NASA Goddard Is Destroying Strategic Capabilities Needed for NASA Missions By Closing Buildings and Divesting Labs

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Around September 23rd, shortly before the start of the federal government shutdown, NASA Goddard Space Flight Center (GSFC) began acting to close 13 buildings on the west side of its campus, with plans to empty and/or displace nearly 100 laboratories, and in many cases, discard unique and valuable labs, equipment, and materials. These building moves and closures are being undertaken at a rapid pace -- entire buildings in a week have been closed -- with little to no planning (for example, GSFC management had not identified a destination one week before a scheduled lab move). Employees and contractors were called in to move items and close out buildings during the shutdown. **The 13 buildings are to be emptied out by March 2026**, a deadline that can only result in harm or destruction to NASA's strategic capabilities, impacting both current and future NASA missions. The unplanned and hasty nature of the action is poised to **result in the loss of millions of dollars in taxpayer-funded laboratory facilities, including sophisticated and high-value equipment that will be difficult, if not impossible, to replace**.

GSFC leadership has justified these building closures as a cost-saving effort in response to years of deferred and inadequate maintenance; current Congressional funding scenarios for Fiscal Year 2026 point to flat funding for NASA Safety, Security, and Mission Services (SSMS), which includes building infrastructure funding. **The need for additional GSFC facilities funding and building renovations are issues that GSFC, NASA and Congress must address. However, these building closures are themselves extremely costly and wasteful.** GSFC leadership may not have performed a cost-benefit analysis or engaged with all stakeholders -- including project leads, principal investigators, and other subject matter experts to be able to perform such analysis. As of late August, our union representing GSFC federal employees learned that GSFC leadership had not assessed the costs, impacts, lost capabilities, and risks that result from these building closures. Even in instances where capabilities can be replaced and labs can be reinstalled in new buildings, this is certain to require significant additional time, dollars, and downtime.

GSFC has to date been closing buildings with little regard for mission success, safety, or the public good, and with disregard for internal policies and Congressional intent. **The unplanned and destructive speed of these building closures is already resulting in the loss of capabilities that are needed for high-priority current and future missions. As the closures advance, the scope of the damage will continue to grow** unless clear alternative actions are taken to mitigate and prevent such damage, or the moves and closures are halted entirely. Labs have been dismantled and specialized hardware has been disposed of or marked for "donation". Some missions that are scheduled to use labs and equipment in these buildings include Artemis III, Gateway, LEMS/LEIA (Lunar Environment Monitoring Station/Lunar Explorer Instrument for Space Biology Applications**)** , Roman Space Telescope, Dragonfly, Habitable Worlds Observatory

(HWO), DAVINCI (Deep Atmosphere Venus Investigation of Noble gases, Chemistry, and Imaging), and a considerable number of grant-funded research projects under Research Opportunities in Space and Earth Science (ROSES), and under internal research and development programs.

Even in cases where the facility divestments do not directly impact current projects, NASA's ability to respond appropriately to unforeseen events is compromised by the losses. For example, if the high gain antenna on the Roman Space Telescope experiences an anomaly before launch, one of the possible ways of addressing it may have been de-integrating it and bringing it to the GEMAC lab for further testing. Now that is no longer an option, and the project might be forced to accept risk to launch it may not have had to previously – as using another facility is likely to require significantly more time or cost, which may not have been anticipated and budgeted for. **Current NASA mission impacts also don't tell the full story of what we're losing as a nation. These closures and moves, along with the recent loss to NASA's workforce through the voluntary resignations programs instigated by the agency, will severely reduce America's ability to be competitive in science and technology in the future.** HWO, for example, may now require significantly increased monetary and/or schedule resources to become a reality, potentially including costs to rebuild capabilities that are currently being divested. Thus, the divestments and disruptions currently underway at GSFC appear grossly wasteful.

Some of the **GSFC capabilities being impacted also include laboratories and test facilities that NASA's government, academic, or private sector partners have used or depended on for shared collaborations currently or in the recent past, including**:

Air Force	NASA Langley Research Center (Virginia)
Arizona State University	NASA Marshall Space Flight Center (Alabama)
Army Research Laboratory	National Science Foundation, NSF
Axion Space (Texas - Artemis III)	National Institute for Standards & Technology, NIST (Colorado)
Ball Aerospace	National Oceanic and Atmospheric Administration, NOAA
Brown University (Rhode Island)	Northrop Grumman (Virginia)
California Institute of Technology (California)	Office of Naval Research
Catholic University of America (DC)	Oklahoma State University
CNES, National Center for Space Studies (France)	Penn State University
Cornell University (New York)	Purdue University (Indiana)
German Aerospace Center, DLR (Germany)	QmagiQ (New Hampshire)
European Space Agency, ESA (Europe)	Space Force
Fermilab (Illinois)	Space Telescope Science Institute (Maryland)

Florida A&M University	SpaceX (California, Texas - Artemis III)
Honeybee Robotics (California)	SRON (Netherlands)
Iowa State University	Teledyne
Japan Aerospace Exploration Agency, JAXA (Japan)	Universities Space Research Association (DC)
Johns Hopkins University (Maryland)	University of Alabama
Lockheed Martin (Colorado)	University of Arizona
Malin Space Science Systems (California)	University of Maryland
Massachusetts Institute of Technology, MIT Lincoln Labs	University of Massachusetts
NASA Ames Research Center (California)	University of Virginia
NASA Columbia Scientific Balloon Facility (Texas)	University of West Virginia
NASA Jet Propulsion Laboratory (California)	University of Wisconsin-Madison
NASA Johnson Space Center (Texas)	US Geological Survey, USGS
NASA Kennedy Space Center (Florida)	

NASA federal employees who had been called in to pack up their workspaces during the government shutdown (October 1st to November 13th 2025) have also been concerned about **how this work was funded during a lapse in appropriations and whether it was appropriately "excepted" by law under the Antideficiency Act** (for example, meeting the criteria of activities needed to protect human life or property) or "exempted" as prior funded work. There were no imminent or unique safety concerns in the buildings emptied during the shutdown of which we have been aware. In some instances, employees were recalled from furlough status and given 48 hours to pack up their offices under threat of having their personal belongings thrown away or mishandled.

Sampling of Missions Impacted by GSFC Building Closures

Artemis III – GSFC work for the first crewed mission to return Americans to the moon, is scheduled for the Thermal Technology Development and Demonstration Facility (T2D2) (housed in **Building 4**).

Roman Space Telescope – Targeted to launch in 2027, the Roman Space Telescope's wide field instrument will image with a field of view 100 times larger than the James Webb Space Telescope (JWST) to detect exoplanets and measure dark energy. Work on Roman includes work performed to characterize the detector systems (**Building 11)**, propulsion system integration (**Building 11**), and electromagnetic testing (**Building 20**). Some Roman equipment and hardware are currently housed in **Building 11's** highbay until their scheduled move to the launch site in July 2026. It was instead moved out on November 12, 2025. The Roman team was given 7 days'

notice. The location of some Roman equipment and parts that were housed in **Building 19,** which has now been locked and closed, is currently unknown to some Roman employees. The power systems branch is being divested **(Building 20)** requiring an alternative facility and location be secured to store the flight batteries for the telescope.

Lunar Environment Monitoring Station (LEMS) and **Lunar Explorer Instrument for Space Biology Applications (LEIA)** – LEMS is a network of small seismometers that will be delivered to the lunar South Pole region on Artemis III and provide continuous long-term monitoring of the Moon's crust and mantle. LEIA is a suite of scientific instruments that will land on the Moon and study the impacts of the lunar environment on biological organisms. Before these missions supporting long-term lunar habitation can be launched, GSFC planned to complete work at the Thermal Technology Development and Demonstration Facility (T2D2) (housed in **Building 4**), the Flight Harness Fabrication facility (**Building 20**), and complete build and testing work (**Building 21**).

Dragonfly – This rotorcraft lander that will explore Saturn's moon, Titan, is set to launch in 2028 and arrive in 2034, to study the chemistry and astrobiological characteristics. GSFC is responsible for the Ocellus 3-D lidar system that provides Dragonfly with altimetry and terrain mapping capabilities. Hardware development, testing, and assembly of Ocellus 3-D lidar system are scheduled in **Building 11.** The Dragonfly Mass Spectrometer (DraMS) is scheduled for electromagnetic testing and other evaluations in **Building 20**, and components will undergo thermal coatings and vacuum tests in the Contamination and Coatings Engineering lab, housed in **Building 4**.

DAVINCI – This orbiter and atmospheric probe will study the origin and evolution of Venus, with a launch date expected in the early 2030s. The VASI instrument is scheduled for fabrication, testing, and assembly in **Building 11**, and thermal testing is scheduled for **Building 4**. The communications antennas and subsystems were planned for testing in **Building 19,** which is now closed and its laboratories divested**.**

Habitable Worlds Observatory (HWO) – HWO is NASA's next large space telescope in development to directly image Earth-sized planets around other stars. HWO was identified as one of NASA's top priorities in the National Academies' Astrophysics 2020 Decadal Survey. Initial development work for detectors and related technologies for HWO's next-generation imaging cameras is currently ongoing in GSFC's Detector Systems Laboratories (**Building 11**).

Geodetic Reference Instrument Transponder for Small Satellites (GRITSS) - GRITSS is a GSFC technology demonstration mission with a planned launch in 2026 aboard a spacecraft bus supplied by an international partner, ISISPACE. The mission uses a small satellite to create a space-based reference point that improves the International Terrestrial Reference Frame; this new "geodetic time-of-flight observable" enables more precise and accurate geodetic measurements on Earth, and this technology has broad applications and benefits for mapping, navigation, engineering, and science. Ground validation testing for the mission was planned in **Building 19**. The status of some GRITSS equipment and parts that were housed in **Building 19**, which has now been locked and closed, is currently unknown to some project employees.

Sampling of Strategic Capabilities Impacted by GSFC Building Closures

Goddard ElectroMagnetic Anechoic Chamber (GEMAC), Building 19 – The GEMAC s a unique and world-class facility housed in Building 19. A configurable hybrid antenna range with tapered and compact ranges, the GEMAC supports performance testing of antennas for in-house and out-of-house flight missions, debugging of vendor-provided microwave radiating and reflecting devices, design and modeling of custom antennas, and measurement of microwave instruments and devices. You can read about the lab on NASA's public website here: https://www.nasa.gov/centers-and-facilities/goddard/nasa-goddards-spiky-antenna-chamber-signaling-success-for-50-years/. This lab was divested during the shutdown.

Microwave Electronics Test and Assembly Laboratory (METAL), Building 19 - The METAL lab is an ESD Class 0 compliant cleanroom for the development of custom microwave electronics for high reliability space qualified products. The lab includes a test area well-equipped with microwave and communications test equipment and a thermal chamber suitable for the qualification of flight hardware. Two assembly areas offer intricate packaging technologies for radio frequency, microwave, and submillimeter wave components and assemblies, from soldering, reflow, and polymerics in a Class 100,000 zone; to high-precision microassembly processes including wirebonding, plasma cleaning, epoxy attachment, vacuum bagging, flip chip, and eutectic die attachment in a Class 10,000 area. Recent customers include Roman, PACE (Plankton, Aerosol, Cloud, ocean Ecosystem), GRITSS, SMAP (Soil Moisture Active Passive), SDO (Solar Dynamics Observatory), LRO (Lunar Reconnaissance Orbiter), GPM,(Global Precipitation Measurement, IceCube, SoOp (Signals of Opportunity), James Webb Space Telescope (JWST), and many internal research and development projects (IRADs). This lab was divested during the shutdown.

The Digital Communications Laboratory, Building 19 - GSFC's highly specialized Digital Communications Lab performs testing of communication subsystems for delivery to flight missions, research and development of next generation communications technologies for efficient and high reliability data transmission, and test and assembly of custom microwave and communications electronics for small satellites. In addition to delivering in-house communications subsystems for GSFC missions (including Roman, PACE, MMS (Magnetospheric Multiscale), DSCOVR (Deep Space Climate Observatory), and GPM), the lab also supports out-of-house communication subsystems with testing and troubleshooting. The lab is also important for research and development in space communications, for instance, the development and adaptation of new error correction coding algorithms, data compression algorithms, and digital modulation techniques. This lab was divested during the shutdown.

Power Systems Branch Battery & Solar Array Laboratories, Building 20 - The battery and solar array labs in the power systems branch are being completely divested. The solar array lab in this building is one of the few facilities at NASA that can simulate and test solar panels at full sun output levels. With the battery lab in this branch being divested, an alternative facility and location needed to be secured to store the flight and flight spare batteries for Roman. Limited space and capabilities due to the building closures are also making it difficult to find a place to maintain the Roman's Electrical Ground Support Equipment and testing capability. All in-house projects such as GPM, MMS, PACE, and Roman have been supported by this or related laboratories in the power systems branch.

Detector Development and Detector Characterization Laboratories, Building 11 – These labs house capabilities unique to NASA for developing and deploying civilian space flight grade cameras, including developing innovative detector technologies that push to fundamental performance limits, and related optical components and electronic readout technologies. **Detectors are at the heart of all past, current and future NASA science missions**. Specific capabilities in these labs include in integration and packaging, detector and focal plane array characterization and microfabrication. Equipment impacted includes multiple pieces of specialized micro-fabrication equipment, materials imaging and analysis tools, semiconductor packaging tools, and detector testbeds. Past high profile NASA missions supported by these laboratories include Landsat, the Hubble Space Telescope, James Webb Space Telescope, Euclid, Lucy, OSIRIS-REx (Origins, Spectral Interpretation, Resource Identification, and Security – Regolith Explorer), New Horizons, PACE, and HAWC+ (High-resolution Airborne Wideband Camera Plus) on Sofia. Current missions at risk of being impacted in these labs, which are to be moved and downsized, include the Roman Space Telescope (RST), Habitable World Observatory (HWO), Advanced Telescope for High ENergy Astrophysics (Athena), PRobe far-Infrared Mission for Astrophysics (PRIMA), and multiple technology development programs under NASA's ROSES programs. **In addition to impacting future and current NASA missions, closing Building 11 will set back NASA technology innovation, which has resulted in patents and advances that have impacts to other industries and applications (for example, in quantum computing, commercial detectors, national security, and defense)**. NASA's public webpages for some of these capabilities and labs are: https://etd.gsfc.nasa.gov/capabilities/capabilities-listing/detector-fabrication-and-characterization/ & https://etd.gsfc.nasa.gov/capabilities/facilities-listing/detector-characterization-lab-dcl/

Propulsion Lab and Cleanroom, Building 11 - This is a lab area containing all the necessary capabilities for building spacecraft propulsion systems. This lab built parts of Roman Space Telescope, Europa Clipper (going to Jupiter's moon which is suspected to have an underground ocean), Lunar Reconnaissance Orbiter (moon mapping), and Global Precipitation Measurement missions, and many more. The specialized facility contains capabilities that cannot be moved, including a ceiling-mounted crane, nitrogen lines, deionized water lines, and secure flight hardware storage area. Equipment and hardware in these labs were moved during the shutdown. Without these labs, GSFC will never build a propulsion system like this again.

Heliophysics Science Division - Building 21 - The Heliophysics Science Division supports research in the prediction and mitigation of solar events that can disrupt modern technology (i.e., Global Positioning System, GPS), critical infrastructure (i.e. the power grid), and help ensure public safety (i.e., commercial airline flights). There are many shared laboratory facilities, and several shared cleanrooms housing hardware builds for heliophysics missions in Building 21 that are impacted by these closures. In addition, a multi-million dollar server supporting heliophysics research, including space weather prediction, is currently housed in a high-end environmentally controlled room in Building 21 and is planned for relocation. Due to the fragility of some of the older computing systems and lack of preparation time in the moves, there are some concerns that data archives and science modeling programs may not be transferred from systems properly. Employees have also been told their new office locations may be split amongst various buildings, hindering group cohesion and collaboration.