



Velocity Update
September 11, 2020



**They shall grow not old, as we that are left grow old:
Age shall not weary them, nor the years condemn.
At the going down of the sun and in the morning
We will remember them.**

Excerpt from "For the Fallen" by Robert Laurence Binyon

Congressional Schedule. The Senate is in session. The House returns on Sept. 14. (*More below.*)

U.S. Economic Outlook

Weekly numbers and long-term outlook. [884,000 people applied for unemployment](#) benefits for the first-time last week, the second week in a row that new unemployment claims have been below a million. Another 839,000 people claimed Pandemic Unemployment Assistance, the program for self-employed or gig workers, for the first time, which is an increase from August numbers. A total of 29.6 million are claiming some kind of unemployment benefits. The economy right now is a good news/bad news situation. Some parts of the U.S. economy (residential construction, real estate, auto sales and manufacturing) are [seeing modest growth](#), though commercial real estate, [restaurants](#), and tourism are still seeing declines. (Even within those three sectors, there are a few bright spots – this [excellent article on motels](#) shows how travelers and those in the hospitality business are making the best of things right now.) Overall, the country appears to have regained almost half of the 22 million jobs lost since March, though the Fed has found signs of a growing labor shortage, primarily among women, as remote schooling and a lack of child care options is forcing people out of the workforce. Employers hired [1.4 million workers](#) in August, which sent the unemployment rate to 8.4 percent, falling below 10 percent for the first time since March. However, data from job posting websites shows that the number of [new job openings](#) are leveling off, meaning that there about 2.5 workers for every new job posting.

The pandemic has also exacerbated the gap in economic security. Most people who were financially secure when the pandemic hit are more or less still that way, while those who were not are now even more so. And as national economic relief programs end without additional action from Congress, that gap is likely to get wider, especially if the infection rate climbs following the start of school and Labor Day/end of summer gatherings. The Centers for Disease Control and Prevention issued an order this week banning landlords from evicting tenants who can't pay rent because of the pandemic through the end of the year. The CDC doesn't normally issue these kinds of orders, so there are likely to be legal challenges. And while it's unclear if another pandemic

relief package will be passed (more on that below) or what will happen with FY2021 appropriations, the Congressional Budget Office has projected that the [U.S. government budget deficit](#) is expected to triple this year to \$3.3 trillion. That's 98% of gross domestic product in FY2020, and will be larger than the economy by 2021.

Coronavirus government operations update

National perspective. As of Friday afternoon, the number of confirmed cases in the U.S. [is at least 6,400,000 with at least 189,000 deaths](#). The spread of the virus has plateaued, with around 1,000 deaths total across the country per day in August. However, while several states in the Northeast have managed to get the new positive case rate down to around 1-percent, there are new hotspots emerging in Iowa, Kansas, North Dakota, and South Dakota. According to the [University of Washington's Institute for Health Metrics and Evaluation](#), daily deaths will climb back to 2,000 a day by mid-November if the country stays at the current infection rate. The model shows that if people started universally wearing masks, the daily death rate would decline, but if states ease restrictions, deaths would climb to 3,000 per day by mid-November. The White House is trying to contain damaging fallout after excerpts from reporter Bob Woodward's new book [surfaced with audio tapes of President Trump](#) telling Woodward in early February how serious the coronavirus is, how easily it is transmitted, and how it is far worse than the flu, all while he downplayed the pandemic publicly.

President Trump continues to say that a vaccine will be available by October or early November, while public health experts contradict that timeline. And last week, the administration [declined to join a World Health Organization initiative](#) to develop and distribute a vaccine. The COVAX initiative has at least 172 countries, including the U.K. and Japan, signed on to pool resources to fund at least nine vaccine candidates and distribute the one that succeeds based in part on population size. The U.S. has purchased a combined 800 million doses of six vaccines, with the option to buy 1 billion more. It is possible (though unlikely) that none of these six options will succeed, meaning that the U.S. would be left out of any successful vaccines developed by the global initiative. Here in the U.S., the Defense Department has named the Naval Medical Center San Diego in California, Joint Base San Antonio Brooke Army Medical Center in Texas, Wilford Hall Ambulatory Surgical Center at Walter Reed National Military Medical Center in Maryland and Fort Belvoir Community Hospital in Virginia as the [five sites for Phase III clinical trials](#) for the vaccine candidate made by AstraZeneca. The trial needs 30,000 volunteers in the U.S.; the company is also hosting trials in other countries. While the company said results from the trial could come later this year, on Tuesday they [paused the trial](#) after a British participant became sick with a "potentially unexplained illness." Experts stressed that this kind of hold on clinical trials is not uncommon, and it's not clear yet how long the hold will last. Also this week, the CEOs of nine pharmaceutical companies issued a [public letter pledging](#) to submit COVID-19 vaccines for clearance from federal regulators only when they're shown to be safe and effective in large clinical studies instead of rushing the vaccines to market.

Washington metro area. Overall coronavirus cases in [D.C., Maryland, and Virginia topped 260,000 by Friday afternoon, with at least 7,000 deaths](#). Maryland's test positivity rate has fluctuated around 4-percent since the start of August, while Virginia's has hovered between 6 and 7 percent. D.C. has kept the city's rate around 3-percent since June. As of late last week, Maryland had [moved into Phase 3](#), meaning that all businesses may reopen and increase capacity. Most public schools in the greater metro area have started school but are still operating remotely. A few districts have begun to announce plans to bring back the youngest and most vulnerable students in phases for in person learning.

Pentagon still in Phase Two operations. The Pentagon is in Phase Two (Bravo), which means a maximum of 80-percent of staff allowed on-site, though the actual number of staff on site tends to be much lower. If you are

planning to visit, give yourself plenty of time to go through the visitor's center. All visitors should expect to get their temperature checked along with their IDs.

NASA is still relying on mostly telework. All of NASA's facilities are at Stage 3 of its pandemic response plan. (Stage 3 means mandatory telework except for those needed for critical work for missions).

The White House. While some staff continues to telework or rotate into the office in shifts to handle classified materials, many staff are going physically back into the office on a regular basis. Mask wearing and temperature checks are not comprehensively required.

Access to Congress remains limited. Access to the congressional office buildings and capitol complex continues to be limited, open only to Members, Congressional staff, and credentialed press. Many offices continue to encourage the vast majority of staff to telework. However, an increasing number of staff, especially at the committee and senior level, are coming into the Capitol complex to support their bosses during this active legislative season.

Congressional activities

There are only a very few work days left to accomplish a long list of legislative priorities before lawmakers go home to campaign, and almost everything in front of Congress right now has the added burden of being a chess piece in the upcoming election. The biggest must-dos are spending related, but here are a few other things that will occupy congressional time over the next few weeks.

Compel in-person election security briefings. Director of National Intelligence John Ratcliffe told Congress that his office will [no longer brief members of Congress](#) in person, instead submitting written reports that prevent members from asking questions in person but does preclude written correspondence. A group of House and Senate Democratic lawmakers, led by Senate Rules Committee ranking member Amy Klobuchar (D-MN), [sent a letter](#) to Ratcliffe demanding that classified briefings resume, saying that the briefings are required by the Intelligence Reform and Terrorism Prevention Act. And 18 House Democrats are pressuring their leadership to use must-pass appropriations or authorization bills to compel ODNI to offer the in-person briefings, including withholding funding specifically from the ODNI. On Thursday, we learned that a senior Department of Homeland Security official alleged in a [whistleblower complaint](#) that on two occasions he was told by acting Homeland Security secretary Chad Wolf to stop providing intelligence analysis on the threat of Russian interference in the 2020 election, in part because it "made the President look bad." The House Intelligence Committee has asked the unnamed official to testify later this month; the allegation is likely to cause lawmakers to exert even more pressure on the ODNI to resume in-person briefings. For more on this issue, GovExec has a helpful podcast that outlines why this issue is important; listen [here](#).

USPS leadership. Former employees of Postmaster General Louis DeJoy are claiming DeJoy had [employees donate to political campaigns](#) and then he reimbursed them via employee bonuses for those donations, a practice that is illegal. The House Committee on Oversight and Reform, chaired by Rep. Carolyn Maloney (D-NY), has opened an investigation into DeJoy. Maloney and other Democrats have called for the Board of Governors of the U.S. Postal Service to suspend DeJoy. This investigation comes on top of questions from Congress on recent changes to the U.S. Postal Service. Senators Elizabeth Warren (D-MA) and Bob Casey (D-PA) [sent a report to the USPS Board of Governors](#) noting that average delivery times for prescription drugs increased 18-percent to 32-percent following DeJoy's changes.

Afghanistan updates. The House Committee on Oversight and Reform was supposed to hold a hearing on Wednesday with Defense and State Department officials on the [administration's strategy in Afghanistan](#). The

hearing did not take place, even after, last week, the committee sent a letter to Defense Secretary Mark Esper and Secretary of State Mike Pompeo noting that if witnesses did not appear at the hearing, the committee would issue subpoenas to compel them to testify. The committee has been asking for officials to appear in a hearing since this time last year.

Space Force Caucus. The U.S. Senate [Space Force Caucus](#) was established on Wednesday by a [bipartisan group](#) of four senators: Cory Gardner (R-CO), Martin Heinrich (D-NM), Kevin Cramer (R-ND), and Kyrsten Sinema (D-AZ). In a letter to other senators, the group said, “The Caucus will strive to host discussions and events for Members and staff with the Secretary of the Air Force, Chief of Space Operations, Vice Chief of Space Operations, and other senior service leaders throughout the year with the goal of educating Members and staffs on the importance of the Space Force mission.”

The next pandemic relief package. The bottom line is that the chances of getting another pandemic relief bill passed before the election is rapidly decreasing. There haven’t been any additional negotiations between the White House and Democrats in the House. On Tuesday, Senate Majority Leader Mitch McConnell introduced a “skinny” pandemic relief package. The \$300 billion-dollar bill included \$300 a month enhanced unemployment benefits through the end of the year, additional funds for the Paycheck Protection Program, child-care support, and money for schools. It also included loan forgiveness for a USPS loan granted by the CARES Act. It did not include any emergency funding for the [Department of Defense](#). The Senate held a cloture vote, meaning 60 votes were needed to move forward with the bill, and the vote [failed](#) 52-47, with one Republican senator joining the Democrats in voting no. Democrats [have said](#) they would accept a bill with a \$2.2 trillion price tag, and that the Senate GOP bill didn’t provide enough aid. Majority Leader Mitch McConnell, however, was at least able to get 52 out of 53 Republican votes for the bill — a small victory for a party that had struggled to unify around a stimulus plan. It’s unclear what the next steps are, and with time running out, it seems highly unlikely a deal will come together before the November election, and in time to have a measurable impact on those impacted by the pandemic. Senate Appropriations Chairman Richard Shelby said it “looks” like negotiations are dead, though he added that “you never know around here.” But not everyone is comfortable with the idea of not passing another coronavirus package. Moderate House Democrats, especially those in red districts, are growing uncomfortable over the lack of action. Some of them are reportedly starting to press Speaker Nancy Pelosi to put some targeted coronavirus relief bills on the floor, even if they have no shot at passing the Senate. On a Democratic caucus call yesterday, House Majority Leader Steny Hoyer raised the idea of passing another relief bill in the coming weeks, even as Pelosi and Senate Minority Leader Chuck Schumer shot the idea down, saying that Dems need to stay unified and arguing that their wait-and-see approach will work. “We don’t want to go home without a bill, but don’t be a cheap date,” Pelosi said at one point in the call. More [here](#), [here](#), and [here](#).

FY2021 NDAA. The conference process for the NDAA to work out an agreement between the House and Senate versions of the bill has not yet officially begun. This week, Rep. Mac Thornberry (R-TX), who is the ranking member of the HASC, said that there will not be a final NDAA bill until after the November election. In addition to the negotiations between House and Senate committees, negotiations with the White House are also required. As a reminder, the President has said he would veto the bill if certain provisions are included. “It’s not just one provision, I think, that prevents us from getting a conference report done. It’s the times that we are living in. On the other hand, I think that we should be able to get a conference report pretty quickly after the election,” Thornberry [said](#) during a speech at the Defense News conference. “Is there a way to get everybody to good? Of course, there is. Is it likely to happen before the election? No, it’s not.” It normally takes about 45 days once House and Senate conferees have been named for the conference to finish its work. The conferees have yet to be named, and we do not expect conferees to be named during September. If the conferees are able to reconcile their differences on the two bills ([HR 6395](#), [S 4049](#)) and President Donald Trump signs the resulting measure, then this would be the 60th consecutive NDAA to become law.

FY2021 Regular Appropriations. As we've reported for the last few weeks, the expectation is that there will be a continuing resolution to keep the government funded after the fiscal year ends on Sept. 30. Speaker Nancy Pelosi and Treasury Secretary Steven Mnuchin have [agreed to the outlines of a deal on a continuing resolution](#), which would likely last at least until after the election in November. According to reports, it would be a clean bill, meaning the legislation would simply extend existing FY2020 funding into FY2021 without policy riders and other issues that could complicate passage. However, the White House has asked for a list of [funding exceptions](#) (aka "anomalies") as part of the CR, including separating [Space Force funding](#) from Air Force funding, and flexibility for funding of Navy ballistic missile submarines and submarine-launched nuclear warheads. In [an interview on Thursday](#), House Budget Chair John Yarmuth predicted if Congress clears a stopgap that expires before the holidays, lawmakers will likely pass yet another short-term fix that drags current funding into early 2021. There will likely be little incentive to finish work on annual appropriations in a lame-duck session of Congress, he said. "If Republicans lose the Senate, the incumbents who lost will probably want to go home for the holidays and get out of there," the Kentucky Democrat said. No actual legislation has been introduced yet, so a formal agreement won't be known until the text is seen. But both parties clearly want to avoid a government shutdown just prior to the election.

For those tracking the funding numbers, [here](#) is where we are on the programs you and we care most about. (Let us know what funding lines of interest to you we are missing from this list, and we will add them!)

FY2021 Intelligence Authorization. We expect the House to move its intelligence bill to the floor as a standalone measure later in September. We do not expect many amendments to be considered when the bill comes to a floor, and it is very possible that the two chambers could opt to include the intelligence bill as an addendum to the conference legislation for the NDAA.

NASA Authorization. The House Science Committee has not scheduled a time for consideration of the [NASA authorization bill](#). As a reminder, the Senate Commerce Committee marked up and reported out [its version of the bill](#) in November 2019. At this point in the legislative year, we do not believe there is much likelihood that this bill will see any more movement during this Congress.

Upcoming hearings.

- September 14, 6 pm, the Senate Foreign Relations Committee will hold a closed briefing on "[2020 Global Nuclear Threats Update](#)"
- September 16, 9:30 am, the Senate Armed Services Readiness and Management Support Subcommittee holds a hearing on "[Supply Chain Integrity](#)"
- September 17, 9:30 am, the Senate Armed Services Committee holds a hearing on "[Matters Relating to the Budget of the National Nuclear Security Administration](#)"
- September 17, 1 pm, the House Armed Services Committee's Subcommittee on Intelligence and Emerging Threats and Capabilities holds a hearing on "[Interim Review of the National Security Commission on Artificial Intelligence Effort and Recommendations](#)"
- Also, we understand the Senate Commerce Committee has tentatively scheduled an oversight hearing with NASA Administrator Jim Bridenstine for September 30, but the hearing has not yet been noticed to members, and the topic for the hearing is not yet known.

Personnel changes

Scott Atlas, a neuroradiologist and senior fellow at Stanford University's conservative Hoover Institution, was named in mid-August as an advisor to President Trump helping to manage the federal pandemic response. Atlas's appointment to this position is not without controversy: in an open letter released September 9, Stanford medical experts [objected to a list of statements Atlas has made about COVID-19](#).

The Trump administration has named yet another new acting [State Department inspector general](#). Matthew Klimow, the U.S. ambassador to Turkmenistan since mid-2019, will run the inspector general's office until the end of 2020.

On Thursday, President Trump announced that he intends to nominate [William Ruger](#), a Naval reserve officer and vice president for research and policy at the Charles Koch Institute, for the position of U.S. ambassador to Afghanistan.

Over at the Pentagon, another senior official has announced his resignation. Yisroel Brumer, who has been serving as acting director of the Cost Assessment and Program Evaluation Office, is leaving to join the private sector; his last day is today. The office does not currently have a Senate-confirmed director. John Whitley was nominated by the White House five months ago and has had a confirmation hearing, though it's not clear when the full Senate will vote on his confirmation.

Michael Cutrone is now performing the duties of the assistant secretary of defense for international security affairs, which focuses on issues related to Europe, the Middle East and Africa. Cutrone has been at the Pentagon since May. He takes over for Michael Ryan, who will return to his role as deputy assistant secretary of defense for Europe and NATO.

Justin Johnson has been named acting deputy assistant secretary of defense for space policy; Steve Kitay left that position in August. Johnson most recently served as Defense Secretary Mark Esper's deputy chief of staff. Before that he was the top space advisor for the deputy secretary of defense. Johnson also spent time at the Heritage Foundation and on the staff of the office of Congressman Doug Lamborn of Colorado.

Dr. Victoria Coleman has been [named as the new director](#) of the Defense Advanced Research Projects Agency. She comes to DARPA from Atlas AI, a tech start up focused on using artificial intelligence to analyze data trends, where she served as CEO. Coleman has been a member of the Defense Science Board, and was a founding chair of DARPA's Microsystems Exploratory Council. She will be the third woman to head DARPA since its creation in 1958. Dr. Peter Highnam, who had been serving as acting DARPA director, will once again become the deputy director.

Gen. Mark Kelly assumed command of [Air Combat Command](#) in a Aug. 28 ceremony at Joint Base Langley-Eustis in Virginia Friday, succeeding retiring Gen. Mike Holmes. Kelly will oversee nearly 115,000 enlisted airmen, 20,000 officers and 22,600 civilians at more than 242 locations nationwide, along with nearly 1,100 fighter jets, remotely piloted aircraft, helicopters and intelligence, surveillance and reconnaissance aircraft across 27 wings.

Lt. Gen. Shaun Q. Morris took command of the Air Force Life Cycle Management Center in a September 3 ceremony, replacing retiring Lt. Gen. Robert D. McMurry. Morris, who previously served as head of the Air Force Nuclear Weapons Center, will now oversee the development and sustainment of Air Force aircraft, software, missiles, and more.

Lisa Campbell has been named the new president of the Canadian Space Agency. She had worked for Veterans Affairs Canada since 2018, and before that as assistant deputy minister of defence and marine procurement. Campbell will be the first woman to hold the top job at the CSA.

Amazon has hired [Peter Marquez](#), who was the director of space policy for the National Security Council at the White House under Presidents Bush (43) and Obama, as head of space policy for Amazon Web Services.

Marquez is the first person to serve in the role. His hiring shows how serious the company is about expanding its presence in the space industry.

Catherine Koerner, who previously led NASA's human health and performance directorate team at Johnson Space Center, is the [new Orion program manager](#).

National security update

Northrop wins Minuteman III contract. On Tuesday, Northrop Grumman was awarded a [\\$13.3 billion Air Force contract](#) for the engineering and manufacturing development phase of the Ground Based Strategic Deterrent (GBSD) program to replace the nation's fleet of Minuteman III intercontinental ballistic missiles. Northrop is leading a national team made up of hundreds of other defense companies including Aerojet Rocketdyne, Lockheed Martin, and General Dynamics.

SDA Contracts. The Space Development Agency [awarded](#) \$187.5 million to Lockheed Martin and \$94 million to York Space Systems under fixed-price contracts. These are the first two contracts the agency has awarded. Each of the companies will build 10 smaller satellites (between 100 and 200 kg each) that will serve as test satellites for a much larger constellation. The test satellites are to be launched no later than September 2022. The satellites will be a specific mix of A-Class (optical cross links that communicate to satellites in the same plane or in different orbits) and B-Class (connect directly to the warfighters via the Link-16 military communications system). "At about this time in exactly two years, we will be launching 20 satellites from two different performers to make up the nucleus of our tranche zero transport. That is the backbone of what the department is betting will be the future of the [joint all-domain command-and-control] architecture, or the ability to do tactical data transfer from space to the warfighting edge," [said](#) Space Development Agency Director Derek Tournear.

AI RFI. The Joint Artificial Intelligence Center is thinking about ways to create a [standard acquisition process for artificial intelligence tools](#). On August 28, the office released on Request for Information (RFI) for ideas to deliver "AI capabilities through meaningful market research/front-end collaboration and optimal teaming arrangements of both traditional and non-traditional companies for AI product procurement."

New USAF Chief calls for accelerating change. Normally, we'd drop a link to Gen. Charles Q. Brown's memo in our What to Read section. However, if you haven't read it yet, take a few minutes to do so. [Gen. Brown's thoughts](#) on joint warfighting, moving fast, collaborating, and getting the job done or facing serious consequences are well worth it. This will be his blueprint and vision as the chief. We also expect his speech at AFA – next week – will also highlight this plan.

GAO report on integrating R&D into defense planning. The Government Accountability Office (GAO) looked at how defense contractors conduct R&D outside of their specific government work, and how the Department of Defense does not tend to include independent R&D into their planning, which can result in duplicate efforts and missed opportunities. Read the full report and GAO's recommendation [here](#) and more about the report [here](#).

IG report on launch vehicle certification. On Thursday, the DoD Inspector General released a final report on its investigation into how the U.S. Air Force certifies that rockets are safe and reliable to launch government satellites. The probe began in early 2019 looking at how the USAF certified SpaceX launch vehicles; it was later expanded. The report concluded that the Space and Missile Systems Center, who managed the certification process, fully complied with the Air Force's New Entrant Certification Guide when it certified the SpaceX launch vehicles. You can read the full report [here](#) (note: a large portion of the report is redacted).

China has been busy lately. Last Friday, China launched an [experimental reusable spacecraft](#), a project they've been pursuing publicly since 2017. The spacecraft was in orbit for two days, performing tests according to state media and deorbiting on Sunday. No images or details of the spacecraft have been released. "The successful flight marked the country's important breakthrough in reusable spacecraft research and is expected to offer convenient and low-cost roundtrip transport for the peaceful use of the space," the media release stated. Before it returned to Earth, though, the spacecraft apparently released [an object into orbit](#). U.S. space surveillance catalogued the new object, designated NORAD ID 46395 (2020-063G COSPAR ID). And an annual report to Congress from the Pentagon says that China is continuing to develop [new anti-satellite capabilities](#) (we should note that the report was released prior to the launch). The report describes counterspace capabilities including kinetic-kill missiles, ground-based lasers, orbiting space robots, space surveillance, jammers, and other electronic weapons. The same report also warns that [China has already pushed ahead](#) of the U.S. in areas like shipbuilding, missile defense, and ballistic and cruise missile construction, and is expected to [double the number of nuclear](#) warheads it has to 400 over the next decade. In addition, the report emphasizes that China is pursuing [emerging technologies](#) including artificial intelligence, cloud computing, big-data analytics, quantum information, and unmanned systems.

Events this week. CSIS and CNAS hosted a discussion on their new report *Toward a More Proliferated World?* last Wednesday. Read the full report [here](#) and our summary of the event [here](#). RAND hosted a discussion on space launch (find our summary [here](#)) and the Atlantic Council held a panel discussion on foreign policy and the 2020 election (our notes are [here](#)). CNAS also hosted a chat with Gen. John Murray who heads up Army Futures Command (read a summary [here](#)). Defense News held a two-day conference this week (read our notes from three of the sessions [here](#) and [here](#)).

Civil and commercial update

NASA seeks lunar miners. On Thursday, NASA Administrator Jim Bridenstine [announced](#) that the agency is seeking [requests for quotes](#) from private companies for the purchase of between 50 and 500 grams of lunar regolith. The idea is that the company would collect material on the surface of the Moon – the type and quality of the material isn't important, according to the agency – and then provide photos and location data. NASA will pay between \$15,000 and \$25,000 for the material upon proof and then collect it at a later time (the implication is that the material would be retrieved during an Artemis mission, though there is no guarantee that would happen). This kind of contract is a first for NASA; normally, collecting material would be part of a sample return mission. It's also a strong show of support for in-situ resource utilization, something the space agency has been preparing for with the Artemis Accords. If companies can prove the concept and earn payment from NASA, it's the start of a viable business case.

Cybersecurity in space. The White House released a [new policy directive](#) on cybersecurity for the space industry last Friday. The policy defines best practices such as encrypting commands to and information received from satellites and managing supply chain risks, and outlines a plan for the government to work with industry to encourage adoption of those best practices and to create norms for cybersecurity operations. The policy does not include any kind of enforcement mechanism or plans to turn these best practices into regulations.

SLS booster test. NASA and Northrop Grumman performed [a static-fire test](#) on a Space Launch System (SLS) Booster last week. The test lasted a little more than two minutes, as expected; the purpose of the test was to evaluate potential changes to future boosters.

Weather reporting and the pandemic. Weather news is something we can all agree is important, and how news outlets are [covering the weather](#) is changing because of the pandemic. Outlets are using drones more and

more to get on-the-ground video, and they're focusing on air-quality forecasting looking at how virus particles travel in dry air versus humid air both outdoors and indoors.

Bolden endorses Biden. Former NASA Administrator and astronaut Charles Bolden [has endorsed](#) Joe Biden for president. The former vice president Biden worked with the former head of the space agency from 2009 to 2017. Bolden, who has no formal role with the Biden campaign, also made some predictions of what a Biden space policy would look like. "I would expect to not see any dramatic change to the path NASA is on," Bolden said, contending that space goals need stable funding and vision. Biden, however, is likely to focus a bit more on Earth science and Bolden expects that studying the planet and its weather from space will play a big role in Biden's Green New Deal plan to counter climate change. Bolden also said the Space Launch System rocket could face trouble though, regardless of who is in office in 2021: "SLS will go away. It could go away during a Biden administration or a next Trump administration ... because at some point commercial entities are going to catch up," he said. "They are really going to build a heavy lift launch vehicle sort of like SLS that they will be able to fly for a much cheaper price than NASA can do SLS. That's just the way it works."

CRS on Artemis. The Congressional Research Service has released a [primer](#) on NASA's Artemis mission, including a timeline for a return to the lunar surface and a breakdown of what platforms will be used for the mission.

2020 Election update

It's 53 days to the election and the final campaign push is on. We know you're getting inundated with election and campaign news, so here's the bottom line on what you need to know this week.

Convention bounces (or not). The polls for the past few weeks have been relatively consistent. Neither candidate saw a noticeable post-convention bounce. Given that Labor Day is the traditional start of the real campaign, you can expect to see a few more polls, though mostly from swing states. However, it's unclear what effect early voting and voting by mail will have on polls (and what effect polls will have on voting). A [poll this week](#) showed that about 6 in 10 registered voters say they want to cast their ballot before Election Day, either in-person or by mail. The Biden-Harris campaign did get one kind of August bounce, though – [August reporting for each campaign](#) shows that the Democrats raised a record \$364.5 million compared to the Trump-Pence campaign's \$210 million. The campaigns did not release their cash-on-hand numbers, but some Republicans are raising concerns that the Trump campaign may face a cash shortage soon, prompting Trump to say that he would spend up to \$100 million of his own money if he has to.

What we all have been waiting for – the Presidential Debates. Last week, the Commission on Presidential Debates [announced](#) moderators for the four upcoming debates:

- Sept. 29, Chris Wallace, Anchor, Fox News Sunday
- Oct. 7, Susan Page, Washington Bureau Chief, USA Today (vice presidential debate)
- Oct. 15, Steve Scully, Senior Executive Producer & Political Editor, C-SPAN Networks
- Oct. 22, Kristen Welker, Co-Anchor Weekend TODAY, White House Correspondent, NBC News

Primaries. Yes, there are still primaries happening. In Massachusetts on Tuesday, a Kennedy made history by losing an election. Sen. Edward Markey won the Massachusetts Democratic Senate primary, beating 39-year-old Rep. Joseph P. Kennedy III by 11-points. In New Hampshire, former State Department official Matt Mowers [won the Republican nomination](#) to take on Democratic Rep. Chris Pappas, while lawyer and Army veteran Corky Messner will now face Sen. Jeanne Shaheen (D) in the general. In Rhode Island, Democratic Rep. Jim Langevin comfortably held off a primary challenge from Dylan Conley.

Media roundup of election stories:

- Politico: [Biden transition team shapes up with Obama-Biden alum hires](#)
- Roll Call: [Russian hackers tied to 2016 elections now target 2020 race, Microsoft says](#)
- Politico: ['So much noise': Brawl over 2020 intel leaves voters in the dark](#)
- Axios: [Biden campaign to suspend TV ads on 9/11 anniversary](#)
- FiveThirtyEight: [Polls Are Good For Biden Pretty Much Everywhere — Except Florida](#)

2020 Election tracking. Velocity has put together an election update – [available here](#) – with all sorts of fabulous details about the 2020 Senate, House, and Presidential races, complete with pundit predictions and polls. This is a living document, and we will keep it updated throughout the campaign season, and until the last race is called. Let us know if there are races not listed here that you would like us to track, and we will add them!

Podcasts (and videos) we love

Okay, technically this isn't a podcast, but it's definitely worth watching. Via Satellite is hosting conversations with satellite industry experts every Thursday at 10 am ET. Watch the latest episode with Swarm Technologies CEO and Co-Founder Sara Spangelo [here](#).

And another video to watch is this behind the scenes look from former CIA and NSA Director Gen. Michael Hayden, the Michael V. Hayden Center for Intelligence, Policy, and International Security, and the Lawfare Institute. [Good Morning, Mr President! A Peek Inside the President's Daily Brief](#) is a discussion between officials who have had a hand in creating the president's daily intelligence briefing.

And now for some cool space news...

There's rust on the Moon. No, really: planetary scientists using observations from India's Chandrayaan-1 Moon orbiting spacecraft have found evidence of hematite, or iron oxide, on the lunar surface. And yes, rust = iron + water + oxygen. Here's [the very cool story](#) of how the Moon is rusting. Space chemistry for the win!

For some other epic space news, we turn to the big screen and the most recent adaptation of Frank Herbert's *Dune*. The [first full trailer](#) for the movie came out this week (technically the first movie; there will be two to cover the full book) and regardless of how you feel about yet another remake or the actual story, visually, the movie looks stunning. We'll hold off on deciding whether or not it's going to be good just yet.

Upcoming conferences and other events of interest

- 9/13 to 9/15, Cipher Brief Threat Conference, Sea Island GA (more info and registration [here](#))
- 9/14, 8:45 am to 3:30 pm, COMSTAC Meeting (more information and registration [here](#); the conference will also be live streamed to the FAA's [Facebook](#), [Twitter](#) and [YouTube](#) account)
- 9/14 to 9/16, AFA's Air, Space, Cyber All Virtual Conference (more info and registration [here](#))
- 9/15, 11:30am, Maryland Space Business Roundtable with Dr. Stephen Volz, NOAA Assistant Administrator for Satellite and Information Services (watch the event [here](#))
- 9/15, 1 to 2 pm, AFRL's Col. Eric Felt live on Facebook (watch [here](#))
- 9/15, 2 pm, Brookings on Defense Policy and the 2020 Election (more [here](#))
- 9/15 to 9/18, Advanced Maui Optical and Space Surveillance (AMOS) Technologies Conference (more [here](#))
- 9/16, 11 am to 12 pm, CSIS hosts "The Eisenhower Legacy in Space" (more [here](#))
- 9/16, 11 am to 12 pm, Joint Space Team Meeting with SIA's Tom Stroup
- 9/16, 1 to 2 pm, Washington Space Business Roundtable with NASA's Kathryn Lueders (more information and registration [here](#))
- 9/16 to 9/18, INSA Intel Summit 2020 (registration and agenda [here](#))
- 9/18, 10 to 11:30 am, MITRE Great Power Competition Speaker Series: Spacepower Panel (more [here](#))

- 9/22, Emerging Technology Meets National Security conference hosted by NVCA (registration [here](#))
- 9/23 to 9/24, Smallsat & Space Access Summit, Alexandria, VA (more info [here](#))
- 9/29 to 9/30, Autonomous Capabilities for DoD Summit, Alexandria, VA (more info [here](#))
- 9/29 to 10/2, 2020 Community Meeting on NOAA Satellites Informing the Future of NOAA Satellite Observations (more [here](#))
- 9/29, First presidential debate in Cleveland, OH; Moderator: Chris Wallace, Fox News
- 10/1, 8 to 11:30 am, Strategic Deterrent Coalition (SDC) Virtual Forum (invitation only)
- 10/4 to 10/10, World Space Week (more information [here](#))
- 10/6, 15th Annual Future Leaders Celebration, Space & Satellite Professionals International (more info [here](#))
- 10/6 to 10/7, Stanford-NVCA Venture Capital Symposium (more info and registration [here](#))
- 10/7, Vice presidential debate in Salt Lake City, UT; Moderator: Susan Page, USA Today
- 10/13 to 10/15, Planet Labs Explore 2020 Virtual Conference (more [here](#))
- 10/15, Second presidential debate in Miami, FL; Moderator: Steve Scully, CSPAN
- 10/22, Third presidential debate in Nashville, TN; Moderator: Kristen Welker, NBC News
- 10/26 to 10/28, [2020 AMS Washington Forum](#) (live virtual format)
- 10/26 to 10/28, 2020 AAS von Braun Memorial Symposium (live virtual format) (more info [here](#))
- 11/3 – election day
- 11/16 to 11/19, Ascend, hosted by AIAA (live virtual format, more info [here](#))
- 12/2 to 12/3, Space Resiliency Summit, Alexandria, VA (more info [here](#))
- 1/31/21 to 2/4/21, AAS/AIAA Space Flight Mechanics Meeting, Charlotte, NC (more info [here](#))
- 1/10/21 to 1/14/21, American Meteorological Society 101st Annual Meeting (registration info [here](#))
- 6/4/21, National Space Club’s Goddard Memorial Dinner
- 8/22/21 to 8/26/21, [36th Space Symposium – rescheduled](#) from late October 2020

What we’re reading

- Aug. 26, *Defense Daily*: [CBO Estimate On Costs Of Arms Buildup Makes Case For Extending Nuke Treaty, Say Dem Lawmakers](#)
- Aug. 27, *Defense Daily*: [New Partnership Between Congress and Pentagon Needed, Flournoy Says](#)
- Aug. 28, *Via Satellite*: [Who is the Space Economy For?](#)
- Aug. 28, *Breaking Defense*: [Industry Says ‘Meh’ To DoD Cislunar Space Push](#)
- Aug. 28, *CNBC*: [Space Force boldly goes to Silicon Valley to get a Star Trek-flavored software boost](#)
- Aug. 28, *Forbes*: [Air Force’s ‘Skyborg’ Robotic Wingman Will Revolutionize How Air Warfare Is Waged—
And How Weapons Are Bought](#)
- Aug. 31, *Politico Pro*: [Cities make their pitches to host the new U.S. Space Command HQ](#)
- Aug. 31, *Space News*: [Rocket Lab returns to flight with Capella Space launch](#)
- Aug. 31, *Space News*: [ULA investigating cause of Delta 4 Heavy mission abort](#)
- Aug. 31, *Aviation Week*: [The Most Dangerous Russian Military Aircraft](#)
- Aug. 31, *Defense News*: [Close the Pentagon — it’s too big of a target](#)
- Aug. 31, *Air Force Magazine*: [8th AF Boss on Hypersonics, B-21, Long-Range Strike, and B-52 Re-Engining](#)
- Aug. 31, *National Defense Magazine*: [NDIA Policy Points: Enhance Shipbuilding by Funding Unmanned Vessels](#)
- Sept. 1, *CSIS Report*: [Key Governance Issues in Space](#)
- Sept. 1, *Space News*: [NASA space technology faces potential budget pressure](#)
- Sept. 1, *Breaking Defense*: [Link 16 To Tie Legacy Platforms To SDA Satellites](#)
- Sept. 1, *Military.com*: [Military Moves Forward with Plan to Make Air Force One Supersonic](#)
- Sept. 1, *C4ISRNet*: [Army to get two new ground station prototypes in 2022](#)
- Sept. 1, *Military Times*: [What war with China could look like](#)
- Sept. 1, *The Drive*: [Test Aircraft Have Been Lugging DARPA’s Prototype Hypersonic Cruise Missiles Around](#)

Sept. 1, *Forbes*: [Why The Pentagon's Ground-Based Midcourse Defense System Needs To Be Upgraded And Expanded](#)

Sept. 1, *The New York Times*: [U.S.-Russia Military Tensions Intensify in the Air and on the Ground Worldwide](#)

Sept. 1, *Air Force Magazine*: [Raymond to Swear in New Space Force Members at AFA's Virtual Air, Space & Cyber Conference](#)

Sept. 1, *Military.com*: [Russian and Chinese Military Harassment Is Increasing. Should the US Be Worried?](#)

Sept. 2, *Defense News*: [New and old aircraft programs could get axed as top US Air Force general seeks 'ruthless prioritization' of capabilities](#)

Sept. 2, *Associate Press*: [Unarmed Minuteman 3 missile launched from Vandenberg Air Force Base for system test](#)

Sept. 2, *Breaking Defense*: ['I Don't Believe China' Is Serious About Nuke No First Use: DASD Nukes Soofer](#)

Sept. 2, *Air Force Magazine*: [Soofer: No New 'Tactical' Nukes for USAF](#)

Sept. 2, *The Economist*: [How did Americans use their coronavirus stimulus cheques?](#)

Sept. 2, *Defense News*: [Two hypersonic weapons complete new developmental milestone](#)

Sept. 2, *Naval News*: [Russia's Admiral Gorshkov frigate to test fire Tsirkon hypersonic missile this month](#)

Sept. 2, *Aviation Week*: [DARPA, USAF Reaffirm HAWC Flight Test Plans By Year's End](#)

Sept. 2, *United Press International*: [DARPA's air-breathing hypersonic missiles ready for free-flight tests](#)

Sept. 2, *Space.com*: [Future of space station commercialization needs fresh ideas and support, panel finds](#)

Sept. 2, *Military.com*: [For Its 73rd Birthday, the Air Force Desperately Needs Some New Ideas](#)

Sept. 2, *Bloomberg*: [Oracle Loses Appeal in \\$10 Billion Pentagon Contract Fight](#)

Sept. 3, *Aviation Week*: [Rocket Lab Unveils First Operational Photon Smallsat](#)

Sept. 3, *Defense One*: [As Russia Provokes, Trump Remains Silent](#)

Sept. 3, *Breaking Defense*: [ABMS Demo Proves AI Chops For C2](#)

Sept. 3, *Air Force Magazine*: [Two Spaceflight Experiments Win AFRL Approval](#)

Sept. 3, *The Washington Post*: [Pentagon restarts projects defunded for Trump's wall, helping some GOP senators](#)

Sept. 3, *Defense News*: [Extending the New START nuclear pact will help stabilize US-Russia relations](#)

Sept. 3, *Breaking Defense*: [AI's Data Hunger Will Drive Intelligence Collection](#)

Sept. 3, *Military Times*: [Space Force or Air Force-lite? Identity matters](#)

Sept. 4, *Breaking Defense*: [Roper Mulls Name Change For Changing ABMS \(Not Skynet!\)](#)

Sept. 4, *Defense Industry Daily*: [Missile Envy: Modernizing the US ICBM Force](#)

Sept. 4, *Aviation Week*: [What Do SpaceX, Palantir And Anduril Mean For Defense Industry?](#)

Sept. 7, *NBC News*: [White House has talked to VA secretary about taking Pentagon job if Trump fires Esper](#)

Sept. 7, *Reuters*: [FAA investigating manufacturing flaws in Boeing 787 jetliners](#)

Sept. 7, *Aviation Week*: [U.S. Air Force Studies Rocket-Based Hypersonic Flying Testbed Plan](#)

Sept. 8, *Space News*: [Gerstenmaier warns against ending space station program prematurely](#)

Sept. 8, *CNN*: [Trump launches unprecedented attack on military leadership he appointed](#)

Sept. 8, *Breaking Defense*: [Army Seeks New Mid-Range Missile Prototype By 2023](#)

Sept. 8, *C4ISRNet*: [The US Space Force is using a repurposed civilian satellite for weather data](#)

Sept. 8, *Space News*: [Space Force: Too early to say if military will need 'super heavy' launch vehicles](#)

Sept. 9, *Aviation Week*: [After 50 Years, NOAA Looks To Shake Up Status Quo](#)

Sept. 9, *Breaking Defense*: [GBSD, B-21 Spending Could Top \\$10B In 2027: Cowen Group](#)

Sept. 9, *Space News*: [Space Force outreach emphasizes role protecting global space economy](#)

Sept. 9, *Breaking Defense*: [Space Force Strategy Out In 'Months' In Time For Budget](#)

Sept. 9, *Aviation Week*: [Rotating Detonation Engines Are Emerging Priority For U.S. Air Force](#)

Sept. 9, *Space News*: [Northrop Grumman to terminate OmegA rocket program](#)

Sept. 9, *C4ISRNet*: [US Army launching new PNT Modernization Office and Open Innovation Lab](#)

Sept. 10, *Aviation Week*: [Vega And Electron Return To Service With New Offerings](#)

Sept. 10, *Defense News*: [AI's dogfight triumph a step toward human-machine teaming](#)

Sept. 10, *Breaking Defense*: [NSA Prepares Unclassified Threat Reports — From Home](#)
Sept. 10, *Breaking Defense*: [China Is Not Ahead Of US On AI: JAIC Chief & Gen. Hyten](#)
Sept. 10, *Aviation Week*: [Attritable Aircraft Prompt Changes In Jet Engine Designs](#)
Sept. 10, *Stars & Stripes*: [Biden says US must maintain small force in Middle East, has no plans for major Defense cuts](#)
Sept. 10, *Defense News*: [New Pentagon directive will put programs on more solid ground, says MDA boss](#)
Sept. 10, *Air Force Magazine*: [‘Future Games’ Exercise to Feature Swarming Drones, Palletized Munitions](#)
Sept. 10, *Air Force Magazine*: [Roper Argues for More Artificial Intelligence Collaboration, Funding](#)
Sept. 10, *The Hill*: [Pentagon officially withdraws plan to end 'Stars and Stripes'](#)
Sept. 10, *Axios*: [Big companies can't lose with Fed money up for grabs](#)
Sept. 10, *The Hill*: [Trump says he didn't share classified information following Woodward book](#)
Sept. 11, *Space News*: [Virgin Orbit asks OneWeb bankruptcy court to mandate payment for canceled launches](#)
Sept. 11, *Aviation Week*: [Lockheed Martin Unveils Details Of MQ-9 Replacement Offer](#)
Sept. 11, *Defense News*: [The new US Air Force chief has a reputation of only asking for what he needs. He's going to need a lot.](#)

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