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| --- | --- |
| Jihad ReportJan 18, 2020 -Jan 24, 2020 | |
| Attacks | **31** |
| Killed | **288** |
| Injured | **200** |
| Suicide Blasts | **2** |
| Countries | **14** |

**Pandemic**

Coronaviruses are a large family of viruses that cause illness ranging from the common cold to pneumonia. Common signs of infection include fever, cough, shortness of breath and breathing difficulties. In more severe cases, infection can cause severe acute respiratory syndrome, kidney failure and death.

[As of this morning](https://www.zerohedge.com/geopolitical/please-help-us-supply-shortages-rock-wuhan-outbreak-overwhelms-chinese-healthcare), the deadly coronavirus that originated in China has killed 26 people and infected more than 900.

**But according to one simulation run less than three months ago, things could get much, much worse.**Less than three months ago, Eric Toner, a scientist at the Johns Hopkins Centre for Health Security, had run a simulation of a global pandemic involving the exact same type of virus, according to [Business Insider](https://www.businessinsider.com.au/scientist-simulated-coronavirus-pandemic-deaths-2020-1).

**His simulation predicted that 65 million people could die "within 18 months".**

He commented:

***“I have thought for a long time that the most likely virus that might cause a new pandemic would be a coronavirus.”***

As of now, the outbreak is not a pandemic, but it has been reported in eight different countries. Toner's simulation said that nearly "every country in the world" would have the virus after six months.

He commented:

*“We don’t yet know how contagious it is. We know that it is being spread person to person, but we don’t know to what extent. An initial first impression is that this is significantly milder than SARS. So that’s reassuring.****On the other hand, it may be more transmissible than SARS, at least in the community setting.****”*

His analysis used a fictional virus called CAPS, which would be resistant to any modern vaccine and would be deadlier than SARS. The simulation involved a virus originating in Brazil's pig farms. The outbreak started small, with farmers coming down with symptoms, before spreading to crowded and impoverished areas.

**The simulation also showed flights being cancelled and travel bookings falling by 45%, as people disseminated false information on social media. It also triggered a financial crisis around the globe, with global GDP falling 11% and stock markets falling 20% to 40%.**

No word on whether or not the simulation accounted for the modern monetary theory the Fed is essentially governing with now.

He also claimed that the current coronavirus could have major economic impact if it the total cases hits the thousands.

He concluded:

*“If we could make it so that we could have a vaccine within months rather than years or decades, that would be a game changer. But it’s not just the identification of potential vaccines. We need to think even more about how they are manufactured on a global scale and distributed and administered to people.”*

***“It’s part of the world we live in now. We’re in an age of epidemics.”***

Of course here in the United States the CDC is assuring us [that we don’t have anything to be concerned about](https://www.usatoday.com/story/news/nation/2020/01/23/coronavirus-wuhan-china-quarantine-vaccine/4551112002/)…

*“We don’t want the American public to be worried about this because their risk is low,” says Anthony Fauci, head of the National Institute of Allergy and Infectious Diseases. “On the other hand, we are taking this very seriously and are dealing very closely with Chinese authorities.”*

Hopefully they are correct, and hopefully this outbreak will blow over sooner rather than later.

A Chicago woman returned Jan. 13 from Wuhan, the epicenter of the outbreak, and began experiencing symptoms a few days after arriving home, said Dr. Allison Arwady, commissioner of the Chicago Department of Public Health.

The 60-year-old woman called her doctor after symptoms arose and she was admitted to a hospital and placed in isolation, health officials said. Further testing confirmed the virus.

Arwady said the woman is "clinically doing well and in stable condition." She did not have extended contact with anyone outside of her home, attend a large public gathering or use public transportation, Arwady said.

The woman was not symptomatic while flying, and Arwady told reporters at a Chicago news conference, "The CDC does not believe that, in the time before symptoms develop, the patients are able to be contagious."

The risk to the U.S. public remains low but more cases will likely be confirmed in the coming days, said Nancy Messonnier, the director of the National Center for Immunization and Respiratory Diseases at the Centers for Disease Control and Prevention.

**Coronavirus update:**[US State Department issues 'Do not travel' advisory for Wuhan, China](https://www.usatoday.com/story/travel/news/2020/01/24/coronavirus-outbreak-leads-state-department-issue-level-4-advisory/4562349002/)

At least 63 potential cases are under investigation in 22 states, and 11 were confirmed negative, Messonnier said. The other potential cases are being tested.

Health officials are still in the early stages of understanding the virus and its symptoms, Messonnier told reporters Friday. She said the virus has an incubation period of about 14 days and it was too early to say whether it is more or less infectious than other coronaviruses like SARS or MERS.

"Our biggest concern would be household contacts – people who are spending extended periods of time having conversations," Arwady added.

At least 830 people in China have been sickened and tens of millions are under lockdown as the coronavirus sweeps across the country.

Public transpiration halted for roughly 36 million people in 13 cities in central China, including Wuhan, where the virus was first detected last month. Other major cities across the country canceled events tied to the Lunar New Year celebration, a busy time for travel.

Beijing's Forbidden City, Shanghai Disneyland and other tourists spots have all closed. [Reuters](https://www.reuters.com/article/china-health-wall/some-parts-of-chinas-great-wall-closed-to-visitors-idUSB9N29F02K)and [CNN](https://www.cnn.com/asia/live-news/coronavirus-outbreak-hnk-intl-01-24-20/index.html)reported that part of the Great Wall near Beijing will close starting Saturday.

While most cases have centered in China, an increasing number of cases have been confirmed in other places, including South Korea, Japan, Singapore, Hong Kong, Macao, Taiwan, Thailand and Vietnam.

Other scares have popped up around the U.S., too. A [student from Tennessee Tech University was being tested](http://bit.ly/38FChNr) for possible infection after he presented very mild symptoms possibly related to the virus, the university and state health officials said Thursday.

A [Texas A&M University student](http://bit.ly/30Rbrz9) was also being tested and is isolated at home, local health officials said. The man, who recently traveled from Wuhan, is improving, said Dr. Eric Wilke of the Brazos County Health Authority.

U.S. Senators were briefed Friday on the virus by top health officials.

Sen. Patty Murray, D-Wash., the top Democrat on the Senate Health Committee, said she wasn’t sure how much the virus would spread, but said the CDC had resources in place to do additional testing for the virus if needed.

"The most important thing is that they have the resources in place should they need to do additional testing," she said.

Sen. Josh Hawley, R-Mo., said, "We do have two confirmed cases in the United States. I think we're likely to see more."

The State Department [issued a warning Thursday not to travel](https://www.usatoday.com/story/travel/news/2020/01/24/coronavirus-outbreak-leads-state-department-issue-level-4-advisory/4562349002/)to Hubei province amid the outbreak and said all non-emergency U.S. personnel and their family members were to leave the province.

"We don't want the American public to be worried about this because their risk is low," says Anthony Fauci, head of the National Institute of Allergy and Infectious Diseases. "On the other hand, we are taking this very seriously and are dealing very closely with Chinese authorities."

Dr. Eric Cioe Peña, director of Global Health at Northwell Health in New Hyde Park, New York, said recent scare shows the "public hysteria and panic" that can occur as news of outbreaks spread.

"At its current rate, the [Wuhan coronavirus is less deadly than the current flu season](https://www.usatoday.com/story/news/health/2020/01/24/coronavirus-versus-flu-influenza-deadlier-than-wuhan-china-disease/4564133002/). This is not to diminish the importance of preventing the spread of this virus but to make sure that our responses are based in evidence and follow common sense," he said.

**Impeach Show: Season 5**

When they finally get a chance to make their case to the Senate starting Saturday, President Donald Trump’s impeachment defense lawyers aren’t going to present a rebuttal to Democrats claims – they’re going to launch an attack on them – Trump attorney Jordan Sekulow said Friday.

Appearing on “Fox and Friends First,” Sekulow said that Trump’s legal team will expose Democrats’ misstatements – and show how Democrats dishonestly edited witness testimony to distort what witnesses have actually said and meant:

“Well, Adam Schiff, who is the House management leader, has had a problem with the truth since he’s been holding these hearings in the House of Representatives, all the way back to the Mueller report.

“So, we will not, in a sense, it’s not a rebuttal.

But, what we are going to do is attack – attack all the misstatements, all of the half-played clips that didn’t play the entire clip, the entire statement, which ends up changing the entire meaning of what they tried to imply.

“I mean, how many times in those videos did you hear, did you see someone’s mouth keep going and the clip stop?

“We’re going to make sure the American people and all one hundred U.S. senators get to see exactly what those Democrat witnesses – that’s all they were: 17 Democrat witnesses – what they had to say, in full.

“Because, what they had to say – in full – is on our side.”

**Why not the Impeachment hearing?**

Senate Judiciary Committee Chairman Lindsey Graham (R-S.C.) says he will vote against a motion to subpoena Hunter Biden if a majority of colleagues agree next week that additional witnesses and documents need to be summoned for President Trump's impeachment trial.

If Republican colleagues introduce a motion to subpoena former Vice President Joe Biden's son, Graham said "I vote against it."

 Republicans have threatened to weaponize the debate over impeachment witnesses by warning that if Democrats and GOP moderates vote to subpoena Bolton, Mulvaney and other senior Trump advisers, they'll respond in kind by calling controversial witnesses such as the Bidens.

Sen. Ran Paul (R-Ky.) has argued that Trump's defense team should be allowed to call whatever witnesses they want.

"The president gets to call anybody he thinks would be good for his defense, the prosecution can call who they want, but I don't think we should selectively call witnesses that don't like the president," Paul said last week.

Sen. John Kennedy (R-La.) says he hasn't made a decision yet on calling additional witnesses, but he predicts that Trump's lawyers would want to cross-examine the Bidens.

"I feel pretty confident, though I don't know it for a fact, that the defense team is going to want to call its witnesses, including but not limited to the Bidens, [and] as a fact witness the whistleblower," he said.

Senate Majority Leader Mitch McConnell (R-Ky.) has also opened the door to subpoenaing Hunter Biden.

"When you get to that issue, I can't imagine that only the witnesses that our Democratic colleagues would want to call would be called," he said.

Graham acknowledged he doesn't yet know of three other Republicans to vote against subpoenaing Hunter Biden but his opposition to the move all but guarantees that it won't happen.

"I need some Republicans who would say as much as I want to know more about Burisma and the Bidens, this is not the venue. I've got to find four," he said.

Republicans control 53 seats and Democrats have 47. A motion to subpoena witnesses would deadlock on a 50-50 vote.

If Graham says that hauling Hunter Biden before the Senate would be going down too much of a political rabbit hole, it's extremely hard to imagine moderates such as Sens. Susan Collins (R-Maine), Lisa Murkowski (R-Alaska) or Mitt Romney (R-Utah) doing so.

Graham said there should be an investigation into Hunter Biden's business dealings in Ukraine and what he did as a highly compensated board member of Burisma Holdings, a Ukrainian gas company, but he warned that the impeachment trial is not the appropriate venue.

"I don't want to call Hunter Biden. I don't want to call Joe Biden. I want someone to look at this when this is done," he said Friday.

"I don't think it's wrong for us to look at the Biden connection in the Ukraine, the $3 million given to the vice president's son by the most corrupt company in the Ukraine," he added.

But Graham said he's going to oppose subpoenas for them because "this needs to end," referring to the impeachment trial.

"To my Republican friends, you may be upset about what happened in the Ukraine with the Bidens but this is not the venue to litigate that," he said.

He believes it would be more appropriate for a special investigator such as former FBI Director Robert Mueller, who investigated Trump, or someone of his nonpartisan stature to do so.

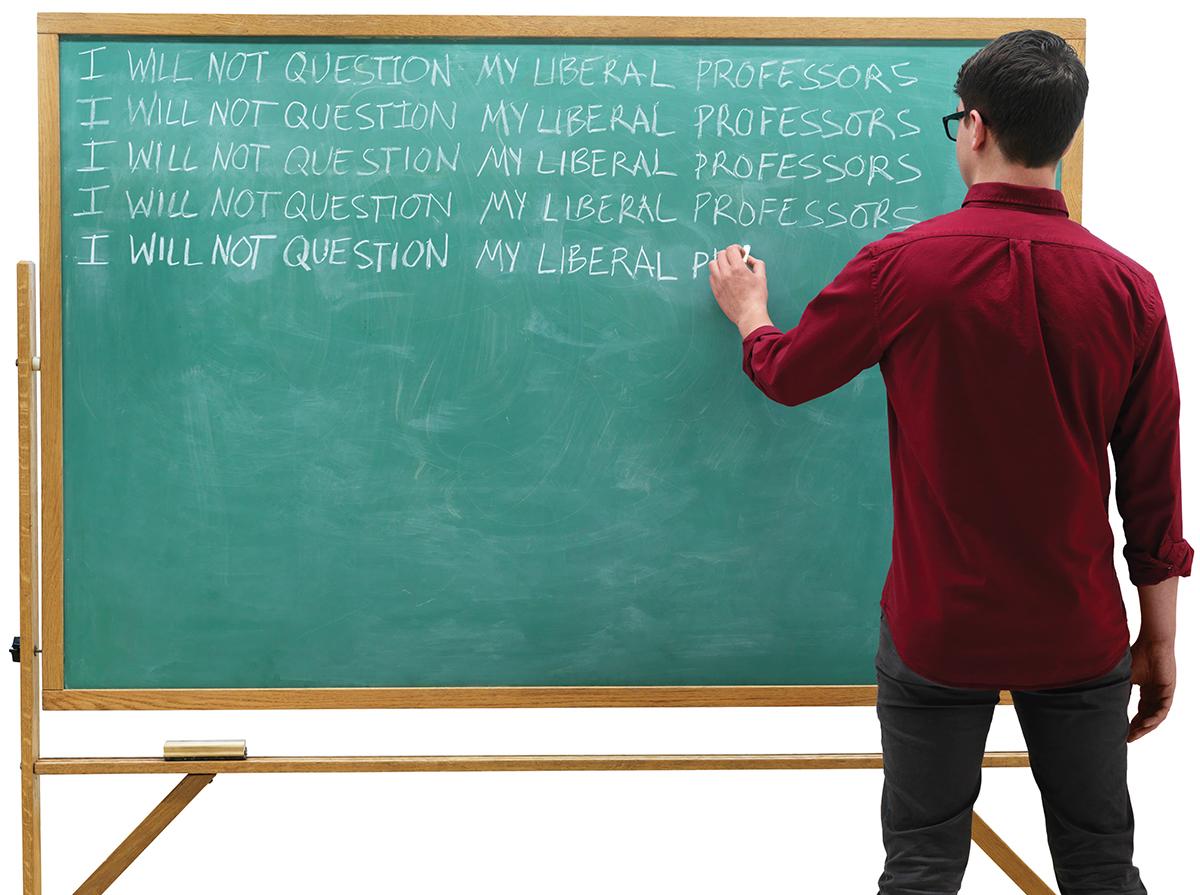
**The University Diversity Problem**

Why do you think that millennials hate Trump so badly? Here’s a better question. Why do you think that millennials thing Socialism is not a bad idea? I mean, who truly believes home ownership is evil? Who would ever want to be poor because it is noble? Who aspires to be homeless or a failure at life? Millennials. Why? Who teaches them such crap?

**Diversity in hiring is the top priority** of most colleges and universities. However, the effort to hire more women, minorities, and LGBT individuals notably lacks one group:**ideological diversity**.

It is well-known that most faculty are composed of an overwhelming majority of liberal and democratic members. However, this view, while generally accepted, is largely anecdotal. Now a [new study](https://www.nas.org/blogs/article/partisan-registration-and-contributions-of-faculty-in-flagship-colleges) by Heterodox Academy Director of Research Sean Stevens and Brooklyn College Professor Mitchell Langbert claims to have put hard numbers on that lack of diversity.

**In reviewing records with the Federal Election Commission, they say that they found that professors gave to Democrats over Republicans by a 95:1 ratio.**

[](https://www.zerohedge.com/s3/files/inline-images/liberal-professors-new-england.jpg?itok=4IaKRUZb)

**The researchers looked at 2,301 political donations and found that 2,081 went to Democrats while just 22 went to Republicans. Only nine professors gave to both parties.**

[An earlier study](https://www.washingtontimes.com/news/2018/apr/26/democratic-professors-outnumber-republicans-10-to-/)found that Democrats outnumbered Republicans by a 10:4 ratio. Business Management Associate Professor Mitchell Langbert reviewed the party affiliations of 8,688 professors at 51 of the top 60 liberal arts colleges listed in U.S. News and World Report’s 2017 rankings.*t of must-read stories.*

Top of Form

Bottom of Form

**These studies magnify concerns for those of us who have objected to increasing speech regulation on campuses — restrictions that have seem to be more often applied to conservative students and speakers.** Indeed, academics have at times been at the heart of such attacks on the free speech rights of conservatives on campus. In one incident at the California State University where[assistant professor of public health professor Greg Thatcher](http://fresnostate.edu/chhs/public-health/faculty-staff/faculty/thatcher.html) is shown on a videotape wiping out the pro-life statements written in chalk by members of Fresno State Students for Life.

Perhaps[the most unnerving controversy involved](http://jonathanturley.org/2014/03/21/california-feminism-professor-charged-with-battery-and-theft-in-confrontation-with-pro-life-protesters/) the confrontation of [Feminist Studies Associate Professor Mireille Miller-Young](http://www.femst.ucsb.edu/people/academic/mireille-miller-young) with pro-life advocates on campus of the University of California at Santa Barbara. Miller-Young led her students in attacking the pro-life display, stealing their display, and then committing battery on one of the young women.  She was convicted and sentenced for the crime.  Despite the shocking conduct of Miller-Young and the clear violation of the most fundamental values for all academics in guaranteeing free speech and associational rights, the faculty overwhelmingly supported Miller-Young and the university decided not to impose any meaningful discipline. Faculty and student defenders attacked the pro-life advocates and one **even referred to them as “terrorists” who did not deserve free speech**.  Miller-Young should have been fired but was instead lionized by faculty and students.

**A**[**recent study**](https://jonathanturley.org/2019/11/20/harvard-study-only-35-percent-of-young-republicans-feel-comfortable-sharing-their-views-on-campus/)**found at Harvard found that only 35 percent of conservative students felt free to share their views on campuses.**That chilling effect is the result of not just open hostility to conservative voices on campus but a striking lack of diversity among academics in terms of ideology.

**Space Force Logo is Out**

The Pentagon's new U.S. Space Force is not Starfleet Command from "Star Trek" and its many iterations, but their logos bear a striking similarity.

President Donald Trump unveiled the Space Force logo Friday, writing on Twitter that he had consulted with military leaders and designers before presenting the blue-and-white symbol, which features an arrowhead shape centered on a planetary background and encircled by the words, “United States Space Force” and “Department of the Air Force.”

The logo, which bears the date 2019 in Roman numerals, also is similar in design to that of Air Force Space Command, from which Space Force was created by legislation that Trump signed in last month.

Space Force is the first new military service since the Air Force was created in 1947. It is meant mainly to improve protection of U.S. satellites and other space assets, rather than to put warriors in orbit to conduct combat in outer space. The idea became a regular applause line for Trump at his political rallies. He originally wanted a Space Force that was “separate but equal” to the Army, Navy and Air Force, but instead Congress made it part of the Department of the Air Force.

“After consultation with our Great Military Leaders, designers, and others, I am pleased to present the new logo for the United States Space Force, the Sixth Branch of our Magnificent Military!” Trump wrote.



**The Impeachment Shredder**

We all have super-powers. To some it is given to heal. To some it is given to prophecy. For others it is strength, endurance and perhaps even immunity. For Jay Sekulow, it is given to shred falsehood and lies. The Democrat management team spoke for three days. As I have often said, the best lies are not made of falsehoods. They are made of truth. They are twisted and contorted with lenses and straight pins and dark magic. They are more of a conjuring than a story.

The word of the day is "Shredded" - as in, several Republicans have described the White House counsel's presentation as having shredded House Democrats' impeachment arguments.

"In two hours, the White House counsel entirely shredded the case by the House managers," said Sen. Joni Ernst (R-IA) in a statement to reporters. "What we saw today was factually relevant ... and (we) saw there were a lot of half-truths from the House managers and, frankly, pushed by the media."

Rep. Elise Stafanik (R-NY) offered similar comments - saying "It took less than two hours to completely shred and eviscerate Adam Schiff’s failed case for impeachment," adding "There is no case for impeachable offenses here. And it took less than two hours to do so. I think the American people understand that."

While Rep. Mark Meadows (R-NC) said "3 days of Democrat arguments were just shredded 2 hours."

Rep. Adam Schiff, meanwhile, says the White House counsel is trying to "deflect" away from Democrats' claims that President Trump abused his office, according to The Hill.

"After listening to the President’s lawyers opening arguments, I have three observations: They don’t contest the facts of Trump’s scheme. They’re trying to deflect, distract from, and distort the truth. And they are continuing to cover it up by blocking documents and witnesses," Schiff tweeted on Saturday.

Update (1130ET): Trump's lawyers began their opening arguments Saturday by slamming Democrats for having "no evidence" to support their argument that Trump's conduct with Ukraine warrants impeachment and removal.

"They’re asking you not only to overturn the results of the last election but, as I’ve said before, they’re asking you to remove President Trump from the ballot in an election that’s occurring in approximately nine months," said White House counsel Pat Cipolline, adding "I don’t think they spent one minute of their 24 hours talking to you about the consequences of that for our country."

Cipollone began on Saturday by reading directly from the transcript of the July 25 phone call between Trump and Ukrainian President Volodomyr Zelensky - claiming Democrats misrepresented it. In particular, the White House counsel played a clip of House Intelligence Committee Chairman Adam Schiff (D-CA) reading a 'parody' of the call.

The use of the clip is likely to satisfy Trump. The president spent the days after Schiff made the comments calling for the congressman’s resignation and suggesting he committed treason. Even months after the September hearing, Trump continues to bring up Schiff’s comments in interviews when railing against the impeachment proceedings.

Trump in his call with Zelensky asked the foreign leader to investigate a debunked theory about 2016 election interference and to probe Joe Biden and his son Hunter’s dealings in Ukraine. The call triggered a rare intelligence community whistleblower complaint claiming that Trump solicited foreign interference in a U.S. election, with the complaint being a key piece of evidence in the Democrats’ impeachment case. -The Hill

After three days of "why", here comes the "why not".

**Weighing the Anchor Baby Business**

The Trump administration has issued a new rule that would allow the State Department to reject visa applications from women who it believes want to travel to the U.S. strictly for the purpose of having a child born on American soil.

The rule to crack down on what is called "birth tourism" took effect Friday.

Last year, officials announced charged 20 people in connection with various schemes that coached Chinese women on how to come to America and [have children](https://www.westernjournal.com/us-charges-20-people-over-chinese-birth-tourism-schemes/) who would then become citizens by virtue of being born in the U.S. Officials said in one such scheme, known as "You Win USA," each mother was charged between $40,000 and $80,000.

The scheme brought more than 500 pregnant women to the U.S., according to a [Justice Department news release](https://www.justice.gov/usao-cdca/pr/federal-prosecutors-unseal-indictments-naming-19-people-linked-chinese-birth-tourism).

“America’s way of life is not for sale,” Joseph Macias, special agent in charge of Homeland Security Investigations Los Angeles, said at the time.

"This rule change is necessary to enhance public safety, national security, and the integrity of our immigration system," White House press secretary Stephanie Grisham said in a [statement](https://www.whitehouse.gov/briefings-statements/statement-press-secretary-regarding-birth-tourism-visa-regulation-rule-change/) Thursday. "The birth tourism industry threatens to overburden valuable hospital resources and is rife with criminal activity, as reflected in Federal prosecutions. Closing this glaring immigration loophole will combat these endemic abuses and ultimately protect the United States from the national security risks created by this practice."

"Permitting short-term visitors with no demonstrable ties to the United States to obtain visas to travel to the United States primarily to obtain U.S. citizenship for a child creates a potential long-term vulnerability for national security," the [new State Department rule](https://s3.amazonaws.com/public-inspection.federalregister.gov/2020-01218.pdf) says.

"Foreign governments or entities, including entities of concern to the United States, may seek to benefit from birth tourism for purposes that would threaten the security of the United States. This rule would help close a potential vulnerability to national security that would be posed by any foreign government or entity that sought to exploit birth tourism to enhance access to the United States," the rule adds.

The rule does not ban pregnant women from traveling to the United States, nor does it ban pregnant women from getting visas. However, it does require [pregnant women seeking tourist visas](https://www.westernjournal.com/liberal-blasts-anchor-babies/) to prove to officials that "birth tourism" is not their intent.

"This rule establishes that travel to the United States with the primary purpose of obtaining U.S. citizenship for a child by giving birth in the United States is an impermissible basis

Not everyone is happy about it. There is huge money in this industry, and that money goes to fund many political campaigns. Those politicians are pissed that Trump has found their golden goose and cooked it.

“Trump continues to find new ways to try to divide and attack families," Adrian Reyna, the strategy director of the nonprofit immigration activist group United We Dream, said in a statement.

“Discriminating against pregnant individuals by blocking them from coming to visit the country does nothing but keep people from their loved ones,” Reyna said. “This rule is based on Trump’s racist fixation on ending [birthright citizenship](https://www.westernjournal.com/george-washington-law-professor-opposing-birthright-citizenship-not-racist/) and essentially stopping the movement of people into this country."

The truth outlined in the new rule defines a stark difference between aliens using a temporary visitor visa for the purpose of obtaining U.S. citizenship for their children and the extensive requirements applicants must meet to naturalize to become U.S citizens.

This regulatory change reflects changes to U.S. foreign policy, specifically in the context of U.S. visas, that significantly narrow the ability of foreign nationals residing abroad to easily obtain U.S. citizenship for their children without complying with any of the rigorous requirements for permanent residence or naturalization," the State Department says in the rule.

By obtaining a child’s U.S. citizenship through birth tourism, foreign nationals are able to help that child avoid the scrutiny, standards, and procedures that he or she would normally undergo if he or she sought to become a U.S. citizen through naturalization," the rule says.

The State Department says a "birth tourism" industry has grown that seeks to [profit](https://www.westernjournal.com/crackdown-ice-agents-break-up-massive-fraud-scheme-aimed-at-american-taxpayers/) by exploiting loopholes in the immigration system. An entire 'birth tourism' industry has evolved to assist pregnant women from other countries to come to the United States to obtain U.S. citizenship for their children by giving birth in the United States, and thereby entitle their children to the benefits of U.S. citizenship," the rule says.

Birth tourism companies advertise their businesses abroad by promoting the citizenship-related benefits of giving birth in the United States. Those parents are charged enormous fees to transport pregnant women here, specifically so they can be born in America.

Companies tout a broad range of benefits for the U.S. citizen child and eventually its family, including, but not limited to, access to free education, less pollution, retirement benefits, the ability to compete for jobs in the U.S. government, and the ability for the whole family to eventually immigrate to the United States through chain migration. The policy that allows a child born here to instantly be classified a US citizen is ending. Chain migration will end shortly thereafter. This is a long overdue closure of this loophole in the broken US immigration system.

**The Indian Moon**

**India crash-lands on the moon**

India's first moon-landing attempt, though it ended with an unintentional crash-landing, was a tremendous accomplishment for ISRO. The [Chandrayaan-2](https://www.space.com/40136-chandrayaan-2.html) mission — which consists of an orbiter, the Vikram lander and a rover named [Pragyan](https://videos.space.com/m/PJ3k7o3E/indias-lunar-rover-pragyan-instruments-detailed-in-animation) — may not be able to study the lunar surface up close, but [the orbiter will continue](https://www.space.com/india-moon-mission-not-over-chandrayaan-2.html) to study it from afar for years to come. Meanwhile, ISRO engineers are studying what went wrong with the Chandrayaan-2 landing to help improve the design of India's next moon-landing attempt.

NASA's Lunar Reconnaissance Orbiter spotted debris, marked in green, and soil disturbance, marked in blue, caused by the hard impact of India's Chandrayaan-2 spacecraft on Sept. 6, 2019. (Image credit: NASA/GSFC/Arizona State University)

The mishap occurred in the final phase of Vikram's descent, when a [problem with the spacecraft's braking thrusters](https://www.space.com/india-admits-moon-lander-crash.html) forced it to make a hard landing 0.3 miles (500 meters) from its target landing site, according to a [statement](http://164.100.24.220/loksabhaquestions/annex/172/AU588.pdf) from Jitendra Singh, the minister of state for India's Department of Space in November. On Dec. 2, NASA released a [photo of Vikram's crash site](https://www.space.com/india-moon-lander-crash-site-debris-photos.html) from its Lunar Reconnaissance Orbiter, which has kept an eye out for the lander since it went missing after the crash. ISRO scientists are also looking for Vikram on the lunar surface using the High Resolution Camera payload on the Chandrayaan-2 orbiter.

Although Vikram can't beam any data back to Earth now, ISRO can still make use of the data the spacecraft sent to Earth until it [lost communication](https://www.space.com/india-loses-contact-with-vikram-moon-lander-chandrayaan-2.html) just minutes before the scheduled landing. Vikram was transmitting data for about 12 minutes before the crash. The Chandrayaan-2 orbiter also helped to relay data from Vikram down to Earth, and the orbiter has supplied its own images and instrument data collected before, during and after mishap.

**What went wrong?**

ISRO now faces the challenge of fully resimulating Vikram's landing using received telemetry and tracking data. By comparing that information with the mission's planned trajectory, the agency will try to pinpoint the cause of the problem and exactly when the problem occurred. ISRO can use this data to determine the physical stress on the lander's mechanical and electronic systems, as well as the vibration, shock and thermal effects on the spacecraft's subsystems during braking phases. The telemetry data, when analyzed and time-sequenced for the state of health of each subsystem, will provide detailed timelines of both planned and unplanned events during the crash.

This analysis would include controlled start of the descent stage and the 12 minutes of data transmitted before communication was lost. It would also include a deeper analysis of how the spacecraft's subsystems were performing during the first (minor) glitch, or deviation, that most likely triggered the unfortunate chain of events, as well as the second (major) glitch that resulted in the short-range hard landing. The first glitch probably triggered some anomalies related to subsystem and thruster control that amplified and led to the mishap clearly seen as second glitch or deviation from planned trajectory around an altitude of 1.2 miles (2 kilometers) above the lunar surface.

Better understanding these details of Vikram's landing failure will progressively improve additional data and supplementary sensors needed for future missions.

**Learning from Vikram's mistakes**

Although ISRO may have lost its lunar lander, the agency gained some valuable experience from the ordeal. ISRO made progress on liquid propulsion, this being the first time that India has attempted a soft landing — and its first experience using liquid propulsion-based retro-rockets to slow down a speeding lander before touchdown. This technology could be used not only for future robotic landers, but also for human missions to the moon.

Even when a landing sequence is preprogrammed and information about the landing site is constantly updated with new data and imagery from the orbiter imagery using artificial intelligence (AI), the actual descent performance data requires a reliable communication system for relaying the most up-to-date information to ground controllers on Earth, who can adjust the lander's course in case it experiences any deviations from its planned descent trajectory.

When Vikram lost contact with Earth, and when a problem occurred with Vikram's reverse-thrust engines, this engine problem could not be fully verified. Thus, other data and visual sightings only can verify the condition of Lander integrity. ISRO has to engineer more redundancy in its communications systems for future missions, even if it means sacrificing a spacecraft's weight and power capacity. **PLAY SOUND**

**More moon-landing practice**

Chandrayaan-2 was not to be the only soft-landing mission; the next lunar landing mission, [Chandrayaan-3](https://www.space.com/india-chandrayaan-3-moon-landing-2020.html), is tentatively scheduled to launch in November 2020. India will need to soft land often and even be able to take off from the lunar surface to fulfill its ambitious goals for human space exploration and sample returns.

Only one week after the Vikram mishap, I submitted a proposal online for the launch of another lander that would serve as a follow-up mission mission to Chandrayaan-2. Called Chandrayaan-2A, the mission would demonstrate a soft landing using a lunar lander with optional ascent capabilities that would allow the spacecraft to ["hop" on the moon](https://www.space.com/10705-private-moon-hopping-robots-funding.html). This mission will improve the technology ISRO needs for successful landings in the future, and it can help ISRO to master the landing process with a simple, low-cost technology-demonstration mission before launching more expensive payloads to the moon or Mars. The success of this mission would not only benefit all of India's future landing missions, but it may also serve as a much-needed boost to team morale!

This "piggyback" lunar lander mission could ride along on an already-planned launch using a PSLV or GSLV rocket carrying other payloads to geostationary or low Earth orbit, or it could launch on its own rocket. This would be a less complex mission than Chandrayaan-2 or -3, carrying just a lander, no orbiter. This lander could test other descent options that put less stress on the spacecraft, such as a longer descent period or a different angle of descent. The descent stage (and possible ascent mode, using restartable engines) ought to be fully and successfully tested before ISRO attempts to send more spacecraft to the lunar surface.

ISRO needs to test a lander in Earth's atmosphere by dropping it with a drone or other aircraft. It is necessary to switch from hard braking to fine braking during testing and then soft landing under Earth's gravity.

This reminds me of what Neil Armstrong did during the Apollo program while practicing at piloting the lunar module. On May 6, 1968, Armstrong bailed out during a test flight of the Lunar Landing Research Vehicle when he lost control of the craft, ejecting himself and narrowly avoiding a fiery explosion. Since ISRO's lander is uncrewed, similar atmospheric effects are to be accounted for as was done for the Apollo lunar module tests.

ISRO also needs to test for vibrations and thermal effects on electronics, control and guidance before and during the switch from a rough to a fine reverse-thrust mode, which happens as the spacecraft slows down upon descent. We also need to test these things when the lander is hovering just above the surface, both at the end of its landing and after lifting off for a controlled "hopping" maneuver.**PLAY SOUND**

With ISRO's strong track record of launching successful space missions, it's safe to say that the proposed lander can be ready to launch in about a year with most of the same but well-tested hardware and software as Chandrayaan-2 and with some modified communication, control and guidance subsystems.

This mission will allow ISRO to reuse Chandrayaan-2 infrastructure as well as the Chandrayaan-2 orbiter, which would relay data between the Chandrayaan-2A lander and Earth, just like it did with Vikram. The lander can also reuse orbiter imaging (which employs AI pattern recognition) for accurate and detailed maps of the targeted landing zone. That same AI software can also help the lander "hop" around to multiple landing sites during tests of the restartable thrusters.

A quick lander and ascent ("hopper") mission can likely be achieved at an optimized cost of less than 3 billion rupees (equivalent to about $42 million) by sharing the launch vehicle cost with other payloads. The partial cost of a launch vehicle allocated to Chandrayaan-2A lander can be approximately 1 billion rupees ($14 million). A lander with robust subsystems, especially descent engines with built-in redundancies for braking and hovering, can cost approximately 2 million rupees ($28 million). Experiments for detecting surface structure and soil analysis that perished with the Vikram lander can be duplicated on this lander also, and it can even carry a replica of the Pragyan rover as well!**PLAY SOUND**

This Chandrayaan-2A mission can be done in the 2020-21 time frame, providing the technology demonstration of a soft landing while the earlier designated and planned [Chandrayaan-3](https://www.space.com/india-confirms-moon-landing-mission-chandrayaan-3.html) mission, a collaboration between ISRO and the Japan Aerospace Exploration Agency (JAXA), is being designed and built. That lander will have to mate with Japan's new H3 rocket at a launch site in Japan and also work with a new orbiter and rover.

Chandrayaan-2A will serve as a precursor mission to a much more complex integrated mission, the joint ISRO-JAXA Lunar Polar Exploration Mission, which will send a lander and a rover to the moon's south pole as early as 2024. The proposed Chandrayaan-2A mission could provide surface data three years earlier, using current infrastructure and with very small incremental effort. And by testing a new ascent system, Chandrayaan-2A could provide ISRO with the capability to conduct sample-return missions from the moon and other planetary destinations. It is especially important for ISRO to soft land on the moon in a mission like this in light of the new international "[moon rush](https://www.space.com/moon-exploration-plans-nasa-india-china-and-more.html)."

**What’s in a Name?**

And then there were nine.

NASA has chosen nine finalists in the student naming contest for its next Mars rover, which currently goes by the bland Mars 2020 (a reference to its launch window, which extends from July through August of this year).

The space agency picked three submissions in each of the three age categories — grades K-4, 5-8 and 9-12.

The monikers, and the students who proposed them, are:

* Endurance, K-4, Oliver Jacobs of Virgina.
* Tenacity, K-4, Eamon Reilly of Pennsylvania.
* Promise, K-4, Amira Shanshiry of Massachusetts.
* Perseverance, 5-8, Alexander Mather of Virginia.
* Vision, 5-8, Hadley Green of Mississippi.
* Clarity, 5-8, Nora Benitez of California.
* Ingenuity, 9-12, Vaneeza Rupani of Alabama.
* Fortitude, 9-12, Anthony Yoon of Oklahoma.
* Courage, 9-12, Tori Gray of Louisiana.

Public input is one criterion NASA will use to pick the final name, and the agency is therefore encouraging folks to vote for their favorite online at go.nasa.gov/name2020. But you'll have to act relatively fast; voting closes at midnight EST (0500 GMT) on Jan. 28.

"After the poll closes, the nine student finalists will discuss their rover names with a panel including [NASA Planetary Science Division director Lori] Glaze, NASA astronaut Jessica Watkins, NASA-JPL rover driver Nick Wiltsie and Clara Ma, who earned the honor of naming the Mars rover Curiosity as a sixth-grade student in 2009," NASA officials wrote in a statement. (JPL is the Jet Propulsion Laboratory in Pasadena, California, which will lead the new rover's mission.)

"The contest will conclude in early March, when the rover's new name — and the student behind it — are announced," NASA officials added. "The grand prize winner will also receive an invitation to see the spacecraft launch in July 2020 from Cape Canaveral Air Force Station in Florida."

The car-size Mars 2020 is scheduled to touch down inside the 28-mile-wide (45 kilometers) Jezero Crater in February 2021. The rover will do a variety of work on the Red Planet, including hunt for signs of ancient life, test out tech that could aid human exploration and collect and cache samples for future return to Earth.

The student naming contest is a long-standing tradition. Kids have named all of NASA's Mars rovers — Sojourner, which launched in 1996; Spirit and Opportunity, which lifted off in 2003; and Curiosity, which landed on Mars in 2012 and continues to work there today.

**The Bernie Burn**

Well, the unthinkable has happened. Do you remember the movie *Days of Thunder?* Do remember the line where Robert Duvall told Cole to slow down? That he was going too fast? Cole responded by saying, “I’m not. Everyone else has slowed down.”

It turned out he was right. It also turns out that is exactly what is happening to the Democrat candidates in Iowa. Lying Liz, Little Peter Buttcrack, and China Joe have all been exposed and are slowing down. Add to that the Pelosi Plot to steal the presidency for herself, and you have all the candidates who happen to be senators sequestered in Washington while they film the Impeach Show, Season 5, and you have the makings for a race for last place.

That leaves only the Socialist still in the race. Oh, the news media would have you believe that he is surging ahead, but that is not true. All the other candidates have slowed down. So, I felt it was appropriate to share with you the platform of the charismatic Socialist with no personality. He has some main points that I think you should know about. You might at first think they are ridiculous, but trust me when I tell you this. Bernie intends to finish burning down America. And he is stacking our millennial children around the bottom of the pyre to use as fuel to set the fire.

1. No more private property.
   1. Your buildings will go first.
   2. Your income producing property will be next
   3. Your land will be next
   4. Your stock ownership will come next
2. No more 401k or trust accounts
   1. Millionaires don’t earn their money. They hide it.
   2. Billionaires don’t make money. They take money from the poor.
   3. All trust accounts, non-profits, shell corporations, and LLCs will become property of the State.
3. No more private education
   1. All curricula will be written and controlled by the State
   2. All tuition will be paid to the State and then universities will be State owned
4. No more free press
   1. The media empire is already owned by the Global Syndicate
   2. The web will be owned and controlled by the State.

Sen. Bernie Sanders last month unveiled a sweeping $150 billion proposal that would fundamentally reshape how the internet works in the United States.

The plan, dubbed "High-Speed Internet for All," would effectively turn the internet into a public utility along the lines of water and power. "High-speed internet service must be treated as the new electricity," the proposal says, "a public utility that everyone deserves as a basic human right."

To that end, the $150 billion would go to creating "publicly owned and democratically controlled, co-operative, or open access broadband networks," the proposal says.

Here's how it works:

1. Requiring internet service providers like Verizon and Comcast to offer "a Basic Internet Plan that provides quality broadband speeds at an affordable price."

The sales pitch is that high-speed-internet should be affordable and available to everyone. Its primary method of doing that: regulations from the Federal Communications Commission.

"The FCC will review prices and regulate rates where necessary, ensuring areas without competition aren't able to run up prices," the plan says. "We will also require providers to offer a basic plan for a regulated rate to all customers, ensuring everyone will be able to affordably connect to the internet."

The "providers" in question are massive media conglomerates like Verizon, Comcast, and Charter. "Bernie will regulate these providers like a utility," it says.

The proposal includes further subsidies for people who qualify for government assistance programs like SNAP, Medicaid, and Temporary Assistance for Needy Families, and it proposes free broadband in all public housing.

2. Redefining "minimum broadband speeds" so that a 100 Mbps download speed and a 10 Mbps upload speed is the floor.

Calling for "high-speed broadband" doesn't mean much if your definition of "fast" internet is stuck in the past. The current FCC minimum to be considered broadband is 25 Mbps down/3 Mbps up.

It works, and it gets the job done well enough, but it's a slouch compared with many other parts of the world. Under Sanders' proposal, the FCC would increase its minimum to 100 Mbps down/10 Mbps up.

It's a little detail that makes it virtually impossible for podcasters to effectively run an independent program, due to the limits on internet speed. All the “web networks” would be terminated due to limited bandwidth. Only Netflix and a few Syndicate content providers run by Obama and other Democrat insiders would be allowed to prosper.

3. Breaking up companies that offer internet service and provide content, like Comcast and AT&T.

Over the past several decades, the telecommunications industry has consolidated into a few Syndicate players who provide internet access, and those companies have in turn merged with the Media Empire. The resulting giants will sell you the internet and cable service you use and provide the content that runs on those services. There will be no room for competition or dissent.

Under Sanders' proposal, these conglomerates would be broken apart and effectively owned by the State.

The proposal says Sanders would use "existing antitrust authority," rather than the FCC, to dismantle "internet service provider and cable monopolies." Moreover, he would "bar service providers from also providing content."

Comcast, which owns NBC, and AT&T, which owns Warner Media (HBO, Turner, Warner Bros.), would likely have to unwind those purchases.

1. Providing $150 billion to create "publicly owned and democratically controlled, co-operative, or open access broadband networks."

While it enforces regulations on major internet service providers, the proposal includes a major expenditure: $150 billion to create "the necessary resilient, modern infrastructure" for high-speed broadband that's widely available and affordable.

The money, part of the broader Green New Deal initiative, is intended "for municipalities and/or states to build State-owned and democratically controlled, co-operative, or open access broadband networks," the proposal says.

One major condition is included: Grants from the funding must go "toward creating good-paying union jobs" and come with rigorous standards.

5. Ending data caps and speed throttling.

Another notable detail in the proposal: putting an end to data caps and speed throttling.

As people stream more content and download larger, higher-definition movies, TV shows, and games, they use more data. Just as that amount has increased, some internet service providers have begun placing caps on users — 200 GB per month, for example. If you go over your cap, there's a chance you'll get slapped with a charge.

In some cases, your provider may even "throttle" your service speed in an attempt to dissuade you from using it. The proposal from the Sanders campaign explicitly calls for the elimination of both practices.

**When We Listen We Shall Hear**

This has probably been happening for billions of years. For sure. The question is, what effect does the rippling of spacetime have on consciousness?

 mysterious cosmic event might have ever-so-slightly stretched and squeezed our planet last week. On Jan. 14, astronomers detected a split-second burst of [gravitational waves](https://www.livescience.com/60586-nobel-in-physics-for-gravitational-waves.html), distortions in space-time … but researchers don't know where this burst came from.

The gravitational wave signal, picked up by the Laser Interferometer Gravitational-Wave Observatory (LIGO) and the Virgo interferometer, lasted only 14 milliseconds, and astronomers haven't yet been able to pinpoint the burst's cause or determine whether it was just a blip in the detectors.

Gravitational waves can be caused by the collision of massive objects, such as two black holes or two [neutron stars](https://www.livescience.com/neutron-star.html). Astronomers detected such gravitational waves from a neutron star collision in 2017 and from one in April of 2019, according to [new findings](https://news.psu.edu/story/604660/2020/01/20/research/ligo-virgo-network-catches-another-neutron-star-collision) that were presented at the meeting of the American Astronomical Society on Jan. 6.

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But gravitational waves from collisions of such massive objects typically last longer and manifest in the data as a series of waves that change in frequency over time as the two orbiting objects move closer to each other, said Andy Howell, a staff scientist at Los Cumbres Observatory Global Telescope Network and an adjunct faculty member in physics at the University of California, Santa Barbara. He was not part of the LIGO research.

This new signal was not a series of waves but a burst, Howell said. One more likely possibility is that this short-lived burst of gravitational waves comes from a more transient event, such as a supernova explosion, the catastrophic ending to a star's life.

Indeed, some astronomers have hypothesized that this could have been a signal from the Betelgeuse star, which mysteriously dimmed recently and is expected to undergo a supernova explosion. But the Betelgeuse star is still there so it's not that scenario, Howell said. It's also unlikely to be another supernova because they happen in our galaxy only about once every 100 years, he added.

What's more, the burst still "seems a little too short for what we expect from the collapse of a massive star," he said. "On the other hand, we've never seen a star blowing up in gravitational waves before, so we don't really know what it would look like." In addition, the astronomers didn't detect any [neutrinos](https://www.livescience.com/64827-neutrinos.html), tiny subatomic particles that carry no charge, which supernovas are known to release.

Another possibility is that the merging of two intermediate-mass black holes caused the signal, Howell said. Merging neutron stars produce waves that last longer (around 30 seconds) than this new signal, while merging black holes might more closely resemble bursts (that last around a couple of seconds). However, intermediate black hole mergers might also release a series of waves that change in frequency.

LIGO came across this signal while specifically looking for such bursts. But "that doesn't mean that what it found is an intermediate-mass black hole merger," Howell told Live Science. "We don't know what they found," especially since LIGO hasn't yet released the exact structure of the signal, he added.

It's also possible that this signal was just noise in the data from the detector, Howell said. But this burst of gravitational waves was found by all three LIGO detectors: one in Washington state, one in Louisiana and one in Italy. So the probability of the [LIGO detectors](https://www.livescience.com/44831-ligo-gravitational-waves-black-holes.html) finding this signal by chance (meaning it's a false alarm) is once every 25.84 years, which "gives us some indication that this is a pretty good signal," Howell said.

There could be other explanations for this mysterious burst, too. For example, a supernova could have directly collapsed into a black hole without producing neutrinos, though such an occurrence is very speculative, Howell said. Astronomers are now pointing their telescopes to that region to try to pinpoint the source of the waves.

"The universe always surprises us," he added. "There could be totally new astronomical events out there that produce gravitational waves that we haven't really thought about."

**NORK Stew**

North Korean leader Little Kim Jong Un has accused the Trump administration of dragging its feet in nuclear negotiations and warned that his country will soon show a new strategic weapon to the world as it bolsters its nuclear deterrent in face of “gangster-like” U.S. sanctions and pressure.

The North’s state media said Wednesday that Little Kim made the comments during a four-day ruling party conference held through Tuesday in the capital Pyongyang, where he declared that the North will never give up its security for economic benefits in the face of what he described as increasing U.S. hostility and nuclear threats.

Little Kim’s comments came after a month long standoff between Washington and Pyongyang over disagreements involving disarmament steps and the removal of sanctions imposed on the North.

“He said that we will shift to a shocking actual action to make it pay for the pains sustained by our people so far, and for the development so far restrained. The world will witness a new strategic weapon to be possessed by the DPRK in the near future.”

Little Kim added that “if the U.S. persists in its hostile policy toward the DPRK, there will never be the denuclearization on the Korean Peninsula and the DPRK will steadily develop necessary and prerequisite strategic weapons for the security of the state until the U.S. rolls back its hostile policy,” according to the agency.

However, Little Kim showed no clear indication of abandoning negotiations with the United States entirely or restarting tests of nuclear bombs and intercontinental ballistic missiles he had suspended under a self-imposed moratorium in 2018.

He did issue a warning that there would be no grounds for the North to get “unilaterally bound” to the moratorium any longer, criticizing the United States for continuing its joint military exercises with rival South Korea and also providing the South with advanced weaponry.

“In the past two years alone when the DPRK took preemptive and crucial measures of halting its nuclear test and ICBM test-fire and shutting down the nuclear-test ground for building confidence between the DPRK and the U.S., the U.S., far from responding to the former with appropriate measures, conducted tens of big and small joint military drills which its president personally promised to stop and threatened the former militarily through the shipment of ultra-modern warfare equipment into (South Korea),” the KCNA quoted Little Kim as saying.

Little Kim and President Donald Trump have met three times since June 2018, but negotiations have faltered since the collapse of their second summit last February in Vietnam, where the Americans rejected North Korean demands for broad sanctions relief in exchange for a partial surrender of its nuclear capabilities.

Little Kim’s speech followed months of intensified testing activity and belligerent statements issued by various North Korean officials, raising concerns that he was reverting to confrontation and preparing to do something provocative if Washington doesn’t back down and relieve sanctions.

The North announced in December that it performed two “crucial” tests at its long-range rocket launch site that would further strengthen its nuclear deterrent, prompting speculation that it was developing an ICBM or planning a satellite launch that would provide an opportunity to advance its missile technologies.

A senior U.S. diplomat said Monday that Washington won’t accept a year-end deadline set by North Korea to make concessions in stalled nuclear talks and urged Pyongyang to return to a negotiating table immediately.

North Korea also last year ended a 17-month pause in ballistic activity by testing a slew of solid-fuel weapons that potentially expanded its capabilities to strike targets in South Korea and Japan, including U.S. military bases there. It also threatened to lift a self-imposed moratorium on the testing of nuclear bombs and ICBMs.