techstory.in/tech-weather-channel-2018/>

### **Farming/horticulture**

#### **Hawke's Bay farmers lose hundreds of lambs to severe weather**

Hawke's Bay farmers have been hit financially and emotionally after significant lamb and ewe losses caused by last week's severe weather.

A spokesperson from Federated Farmers said one had lost 25 per cent of his lambs.

[https://www.nzherald.co.nz/business/news/article.cfm?c\\_id=3&objectid=12123803](https://www.nzherald.co.nz/business/news/article.cfm?c_id=3&objectid=12123803)

#### **Farmers fear summer El Nino drought as Spring rains wipe out lamb stocks**

Farmers across the North Island counting the cost of a wild start to spring, with thousands of lambs lost due to heavy rain, may soon have another problem to contend with.

<https://www.tvnz.co.nz/one-news/new-zealand/farmers-fear-summer-el-nino-drought-spring-rains-wipe-lamb-stocks>

#### **Brisk weather brings cheaper broccoli, lower overall food prices**

In a blow to children around the country, broccoli prices are falling.

Statistics NZ has released its latest food price data, which shows the much-maligned vegetable cost 27 per cent less in August than in July, with prices down 32 per cent for the year.

"Broccoli is grown all year round, but is typically cheapest in December, at about \$1.50 a head," prices manager Geraldine Duoba said.

<https://www.stuff.co.nz/business/farming/107176945/brisk-weather-brings-cheaper-broccoli-lower-overall-food-prices>

### **Millions of litres of emergency water for farmers in drought**

Millions of litres of emergency water could be made available to some Hawke's Bay farmers if a drought hits the region this summer, Hawke's Bay Regional Council says.

<https://www.radionz.co.nz/news/national/366551/millions-of-litres-of-emergency-water-for-farmers-in-drought>

### **Fire**

#### **Forest Service science improving fire weather prediction**

New tool helps forecast when weather will make wildland fires more dangerous

[https://www.eurekalert.org/pub\\_releases/2018-09/ufs--fss091218.php](https://www.eurekalert.org/pub_releases/2018-09/ufs--fss091218.php)

Innovation and technologies (inc data and new products)

From transport to street lighting: The emergence of smart city platforms

Uber and Airbnb have shown how city services can be transformed by platform offerings. Developing the right platforms will be key for cities to ensure that their economies, environment, and services are fit for the future, writes Eric Woods.

<https://www.euractiv.com/section/digital/opinion/tue-from-transport-to-street-lighting-the-emergence-of-smart-city-platforms/>

### **Weather in pictures**

#### **Photos: Typhoon Mangkhut ravages Philippines, Hong Kong, and southern China**

Dozens were killed, many in a deadly landslide in the Philippines.

<https://www.vox.com/2018/9/17/17869462/typhoon-mangkhut-philippines-hong-kong-china>

Photos: what Hurricane Florence's destruction looks like on the ground

The most telling images we've seen so far from Florence's path.

<https://www.vox.com/2018/9/17/17870020/hurricane-florence-photos-north-carolina>

### **Climate change / global warming / sea level rise**

#### **Meat, milk and methane: new insights into agriculture's role in climate change**

Agriculture is responsible for around half of New Zealand's emissions, and poses the biggest challenge in our transition to a low carbon economy. The two main agriculture greenhouse gases are nitrous oxide (a long-lived gas like CO<sub>2</sub>) and methane (a short-lived gas).

Date: Wednesday 3 October  
Time: 5:30 pm – 6:30 pm  
Venue: GBLT1, Lecture Theatre 1, Old Government Building  
RSVP

New research on methane has given us a more accurate picture of how it contributes to global warming. The research suggests a better way to measure methane by a modification of the global warming potential (GWP) metric that is used in climate change accounting. This would give a better basis for policy such as how methane should be included in the Emissions Trading Scheme, and the scale of emissions reductions needed to get to 'net zero'. Policy decisions on methane over the next year or so will have major implications for livestock farming but also for the broader land sector in New Zealand. The lecture will summarise the research findings and explore the related policy issues.

Professor Dave Frame is Director of the New Zealand Climate Change Research Institute (NZCCRI) at Victoria University of Wellington. He has been a Lead Author on the Fifth and Sixth Assessment Report of the Intergovernmental Panel on Climate Change, and his research has often been published in the world's leading scientific research journals.

### **Cloud seeding / Geoengineering**

#### **South Sumatra Intensifies Weather Modification Technology**

TEMPO.CO, Jakarta - The Government of South Sumatra Province is currently intensifying Weather Modification Technology (WMT) by sprinkling salt over clouds to prevent widespread land and forest fires. Agency for the Assessment and Application of Technology Chief for Weather Modification Sutrisno remarked here on Tuesday that the implementation of WMT in the context of handling land and forest fires in South Sumatra is still ongoing.

<http://en.tempo.co/read/news/2018/09/19/310921761/South-Sumatra-Intensifies-Weather-Modification-Technology>

## **Journal and articles online**

### **Quarterly Journal of the Royal Meteorological Society**

#### **Source term estimation of multi-specie atmospheric release of radiation from gamma dose rates**

Ondřej Tichý, Václav Šmídl, Radek Hofman, Nikolaos Evangeliou

First Published: 14 September 2018

#### **Multi-scale Observations of Atmospheric Moisture Variability in relation to Heavy Precipitating Systems in the north-western Mediterranean during HyMeX IOP12**

S. Khodayar, B. Czajka, A. Caldas-Alvarez, S. Helgert, C. Flamant, P. Di Girolamo, O. Bock, P. Chazette

First Published: 09 September 2018

## **Weather**

### **Volume 73, Issue 9**

Pages: E1, 274-288, i-iv, 289-304, E2-E4

September 2018

### **Cover Information**

First Published: 04 September 2018

### **In this issue of Weather**

Jim Galvin

#### **Large-scale Rossby wave and synoptic-scale dynamic analyses of the unusually late 2016 heatwave over Europe**

Philipp Zschenderlein, Georgios Fragkoulidis, Andreas H. Fink, Volkmar Wirth

Pages: 275-283 | First Published: 20 July 2018

Parts of Europe were affected by a heatwave in late summer 2016, with record-breaking temperatures for the time of year. The heatwave was associated with successive Rossby wave packets, which originated in western North America. During the heatwave, subsidence and the ensuing adiabatic compression in the free atmosphere – in combination with boundary layer processes, rather than temperature advection – were instrumental in explaining the occurrence of the extreme temperature events at the three selected surface stations.

Recent assessment of West African summer monsoon daily rainfall trends

Romarc C. Odoulami, A. A. Akinsanola

Pages: 283-287 | First Published: 15 September 2017

Book Review

Pages: 287 | First Published: 06 April 2018

Weather images

Pages: 288 | First Published: 04 September 2018

July 2018 Mostly dry, warm and sunny; very warm in southeast

Pages: i-iv | First Published: 04 September 2018

Photographs

Optical phenomena

Pages: 289 | First Published: 04 September 2018

Research Articles

Flooding threshold rainfall events in Bermuda

Michael C. Johnston, Mark P. Guishard, Irene Peñate, Ian D. Currie

Pages: 290-294 | First Published: 18 January 2018

Recent localised flooding events in Bermuda motivate an examination of the daily rainfall record, to determine trends and variability in rainfall accumulations. A catalogue of anecdotal reports of

flooding for the last decade was used to assess a threshold daily rainfall of 39.3mm for flood events. Examination of the historical record of daily rainfall for 1949–2016 revealed a return period of 2 months for flood mean threshold events. A time series of rainfall amounts and rain days since 1949 exhibits a high degree of variability and exhibits no statistically significant trend.

### **International cooperation in meteorology, part 1: origin and early years**

John W. Zillman

Pages: 295-300 | First Published: 17 April 2018

The development of international cooperation in meteorology from the 1700s to 1960. Following the original initiative of the Royal Society in 1723 (bottom left) and other limited-duration data collection efforts through the late 1700s and early 1800s, the major milestones were the Brussels Conference of 1853, the establishment of the International Meteorological Organization (IMO) in 1873 and its replacement by the World Meteorological Organization (WMO) in 1950. From the 1890s to the late 1940s, the non-governmental IMO Conference of Directors, supported by its subsidiary International Meteorological Committee and expert Technical Commissions, provided a comprehensive international framework for essential cooperation, standardisation and coordination across the entire emerging science and practice of meteorology. The important task of establishing and maintaining a cooperative framework for ongoing observation and data collection and exchange fell to the IMO Technical Commission for Synoptic Weather Information (CSWI) and, later, to the WMO Commission for Synoptic Meteorology (CSM). The major special cooperative data collection and research initiatives of the IMO and early WMO years were the First and Second International Polar Years (IPYs) and the International Geophysical Year (IGY).

Short Article

### **An observational study of the Kanchipuram flood during the northeast monsoon season in 2015**

Anoop Mishra, Sagarika Chandra, Mohammd Rafiq, N. Sivarajan, K. Santhanam

Pages: 300-301 | First Published: 18 May 2018

- This study presents analysis of observational data from a flood that hit Kanchipuram, India in 2015.
- Rain gauge observations from 13 stations are used.
- The results show that the flood was caused by multi-day heavy precipitation events during November and December.

- The image shows the cumulative rainfall totals over Kanchipuram from 2 November to 2 December 2015.

Professional interest

### The Business Case for Curiosity

Most of the breakthrough discoveries and remarkable inventions throughout history, from flints for starting a fire to self-driving cars, have something in common: They are the result of curiosity. The impulse to seek new information and experiences and explore novel possibilities is a basic human attribute. New research points to three important insights about curiosity as it relates to business. First, curiosity is much more important to an enterprise's performance than was previously thought. That's because cultivating it at all levels helps leaders and their employees adapt to uncertain market conditions and external pressures: When our curiosity is triggered, we think more deeply and rationally about decisions and come up with more-creative solutions. In addition, curiosity allows leaders to gain more respect from their followers and inspires employees to develop more-trusting and more-collaborative relationships with colleagues.

[https://hbr.org/2018/09/curiosity?utm\\_medium=email&utm\\_source=newsletter\\_weekly&utm\\_campaign=weeklyhotlist\\_activesubs\\_notdalertnlsubs\\_movetile\\_dailyalert\\_placementtesta&utm\\_content=signinnudge&referral=00202&deliveryName=DM13437#the-business-case-for-curiosity](https://hbr.org/2018/09/curiosity?utm_medium=email&utm_source=newsletter_weekly&utm_campaign=weeklyhotlist_activesubs_notdalertnlsubs_movetile_dailyalert_placementtesta&utm_content=signinnudge&referral=00202&deliveryName=DM13437#the-business-case-for-curiosity)

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