|  |
| --- |
| Jihad Report Aug 12, 2017 -Aug 18, 2017  |
| Attacks | 40  |
| Killed | 204  |
| Injured | 349  |
| Suicide Blasts | 6  |
| Countries | 17 |

# Total Solar Eclipse Aug. 21, 2017: Live Webcasts from NASA & More

By SPACE.com Staff | August 19, 2017 08:12am ET



NASA will follow the total solar eclipse live Aug. 21 as it crosses the United States from ground, aircraft, balloon and spacecraft, beginning at 12 p.m. EDT (1600 GMT). You can watch it online here in the window above, courtesy of NASA. "Eclipse Across America: Through The Eyes of NASA" will begin with a preview in South Carolina, and then the agency will broadcast from the path of totality starting at 1 p.m. EDT (1700 GMT). [[Total Solar Eclipse 2017: When, Where and How to See It (Safely)](https://www.space.com/33797-total-solar-eclipse-2017-guide.html)]

NASA EDGE will broadcast a 4 hour 30 minute live webcast "Megacast" from Carbondale, Illinois, featuring scientist interviews and feeds from a variety of telescopes during the celestial event. See those in the windows below Aug. 21, courtesy of NASA EDGE. https://www.space.com/17933-nasa-television-webcasts-live-space-tv.html

NASA EDGE Megacast: H-Alpha Telescope:

NASA EDGE Megacast: Ca-K Telescope:

NASA EDGE Megacast: White Light Telescope:

NASA EDGE Megacast: Processed Imagery:

**From NASA:**

"The program will feature views from NASA research aircraft, high-altitude balloons, satellites and specially-modified telescopes. It also will include live reports from Charleston, as well as from Salem, Oregon; Idaho Falls, Idaho; Beatrice, Nebraska; Jefferson City, Missouri; Carbondale, Illinois; Hopkinsville, Kentucky; and Clarksville, Tennessee.

"The Toshiba Vision screen in New York's Times Square will broadcast the program live in its entirety to give the public a big-screen view of the eclipse. Viewers in Times Square can listen to NASA coverage while observing it on the big screen by downloading the NASA app or going to https://www.nasa.gov/eclipselive."

**Little Kim and the Globalist Elite Battle Plan**

Maybe, you though the great and terrible tone of President Trump put an end to the aspirations of Little Kim to take a first strike against America. Well, it did for about 72 hours. But the Globalist Elite want Donald Trump out of office and they are doing this in a variety of ways. Their first and foremost plan is to suck America into a shooting war his first year in the presidency. North Korea warned Sunday that the upcoming US-South Korea military exercises are "reckless behavior driving the situation into the uncontrollable phase of a nuclear war."

Pyongyang also declared that its army can target the United States anytime, and neither Guam, Hawaii nor the US mainland can "dodge the merciless strike."

The messages in Rodong Sinmun, the official government newspaper, come a day before the US starts the Ulchi Freedom Guardian military exercises with South Korea.

Tensions between the US and North Korea have grown in recent weeks.

Just last week, Pyongyang said it had finalized a plan to fire four missiles toward the US territory of Guam. State media reported that leader Kim Jong Un would assess the US' next move before giving launch orders.

Kim would "watch a little more the foolish and stupid conduct of the Yankees," a North Korean statement said last week.

But US military and Trump administration officials said the 10-day military exercises set to begin Monday, would go ahead as scheduled.

The annual drills antagonize Pyongyang, which sees them [as practice for an invasion](http://www.cnn.com/2017/08/16/politics/trump-kim-north-korea-tweet/index.html). However, the US and South Korea maintain they are purely defensive.

"The Trump group's declaration of the reckless nuclear war exercises against the DPRK ... is a reckless behavior driving the situation into the uncontrollable phase of a nuclear war," Rodong Sinmun said, using the acronym for Democratic People's Republic of Korea, the nation's official name.

It described North Korea as the "strongest possessor" of intercontinental ballistic missiles capable of striking the US mainland from anywhere.

"The Korean People's Army is keeping a high alert, fully ready to contain the enemies. It will take resolute steps the moment even a slight sign of the preventive war is spotted," it said.

It did not provide any details on what it meant by "preventive war."

Both US Secretary of State Rex Tillerson and Secretary of Defense James Mattis said last week that the US was keeping military options on the table in dealing with North Korea.

Tillerson said peaceful diplomatic pressure was the preferred way to get Pyongyang to stop its testing of nuclear-capable ballistic missiles. But he added that the diplomatic approach "has to be backed with military threat" if North Korea chooses to move forward with destabilizing actions.

Mattis also made clear the US' willingness to use force if North Korea steps out of line.

"In close collaboration with our allies, there are strong military consequences if the DPRK initiates hostilities," he said.

"The joint exercise is the most explicit expression of hostility against us, and no one can guarantee that the exercise won't evolve into actual fighting," said an editorial carried by the North's official Rodong Sinmun newspaper.

"The Ulchi Freedom Guardian joint military exercises will be like pouring gasoline on fire and worsen the state of the peninsula," the paper said.

Warning of an "uncontrollable phase of a nuclear war" on the peninsula, it added: "If the United States is lost in a fantasy that war on the peninsula is at somebody else's doorstep far away from them across the Pacific, it is far more mistaken than ever."

Seoul and Washington have said the largely computer-simulated UFG exercise, which dates back to 1976, will go ahead as planned, but did not comment on whether the drills would be scaled back in an effort to ease tensions.

Around 17,500 US troops will participate in this year's drills -- a cutback from last year -- according to numbers provided by Seoul's defence ministry.

But South Korea's Yonhap news agency reported the allies were mulling scrapping an initial plan to bring in two aircraft carriers to the peninsula to take part in the drill.

South Korea's top military officer said Sunday that the current security situation on the peninsula was "more serious than at any other time" amid the North's growing nuclear and missile threats, and warned Pyongyang of merciless retaliation against any attack.

"If the enemy provokes, (our military) will retaliate resolutely and strongly to make it regret bitterly," said General Jeong Kyeong-Doo, chairman of the Joint Chiefs of Staff, in his inauguration speech.

**Promise from South Korea's President**

As tensions escalate, South Korean President Moon Jae-in promised his citizens last week there "will be no war on the Korean Peninsula ever again."

Moon, who took office in May, announced on his 100th day in office that US and South Korean policies are aligned on North Korea.

US President Donald Trump assured South Korea he would consult with them before making any military decisions on North Korea, according to Moon.



Moon Chung-in: We do not want war 01:13

Moon said North Korea's development of nuclear weapons technology was "nearing" a red line, which he described as "completing an ICBM and weaponizing it with a nuclear head."

North Korea claims it has successfully miniaturized a nuclear weapon. While some experts believe it may have the technology, others caution that even if it doesn't, North Korea should be taken at its word.

"If North Korea provokes again, it will face with much harsher sanction and won't stand it in the end. I want to warn North Korea to do no more dangerous gambling," Moon said.

His comments about averting war echoed similar statements he made Tuesday that only South Korea could give consent to initiate any conflict with the North.

"The government, putting everything on the line, will block war by all means," Moon said.

**China weighs in**

China has urged both Washington and Pyongyang to tone down the rhetoric and stop actions that inflame tensions, missile testing on North Korea's side and military exercises on the US and South Korean side.

China's Global Times newspaper, a state-run tabloid, was scathing of South Korea's decision to proceed with the drills.

"The drill will definitely provoke Pyongyang more, and Pyongyang is expected to make a more radical response," it said in an editorial.

"If South Korea really wants no war on the Korean Peninsula, it should try to stop this military exercise."

**From Russia with Love**

A U.S. District court judge has put a former British spy one step closer to facing questions under oath about the controversial dossier he authored alleging President [Donald Trump](http://abcnews.go.com/topics/news/donald-trump.htm)’s 2016 campaign team plotted with Russian agents.

A ruling by Judge Ursula Ungaro allows lawyers for a Russian technology executive named in the dossier to seek British approval to question onetime MI6 agent Christopher Steele about the funding and sourcing of the dossier under oath. The request was made as part of a libel suit brought by Webzilla CEO Aleksej Gubarev against the website Buzzfeed, which was first to publish the dossier Steele prepared.

“I suspect that I'll be the first to speak to him,” Gubarev’s attorney, Valentin Gurvits, told ABC News this week. “I know that he is trying very hard to prevent that from happening.”

The potential interview with Steele is part of a widening effort to pierce the secrecy surrounding the now infamous dossier that raised the first questions about then-candidate Trump’s ties to Russia. The 35-page document contains a range of unverified allegations – some of which have been discredited – laying out a history of ties between several Trump associates and Russia operatives. It also levels salacious claims about Trump’s own behavior during a visit to Moscow in 2013 – claims Trump later refuted and denounced during a Jan. 11 news conference.

“I think it was disgraceful, disgraceful that the intelligence agencies allowed any information that turned out to be so false and fake out,” Trump said.

Interest in the funding and sourcing for the dossier led the Senate Judiciary Committee to summon Glenn Simpson, the head of the Washington, D.C.-based research firm Fusion GPS that commissioned Steele’s work, to a closed session meeting scheduled for Tuesday. In a letter to Simpson, Senate Judiciary Chairman [Chuck Grassley](http://abcnews.go.com/topics/news/us/chuck-grassley.htm), R-Iowa, indicated he wants Simpson to reveal who first hired him to investigate Trump’s Russia ties and which government agencies received copies when it was completed.

“We are interested in the history of the dossier, including how it was funded, compiled and how it was used,” a Grassley aide told ABC News.

“There's certainly plenty of evidence that Russia worked to interfere with our democratic process … but allegations that the Trump campaign was involved stem largely from the contents of a salacious and unverified anti-Trump dossier, whose creation was overseen by Fusion GPS for political purposes,” another Republican Judiciary Committee aide said. “Reports that the [FBI](http://abcnews.go.com/topics/news/us/federal-bureau-of-investigation.htm) then used the dossier as a roadmap for its investigation, attempted to hire the former British spy who was compiling it, and may have relied on it to obtain special surveillance authority raises significant oversight and civil liberties concerns that warrant scrutiny.”

A source familiar with the Fusion GPS negotiations with the Senate Judiciary Committee told ABC News that Simpson is ready and willing to answer questions.

“Mr. Simpson will participate in a transcribed interview with the committee, and so far is the only person who has been willing to do so,” the source said.

Both Simpson and Steele have also been drawn into defamation lawsuits filed by the Russian tech mogul, Gubarev, in Great Britain and in the U.S. District Court in the Southern District of Florida.

Gubarev’s named appeared in the dossier, which was later published online by Buzzfeed. The dossier alleges that Gubarev had been recruited under duress by Russian agents, and that his company had transmitted viruses, planted bugs, stolen data and conducted “altering operations against the Democratic Party leadership” during the 2016 elections. Gubarev has strongly denied all of those claims.

“His response is it is a lie. It is a fabrication,” Gurvits, Gubarev’s attorney, told ABC News. “Never happened.”

Buzzfeed initially published the dossier with references to Gubarev but later redacted Gubarev’s name and the name of his company on the copy of the document published by the website. Attorneys for Buzzfeed, Steele and Simpson declined to comment.

Gubarev’s lawsuit has attracted attention because his lawyers have expressly stated they want to ask Steele – a former British intelligence officer stationed in Moscow – to identify the sources he relied upon to prepare the dossier.

A Russian who lives in Cyprus, Gubarev and his company operates one of the largest web-hosting networks in Europe. In a lengthy interview with ABC News, his lawyer rejected the suggestion that Gubarev is acting as a surrogate for the Kremlin who is attempting to use the U.S. courts to unmask the identities of Steele’s Russian sources.

“It's clear that we're not acting on behalf of the Russians,” Gurvits told ABC news. “We are acting on behalf of a businessman who has less ties, frankly, with Russia than he does with the United States. Forty percent of his business comes from the United States. This is not a relationship that a sane person would ever mess with.”

If he has the opportunity to take Steele’s sworn testimony, Gurvits said, “my number-one question is, ‘Why was this allegation about my clients included [in the dossier]?” he said. “Where did you get it? What did you do to verify it? And who did you communicate it to?"

In June court filings in the United Kingdom, Steele’s attorneys answered the last question, telling the court he shared his findings with a representative of Sen. John McCain. Arrangements were then made through an intermediary to get the document to McCain, who chairs the Senate Armed Services Committee, “so that it was known to … the United States governments at a high level by persons with responsibility for national security,” Steele’s filing in British court says.

McCain released a statement in January saying he then “delivered the information to the director of the FBI,” because he had been unable to assess the accuracy of the claims on his own. “That has been the extent of my contact with the FBI or any other government agency regarding this issue.”

As for who funded Steele’s research effort in the first place, that remains a mystery. British court records have only identified the clients as a Republican opponent of Trump’s initially, and a Democratic funder later. Grassley aides told ABC News that Judiciary Committee investigators plan to ask Simpson Tuesday to reveal the identity of his clients, but they are not optimistic they will get an answer.

Attorneys for Fusion have already indicated to the committee that its client relationships are confidential.

**The FOIA Games**

The ACLJ filed a FOIA request to find out what happened on the tarmac in Phoenix. We’ve talked about this many times on this program. The FBI, 8 months after the request was filed, came back and said, “We can’t find anything. The next thing that happened is the ACLJ went to the judge, and the judge ordered them to cough it up anyway. 416 pages later, they hit the mother lode, less the redacted notes of who, what where, and when. That is about the change.

Our [federal lawsuit](https://aclj.org/executive-power/acljs-files-lawsuit-over-ag-lynchs-secret-meeting-with-bill-clinton-will-hold-obamas-justice-department-accountable) against the DOJ bureaucracy over the secret meeting between former Attorney General Lynch and former President Clinton has already [unearthed documents proving](https://aclj.org/government-corruption/doj-document-dump-to-aclj-on-clinton-lynch-meeting-comey-fbi-lied-media-collusion-spin-and-illegality) the FBI lied that it had “no” documents, that the media was colluding with the Obama DOJ to bury the story, and that [AG Lynch (AKA Elizabeth Carlisle) was using a secret email address](https://aclj.org/government-corruption/aclj-foia-unmasks-former-obama-attorney-general-loretta-lynchs-alias-email-account-elizabeth-carlisle) to conduct official business. Now we’ve uncovered that the Obama White House was involved.

On the afternoon of June 29, 2016, two days after the Clinton-Lynch meeting, senior DOJ officials [forwarded an email](http://media.aclj.org/pdf/White-House-Clinton-Lynch-Documents.pdf) containing a transcript of AG Lynch’s press availability where she answered questions about the meeting directly to the Assistant Press Secretary and Spokeswoman at the Obama White House, Brandi Hoffine, that stated, “I’ve attached a document containing the transcript to this email, and I’ve included the text below. Please let me know if there is anything that needs to be corrected.”

Nineteen minutes later, the same senior DOJ official, Melanie Newman – the person who had taken point on the DOJ spin team – [emailed the FBI](http://media.aclj.org/pdf/Clinton-Lynch-Flag.pdf) to “flag” the story about the meeting – an email the Comey-led FBI told us last October [didn’t exist](http://media.aclj.org/pdf/FBI-Letter-%28no-records-located%29-10.21.16_Redacted.pdf). This email included the now redacted talking points – key spin the Obama deep state still doesn’t want the public to see.

It was Comey himself who testified that the Clinton-Lynch meeting was the impetus for his now infamous public announcement exonerating Hillary Clinton. He [testified before Congress](https://www.nytimes.com/2017/06/08/us/politics/senate-hearing-transcript.html), “[I]n an ultimately conclusive way, that was the thing that capped it for me, that I had to do something separately to protect the credibility of the investigation, which meant both the FBI and the Justice Department.” We know that AG Lynch’s Deputy Chief of Staff contacted Comey’s Chief of Staff and Counselor, [Jim Rybicki](https://www.fbi.gov/about/leadership-and-structure/fbi-executives/rybicki), [with information that is still redacted](http://media.aclj.org/pdf/Clinton-Lynch-FBI-Just-Called.pdf) on July 1st, just days before Comey’s public announcement.

We’ve also learned that within 2 minutes of the first press inquiry about the Clinton-Lynch meeting, senior DOJ officials had added Matthew Axelrod, the Principal Associate Deputy Attorney General, into the conversation. Axelrod was the number two to Deputy Attorney General Sally Yates and according to [his bio](http://www.linklaters.com/AboutUs/OurPeople/Pages/MatthewAxelrod.aspx), “took the lead in advising on crisis management within the DOJ, working closely with the White House, Congress, the FBI, and the media on DOJ’s most sensitive and high-profile matters.”

So within 2 minutes of learning that the press had found out about the secret Clinton-Lynch meeting, senior DOJ officials knew they had a crisis on their hands.

But it gets even worse. We’ve also learned that Paige Herwig, Counselor to AG Lynch, was [directly editing](http://media.aclj.org/pdf/Paige-Herwig-Edits-Clinton-Lynch-Documents.pdf) the still redacted talking points. Herwig is now the Deputy General Counsel to the U.S. Senate Committee on the Judiciary for Ranking Member Dianne Feinstein – [the committee that is now investigating](https://www.judiciary.senate.gov/imo/media/doc/2017-06-22%20CG%20DF%20LG%20SW%20to%20Loretta%20Lynch%20%28Clinton%20Lynch%20Emails%29.pdf) the Lynch matter. Before becoming Counselor to AG Lynch, [Herwig](https://www.linkedin.com/in/paige-herwig-880a565) was Special Assistant and Associate Counsel to President Obama.

The conflict of interest is astounding. Committee staff who are supposedly investigating this situation were the same people creating the talking points – Obama loyalists investigating themselves.

As more information comes out, it continues to show just how important this meeting was and just how corrupt it was. The DOJ knew it was a big deal. They knew it had, at the very minimum, the appearance of impropriety. They knew they had a crisis. And they did everything they could to minimize and bury the story – a plan the mainstream media was all too [happy to oblige](https://aclj.org/government-corruption/doj-document-dump-to-aclj-on-clinton-lynch-meeting-comey-fbi-lied-media-collusion-spin-and-illegality).

We are preparing direct legal action to get the unredacted documents – the talking points and spin that the DOJ bureaucracy still doesn’t want the American people to see. We are winning. The truth will come out and those responsible will be held accountable.

The truth is that here are still more than 40 Obama appointees standing in the way of this investigation, including the FOIA judges. Can Trump fix this? Yes. He could fix it in one day, because the Senate is not required to approve any of these replacements. Why hasn’t he? Because the Globalists are assaulting the White House on all fronts.

Many people don’t know that the Democrats plan to add funding requests on every single bill proposed for the next four years for removing Confederate statues. Every bill. Every bill. Including tax reform, health care. There is a solution, and the number is 60.

It is possible to have 60 free Republican seats in the Senate in 2018.

America is not mentioned in the scriptures anywhere. No prophet, no seer, so revelation made even a reference to nation that would be founded on the principles that rights come from God, and that government must serve the people by the permission of the people. No mention of the power, wealth, and progress that America would give to the world that would in less than a century nearly obliterate hunger, disease, and ignorance from the planet. But for a few evil leaders who choose to enslave their nations rather than see them benefit from the energy and knowledge breakthroughs started by America. America cannot be defeated in the present.

The enemies of liberty and freedom for humankind have been trying for 240 years to destroy America. They almost won in November of 2018, but they lost a key battle when Americans stepped forward and took back the white house. The transfer of power from Washington DC back to the people of America began within hours of that election. The process had to be stopped at all costs, even if it meant the complete destruction of America, or the assassination of the people’s president.

The enemies of America have realized that since they cannot defeat America in the present, they will go back and defeat it in the past. Impossible, you say? Come on. You’re talking with a physicist. Time is an illusion and only exists because it is observed to be a certain way. America’s enemies have decided that every bill, every law, every proposal that comes out of committee in Washington will have an amendment placed upon it. That amendment will demand money for the obliteration of America’s past. Every statue, every history book, every legend, every lesson learned by the bloody process of refining and perfecting liberty and freedom for all will be erased.

There will be no tax reform without a portion of America’s past burned away. There will be no health insurance reform without speech that claims all men are created equal eliminated from our vocabulary. We hear it now at every rally, every gathering of people, every blockade of a highway or campaign speech that one color of people is superior to another and is entitled to a living wage just for being alive in America. There will be no immigration reform without money being approved to remove the memory of America’s war with Mexico for Texas or California. There will be no law and order approved without the replacement of our founding fathers with globalist ideas of the elimination of private property, or cash, or the need to borrow money for a college education.

Of course, then your education will be controlled by globalists, along with the approved textbooks. Your healthcare will be granted only if you are worth the investment in time and medicine. Rights that we take for granted like the freedom to travel or to gather or to speak your mind will be relics of a day in the racist past.

Yes, America can be defeated in the past. And that may be why there is no prophecy of America. That is why not even God made mention of a country that would come forth in the last days founded under the trust in His name. The globalists know this. You doubt me. I am telling you that unless we wake up and see what the globalists are trying to do, this is exactly what will happen. And our grandchildren will ask questions about this day, and we will be too stupid or too scared to tell them that an age like this ever existed.

America will be defeated by evil killing our past, so that it never existed.

**The ANTIFA Army Has Arrived**

## In the meantime, there are groups of soldiers who attack civilians every single day in America, and almost no one is even arrested. They move in black troops with clubs, masks, and anti pepper spray gear. A White House petition created Thursday is calling on President Trump to officially recognize the radical left-wing Antifa movement as a terrorist organization.

“Antifa has earned this title due to its violent actions in multiple cities and their influence in the killings of multiple police officers throughout the United States,” the [petition](https://petitions.whitehouse.gov/petition/formally-recognize-antifa-terrorist-organization-0) reads.

Antifa has been known to provoke right-wing activists, and has made appearances in [Berkeley, California](http://www.breitbart.com/tech/2017/03/04/10-arrested-in-berkeley-elderly-man-assaulted-following-violent-anti-trump-protest/), in March and [Charlottesville, Virginia](http://www.breitbart.com/big-government/2017/08/12/female-reporter-for-the-hill-allegedly-punched-by-antifa-protester-in-charlottesville/), last weekend.

In the most recent incident in Charlottesville, the violent protesters clashed with right-wing activists protesting the city’s decision to remove a statue of Robert E. Lee.

Although Trump has not called out “Antifa” by name, he did condemn white supremacists and violent “alt-left” protesters.

“What about the alt-left that came charging at, as you say, at the alt-right? Do they have any semblance of guilt?” Trump [told](http://www.breitbart.com/big-government/2017/08/15/donald-trump-reporters-charlottesville-violence/) reporters at Trump Tower on Tuesday. “What about the fact that they came charging with clubs in their hands, swinging clubs? Do they have any problem? I think they do. That was a horrible, horrible day.”

The petition had 29,169 signatures as of Saturday evening – still shy of just over 70,000 signatures before it is eligible for an official response from the White House.

Other petitions demanding that Trump take action against similar advocacy groups have circulated through the White House’s petition site, like one [attempting](https://petitions.whitehouse.gov/petition/formally-recognize-black-lives-matter-terrorist-organization) to get Trump to recognize Black Lives Matter as a terrorist organization, but none have gotten an official response from the White House

## Shocking video has captured the moment a black left-wing activist, crashing a planned free speech rally in downtown Boston on Saturday, called a black police officer a “stupid-ass black bitch” for failing to be “on our side.”

The video sees black clad activists, including members of left-wing groups such as Antifa and Black Lives Matter, clashing with riot gear-wearing police officers.

[The short video](https://twitter.com/PhilipinDC/status/899099024455872512), recorded by reporter Philip Crowther sees leftist activists cursing at cops, throwing [bottles of urine](https://twitter.com/CBSNews/status/899011558436737024), spitting, and shouting racial slurs.

“You stupid-a\*\* bitch. I’ll fucking spit on you, bitch. You stupid-a\*\* black bitch. You’re supposed to be on our side!” screamed one black activist to a black police officer.

President Donald Trump praised the few hundred free speech protesters in Boston on Saturday, who had peacefully rallied before an [estimated](https://twitter.com/ABC/status/899010419381153796) 40,000 leftist activists descended on the city of Boston.

“Our great country has been divided for decades. Sometimes you need protest in order to heal, & we will heal, & be stronger than ever before!” Trump [wrote](https://twitter.com/realDonaldTrump/status/899008381226299392) on Twitter. No more than 300 free-speech activists took part in the event, while approximately 30,000 counter-protesters took to the streets in a protest organized by groups such as Black Lives Matter and Boston’s ANSWER Coalition.

The rally was organized by a group known as the Boston Free Speech Coalition and invited “libertarians, conservatives, traditionalists, classical liberals, (Donald) Trump supporters or anyone else who enjoys their right to free speech.”

The president also praised the Boston mayor and law enforcement officials for quickly quelling the violence that broke out.

“Police are looking tough and smart! Thank you,” Trump wrote. Some [27 arrests](https://twitter.com/ABC/status/899010419381153796) were made Saturday, according to the Boston Police Department. The Boston Police commissioner confirmed that “bottles of urine” and other items were thrown at the police officers. 27. There were thousands of these paid and trained soldiers on the streets of Boston and only 27 were arrested.

**They’re Everywhere**

Joshua Witt, 26, was leaving his car to enter a Steak ’n Shake in Sheridan, Colorado, and claims his long-on-top, buzzed-on-the-sides haircut was the reason for the stabbing as a confused anti-fascist accused him of being a neo-Nazi.

“All I hear is, ‘Are you one of them neo-Nazis?’ as this dude is swinging a knife up over my car door at me,” he [told](http://nypost.com/2017/08/19/man-stabbed-after-haircut-gets-him-mistaken-for-a-neo-nazi/) the New York Post on Saturday. “I threw my hands up and once the knife kind of hit, I dived back into my car and shut the door and watched him run off west, behind my car.”

Witt later described the incident on Facebook.

“[So] apparently I look like a neo-nazi and got stabbed for it … luckily I put my hands up to stop it so he only stabbed my hand…. please keep in mind there was no conversation between me and this dude I was literally just getting out of my car,” Witt wrote in a [post](https://www.facebook.com/permalink.php?story_fbid=497075400637404&id=100010048441847&pnref=story) shared over 30,000 times:

The stabbing incident follows a widespread furor over the potential [rise](https://www.nytimes.com/2017/08/17/business/media/charlottesville-media-trump.html?mcubz=0) of Nazism and white supremacy in the United States, after a white nationalist rally in Charlottesville [turned](http://www.breitbart.com/live/live-wire-charlottesville-protest-turns-violent-as-state-of-emergency-declared/) violent after activists clashed with counter-demonstrators. One woman was killed in the incident.

**So, let’s talk about Charlottesville.** I am going to take you on a little ride, using what I observed in the videos that have been circulated about the event that has been defined by the press. Make no mistake, every word, every impression you have about this came from the main stream press, who framed it, memed it, and phrased it for you. Now, I am going to undo all of that by putting you someplace they could not.

I am putting you in the passenger seat of Mr. James Field’s car. We’re riding around town in James’s dream car. He saved up for it, a bought it, put it on his Facebook page, and kept it spotless. He drives down to Charlottesville to see what’s up. He is not going to get out and protest, because after all he is barely 20 years old and he doesn’t want to park his car anywhere while this is going on.

My God, look at all the people. On every street down every block there are people blocking the roads and people in black with masks and clubs beating people with flags and signs. All of a sudden, James makes a turn down a particularly crowded street. Traffic is stopped ahead by the protesters blocking the street. He applies his brakes and approaches the intersection with caution.

Suddenly, someone jumps down from the sidewalk and steps forward and swings his bat putting a dent in his car. James becomes furious, but scared at the same time. He had a bat, and he is not alone, so he steps on the gas to get up the intersection and maybe he can turn off this street, but as he approaches the crowd surges around him, leaving him no choice but to ram the vehicle in front of him.

Within seconds, a dozen people collide with his car, smashing the mirrors off and pulverizing the rear windshield. He knows that if he does not do something fast, they are going to total his car and possibly pull him out and beat him to death in the street. He slammed the high performance Dodge Challenger into reverse, and steps on the accelerator. The people are pushed out of the way behind him and the car lurches backward. Everyone moves out of the way, except for one girl standing directly behind him blocking his retreat from certain death with her body. She is crushed and dies on the scene, but at least he gets out of there and makes it to freedom. The car is pretty much totaled.

Manslaughter, or murder? The difference, Earth Explorers is intent. What was the intent of the people smashing his car to bits? What was the intent of James Fields? The press would have you believe that he was a white, nazi nationalist. The boy was 20. He had only voted in one election. He no more had his ideology defined that the young people who were trying to kill him. I am telling you that this boy has a good defense, and unlike Dylan Roof, there are thousands of witnesses and numerous camera angles to back up everything I said here. Be wary, Earth Explorers. Don’t let the globalist press right your history.

**What if ISIS Attacks?**

The Russian leader is reportedly mounting an enormous military mission to take control of the terror group’s stronghold of Raqqa. The city is the self-declared capital of ISIS in Syria and is patrolled by as many as 5,000 jihadi members.

Putin is set to mobilise 150,000 reservists who he conscripted into the military in January. Yesterday, Putin hinted he was ready to join forces with the West to tackle Islamic State. He told: “I swear if ISIS commit terrorist attack in Russia, in half an hour Saudi Arabia is destroyed”

**What Happens When Government is Used Against the People**?

The investigation into the targeting of Tea Party members by Obama’s IRS is back on.

On Thursday, a federal judge ordered the names of the people who the agency says targeted Tea Party groups members. The judge then went on to say that the IRS must prove, via documentation, that they STOPPED the targeting. This could be the actual start of the undoing of Obama’s weaponized IRS.

Justice may still be within our reach! From [Washington Examiner](http://www.washingtontimes.com/news/2017/aug/17/judge-in-tea-party-case-orders-irs-to-disclose-emp/)

A federal judge on Thursday ordered the IRS to name the specific employees the agency blames for targeting tea party groups for intrusive scrutiny and said the government must prove it has ceased the targeting.

Judge Reggie B. Walton also said the IRS must explain the reasons for the delays for 38 groups that are part of a lawsuit in the District of Columbia, where they are still looking for a full accounting of their treatment.

Judge Walton approved another round of limited discovery in the case and laid out six questions that the IRS must answer, including the employees’ names, why the groups were targeted and how the IRS has tried to prevent a repeat.

At a hearing earlier this week, Judge Walton said it was time to get everything on the table.

“Lay it on the line. Put it out there,” he told attorneys for the IRS, who are continuing to fight some tea party groups’ demands for full disclosure.

The targeting scandal burst open in May 2013 when the IRS admitted it had been pulling conservative-leaning groups’ nonprofit status applications out of the usual processing queue and subjecting them to extra scrutiny and extraordinary delays because of perceived political activity.

IRS senior executive Lois G. Lerner initially said the problem was rogue employees at an Ohio office who botched the handling. But subsequent investigations revealed that IRS officials at the highest levels of Washington were aware of the delays and extra scrutiny.

Some applications are still awaiting approval, though the IRS as of late last month had agreed to a process for deciding on one of the key outstanding cases.

Still, some tea party groups say they feel they are being treated unfairly.

Carly Gammill, a lawyer at the American Center for Law and Justice, which is representing some of the groups in the lawsuits, told Judge Walton that they are concerned about an email sent by IRS employees during the initial targeting speculating that they would approve applications but would review them later for follow-ups.

“We suspect we will have to approve the majority of the c4 applications,” Holly Paz, a top Lerner aide, said in one 2011 email. “We will also refer these organizations to the Review of operations for follow-up in a later year.”

Ms. Gammill said the case against the IRS has been open for four years and that it’s time the agency explain what it did and whether it’s still treating tea party applications differently.

She had hoped for a broad series of inquiries that Judge Walton would make the IRS answer.

But Laura Conner, the Justice Department lawyer defending the IRS, said the inquiries would absorb too much time and effort, with no evidence that they would produce any new evidence.

“The United States should not be held to respond to far-reaching inquiries,” she said.

Judge Walton came down in the middle, writing his own set of inquiries for the IRS.

“Why hide the ball?” he asked the tax agency. “If there’s nothing there, there’s nothing there.”

Mr. Walton told the IRS to go beyond searching a basic agency database for records and ordered it to scour “other relevant resources containing documents from the relevant time period.”

The judge said that time frame runs from 2009 to March 27, 2015. The IRS had been arguing for a shorter period.

“Furthermore, to the extent that the plaintiffs have already received information produced by the government indicating that the plaintiffs were allegedly discriminated against, and that information provides a basis to believe that other such documents exist, the government must search all relevant sources to ensure that all documents responsive to the document request is identified and produced,” the judge wrote in his order.

He gave the IRS until Oct. 16 to finish the search.

Do you think Obama’s Crooked IRS Department should all end up in PRISON?

**The Arizona Primary**

President Donald Trump landed a long-anticipated blow to Sen. Jeff Flake of Arizona early Thursday, seemingly endorsing his Republican primary opponent in a Twitter message.

In a tweet posted at 3:56 a.m. Arizona time, Trump said: "Great to see that Dr. Kelli Ward is running against Flake Jeff Flake, who is WEAK on borders, crime and a non-factor in Senate. He's toxic!"

The social-media attack on Flake, R-Ariz., who recently wrote a book critical of the Republican Party's embrace of Trump's politics, left Ward, the former state senator from Lake Havasu City, jubilant. And it left Flake's fellow Republicans scrambling to defend him from the president of their own party.

"Jeff Flake is an excellent Senator and a tireless advocate for Arizona and our nation," Senate Majority Leader Mitch McConnell, R-Ky., said Thursday afternoon in a brief written statement. "He has my full support."

Sen. Bob Corker, R-Tenn., chairman of the Senate Foreign Relations Committee on which Flake sits, [on Thursday praised Flake](https://www.facebook.com/ChloeNooga/videos/1527134817346102/) as "one of the finest human beings I've ever met."

"The White House would be well-served to embrace the character, the substance, of someone like Senator Flake," Corker said. "He's one of the finest people I serve with. He's got a conscience. He is a real conservative. ... I hope for the good of our country he is someone who will be serving after 2018, and I'm thankful to know him."

But Flake [has been on Trump's radar for a long time](http://www.azcentral.com/story/news/politics/azdc/2016/09/04/donald-trump-jeff-flake-immigration-twitter/89874032/), and Flake likely exacerbated the already negative relationship with the Aug. 1 publication of his anti-Trump book, *Conscience of a Conservative: A Rejection of Destructive Politics and a Return to Principle.*

First elected to the Senate in 2012 and up for re-election in 2018, Flake was one of Trump’s most vocal Republican critics during the presidential campaign, refusing to endorse or vote for him. [He recently published a book that further antagonized the president](http://www.azcentral.com/story/news/politics/arizona/2017/08/02/jeff-flake-book-reelection-campaign/527657001/) by criticizing the new influence of pro-Trump populists, protectionists and conspiracy theorists.

Ward, meanwhile, has been a vocal supporter of Trump's agenda and at times publicly parroted some of his controversial statements, including blaming "both sides" for the recent violence in Charlottesville, Virginia.

Facebook[Twitter](https://twitter.com/intent/tweet?url=http://www.azcentral.com/picture-gallery/opinion/op-ed/robertrobb/2017/07/31/5-key-quotes-from-jeff-flakes-new-book/104155906/&text=President%20Donald%20Trump%20appears%20to%20endorse%20Kelli%20Ward%20in%20tweet%20bashing%20Sen.%20Jeff%20Flake&via=azcentral)[Google+](http://plus.google.com/share?url=http://www.azcentral.com/picture-gallery/opinion/op-ed/robertrobb/2017/07/31/5-key-quotes-from-jeff-flakes-new-book/104155906/)[LinkedIn](http://www.linkedin.com/shareArticle?url=http://www.azcentral.com/picture-gallery/opinion/op-ed/robertrobb/2017/07/31/5-key-quotes-from-jeff-flakes-new-book/104155906/&mini=true)

5 key quotes from Jeff Flake's new book

[Fullscreen](http://www.azcentral.com/story/news/politics/arizona/2017/08/17/president-donald-trump-endorse-kelli-ward-tweet-bashing-sen-jeff-flake/575649001/)

Sen. Jeff Flake says conservatives have gotten woefully off track in his new book, "Conscience of a Conservative." Here are five key passages:  Patrick Breen/The Republic

A buoyant Ward appeared on Phoenix radio station KFYI-AM (550) shortly after 6:30 a.m.Thursday.

"It's a pretty darn great morning," she said, adding that Trump's tweet of support was a sign of escalating momentum for her campaign against Flake.

"The president is exactly right: Jeff Flake is weak on the border," Ward said on KFYI. "He's an open-borders globalist. He has embraced the term 'globalist' himself."

Ward said that she and "Team Ward" will be out "in full force" [Tuesday at Trump's rally at the downtown Phoenix Convention Center](http://www.azcentral.com/story/news/2017/08/16/president-donald-trump-downtown-phoenix-rally/569484001/). She stopped short of saying whether she would be speaking at the event, only saying "there's a lot of discussion going on right now."

Sen. Jeff Flake (Photo: Jacquelyn Martin/Associated Press)

The National Republican Senatorial Committee, the arm of the Republican Party that works to elect GOP senators, is sticking by the incumbent Flake.

"The NRSC unequivocally supports Senator Flake in his reelection bid," said Sen. Cory Gardner, R-Colo., the NRSC chairman.

If Trump has, in fact, landed on Ward as his favored challenger to Flake, it would set up a proxy war of sorts between factions within the Arizona Republican Party for next year's Senate nomination.

Will Allison, a spokesman for Flake’s 2018 re-election campaign, accused Trump and Ward, two Washington outsiders, of making a new kind of inside-Washington agreement.

"You don't serve Arizona by cutting backroom deals in Washington, D.C.,” Allison said in a written statement provided to *The Arizona Republic*. “That's why Senator Flake will always fight for the people of our state.”

Ward last year[challenged McCain in the GOP primary but lost.](http://www.azcentral.com/story/news/politics/elections/2016/08/31/john-mccain-leading-kelli-ward-republican-senate-primary/89518792/) She earned nearly 40 percent of the vote to McCain's 51 percent in a four-way race.

Not long after her defeat, she re-launched her campaign for the 2018 primary against Flake.

Ward recently received national attention by saying McCain, who is undergoing treatment for brain cancer, [should step down so that Gov. Doug Ducey could appoint a new Republican senator](http://www.azcentral.com/story/news/politics/arizona/2017/07/21/kelli-ward-arizona-senator-john-mccain-should-step-down-and-i-should-get-his-job/500267001/) to replace him. And she said she thought she should be considered for the job.

In a Thursday morning tweet, McCain, who also has long been at odds with Trump, defended his ally Flake as "a principled legislator" who does what's right for the people of Arizona.

"Our state needs his leadership now more than ever," McCain said.

Trump’s apparent endorsement of Ward comes two days after a news conference in which [the president again blamed “both sides” for violence at a Saturday rally](http://www.azcentral.com/story/news/2017/08/15/trump-unfiltered-right-first-time-both-sides-blame/568906001/) by white supremacists and neo-Nazis. Three people died, including a woman killed after a car rammed into a crowd of counter-protesters.

Ward voiced agreement with Trump's casting blame on both sides, saying in a message on Twitter "I agree - stop the hate, violence & rhetoric on both sides - we need to stand together as Americans!" As part of her message she quoted Trump's tweet on the matter.

Trump's shout-out to Ward gives her a clear boost over possible rival Robert Graham, a former state GOP chairman who has been seen as a potential entrant into the Senate race. Jeff DeWit, the Arizona state treasurer who is close to Trump, also has frequently been mentioned as a possible candidate but [this week made public comments that indicated he's not that interested in the Senate job](http://www.azcentral.com/story/news/politics/arizona/2017/08/16/why-did-president-donald-trump-choose-arizona-outside-the-swamp-rally/573485001/).

Former Rep. Matt Salmon, R-Ariz., came up briefly Thursday as the favorite of some in Trump's orbit but he quickly confirmed that he instead will keep his post-Congress job at Arizona State University.

The president apparently decided to say something nice about Ward without giving his aides a heads up. Also, he may have been channeling former Rep. J.D. Hayworth, R-Ariz., who appeared on the Fox News Channel shortly before Trump tweeted.

Hayworth, whose 2010 primary challenge for the Senate was crushed by McCain, praised Ward and blasted Flake as "toxic," the same word that appeared in Trump's subsequent anti-Flake tweet.

"Dr. Kelli Ward is out working hard," Hayworth said on the early-morning "FOX & Friends"program. "... She gave John McCain a great race in the primary of 2016; in fact, performed better than I did in 2010. She's got the momentum, she's gaining some of the money, keep your eyes on Kelli Ward."

Hayworth, who served six terms in Congress before his 2006 ouster by Democrat Harry Mitchell, further accused Flake of doing his best "to be obnoxious, to be the smirking senator that he is really known to be."

This week's Republican Senate primary in Alabama [gave a glimpse at Trump's influence](http://www.al.com/news/index.ssf/2017/08/luther_strange_alabama_senate.html) in GOP races around the country. The president endorsed incumbent Sen. Luther Strange, who on Tuesday finished second behind Roy Moore, a former Alabama Supreme Court chief justice. But Strange's performance was good enough for him to proceed to a runoff, and some observers say he might not have made it to the next round without Trump's help.

**The GOP Cannot Get Involved**

The GOP cannot help in a primary when there is a sitting Republican in that office. Trump is not part of the GOP. This means that if Trump goes into States he won by double digits and endorses challengers to sitting Senators and Congressmen, then the GOP is going to be losing its power. The GOP’s strong 2016 election showing raises a crucial question: Do Republicans have any chance of netting eight Senate seats — and a filibuster-proof majority — in 2018?

The upcoming Senate class is unusually unbalanced. Only eight Republican Senate seats are up for election in 2018, compared with 25 Democratic seats (including two independents who caucus with the Democrats). Ten of those Democratic seats are in states carried by Donald Trump.

By any measure, Democrats are on the defensive in the next fight for Senate control. A three-seat Democratic midterm gain, which would give the party a majority, looks virtually impossible given the seats up this cycle.

*[*[*Senate Democrats got a big break today. They are going to need many more.*](https://www.washingtonpost.com/news/the-fix/wp/2016/12/13/senate-democrats-got-a-big-break-today-they-are-going-to-need-a-lot-more/?utm_term=.20bedf1e0bb7)*]*

A net change of eight seats would be large by historical standards but not unprecedented. Swings of at least eight Senate seats have occurred in four of the last 17 midterm elections — 1958, 1986, 1994 and 2014 — and in six of the last 34 elections (going back to 1950).

The problem for Republicans is that these big Senate swings have always happened *against* the sitting president’s party. The sole exception, since the direct election of senators, occurred in 1934, when President Franklin Roosevelt’s party gained 10 Senate seats. Two years earlier, when Roosevelt won a landslide presidential victory, his party gained a dozen Senate seats.

The sitting president’s party has gained Senate seats in only four of the past 17 midterms, and each time the gain has been minuscule — one seat in 1970, 1982 and 2002, and two seats in 1962.

History, then, is not on the GOP’s side.

But since 2016 was something of a “black swan” election and Donald J. Trump remains a wild card, it’s probably premature to dismiss the possibility that 2018 could produce another unusual outcome.

The only Republican Senate seat at risk as the cycle begins is in Nevada. GOP freshman Dean Heller was elected in 2012 when he squeezed by Democrat Shelley Berkley in a photo finish, 46 percent to 45 percent. This year, Democrat Hillary Clinton carried Nevada narrowly in the presidential race, so you can bet Democrats will go after Heller with everything they have.

A number of Republican senators could find themselves facing primary challenges, including Jeff Flake of Arizona and Ted Cruz of Texas. Utah’s Orrin Hatch may retire. But at this very early point, there is no reason to believe that any GOP-held seat other than Heller’s will be at risk, even if there are Republican retirements or messy primaries.

On the other hand, five Democratic senators in the class represent states normally classified as anywhere from leaning Republican to strongly Republican: Indiana, Missouri, Montana, North Dakota and West Virginia. Two other states are pure swing states: Florida and Ohio. And three states often lean Democratic but were carried by Trump last month: Pennsylvania, Michigan and Wisconsin. (Both Pennsylvania and Wisconsin currently have one Republican senator.)

Joe Donnelly (D-Ind.) was a surprising winner in 2012 after popular veteran incumbent Richard Lugar (R) was upset in the GOP primary and the eventual Republican nominee, Richard Mourdock, stumbled through an underwhelming campaign.

Claire McCaskill (D-Mo.) looked headed for defeat four years ago until her GOP challenger, Todd Akin, started talking about rape in a way that offended many in the Show Me State. She won reelection easily against the inept Republican.

Jon Tester (D-Mont.) and Heidi Heitkamp (D-N.D.) proved to be strong campaigners who localized their races, while Joe Manchin (D-W.Va.) emphasized his conservative views on issues from guns to coal in a state that has become very Republican in federal elections.

Debbie Stabenow (D-Mich.), who won by 21 points in 2012, seems like a difficult target, but Robert Casey Jr., who won by nine points, and Tammy Baldwin (D-Wis.), who beat a former GOP governor by only five points, appear to be softer incumbents.

As always, the crucial question in any election is turnout — and the makeup of the electorate. That will be doubly so in 2018, since overall turnout drops during midterm elections. Midterm electorates usually look more Republican, with whites and older voters constituting a larger percentage of voters.

Since Trump won the electoral vote while losing the popular vote by more than two percentage points and 2.8 million votes, his victory was all about the combination of states he won. If he can energize his supporters in normally swing states and even Democratic-leaning states he carried this year, he could have a huge impact on the Senate midterm elections.

Since the president-elect is still weeks from being sworn in, it’s impossible to know how he will be viewed in 2018. If he is widely seen as successful, he could turn out to be a considerable asset for Republican Senate hopefuls in states with competitive contests.

If he is seen as a disappointment, or worse, voters will use the midterm elections to send a message of dissatisfaction to him and his party. In that case, Trump would be an albatross around the neck of Republican nominees in states that he was not expected to carry in 2016, including Pennsylvania, Michigan and Wisconsin, as well as in states where the Republican label is not a disadvantage.

The Health 202 newsletter

Your daily guide to the health-care debate.

Top of Form

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Trump voters’ strong commitment to the president-elect suggests that they’ll stand by him over the next two years. He has shown an ability to blame others (the media, Democrats, etc.) when he gets into political trouble, and that could help him rally supporters in 2018, even if his job approval numbers are relatively weak and a majority of Americans are unhappy with the direction of the country.

Election cycles invariably look very different when they begin and when they end. Retirements, primary fights and results, political events in the nation’s capital, and economic and foreign-policy developments all impact voters. We simply can’t know what voters will be thinking 23 months from now.

Nevertheless, the Senate already bears watching — not to see whether Democrats can retake the body in 2018, which seems unlikely now, but to see whether Republicans can strengthen their hold on the Senate and strengthen the hand of President Trump.

The outcome of the 2016 election shocked and worried Democrats across the country. Unfortunately for them, there may be worse to come in the 2018 midterm elections.

In less than two years, 33 Senate seats will be up for grabs. [Senate Democrats](http://www.huffingtonpost.com/news/democratic-caucus/), armed with the filibuster, are the last line of defense against incoming President [Donald Trump](http://www.huffingtonpost.com/news/donald-trump/) and the congressional Republican agenda. That means the electoral stakes are high in 2018, and Democrats must fight to keep up their numbers.

The picture looks reasonably sunny for Republicans, who have only eight Senate seats on the ballot next year. Six of them (Mississippi, Nebraska, Tennessee, Texas, Utah and Wyoming) are likely safe for the GOP.

Democrats, on the other hand, have 23 Senate seats to defend ― 25 if you count the independents who caucus with the Democrats.

A dozen of those seats are likely safe in the Democrats’ camp. They’ll probably hold onto seven seats in the Northeast ― Connecticut, Massachusetts, Rhode Island, New York, New Jersey, Maryland and Delaware. Democrats are expected to retain five more seats in California, Hawaii, Washington, New Mexico and Minnesota.

The two Senate seats now held by independents ― Angus King (Maine) and Bernie Sanders (Vt.) ― are also likely to stay in the hands of their incumbents or go to Democrats.

That leaves 13 seats ― 11 held by Democrats and two held by Republicans ― as potential tossups.



[Sabato’s Crystal Ball](http://www.centerforpolitics.org/crystalball/articles/2018-senate-democrats-are-very-exposed/)

Just two of the tossup seats are in states that voted for Hillary Clinton last November: Nevada and Virginia. Others are in states ― like Pennsylvania, Florida and Michigan ― that only went for Donald Trump by small margins. But Trump’s victories can’t be ignored.

Midterm elections have tended to favor the opposition ― that is, the party that isn’t led by the sitting president. So history could be working for the Democrats.

But the 2018 midterms could be different. Kyle Kondik and Geoffrey Skelley of [Sabato’s Crystal Ball argue](http://www.centerforpolitics.org/crystalball/articles/2018-senate-democrats-are-very-exposed/) that today’s extremely polarized political environment means that the GOP has a good chance of picking up seats in a few “very Republican states” now held by Democrats.

Here’s an early look at those tossup races:

First-term senators like Tammy Baldwin (D-Wis.), Heidi Heitkamp (D-N.D.) and Joe Donnelly (D-Ind.) may have a harder time defending their seats.

In Wisconsin, Gov. Scott Walker, a former GOP presidential candidate, has [ruled out a 2018 Senate bid](http://www.washingtonexaminer.com/gov.-scott-walker-leaning-toward-re-election-rules-out-2018-senate-bid/article/2607557) against Baldwin, but Republicans still have time to [find another strong candidate](http://www.usatoday.com/story/news/politics/2016/12/27/gop-targets-tammy-baldwin/95873022/?utm_source=dlvr.it&utm_medium=twitter) to take on the junior senator.

The GOP has plenty of time to find a strong candidate to unseat Donnelly in Indiana, too. The first-term senator won office in 2012 after tea party favorite Richard Mourdock took out six-term Sen. Richard Lugar in the Republican primary and then took himself out in the general election with controversial remarks about rape. Now the Republicans have a good chance of winning that Senate seat back.

As for Heitkamp, she appeared to top [Trump’s list for agriculture secretary](http://www.politico.com/story/2016/12/democrat-heitkamp-tops-trumps-list-for-agriculture-secretary-232465) at one point. That looked like bad news for Democrats trying to hold onto the North Dakota Senate seat. New [reports suggest](https://www.bloomberg.com/politics/articles/2017-01-02/perdue-said-to-be-trump-s-lead-pick-for-agriculture-secretary) former Georgia Gov. Sonny Perdue is now the best bet for the agriculture post. But even if Heitkamp is running for re-election, she faces a battle in a state that voted for Trump by a 36-point margin.



Mark Wilson/Getty Images

Sens. Heidi Heitkamp (far left) and Debbie Stabenow (second from right) could face tough re-election races in 2018.

Second-term senators Claire McCaskill (D-Mo.) and Jon Tester (D-Mont.) also hail from states that voted for Trump by wide margins (19 points and 21 points, respectively). Both are well-established incumbents ― a boon for re-election. But if they face strong challengers in their heavily Republican states, McCaskill and Tester could still be in trouble.

Tester probably stands a better chance of the two. While going for Trump last year, Montana also re-elected its Democratic governor, Steve Bullock, to a second term.

The Senate race in Ohio could get interesting. Democratic incumbent Sherrod Brown won his 2006 and 2012 elections by comfortable margins, so the same is possible next year. But the sizable victories of both Trump and fellow Sen. Rob Portman (R) last November could provide momentum for Republicans to oust Brown after roughly four decades of public service in Ohio. Specifically, while Brown could probably beat state Treasurer [Josh Mandel again](http://www.cleveland.com/open/index.ssf/2016/12/ohio_treasurer_josh_mandel_ann.html), a bid by Ohio Gov. John Kasich would likely prove tougher competition. The popular Kasich is perfectly positioned for a 2018 Senate bid: He led Trump by 11 points in the state’s 2016 presidential primary, and he can’t run for re-election next year having served two consecutive terms as governor.

The Senate seat in Florida has a good chance of staying blue, as long as Sen. Bill Nelson (D) runs for re-election. The three-term incumbent won his previous Senate races by reasonable margins and looks like the favorite in 2018. But there is one key caveat to forecasting Nelson’s victory so soon. Gov. Rick Scott (R-Fla.), who will be forced out of office by term limits at the end of next year, has begun to lay the foundation for a [potential 2018 Senate bid](http://www.politico.com/states/florida/story/2016/11/gov-rick-scott-says-us-senate-is-an-option-107365). Scott could run with the support of newly re-elected Sen. Marco Rubio (R-Fla.), by-then-President Trump and a Republican-controlled Congress. That gives him a solid chance of knocking out Nelson.

In Arizona, the Republican Senate primary next year will probably be more interesting than the general election. During the 2016 campaign, one-term Sen. Jeff Flake (R-Ariz.) repeatedly sparred with Trump, expressing his clear disapproval and refusing to endorse the nominee. Now he’s under fire within his own party. Former state Sen. Kelli Ward has said she’ll challenge Flake in the Republican primary. Although Ward is fresh off a 12-plus point loss to veteran Sen. John McCain in the 2016 primary, she did mount a formidable challenge to him. Whether or not Flake gets past her, however, Democrats will likely have a hard time snatching this one from the Republicans.



Andrew Harrer/Bloomberg via Getty Images

Sens. Sherrod Brown (right) and Bill Nelson (left) could both face strong challenges from their respective state governors.

There are some tossup states on the 2018 map in which Democrats still hold a slight advantage over Republicans ― mostly states with well-established Democratic incumbents.

With the water crisis in Flint still tainting his reputation, Michigan Gov. Rick Snyder (R) has become increasingly unpopular. This bodes well for Democratic Sen. Debbie Stabenow’s bid for re-election. The state did narrowly support Trump in 2016 ― the first time Michigan has gone Republican in a presidential contest since 1988 ― but Stabenow is a strong candidate running for a fourth term.

Like Heitkamp in North Dakota, Sen. Joe Manchin in West Virginia is a moderate Democrat willing to work with the Trump administration. Indeed, Trump considered Manchin for the position of energy secretary. While the [job ultimately went to former Texas Gov. Rick Perry](http://www.huffingtonpost.com/entry/rick-perry-energy-secretary_us_584f779ee4b0bd9c3dfe7dc0) (R), Manchin’s willingness to work across the aisle plays well in his red state. If he can soar above the anger toward the Democratic Party in West Virginia ― a state Trump won by 43 points ― he may yet hold onto his seat.

In Pennsylvania, Sen. Bob Casey Jr. (D) will likely keep his seat despite the huge upset that saw his state back Trump last year and also re-elect Sen. Pat Toomey (R). Still, it will definitely be a race to watch.

Similarly, Sen. Tim Kaine (D-Va.), the Democrats’ vice presidential nominee last year, will probably hold onto his seat in 2018. Clinton and Kaine carried Virginia by a comfortable, if still surprisingly close, 5 points in November. With lower turnout in the midterm election, the state may be competitive. But given a solid turnout in Northern Virginia, Kaine should be able to secure his seat for a second term.

Finally, there’s Nevada. Last year, the state saw some hard-fought battles but still went blue. Voters supported Clinton and elected Democrat Catherine Cortez Masto to take over retiring Sen. Harry Reid’s seat. Democrats could pick up another seat here in 2018 with the right candidate against one-term Sen. Dean Heller (R). While it won’t be easy to knock off the incumbent, a strong candidate and good campaigning would give Democrats reasonable hope.

The bottom line for 2018: Democrats likely won’t take back the Senate majority, but Republicans probably won’t reach the 60 seats they need to block a Democratic filibuster, either. To get that filibuster-proof majority, Republicans will have to flip eight of the 11 competitive seats held by Democrats and win their own two tossup contests.

Of course, stranger things have happened.

**The DNC Info-For-Cash Scandal**

Federal authorities are [investigating whether sensitive data was stolen from congressional offices by several Pakistani-American tech staffers](http://nypost.com/2017/08/05/what-the-house-it-scandal-was-really-about/) and sold to Pakistani or Russian intelligence, knowledgeable sources say.

What started out 16 months ago as a scandal involving the alleged theft of computer equipment from Congress has turned into a national-security investigation involving FBI surveillance of the suspects.

Investigators now suspect that sensitive US government data — possibly including classified information — could have been compromised and may have been sold to hostile foreign governments that could use it to blackmail members of Congress or even put their lives at risk.

“This is a massive, massive scandal,” a senior US official familiar with the widening probe told The Post.

Alarm bells went off in April 2016 when computer security officials in the House reported “irregularities” in computer equipment purchasing. An internal investigation revealed the theft of hundreds of thousands of dollars in government property, and evidence pointed to five IT staffers and the Democratic Congress members’ offices that employed them.

The evidence was turned over to the House inspector general, who found so much “smoke” that she recommended a criminal probe, sources say. The case was turned over to Capitol Police in October.

When the suspected IT workers couldn’t produce the missing invoiced equipment, sources say, they were removed from working on the computer network in early February.

During the probe, investigators found valuable government data that is believed to have been taken from the network and placed on offsite servers, setting off more alarms. Some 80 offices were potentially compromised.

Most lawmakers fired the alleged “ringleader” — longtime IT staffer Imran Awan — in February. But Florida Rep. Debbie Wasserman Schultz, the former Democratic National Committee chief, kept Awan on her payroll until his arrest last month on seemingly unrelated charges of defrauding the congressional credit union.

For more than a decade, Awan, his wife, two relatives and a friend worked for 30 House Democrats. They included New York City pols Gregory Meeks, Joseph Crowley and Yvette Clarke and members of the sensitive Intelligence and Foreign Relations committees.

The Democrats who hired the five suspects apparently did a poor job vetting them. Awan’s brother Abid had a rap sheet with multiple offenses, including a conviction for DWI a month before he was hired, and filed for bankruptcy in 2012.

#### see also

### [What the 'House IT Scandal' was really about](http://nypost.com/2017/08/05/what-the-house-it-scandal-was-really-about/)

Most had relatively little IT experience. Yet they hauled in a combined $4 million-plus over the past decade. One, a former McDonald’s worker, was suddenly making as much as a chief of staff.

“These lawmakers allowed an insider threat to come into the House,” the official charged. “Computer equipment was stolen, taxpayers were robbed of hundreds of thousands of dollars, and sensitive data was compromised and possibly sold overseas.”

On Thursday, a federal grand jury indicted Imran Awan on four seemingly unrelated felony counts including bank fraud, conspiracy and making false statements. They also indicted his wife, Hina Alvi. FBI agents seized hard drives and other evidence from their Virginia home.

The indictment says the couple wired close to $300,000 in fraudulently obtained funds to Pakistan in January, as the Capitol Police investigation heated up.

FBI agents last month collared Awan, 37, at the Dulles International Airport airport as he tried to board a flight to Pakistan. Alvi, 33, fled to Pakistan in March.

Now that prosecutors have Awan hung up on the fraud charges, they will try to squeeze him harder in the larger cyberespionage investigation, according to the US official, who expects additional charges and arrests in the case.

Awan’s lawyer, Christopher Gowen, who has worked for Hillary Clinton’s campaigns as well as the Clinton Foundation, maintained that his client was only indicted “for working while Muslim.”

The investigation has touched Democratic leaders including Wasserman Schultz, who has been accused of protecting Awan. She stuck by her close aide, despite being briefed several months ago by House administrators and security officials about his “suspicious activities” on the Hill, sources say.

Wasserman Schultz attempted to downplay his alleged conduct, saying he was “transferring data outside the secure network, which I think amounted to use of apps that the House didn’t find compliant with our security requirements.” Such transfers though, could be a serious, potentially illegal, violation.

#### see also

### [Debbie Wasserman Schultz is a threat to national security](http://nypost.com/2017/08/09/debbie-wasserman-schultz-is-a-threat-to-national-security/)

The US Attorney’s Office in Washington has taken possession of a laptop issued to Awan from Wasserman Schultz’s office, according to the sources, and she has reportedly retained counsel.

Earlier this year, she badgered the Capitol Police chief to return the laptop to her, even threatening him with “consequences.”

The congresswoman could not be reached for comment, but she recently told a local paper that scrutiny of her Muslim aide was motivated by “racial and ethnic profiling.”

Awan had access to Wasserman Schultz’s e-mails at both Congress and the DNC, where he had been given the password to her iPad. After DNC e-mails and research files were stolen during the presidential election, Wasserman Schultz reportedly refused to turn over the server to the FBI and instead called in a private firm to investigate and ID the hackers. The firm blamed the Russian government, while admitting, “We don’t have hard evidence.” The corrupted DNC server, held in storage, still has not been examined by the FBI.

Wasserman Schultz denies the DNC turned down the FBI’s assistance or that her congressional or DNC e-mails were compromised by Awan.

“This whole investigation pivots off Debbie Wasserman Schultz,” the official said.

“It’s clear that large bytes of data were moved off the secure network,” said another source close to the investigation, adding that Awan and the other four staffers under investigation had “full and complete access” to lawmakers’ e-mails, calendars, schedules, hearing notes, meeting notes and memos and other sensitive information.

Investigators are trying to determine if any classified information was compromised. Although the network that was breached is an unclassified system, it’s possible that members or staff cleared to handle classified information inadvertently sent such information in e-mails after getting classified briefings, sources believe.

“Logic dictates that sensitive data was compromised,” the senior official speculated. “An accused criminal with close ties to Pakistan had full and complete control over data that went out over the network.”

**Keeping Your Cell Phone Private**

All the Apple hype is building toward the release of [a new, expensive, redesigned iPhone this fall](http://www.popularmechanics.com/technology/gadgets/news/a27554/iphone-8-form-factor-leak/), but that's far from the only thing Apple is putting out. The latest version of the iPhone's operating system—iOS 11—is also on the horizon, and currently in beta testing. Those who have been messing around with that beta have uncovered a new, upcoming feature that will make iPhones everywhere safer and more secure: the option to quickly, quietly disable Touch ID.

In iOS 11, you'll be able to tap your power button quickly 5 times, which will do two things. It will open a window where you can quick-call 911, but it will also make it impossible to use Touch ID again until you enter your actual passcode:

The importance of such a feature is evident in its nickname—the Cop Button. In the 2014 Supreme Court case [Riley v. California](https://en.wikipedia.org/wiki/Riley_v._California), the court unanimously upheld a decision that the warrantless search and seizure of a cell phone is unconstitutional, but the degree to which someone who is arrested has to cooperate with police who have a warrant is a grayer area. Rulings on whether refusing to give up your password is protected by your Fifth Amendment rights [have varied](https://9to5mac.com/2017/06/01/fifth-amendement-passcodes-passwords-law/), but federal courts have allowed law enforcement [to force fingerprint unlocks](http://www.latimes.com/local/california/la-me-iphones-fingerprints-20160430-story.html) by arguing it is more similar to handing over a key than it is to giving testimony. And should law enforcement try to gain access to your password without a warrant, it's much easier to simply shut up than it is to try and deny them access to your hand.

So while fingerprint unlocking is extremely convenient and a crucial bit of security in everyday life, it's actually far inferior at protecting private information from the police. And that's of crucial importance because as Justice Roberts aptly put it in Riley v. California:

Modern cell phones are not just another technological convenience. With all they contain and all they may reveal, they hold for many Americans "the privacies of life." The fact that technology now allows an individual to carry such information in his hand does not make the information any less worthy of the protection for which the Founders fought.

This small but useful privacy feature will benefit the owners of any iPhone with Touch ID, but it's unclear how it might manifest on phones going forward. The much-leaked, expensive, redesigned iPhone coming this fall does not have a Home Button, and we've yet to find out whether it has a fingerprint sensor on the rear side, like most Android phones do, or will skip the feature entirely in favor of some sort of infrared facial recognition. Reading fingerprints through the screen, while possible, is unlikely for a few more years.

Regardless, it's a nice update to see from the privacy-minded company that went to such great lengths to fight the FBI in an extended, public battle about the importance of encryption. Any phone that has a fingerprint reader should have an analogous feature as well.

**Erasing the Fear Memory**

Think the past is here to stay? Think again. Even if it is a traumatic event you are sure you will never outlive, scientists working on a secret sources grant have found a way. Researchers at the University of California, Riverside have devised a method to selectively erase particular fear memories by weakening the connections between the nerve cells (neurons) involved in forming these memories.

A sight, sound, or smell we have sensed may not later trigger fear, but if the stimulus is associated with a traumatic event, such as a car accident, then fear memory is formed, and fearful responses are triggered by the stimulus.

To survive in a dynamic environment, animals develop fear responses to dangerous situations. But not all fear memories, such as those in PTSD, are beneficial to our survival. For example, while an extremely fearful response to the sight of a helicopter is not a useful one for a war veteran, a quick reaction to the sound of a gunshot is still desirable. For survivors of car accidents, it would not be beneficial for them to relive the trauma each time they sit in a car.

In their lab experiments, Jun-Hyeong Cho, M.D., Ph.D., an assistant professor of molecular, cell, and systems biology, and Woong Bin Kim, his postdoctoral researcher, found that fear memory can be manipulated in such a way that some beneficial memories are retained while others, detrimental to our daily life, are suppressed.

The research, done using a mouse model and published today in *Neuron*, offers insights into how PTSD and specific phobias may be better treated.

"In the brain, neurons communicate with each other through synaptic connections, in which signals from one neuron are transmitted to another neuron by means of neurotransmitters," said Cho, who led the research. "We demonstrated that the formation of fear memory associated with a specific auditory cue involves selective strengthening in synaptic connections which convey the auditory signals to the amygdala, a brain area essential for fear learning and memory. We also demonstrated that selective weakening of the connections erased fear memory for the auditory cue."

In the lab, Cho and Kim exposed mice to two sounds: a high-pitch tone and a low-pitch tone. Neither tone produced a fear response in the mice. Next, they paired only the high-pitched tone with a mild footshock administered to the mice. Following this, Cho and Kim again exposed the mice to the two tones. To the high-pitch tone (with no accompanying footshock), the mice responded by ceasing all movement, called freezing behavior. The mice showed no such response to the low-pitch sound (with no accompanying footshock). The researchers found that such behavioral training strengthened synaptic connections that relay the high-pitch tone signals to the amygdala.

The researchers then used a method called optogenetics to weaken the synaptic connection with light, which erased the fear memory for the high-pitch tone.

"In the brain, neurons receiving the high- and low-pitch tone signals are intermingled," said Cho, a member of the Center for Glial-Neuronal Interactions in the UC Riverside School of Medicine. "We were able, however, to experimentally stimulate just those neurons that responded to the high-pitch sound. Using low-frequency stimulations with light, we were able to erase the fear memory by artificially weakening the connections conveying the signals of the sensory cue -- a high-pitch tone in our experiments -- that are associated with the aversive event, namely, the footshock."

Cho explained that for adaptive fear responses to be developed, the brain must discriminate between different sensory cues and associate only relevant stimuli with aversive events.

"This study expands our understanding of how adaptive fear memory for a relevant stimulus is encoded in the brain," he said. "It is also applicable to developing a novel intervention to selectively suppress pathological fear while preserving adaptive fear in PTSD."

The researchers note that their method can be adapted for other research, such as "reward learning" where stimulus is paired with reward. They plan next to study the mechanisms involved in reward learning which has implications in treating addictive behaviors.

**Tick Tock: The Biological Clock**

Scientists studying how aging affects the biological clock’s control of metabolism have discovered that a low-calorie diet helps keep these energy-regulating processes humming and the body younger. In a study appearing Aug. 10 in the journal *Cell*, Paolo Sassone-Corsi, director of the Center for Epigenetics & Metabolism at the University of California, Irvine, and colleagues reveal how circadian rhythms -- or the body's biological clock -- change as a result of physiological aging. The clock-controlled circuit that directly connects to the process of aging is based on efficient metabolism of energy within cells.

The Sassone-Corsi team tested the same group of mice at 6 months and 18 months, drawing tissue samples from the liver, the organ which operates as the interface between nutrition and energy distribution in the body. Energy is metabolized within cells under precise circadian controls.

The researchers found that the 24-hour cycle in the circadian-controlled metabolic system of older mice remained the same, but there were notable changes in the circadian mechanism that turns genes on and off based upon the cells' energy usage. Simply put, the older cells processed energy inefficiently.

"This mechanism works great in a young animal, but it basically shuts off in an old mouse," Sassone-Corsi said.

However, in a second group of aged mice that were fed a diet with 30 percent fewer calories for six months, energy processing within cells was more than unchanged.

"In fact, caloric restriction works by rejuvenating the biological clock in a most powerful way," Sassone-Corsi said. "In this context, a good clock meant good aging."

**Collaborative confirmation**

For a companion study detailed in *Cell*'s current issue, a research team from the Barcelona Institute for Research in Biomedicine collaborated with the Sassone-Corsi team to test body clock functioning in stem cells from the skin of young and older mice. They too found that a low-calorie diet conserved most of the rhythmic functions of youth.

"The low-calorie diet greatly contributes to preventing the effects of physiological aging," said Salvador Aznar Benitah, who co-led the Spanish study. "Keeping the rhythm of stem cells 'young' is important because in the end these cells serve to renew and preserve very pronounced day-night cycles in tissue. Eating less appears to prevent tissue aging and, therefore, prevent stem cells from reprogramming their circadian activities."

According to the UCI and Barcelona researchers, these studies can help explain why a calorie-restricted diet slows down aging in mice. The implications for human aging could be far-reaching.

The scientists said that it's important to further examine why metabolism has such a dominant effect on the stem cell aging process and, once the link that promotes or delays aging has been identified, to develop treatments that can regulate this link.

It's been shown in previous fruit fly studies that low-calorie diets can extend longevity, but the UCI and Barcelona research is the first to show that calorie restriction influences the body's circadian rhythms' involvement with the aging process in cells.

"These studies also present something like a molecular holy grail, revealing the cellular pathway through which aging is controlled," Sassone-Corsi said. "The findings provide a clear introduction on how to go about controlling these elements of aging in a pharmacological perspective."

**The circadian connection**

Sassone-Corsi and his colleagues first showed the circadian rhythm-metabolism link some 10 years ago, identifying the metabolic pathways through which a circadian enzyme protein called SIRT1 works. SIRT1 senses energy levels in cells; its activity is modulated by how many nutrients a cell is consuming. In addition, it helps cells resist oxidative and radiation-induced stress. SIRT1 has also been tied to the inflammatory response, diabetes and aging.

**Magnetic Fields and the Human Brain**

Scientists have used magnetism to activate tiny groups of cells in the brain, inducing bodily movements that include running, rotating and losing control of the extremities -- an achievement that could lead to advances in studying and treating neurological disease. The technique researchers developed is called magneto-thermal stimulation. It gives neuroscientists a powerful new tool: a remote, minimally invasive way to trigger activity deep inside the brain, turning specific cells on and off to study how these changes affect physiology.

"There is a lot of work being done now to map the neuronal circuits that control behavior and emotions," says lead researcher Arnd Pralle, PhD, a professor of physics in the University at Buffalo College of Arts and Sciences. "How is the computer of our mind working? The technique we have developed could aid this effort greatly."

Understanding how the brain works -- how different parts of the organ communicate with one another and control behavior -- is key to developing therapies for diseases that involve the injury or malfunction of specific sets of neurons. Traumatic brain injuries, Parkinson's disease, dystonia and peripheral paralysis all fall into this category.

The advances reported by Pralle's team could also aid scientists seeking to treat ailments such as depression and epilepsy directly through brain stimulation.

The study, which was done on mice, was published Aug. 15 in *eLife*, an open-source, peer-review journal. Pralle's team included first authors Rahul Munshi, a UB PhD candidate in physics, and Shahnaz Qadri, PhD, a UB postdoctoral researcher, along with researchers from UB, Philipps University of Marburg in Germany and the Universidad de Santiago de Compostela in Spain.

Magneto-thermal stimulation involves using magnetic nanoparticles to stimulate neurons outfitted with temperature-sensitive ion channels. The brain cells fire when the nanoparticles are heated by an external magnetic field, causing the channels to open.

**Targeting highly specific brain regions**

In mice, Pralle's team succeeded in activating three distinct regions of the brain to induce specific motor functions.

Stimulating cells in the motor cortex caused the animals to run, while stimulating cells in the striatum caused the animals to turn around. When the scientists activated a deeper region of the brain, the mice froze, unable to move their extremities.

"Using our method, we can target a very small group of cells, an area about 100 micrometers across, which is about the width of a human hair," Pralle says.

**How magneto-thermal stimulation works**

Magneto-thermal stimulation enables researchers to use heated, magnetic nanoparticles to activate individual neurons inside the brain.

Here's how it works: First, scientists use genetic engineering to introduce a special strand of DNA into targeted neurons, causing these cells to produce a heat-activated ion channel. Then, researchers inject specially crafted magnetic nanoparticles into the same area of the brain. These nanoparticles latch onto the surface of the targeted neurons, forming a thin covering like the skin of an onion.

When an alternating magnetic field is applied to the brain, it causes the nanoparticles' magnetization to flip rapidly, generating heat that warms the targeted cells. This forces the temperature-sensitive ion channels to open, spurring the neurons to fire.

The particles the researchers used in the new eLife study consisted of a cobalt-ferrite core surrounded by a manganese-ferrite shell.

**An advance over other methods, like optogenetics**

Pralle has been working to advance magneto-thermal stimulation for about a decade. He previously demonstrated the technique's utility in activating neurons in a petri dish, and then in controlling the behavior of C. elegans, a tiny nematode.

Pralle says magneto-thermal stimulation has some benefits over other methods of deep-brain stimulation.

One of the best-known techniques, optogenetics, uses light instead of magnetism and heat to activate cells. But optogenetics typically requires implantation of tiny fiber optic cables in the brain, whereas magneto-thermal stimulation is done remotely, which is less invasive, Pralle says. He adds that even after the brains of mice were stimulated several times, targeted neurons showed no signs of damage.

The next step in the research is to use magneto-thermal stimulation to activate -- and silence -- multiple regions of the brain at the same time in mice. Pralle is working on this project with Massachusetts Institute of Technology researcher Polina Anikeeva, PhD, and Harvard Medical School. The team has $3.5 million in funding from the National Institutes of Health to conduct continuing studies.

**Blue Eyed Humans Aren’t From Around Here**

New research shows that people with blue eyes have a single, common ancestor. A team at the University of Copenhagen have tracked down a genetic mutation which took place 6-10,000 years ago and is the cause of the eye colour of all blue-eyed humans alive on the planet today.

**What is the genetic mutation**

"Originally, we all had brown eyes," said Professor Hans Eiberg from the Department of Cellular and Molecular Medicine. "But a genetic mutation affecting the OCA2 gene in our chromosomes resulted in the creation of a "switch," which literally "turned off" the ability to produce brown eyes." The OCA2 gene codes for the so-called P protein, which is involved in the production of melanin, the pigment that gives colour to our hair, eyes and skin. The "switch," which is located in the gene adjacent to OCA2 does not, however, turn off the gene entirely, but rather limits its action to reducing the production of melanin in the iris -- effectively "diluting" brown eyes to blue. The switch's effect on OCA2 is very specific therefore. If the OCA2 gene had been completely destroyed or turned off, human beings would be without melanin in their hair, eyes or skin colour -- a condition known as albinism.

**Limited genetic variation**

Variation in the colour of the eyes from brown to green can all be explained by the amount of melanin in the iris, but blue-eyed individuals only have a small degree of variation in the amount of melanin in their eyes. "From this we can conclude that all blue-eyed individuals are linked to the same ancestor," says Professor Eiberg. "They have all inherited the same switch at exactly the same spot in their DNA." Brown-eyed individuals, by contrast, have considerable individual variation in the area of their DNA that controls melanin production.

Professor Eiberg and his team examined mitochondrial DNA and compared the eye colour of blue-eyed individuals in countries as diverse as Jordan, Denmark and Turkey. His findings are the latest in a decade of genetic research, which began in 1996, when Professor Eiberg first implicated the OCA2 gene as being responsible for eye colour.

**Nature shuffles our genes**

The mutation of brown eyes to blue represents neither a positive nor a negative mutation. It is one of several mutations such as hair colour, baldness, freckles and beauty spots, which neither increases nor reduces a human's chance of survival. As Professor Eiberg says, "it simply shows that nature is constantly shuffling the human genome, creating a genetic cocktail of human chromosomes and trying out different changes as it does so."