

## Atmospheric Rivers Increase to increase 3x in Size as the Grand Solar Minimum Intensifies

[— ADAPT 2030 Video Click Link to Watch —](#)



There seems to be a push in the news lately about this Geophysical Research letter global analysis of climate change projection effects on Atmospheric Rivers. I highlighted in the yellow there the percentage is based on the models that they think these arc storms or atmospheric compression events are going to increase over today's rates. Looking down the chart you can see at the very minimum that they're forecasting out 25 to 30 percent and even as high as 300 percent or three times more rain and more ferocity from these events pushing forward into 2030.



## Geophysical Research Letters

**RESEARCH LETTER**  
10.1029/2017GL076968

## Global Analysis of Climate Change Projection Effects on Atmospheric Rivers

Vicky Espinoza<sup>1,2</sup> , Duane E. Waliser<sup>2</sup> , Bin Guan<sup>2,3</sup> , David A. Lavers<sup>4</sup> ,  
and F. Martin Ralph<sup>5</sup> 

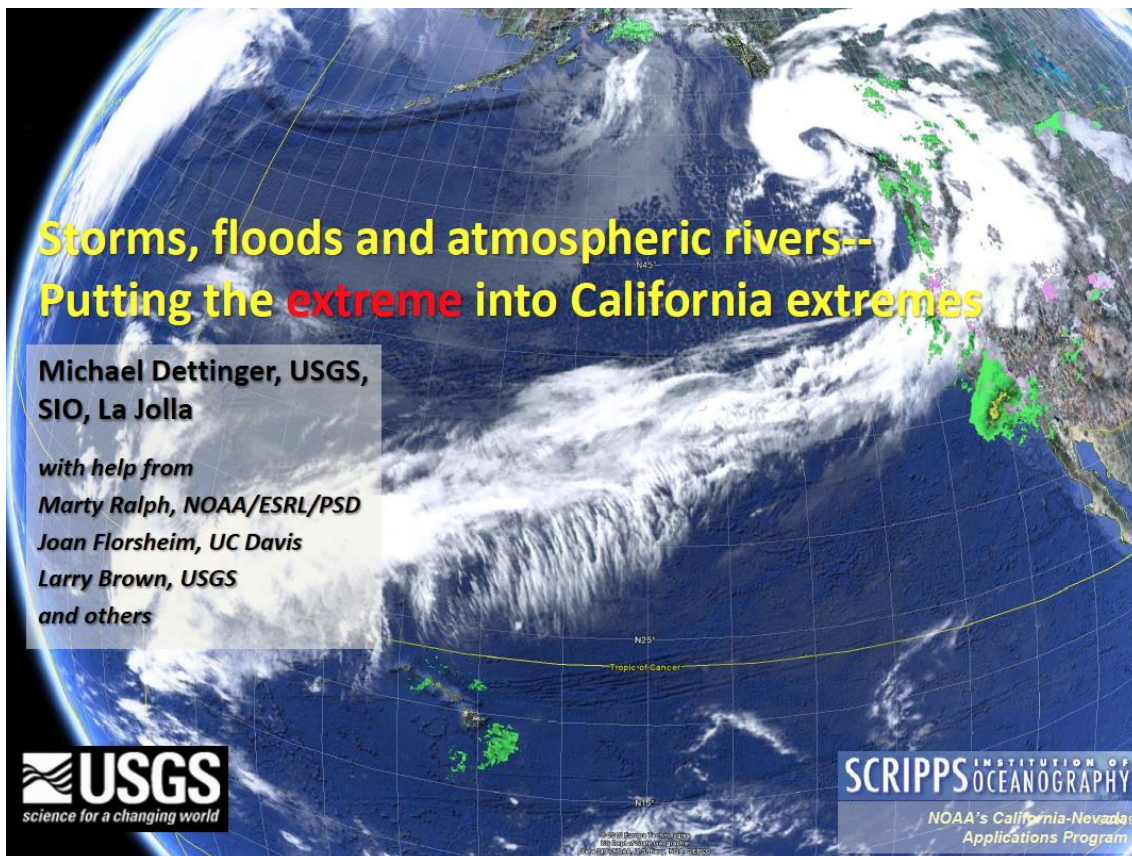
**Table 1**

Comparison of Mean Changes in AR Frequency (Percent of Time Steps) and IVT ( $\text{kg} \cdot \text{m}^{-1} \cdot \text{s}^{-1}$ ) Between the Current Study and Previous Studies for the Western U.S. and Western Europe

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Warner et al. (2015)	1970–1999	2070–2099	U.S. West Coast	+230–290	+30
Payne and Magnusdottir (2015)	1980–2005	2070–2100	U.S. West Coast	+23–35	—
Gao et al. (2015)	1975–2004	2070–2099	U.S. West Coast	+50–600	—
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Shields and Kiehl (2016a)	1960–2005	2055–2100	U.S. West Coast	+8	—
Espinoza et al. (2018, current study)	1979–2002	2073–2096	U.S. West Coast	+45	+30
Lavers et al. (2013)	1980–2005	2074–2099	W. Europe	+50–100	—
Gao et al. (2016)	1975–2004	2070–2099	W. Europe	+127–275	+20–50
Ramos et al. (2016)	1980–2005	2074–2099	Europe	+100–300	+30
Shields and Kiehl (2016a)	1960–2005	2055–2100	North Atlantic	+4	—
Espinoza et al. (2018, current study)	1979–2002	2073–2096	W. Europe	+60	+30

Note. The bold (italic) region is previous studies focusing on the U.S. West Coast (western Europe). The studies are ordered from oldest to most recent within each geographic region (bold and italic). Note that each of the studies mentioned above differ in their methodologies, models used, and their study periods limiting their comparability.

It's almost unusual at the timing while this is making the news media rounds across the planet. They're talking about massive super storms massive super floods beginning now.



**Storms, floods and atmospheric rivers--  
Putting the extreme into California extremes**

Michael Dettinger, USGS,  
SIO, La Jolla

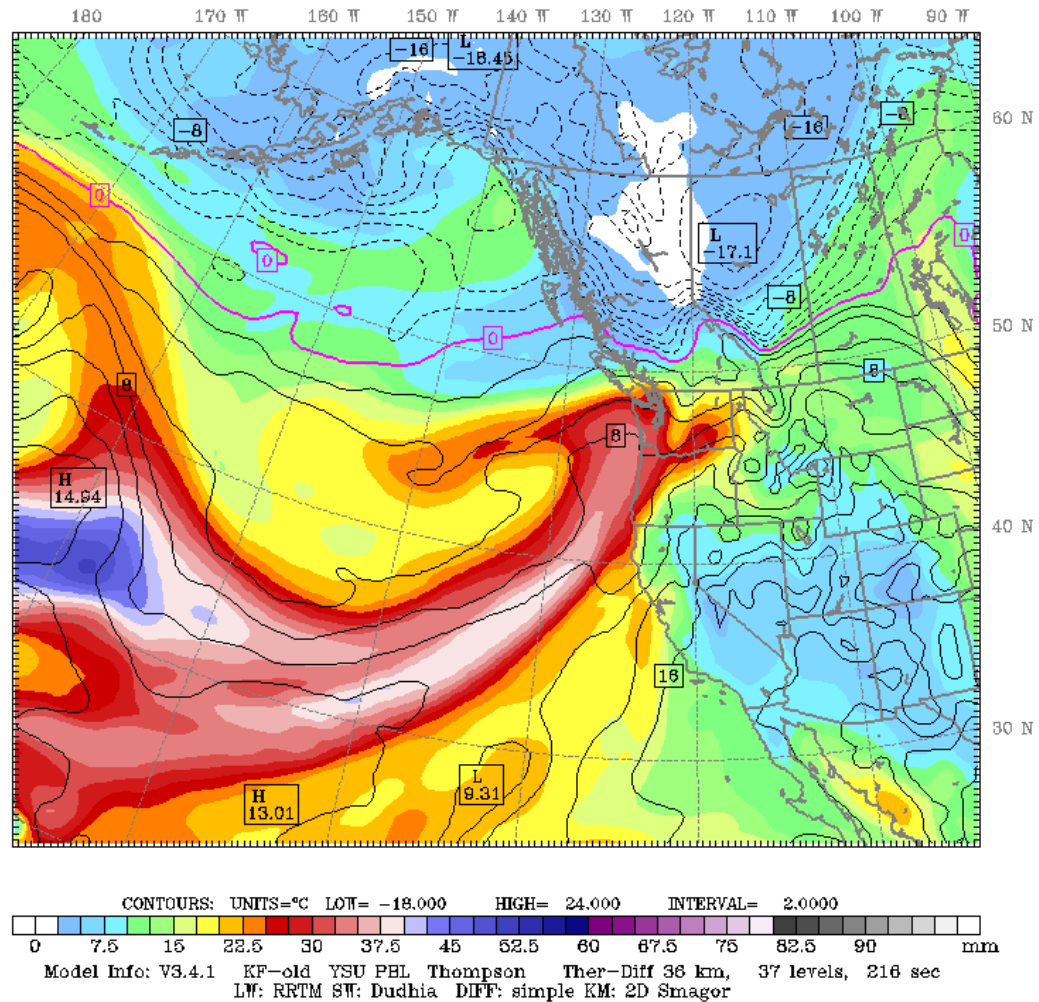
with help from  
Marty Ralph, NOAA/ESRL/PSD  
Joan Florsheim, UC Davis  
Larry Brown, USGS  
and others

**USGS**  
science for a changing world

**SCRIPPS** INSTITUTE OF OCEANOGRAPHY  
NOAA's California-Nevada  
Applications Program

Graphics showing you these ARK storms through California West Coast US. They're pervasive across the entire planet and there is a ramp up in winds as well.

UW WRF-GFS 36km Domain  
 Fcst: 9 h  
 Column-integrated water vapor (mm)  
 850 mb Temperature (C)  
 Init: 12 UTC Tue 30 Oct 12  
 Valid: 21 UTC Tue 30 Oct 12 (14 PDT Tue 30 Oct 12)



I want to take you through the last two weeks of events of “hemisphere rivers” increasing along with global wind patterns that are far above the norm. Starting in the southern hemisphere, the largest wave ever recorded, a massive 23.8 meter 78-foot-tall wave, near Campbell island south of New Zealand toward Antarctica. At the bottom of the slide there where I highlighted in blue, this new record which broke the old record that was set in Tasmania in 2012.



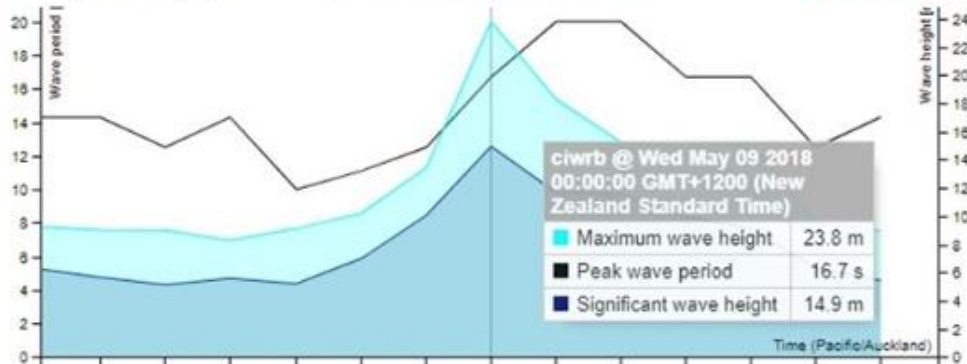
## THE WATCHERS

Watching the world evolve and transform

# Southern hemisphere produced its largest wave on record

Posted by TW on May 15, 2018 in categories Editors' picks, Severe weather

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A massive 23.8 m (78 feet) high wave has been measured near Campbell Island, New Zealand on May 9, 2018, making it the largest wave ever recorded in the southern hemisphere.

A new ocean buoy, installed March 2, 2018 and located about 640 km (400 miles) south of New Zealand's South Island, measured a maximum wave height of 23.8 m (78 feet). The previous record for the southern hemisphere was a 22.03 m (72 feet) high wave registered off the Australian state of [Tasmania in 2012](#).

Looking at the massive flood beyond flood lists this is what's coming off THE WATCHERS, Australia cold blast, record rainfall, massive floods in Germany which we will look at. Dams bursting in Kenya, that's just too much water and it's way above the norm to have dams breaking.

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### Record rainfall, strong winds and cold blast as extreme weather hits parts of Australia

Extreme weather events have broken historic rainfall records, bringing strong winds and unusually cold conditions across Australia on May 11, 2018. Tasmania's capital Hobart experienced a record-breaking rainfall, which caused road closures, schools to shut...

May 11, 2018



### Severe thunderstorm, massive flooding hits Germany

Severe thunderstorms accompanied by large amounts of hail and heavy rain hit parts of Germany on Thursday, May 10, 2018. Floods damaged homes and roads, leaving parts of the region under 1 m (40 inches) of water. A 'once in a century' hailstorm reportedly...

May 11, 2018



### At least 48 killed after dam burst in central Kenya

At least 38 people were killed on Wednesday, May 9, 2018, after a dam collapsed in central Kenya, submerging homes over a radius of nearly 2 km (1.2 miles). The number of people killed in Kenya since the start of the wet season has thus risen to at least 164....

May 10, 2018

Afghanistan, looking at least 150,000 people displaced by these floods. British Columbia record flooding after snowpack, second dam breaks over in Kenya.

## THE WATCHERS

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### At least 34 people and 600 animals dead after flash floods hit Afghanistan

Flash floods affecting Afghanistan over the past 7 days have claimed lives of at least 34 people and left 4 injured. Severe weather hit the country following an unusually dry winter. Hashmat Khan Bahaduri, spokesman for the Afghanistan Natural Disaster Management...

May 16, 2018



### Kenya Dam burst and floods death toll reached 48, 40 still missing

The death toll after the Patel dam burst in central Kenya on May 9, 2018 has reached 48 and still continues to rise. There 40 people still missing, officials said. Over 500 homes were affected after the private Patel dam in Solai collapsed last week, submerging...

May 14, 2018



### Historic flooding hits British Columbia after record snowpack starts melting, Canada

Record snowpack, temperatures as high as 30 °C (86 °F) and 2 days of intense rain have caused historic floods in parts of British Columbia over the past couple of days. In Grand Forks, the flood is worst since 1948. Things are not over yet, officials said,...

May 14, 2018

Yemen with the cyclone, Oman deserts are flooded.



### Yemen – Cyclone Mekunu Causes Devastation in Socotra

25 MAY, 2018

Oman is bracing for the onslaught of Cyclone Mekunu, which is expected to make landfall near Salalah city on 25 or 26 May, 2018. Mekunu is likely to bring maximum...

[Read Full Article](#)

Flash floods in Paris that went down into the “tube station, the underground, the subway”, and flooded those stations. Feet deep of hail in the middle of the city. Severe floods in Afghanistan, these are places that are generally drier in the desert areas. Oman, Yemen and Afghanistan not places you associated with massive flooding.

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### Flash floods hit Paris, intense hailstorm leaves serious crop loss, France

A severe storm swept over French capital Paris on May 22, 2018, flooding streets and Metro stations. Just a few days ago, intense hailstorm further south in Vaucluse destroyed almost a year's worth of Luberon cherry tree crops. The capital's streets looked...

May 23, 2018



### Two rivers overflow, leaving over 2 100 homes and 12 900 people affected in Gatumba, Burundi

Heavy rainfall that hit parts of Burundi on May 4, 2018 led to significant flooding in Gatumba, approximately 12 km (7 miles) from the city of Bujumbura. A joint assessment conducted on May 9 by Burundi Red Cross Society, the government of Burundi, OCHA, WFP,...

May 20, 2018



### 17 killed, 23 injured after new wave of severe flooding hits Afghanistan

Heavy rainfall and deadly floods continue affecting Afghanistan after unusually dry winter. Just days after floods took away lives of at least 34 people and 600 animals, a new wave of heavy torrential rains, flash flooding and landslides claimed lives another 17...

May 19, 2018

We have evacuations after a landslide in Lake to Houma North Carolina, another dam break. What is what these dam breaks going on? Catastrophic flooding, we saw this in Maryland. We have these absolutely earth-shattering, 14 inches of rain in 24 hours in Karnataka and India.

## THE WATCHERS

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### Record-breaking rains flood parts of Karnataka, 2018 Monsoon arrives with a bang

Record-breaking rains have hit parts of the Indian state of Karnataka over the past 24 hours, with up to 366.5 mm (14.4 inches) of rain within 24 hours. The Southwest Monsoon has now covered entire Kerala, most parts of Coastal Karnataka, some parts of South...

May 30, 2018



### Evacuations after landslide compromises integrity of Lake Tahoma dam, North Carolina

Thousands of people were evacuated early Wednesday, May 30, 2018 after a landslide caused by heavy rains raised fears about the integrity of Lake Tahoma dam in North Carolina. At 06:26 EDT (10:26 UTC), the National Weather Service issued a Flash Flood Warning for...

May 30, 2018



### Another catastrophic flash flood hits Ellicott City, Maryland, two month's worth of rain in less than 2 hours

Nearly two years after what was called a '1-in-a-1000-year' event ravaged Ellicott City, Maryland, the city experienced yet another major flash flood on Sunday, May 27, 2018. The storms dumped more than two month's worth of rain in less than 2 hours,...

May 28, 2018



Let's take a look at what the towns are looking like at the moment, record-breaking monsoon.

## Record-breaking rains flood parts of Karnataka, 2018 Monsoon arrives with a bang

Posted by TW on May 30, 2018 in categories [Featured articles](#), [Floods](#), [Monsoons](#), [Severe storms](#)

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I want to take you down to Karnataka, anyway I traveled down there early 90s'.



**Mangalore City**  
@MangaloreCity



This is also perhaps the highest rainfall recorded in the past few decades on a single day, as in the past decade the rainfall for a day has not crossed 100mm. [#Mangaluru](#)

[pic.twitter.com/D44125tjit](https://pic.twitter.com/D44125tjit)

12:57 AM - May 30, 2018



I went to this place called Hampi.



Here we go, this is the ancient city that's out part of it is along this river that is flooding at the moment, so you have to wonder what's going to be happening with the ruins here.





I know a lot of it's up on the hill, the entire area is millions and millions and millions of boulders. If you like bouldering this is your place because everywhere you're climbing you're finding sadhus inside the caves that are formed by boulders, and there are temples strewn everywhere you go. There's something amazing to go look at, if you're into that kind of traveling. In Hampi you can feed an elephant and orange that taps you on the head for good luck, this is the same place, but it's going to be flooded because of the river as well.



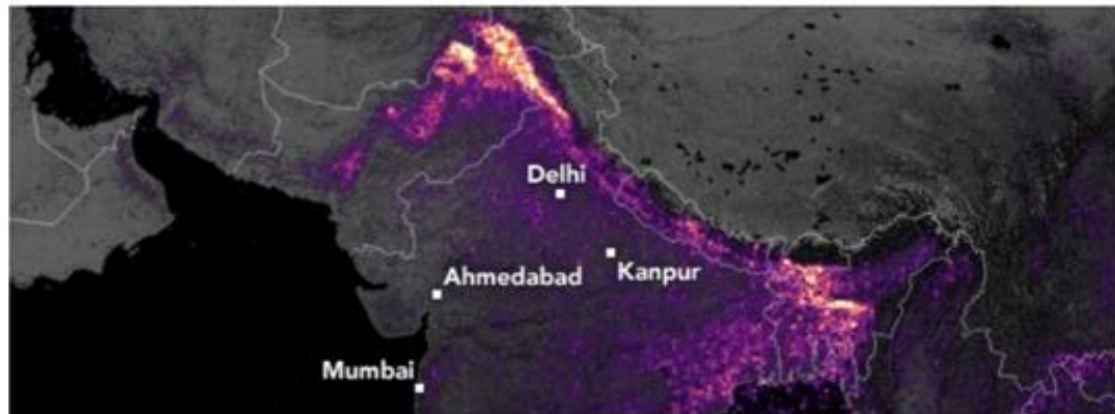
(Below) Staying over in India, unusually intense thunderstorms, dust storms and lightning are ravaging in India. Hundreds and hundreds of people were killed by lightning strikes this week and even NASA Earth Observatory quotes it as “the intensity seems to be anomalous”, at about 40,000 lightning strikes in April.

# Unusually intense thunderstorms, dust storms, and lightning ravage India

Posted by TW on May 25, 2018 in category [Earth changes](#)

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A streak of unusually intense thunderstorms, dust storms and lightning ravaged India this year, claiming lives of more than 200 people and causing huge material damage. While dust storms and thunderstorms are common in the country at this time, **the intensity appears to be anomalous, NASA's Earth Observatory reports.**

The state of Andhra Pradesh in the country's southeast was struck by about 40 000 lightning bolts in just 13 hours late April 2018. That's more than the number of strikes that occurred in the entire month of May 2017.

There's going to be disruptions in agriculture you're going to be responsible for growing some of your own food again. Heirloom and organic seeds for any grow zone on our planet. They have an amazing array of sprouting seeds and any vegetables that you'd like to grow spices & herbs as well.



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Now, staying on with unusual happenings from the sky this is Turkey, this is how deep the hail is on May 28<sup>th</sup> just a few days back. Severe weather a you really has a good run down inside Twitter of what's going on with floods and unusual anomalies around Europe.



Also taking a look at Germany, this is the third year in a row it's been flooding there with this kind of magnitude and intensity.



Countryside villages that's one thing but when you're looking at downtown in cities this is quite another, when it's this level of flooding. You know they have incredible drainage systems its Germany after all, it's precision engineering and when you get in this much water coming in flooding, something is not right.



severe-weather.EU severe-weather.EU @ severeweatherEU · May 29 ·  
Major flooding in Aachen, Germany today, May 29! Report: Claudio Simone





Then we have an Italy, flooding as well now. Understand that's right next to a mountain, so maybe something's pooling up there and is it's flowing down but unusual.



severe-weather.EU @ severeweatherEU · May 28 ·

Major flash floods in Val Brembana (Bergamo), north Italy on May 27! Report: Cinzia Omacini



Let's take a look over at Elliot City, this has been making the news across the United States, there's a plethora of details on this already but this is the second year in a row what's happened there and it's even higher this year and the water is deeper.



**Jeremy Harris** @ JeremyHarrisTV · May 27 ·

It's happening all over again. Main Street in @ Ellicott City with Devastating flooding. @ CairnsKcairns @ FOXBaltimore @ wbaltv11 @ WJZ video courtesy my sister Kali Harris. (Explicit language) # EllicottCity # Maryland





I also want to bring you over to another anomalous events with winds in our sky, Toxic Salt storm engulfing parts of Uzbekistan and Turkmenistan. This dust is from the Aral Sea area and contains nitrogen fertilizers, that's been gathering of the sea for dozens of years. That's that sea that dried out where you see those boats in the middle of the desert, that's the Aral Sea.

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## Toxic salt storm engulfs parts of Uzbekistan and Turkmenistan

Posted by TW on May 28, 2018 in categories [Editors' picks](#), [Pollution](#), [Severe weather](#) [Follow @TheWatchers\\_](#)



AKIpress said residents complained that the dust, containing nitrogen fertilizer that has been gathering at the bottom of the sea for dozens of years, spread even through the windows.

Salt storms near the Aral Sea are well known serious health hazard to surrounding areas.

Here on the satellite map, you can see it's to the far north up there where that huge dust cloud is coming off. Right above Turkmenistan you can see the border area they're.

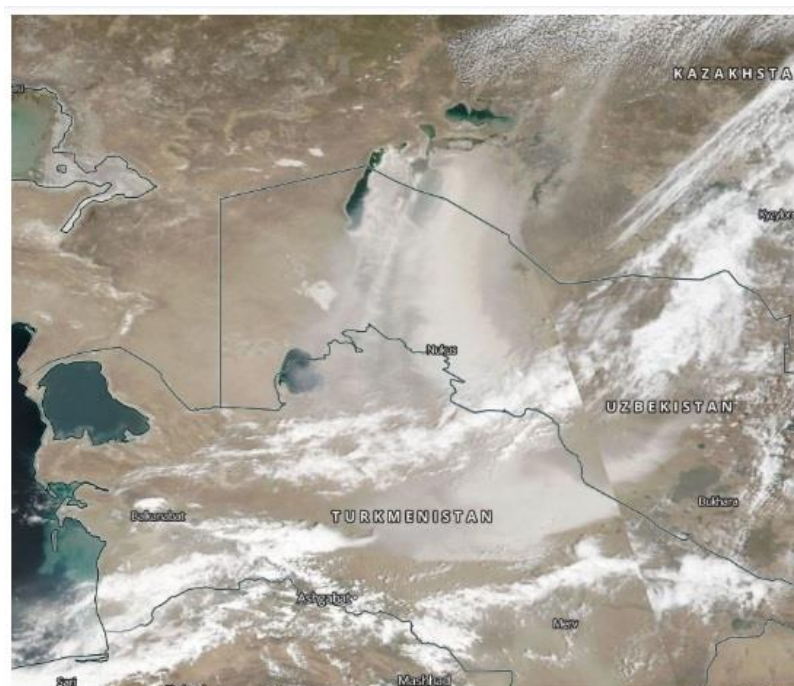


Image credit: NASA/NOAA Suomi NPP/VIIRS. Acquired May 27, 2018

## Powerful dust storm hits Iran, causing near zero visibility and injuring 99 people

Posted by [TW](#) on May 29, 2018 in category [Dust storms](#)

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The storm, caused by a strong upper-level storm system with winds gusts up to 112 km/h (70 mph), lasted around 12 hours. It affected eastern Iran, southwestern Afghanistan and northwestern Pakistan.

Wide out on the map here for you going over Afghanistan. Putting all these pieces together, with the weakening magnetosphere, our jet streams are wandering and it's going to continue.



In the media they are, covering up the Grand Solar Minimum again. Look out for the “Atmospheric River” changes, it's because of CO2, but in all actuality it's because of the intensifying Eddy Grand Solar Minimum that we have entered and now we're going to have to deal with it.



## Geophysical Research Letters

### RESEARCH LETTER

10.1029/2017GL076968

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**Table 1**

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Links to all of the articles in the video

ADAPT 2030 Mini Ice Age 2015–2035 Series on YouTube

<https://www.youtube.com/user/MyanmarLiving>

Atmospheric Rivers Increase Size 3X

Effects on Atmospheric Rivers

<https://agupubs.onlinelibrary.wiley.com/doi/pdf/10.1029/2017GL076968>

Floods <https://watchers.news/category/floods/>

<https://watchers.news/2018/05/30/record-breaking-rains-flood-parts-of-karnataka-2018-monsoon-arrives-with-a-bang/>

Largest Wave Ever southern hemisphere

<https://watchers.news/2018/05/15/southern-hemisphere-produced-its-largest-wave-on-record/>

India Lightning <https://watchers.news/2018/05/25/unusually-intense-thunderstorms-dust-storms-and-lightning-ravage-india/>

Dust storm Iran <https://watchers.news/2018/05/29/powerful-dust-storm-hits-iran-causing-near-zero-visibility-and-injuring-99-people/>



Mini Ice Age Conversations Podcast is available on [iTunes](#), [Soundcloud](#), [Stitcher Radio](#) and [Libsyn](#)