

# Space Alert!



Global Network Against Weapons and Nuclear Power in Space  
globalnet@mindspring.com • www.space4peace.org • (207) 389-4606

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Newsletter #41

## Defend the Earth, Not Arms Dealers

by Koohan Paik-Mander

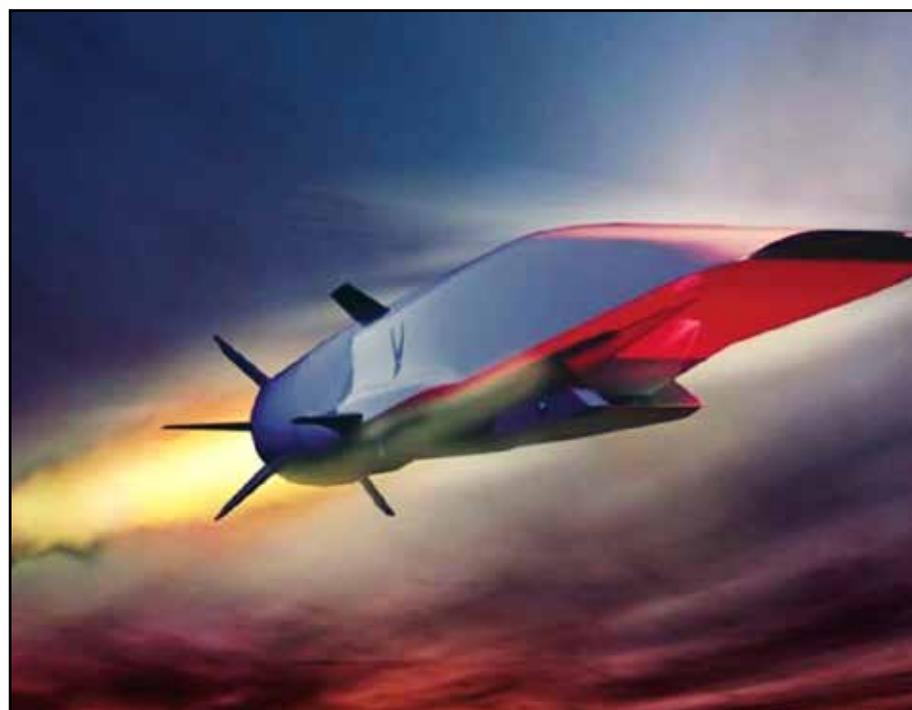
We are drowning and burning and choking because of climate change.

The world is haunted by images of commuters in China, in a dark subway car with muddy water up to their necks, standing in order to breathe.

Only days before, Germany and Belgium witnessed torrents of water that swept away centuries-old, half-timbered houses, leaving hundreds dead. A few days before that, Oman, New Zealand, New York, and elsewhere had also been deluged. Meanwhile, out-of-control fires on the west coast are belching so much smoke that New Yorkers can't breathe.

We have entered the era of Climate Catastrophe, and our president and Congress must respond appropriately. Instead, they continue to pour billions of dollars every year into war-making that will further compromise the health of the Earth and the survival of its people.

In June 2021, the U.S. released the FY 2022 defense budget request. The theme was singular: to dominate China. The wish list came to \$715 billion. Then, the following month, the Senate Armed Services Committee voted to pile on another \$25 billion in a nearly unanimous bipartisan vote. (Only Elizabeth Warren demurred.)



The floods, fires, tornadoes, rain bombs and mudslides are, by far, the biggest threat to global security. Not China.

### A Hypersonic Arms Race

The spectre of “the China threat” has been effective in justifying endless support for war, expansion of the nuclear arsenal, and developing uber-costly high-tech weapons, like hypersonics, that don't even function yet. Even if they did function, they would open up the chance of miscalculation that could easily tip

into nuclear war.

What makes hypersonic weapons so unique is not their speed, but rather, their maneuverability. They can keep their target a secret by taking a surprising pivot just before striking. This makes them impossible to intercept with current technologies. It also makes them prime candidates for a miscalculated retaliatory second strike, and perilous escalation.

By contrast, the Pentagon's sales pitches stress how much further ahead China and Russia are in their hypersonics development. This narrative has so far been very successful in garnering Congressional support, so much so, that we now find ourselves in an accelerating hypersonic arms race, in which no one benefits but the weapons industry.

### “Climate change”? What's that?

The companies which routinely benefit from developing hypersonic weapons and their infrastructure are Lockheed Martin, Dynetics Technical Solutions, General Atomics Electromagnetic Systems, Elon Musk's SpaceX, Northrop Grumman, Leidos, L3Harris, and Raytheon – the company where Lloyd Austin served

as a board member until he was appointed Secretary of Defense.

Clearly, Austin and his colleagues in the weapons industry are in the business to stimulate a profitable arms race.

The resulting instability has distracted lawmakers from what we actually need for real security.

George Nacouzi, a senior engineer at the conservative RAND Corporation, and co-author of “Hypersonic Missile Nonproliferation: Hindering the Spread of a New Class of Weapons,” suggests, “If you could just start with a trilateral agreement between these three major nations (China, the U.S. and Russia), that would be taking a really effective step in terms of controlling proliferation of these weapons.”

### Hypersonics 101

Hypersonic speed is defined as traveling at Mach 5 or higher, with Mach 1 being the speed of sound – about 680 mph. Mach 5 would be five times that, so hypersonic weapons are those which travel 57 miles per minute and faster.

There are two types of hypersonic weapons in development:

hypersonic cruise missiles, which use an advanced engine called a “scramjet,” which slows down incoming airflow to maintain steady combustion, and hypersonic glide vehicles, which are launched from a rocket, but which then detach and glide, engine-free, through the low atmosphere, before striking a target.

The development of hypersonics is still in its infancy, especially interception technologies. Existing interception systems are designed to strike incoming ballistic missiles, which may travel just as fast as hypersonics, but because their trajectory is as predictable as a fly ball's arc, they can be intercepted. By contrast, the

(See Arms Dealers P #6.)



Global Network  
PO Box 652  
Brunswick, ME 04011

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# Reflections on a lifetime of space activism

By Bruce K. Gagnon

It's been a hard year for me, not just because of the Covid rage, but also because of all the dangerous developments around the U.S. military space program. Trump, as one of his swan songs, ushered in the new 'Space Force' before leaving office. He had lots of help from the Democrats in the House of Representatives (who had a majority and could have killed it).

Actually the only thing the Dems wanted was to change the name to the 'Space Corps' (like the Marines). That went nowhere.

Since Biden's coming to office he has extended his support to the Space Force and its acquisition arm called the 'Space Development Agency'. Space Force has already begun bragging that they will soon deploy their 'first weapon in space'—although so far it is all very mysterious.

In the meantime virtually every nation and every region in the U.S. is scrambling to get into the space launch biz. You'll see in this edition several stories about space port proposals (in motion or approved) that seek to become part of the new 'gold rush' into space. The aerospace industry is priming this global speculative gold fever in order to create supplicants ready to hand over isolated environmental gems.

Listen carefully how each prospective community is promised the same thing if they win the prize to host a new space launch facility. More jobs than they can imagine, no environmental harm, and their region's place at the 'head of the table' when it comes to the new high-tech space lottery game.

But the story of Kodiak Island, Alaska is instructive. The Pacific Spaceport Complex-Alaska (PSCA), formerly known as the Kodiak Launch Complex, is a dual-use commercial and military spaceport for sub-orbital and orbital launch vehicles. The facility is owned and operated by the Alaska Aerospace Corporation and is located on Kodiak Island—famous for wild salmon, bald eagles and big bears.

The spaceport opened in 1998 and has supported 27 launches, most of those for the Pentagon. (Israel has tested their 'missile defense' rockets there as well.) The site was closed for two years following a launch failure that caused significant damage to parts of the spaceport. It reopened in August 2016. PSCA does not talk openly about any environmental damage from this space port.

Local citizens (including a Kodiak mayor) organized to try to prevent the construction of the launch complex. They were told it would be for civilian use only. That was a lie. They were told the technology was safe and there would be no real environmental impacts. Another lie.

The locals called it 'Space Pork Kodiak'. Many years ago I traveled to Kodiak to offer Global Net-

work's support to the people organizing to oppose the complex.

Local activists knew better than to trust the assurances of these politicians. They smelled something fishy going on. They learned that each launch could release approximately 23,500 pounds of hydrochloric acid into the atmosphere and other dangerous substances into the ocean. They knew that this contamination could over time have tremendous negative impact on the local environment. (At the Cape Canaveral National Wildlife Refuge in Florida, after each space launch, there are significant fish and bird kills due to the accumulation of toxic exhaust pollutants.)

Knowing the truth about Kodiak helps me view the many new spaceport proposals with a jaundiced eye. Why does the Pentagon and aerospace industry want so many damn spaceports all over the world?

This question is driving me nuts and if anyone has any ideas please pass them my way. I understand that 5G is driving plans to launch more than 40,000 mini-satellites into space. (5G has military applications for expanded surveillance and targeting.) Of course more than a few launch sites are needed. But many of these places (like Rocket Lab in New Zealand which like Kodiak was promised to be for civilian use) will essentially turn into military controlled entities.

Does the Pentagon really need that many launch facilities around the globe? Again, why?

At these space ports they are launching satellites and/or testing military rockets. At what point could these many facilities be used to launch offensive missiles armed with warheads (nuclear or conventional)?

There is absolutely no doubt that the Pentagon (with Space Force leading the way) is steadily developing first-strike attack capability. They call it 'Prompt Global Strike' at Strategic Command HQ in Omaha, Nebraska. Could it be that the U.S. is setting in motion a plan to launch attack missiles from many geographic locations around the world giving them a 'better shot' at the latest boogey-men in China, Russia, Iran and god knows who else?

I'm just thinking out loud here. But I've got 39 years of experience tracking this Star Wars project. Some folks thought I was crazy years ago when I warned about 'mining the sky' for resources and profit. Then in 2015 Obama opened the door to American corporate capitalism in space when he signed the U.S. Commercial Space Launch Competitiveness Act—denying the reality of the Outer Space and Moon Treaties at the United Nations that say the 'heavens are the province of all [human]kind'.

A few have called me a conspiracy theorist for constantly telling stories about Operation Paperclip, where former Nazi scientists and engineers



were brought to the Army's Redstone Arsenal in Huntsville, Alabama to build the U.S. space program under the direction of Wernher Von Braun. (Today they call Huntsville 'The Pentagon of the South' because it has gotten so big.)

Then one of the aerospace writers for the industry bible called *Jane's Defence Weekly* wrote a book about Operation Paperclip and concluded that the Pentagon's secret 'Black budget' architecture came with the Nazi's when they arrived in the U.S. after WW II. The author asked, 'Was there an ideological contamination as well when the Nazi's came to America' and were seeded into every aspect of the Pentagon, weapons industry, and CIA?

I am looking for the deeper meaning (and deeper strategy) underway. I've learned that there is usually one lurking in the shadows.

This is admittedly not happy news. But fascism is never a happy subject for those learning to identify it and grappling with how best to deal with it. Italy's Mussolini during WWII defined fascism as the 'wedding of corporate power and government'. Bingo!

In the Space Command document entitled 'Vision for 2020' (circa 1997) they spelled out the plans to 'control and dominate space', to 'deny other nations' the use of space and stated 'space forces will emerge to protect military and commercial national interests and investments in the space medium due to their increasing importance'.

Things appear to be right on schedule. We best get on the ball.

—Bruce K. Gagnon is the coordinator of the Global Network and began working on space issues on June 12, 1982 when he heard the head of Reagan's Star Wars program say he was glad that anti-nuclear people were not paying close attention to the Star Wars program. Gagnon lives in Bath, Maine.

# Danger zone: Space Force Lunar Patrols

by Diana Da Silva

On December 20, 2019, the U.S. Space Force (USSF) was created to conduct military operations in space to protect U.S. 'assets and interests.' It is the sixth independent branch of the U.S. military. To operate, the USSF relies on the space assets of the U.S. Air Force, namely government satellites and two Boeing X-37 space planes, which for several years now have been operating secret, unmanned missions in orbit.

A debate over the possibility of sending military patrol vessels into space to protect U.S. interests has been open since the official speech of Major General John Shaw, Chief of the Space Operations Command of the Space Force, on September 29, 2020. He said, "At some point, yes, we will put humans in space. They will then be able to operate command centers somewhere in the lunar environment or elsewhere". These words were later qualified in early October by Lt. General David D. Thompson, U.S. Deputy Commander of the U.S. Space Force, to reassure international partners and the public who accused the USSF of hiding certain military activities: "the construction of a military base on the Moon was not on the agenda, especially because the robots are doing a very good job at the moment".

Military space patrol vessels are therefore being considered by the USSF, but this will not be in the near future. Thompson speaks of a decade before lunar patrol ships can be deployed. This project echoes a doctrine that appeared saying that the service must prepare for a future when the moon and the volume of space around it could become the next military frontier.

But what are the Space Force's expected goals in sending lunar patrol ships?

In order to effectively prepare for this mission, NASA, in collaboration with the Space Force, is soliciting the help of private companies that invest in space projects. Indeed, American commercial companies are developing deep space technologies previously exclusively reserved for governments, ranging from space communications to navigation to lunar landing systems. Space awareness technologies are a fundamental component of the infrastructure needed to support a cislunar economy, and are critical to the successful completion of space missions.

NASA and the Space Force have also partnered in a broad agreement that will eventually allow the USSF to conduct human spaceflight, provide space transportation and space security expertise to U.S. interests, as well as scientific research and planetary defense, according to a recent NASA statement. NASA explicitly wanted to sign such an agreement in order to be able to protect space projects currently underway on the Moon, such as Project Artemis, which plans to send astronauts to



the Moon and build sustainable lunar infrastructure, so that it can 'conquer Mars' in the coming years. NASA does not hide the fact that the viable and sustainable exploration of the Moon and Mars is based on the use of natural resources. Thus, the Space Force, which is dedicated to protecting American interests in space, both in terms of space infrastructure and low-orbit activities, will be required to ensure the security of Americans and the economy on the Moon.

If diplomatic relations between the U.S., Russia and China do not improve, nothing can legally prevent Chinese or Russians from disembarking within a short distance of the Artemis Base Camp. And even less from exploiting the same deposit of a lunar resource: this is also why lunar patrol boats are greatly considered by the United States of America.

—Reprinted in part from Space Legal Issues.

## Richest counties in the U.S. make war

By Will Griffin

After the imperialists make their dirty money from producing weapons that destroy innocent lives and perpetuates monopoly capitalism, where does that wealth actually go?

Most of these imperialists and war contractors live in the greater D.C. area where six out of the 10 richest counties in the U.S. exist.

Loudoun Co. is the wealthiest county in the U.S., and this is where the "workers" of the U.S. sell their soul for some pocket change, ultimately siding with imperialism over democracy, producing and maintaining spy satellites and other devices/software that undermines all people.

Fairfax Co. is the 2nd wealthiest. It's the home of some of the most disgusting humans on earth, the CIA. Many intelligence agencies reside there. These parasites own the whole state of Virginia while spying and intervening in everyone else's business.

Arlington Co. is the 9th richest county. It's where the Pentagon calls home. The Pentagon directs the military-industrial complex, associated think tanks, coordinates with political leaders, and sits on their asses while pushing for more death and destruction around the world.

Montgomery Co. is home of the National

Geospatial-Intelligence Agency; a combat 'support' agency with the primary mission to collect, analyze and distribute data collected from everywhere, all the time. It maintains the 3rd largest government building in the DC area.

Howard Co. is home for over 8,000 employees from the NSA. These parasites bring home a fat paycheck, enriching the suburbs of the county, living luxurious lifestyles a while most Americans are living paycheck to paycheck.

Fall Church is home to General Dynamics and Northrop Grumman, two of the nastiest weapons producers the world has ever seen. They have their hands in everything as they take U.S. tax dollars away from schools, hospitals and infrastructure we all dearly need.

Together, the greater Washington DC area has the highest median income within the U.S.. They live in large white picket fenced homes, suburbs without gunshots and literally don't care about the rest of the country while saying they're here to 'protect' the people.

—Will Griffin is an Iraq & Afghanistan war veteran and a Global Network board member. He creates a monthly space issues video for the GN and lives in Philadelphia, Pennsylvania

## Fighting over Space Command HQ

Donald Trump awarded the U.S. Space Command HQ to Huntsville, Alabama, in a move that some Pentagon insiders and lawmakers say bypassed the military's top pick of Colorado Springs, the unit's current home, because of political considerations.

It's a decision that Colorado lawmakers are lobbying Biden to overturn.

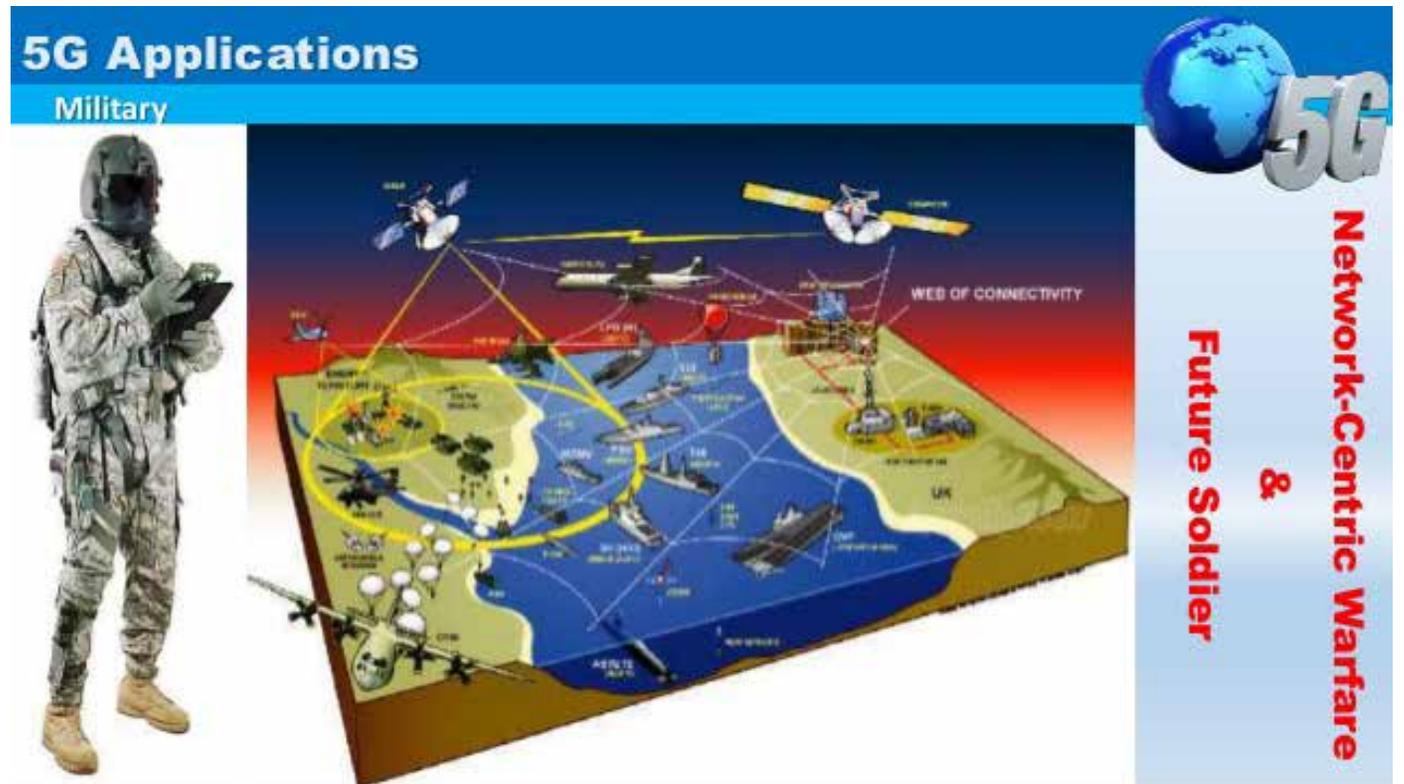
Moving the command to Huntsville would require major construction projects to house it, and new infrastructure to be built, including satellite ground stations and other equipment.

The Pentagon has spent more than \$350 million on Colorado space infrastructure in recent years and is breaking ground on a new \$800 million space operations center at Schriever Air Force Base in the area.

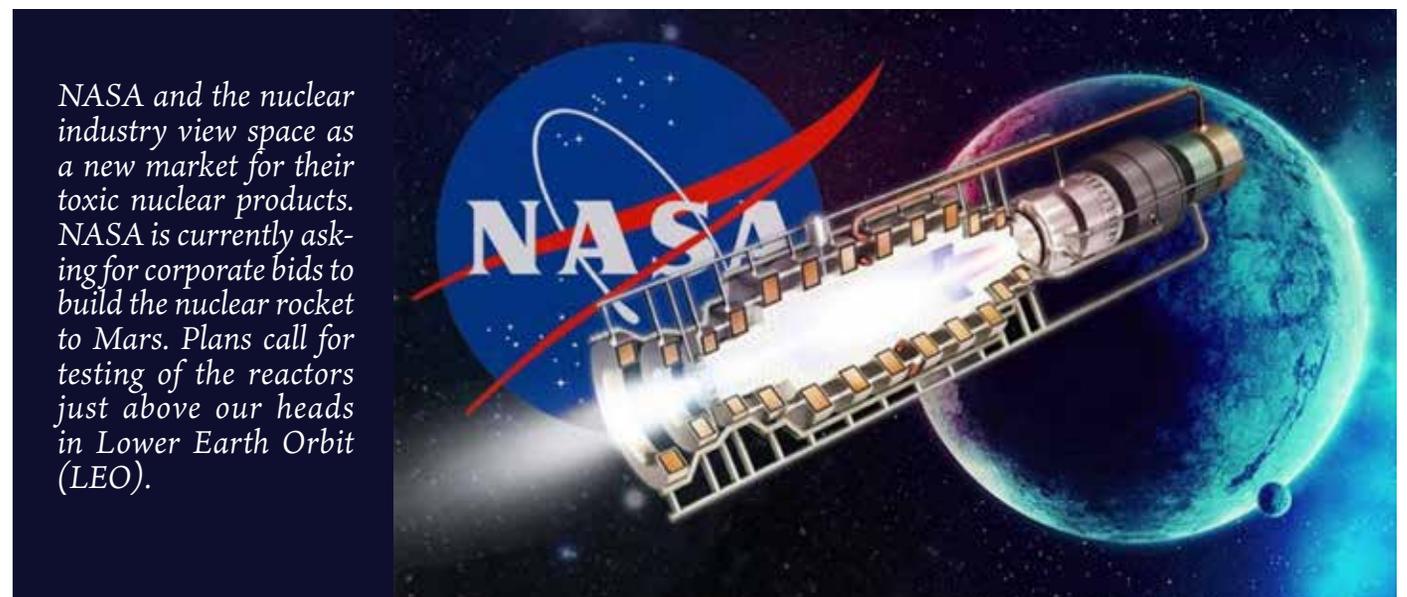
Cities in 26 states applied to host Space Command, but the Air Force came up with six finalists, with Colorado Springs leading the pack and Huntsville making the cut. So many communities wanted the command because it comes with thousands of civilian jobs and billions of dollars in potential military contracts.

Billing itself as 'Rocket City' and 'Pentagon of the South', Huntsville is home to Army rocket programs and missile defense. Huntsville has a long history in space, housing some of the earliest military rocket programs in America. Hundreds of former Nazi rocket scientists and engineers were brought to Huntsville at the end of WW II to create the U.S. space program through Operation Paperclip.

—Refer to Secret Agenda by Linda Hunt.



**Star Wars redux.** Maj. Gen. DeAnna Burt, Space Force Space Component Command commander, is sworn in to the U.S. Space Force at Vandenberg Space Force Base, California. The U.S. appears to now be leading the imperial Star Wars forces. The Pentagon must think this photo is good for public relations.



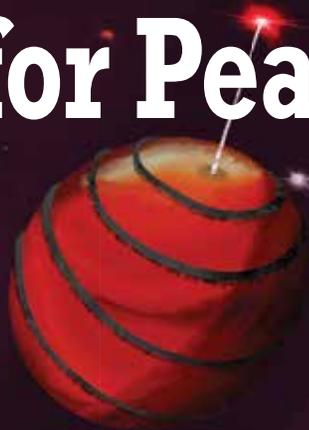
NASA and the nuclear industry view space as a new market for their toxic nuclear products. NASA is currently asking for corporate bids to build the nuclear rocket to Mars. Plans call for testing of the reactors just above our heads in Lower Earth Orbit (LEO).

# Keep Space for Peace

A gold rush into space is now underway

There are tens of thousands of mini-satellites expected to be launched in coming years, mostly for 5G which will have military application for greater surveillance and targeting.

We can expect growing deterioration of the Earth's ozone layer due to toxic rocket exhaust. More spaceports (often in environmentally sensitive areas) are being constructed to handle the glut in launches.



Astronomers are angry as they witness the dark night sky covered in satellite trails.

The privatization of space for profit puts the United Nations' Moon and Outer Space Treaties in jeopardy. The Pentagon's 'Space Force' is issuing statements about the U.S. determination to control the pathway 'on and off' the planet.

Now is the time for us to gather internationally and call for protection of the space environment from greed, pollution and war.

Join us by organizing a local public event in your community during Keep Space for Peace Week.

Art design by Brandon Marx & Nancy E. Randolph

International Week of Protest to Stop the Militarization of Space | **October 2-9, 2021**

## Want to live on Mars?



The architecture studio ABIBOO has revealed plans for the creation of the first sustainable city on Mars and they're hoping to have it completed and ready for residents in 2100 with construction beginning in 2054. Located on Tempe Mensa, the city of Nüwa will feature a population of 250,000 people primarily located inside the rock of a steep cliff, which was specifically chosen because the area offers protection from radiation, but still provides access to indirect sunlight.

The architecture firm envisions all tasks on the planet will be performed in what they're calling "macro-buildings" found inside the cliff, which can be accessed from an elevator system. A train and bus system will help people commute from one side to the other. Facilities for such necessities as crops, which are expected to account for 50 percent of the human diet, will be located at highest point of the cliff, known as the Mesa. It was picked for its direct sunlight access.

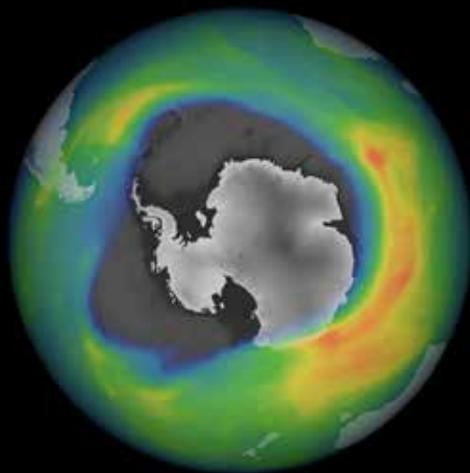
ABIBOO believes that after a brief initial period where Earth supplements Nüwa with supplies and capital investment, it wouldn't take long for the city to become self-sustainable.

Large pavilions at the bottom of the cliff are meant to encourage interaction among residents. These areas offer views of the rest of the city, as well as the landscape of Mars. A farming region for animals can also be found here since they also require the same atmosphere as humans.

There will also be a shuttle service for people who need to return to Earth. Launch windows will open every 26 months with a one-way ticket costing \$300,000.

Anyone interested in going?

Due to toxic rocket exhaust, we can expect growing deterioration of the Earth's ozone layer.



Help support our work!  
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See page 16!

## Arms Dealers (cont. from p. 1)

mosquito-like path of hypersonics makes them impossible to intercept.

### Satellite Planet

Hypersonic research and development is focused on developing a new kind of interception. Creating an effective interception system would require a matrix of thousands of satellites cocooning our planet, capable of tracking and striking every 3-dimensional coordinate, within the Earth's atmosphere, with nanosecond precision. Northrup Grumman was awarded a \$155 million contract in January 2021 to develop the prototype for such a satellite network. SpaceX and United Launch Alliance were awarded contracts worth about about \$1 billion per year to launch the satellites.

The privacy, health and ecological implications of building such a defense infrastructure are staggering. Not to mention that every satellite launch punches another hole in the Earth's fragile ozone.

### No Humans, No Humanity

Another unsettling implication of hypersonic interception is that it is being designed so that artificial intelligence will actually do most of the "thinking" required to "pull the trigger." Because the time between launch and strike of an incoming missile could be as brief as 6 minutes, it is believed that humans would be prone to panic within such a short duration of time, whereas machines would not. The rapid, rational thought processing required during such a moment of urgency is thought to be best handled by machines.

As machine decision-making accelerates warfare, it is plain to see how conflict could easily escalate. Compressed time and space creates the incentive for each side to strike first and strike fast in a perceived crisis. This is a recipe for crisis instability. It's sort of like a Twitter war, with WMDs instead of words. Even if neither party initially planned to strike first, the accelerated dynamic inherent in an AI-driven scenario forces the likelihood of mutually assured destruction.

James Johnson, in *Strategic Studies Quarterly*, elaborates on what parts of the thinking would be turned over to artificial intelligence (AI):

"AI technology is expected to accelerate progress for hypersonic weapons and other long-range (conventional and nuclear-armed) precision munitions in all of these critical enabling capabilities:

- autonomous navigation and advanced vision-based guidance systems,
- ISR systems for targeting and tracking (especially mobile) targets,
- missile release and sensor systems,
- AI machine learning systems to decipher patterns from large data sets to support intelligence analysis for identifying and tracking targets,
- pattern interpretation to cue decision support systems for enabling "fire and forget"

missiles, and

- escalation prediction.

In a 2018 Sandia Laboratories report to the U.S. Department of Energy, the company boasts that it is "(a)chieving an autonomous hypersonic missile... that can intelligently navigate, guide, and control itself and home-in on targets ranging from traditional stationary systems to targets that are themselves hypersonic vehicles—with all the maneuverability that this entails."

What kind of insane logic has led Congress to accept this ghastly scenario? Have we become so disconnected from the Earth, and from our own humanity, that we can so easily hand over the already compromised future of our planet to algorithms? As appalling as it sounds, this is precisely what approval of the defense budget has revealed. When you see a budget line item that reads "hypersonic missile," assume that it will be a machine pulling the trigger.

### Hypersonic Arms Control

There also is some good news. Because hypersonics are still all experimental, we are in an ideal moment to establish risk-mitigation measures, such as negotiating a new international arms control agreement that would institute a moratorium or ban on hypersonic weapon testing. Such a path would include calls for international transparency and confidence-building measures, such as exchanging weapons data and conducting joint technical studies.

It would be in the highest interest of genuine security to do so.

Richard Speier of RAND Corporation reflects on such a prospect, "I am optimistic about the U.S., Russia and China. It's in their interest to do this.

And there's time to do it. Not a lot of time. But a few years."

### Earth Budget

So, what will it take for our lawmakers to show leadership during this most dire moment in human history? Don't they get that you can pour resources into war, or you can pour resources into reviving life on Earth—but you can't do both? The activities are mutually exclusive.

Militarism is the most fossil-fuel consuming, carbon-releasing, species-extinguishing activity on Earth.

The \$740 billion defense budget should be spent for genuine defense of life, not militarism. It should be redirected to an "Earth budget." That money should be used to employ people to build renewable-energy microgrids and functional public transportation, as well as diplomatic relations toward arms control treaties. We need to provide support for our own climate refugees, for regenerative agriculture, and for universal healthcare. We must clean up our waterways and Superfund sites, remove microplastics and other chemicals from the environment, and engage in countless other tasks that await those who love each other and this Earth. Let's cooperate with China on that. It is certainly the only way anything positive will result.

—Koohan Paik-Mander, who grew up in postwar Korea and on the U.S. colony of Guam, is a Hawaii-based journalist and media educator. She is a board member of the Global Network Against Weapons and Nuclear Power in Space and formerly served as campaign director of the Asia-Pacific program at the International Forum on Globalization.



## SDA to build sats for global domination

The Space Development Agency (SDA) plans to award a January 2022 contract for a set of roughly 144 data relay satellites that, once on orbit, will represent the start of the agency's plan to cover the Earth in a new multifunctional network.

The SDA, established in March 2019, will fully transition into the Space Force in October 2022. Since 2019, the agency has been getting new military satellites launched into various orbits.

The agency's role is in streamlining the acquisition process, eliminating redundancies of effort and collecting feedback from the combatant commands as to what their needs are.

The SDA has divided the development of the National Defense Space Architecture into five two-year stages, called tranches.

The envisioned National Defense Space Architecture will consist of a

layered approach, eventually featuring hundreds of satellites that can track targets such as missiles, hypersonic vehicles and other objects; provide position, navigation and timing for targeting by warfighters in GPS-denied environments; and communicate with platforms and warfighters on Earth and between other satellites.

Tranche 1 will be able to provide



## Conflict likely over Moon bases

In 1967, the U.N. General Assembly adopted a treaty on the use of outer space that promised cooperation and banned nuclear weapons, military maneuvers, and military installations off-planet. The agreement also requires countries to take "appropriate international consultations" before making any moves that would "cause potentially harmful interference" with other space programs, and allows countries to "request consultation" if they believe such interference is likely.

This treaty "forecasted very well" the issues that that might arise as space exploration expanded, said James Lake, a senior associate at Canyon Consulting who co-wrote an article on lunar security issues in the August issue of *Space Force Journal*. "The question remains: is that text sufficient? That's something we are going to find out fairly soon."

Notably, a treaty annex that prohibits military activity on the moon went unratified by Russia, China, and the United States. It's likely both the China-Russia and U.S.-led partnerships will begin their moon bases without any sort of agreement between them in place.

In June, the China National Space Agency and Russia's Roscosmos announced they would begin surveying locations for their International Lunar Research Station this year, and pick a site by 2025.

In 2020, NASA, together with the nations partnering with the U.S. under the Artemis Accords, outlined its Artemis Base Camp project. The Artemis nations (Australia, Canada, Italy, Japan, Luxembourg, UAE, UK, & the U.S.) aim to send astronauts back to the moon by 2024.

In addition to those two major alliances, private firms such as Blue Origin are also working on private moon bases.

—Reprinted in part from Defense One.



Activists in Albuquerque, New Mexico recently rallied at a new aerospace high-tech hub called 'Q Station' that was created as a collaborative project between the Air Force Research Laboratory (Kirtland AFB), the City of Albuquerque, and other 'economic development' organizations. Communities like Albuquerque are increasingly being taken over by the military industrial complex as Pentagon funds are the only job creation game in town. The Pentagon has been saying since 2003 that America's role under globalization of the world economy will be 'Security Export'. That means endless war.

## Space ports are popping up all over the globe

### Space port controversy in Georgia

by Alexandra Marvar

A small Southern county hopes to land a starring role in the commercial space race. But for residents of the exclusive islands in the flight path, the stakes feel sky-high.

On an isolated archipelago off the coast of Georgia a controversy is roiling over a proposed spaceport.

On one side of the fight are the commissioners of Camden County, Georgia, who have put nine years and close to 10 million taxpayer dollars toward the construction of a rocket launch facility on the mainland that they say will bring jobs, tourism and cachet to the area of about 55,000 people.

On the other are residents of the nearby barrier islands and coastline who fear falling debris, toxic plumes and catastrophic fire.

But the fears aren't based on nothing: Last September, one of the same class of rockets for which Camden County is tailoring its application tumbled from the sky in flaming pieces, igniting fires on public land near its launch site on Kodiak Island in Alaska. In 2014, a different type of rocket, launched from Wallops Island, Va., flew for six seconds before it fell to the ground and exploded, burning 15 acres

and blowing windows and doors off buildings over a mile away.

And at Space X's launch site in Boca Chica, Texas, there have been multiple "massive explosions," which the company has referred to in public statements as "awesome." One 2019 mishap—the official term for when a rocket fails to launch, veers off course or explodes and comes crashing back to Earth—caused a fire that consumed some 130 acres of a nearby state park before the U.S. Fish and Wildlife Service was notified of the blaze.

The two barrier islands in the rocket's proposed flight path, Cumberland Island and Little Cumberland, are federally protected sanctuaries where endangered sea turtles nest, horses run wild, and some of the world's fewer than 400 remaining North Atlantic right whales calve off the coast.

The biggest controversy, however, is that the proposed rocket trajectory would come very close to people's homes, blasting over populated areas only five miles downrange—a situation that would be without precedent in U.S. history, according to a 2019 Federal Aviation Administration memo.

The National Park Service and Department of the Interior have recently questioned the safety of the

plan. A diverse group of critics, including fishermen and shrimpers, sea turtle researchers, island residents, and the chieftess of the Gullah/Geechee nation have pushed to halt it entirely.

A spokesman for the F.A.A., which regulates the commercial space industry and is charged with supporting and promoting its growth, said in a statement to The New York Times: "Every proposed launch site presents unique circumstances." The agency's decision about whether the site is appropriate for rocket launches is expected sometime in September.

—Printed in part from the New York Times.



A protest was held at New Zealand's Rocket Lab in June by a coalition of organizations opposing the militarization of the launch facility there. Like many other space ports around the globe, New Zealanders were promised that Rocket Lab would only do civilian launches. But Lockheed Martin has taken over the facility and offensive military missions are now the standard fare.



An activist in North Yorkshire, England attached the upside-down flag to the fence of the U.S. NSA spy base at Menwith Hill. The base intercepts all phone-fax-emails from Europe on behalf of the Pentagon and U.S. corporate interests.

### Space port in Papua

Indonesia's National Institute of Aeronautics and Space (LAPAN) said the benefits of the country's first spaceport in Biak, Papua, are greater than the downsides, while locals are divided over the project. The planned rocket launch site will be located on the eastern coast of the impoverished and remote island of Biak, which overlooks the Pacific Ocean. Biak is part of the Indonesian province of Papua, one of the most biodiverse regions on the planet. The space port will be used to launch unmanned space rockets and Indonesian president Joko Widodo has invited Elon Musk to consider Indonesia as a launch site for Space X (and 5G). Many residents fear the project could potentially result in the destruction of forests and displacement of residents.

## usually in environmentally sensitive places

### Scotland Space Port Battles Heat Up

A billionaire retail tycoon has failed in his legal bid to overturn a local authority's decision to grant permission for the construction of Scotland's first spaceport.

Anders Holch Povlsen, 48, instructed lawyers to go to the Court of Session in Edinburgh to stop the building of the Sutherland Space hub in the country's far north. The businessman believed that Highland Council were wrong to grant planning permission to the vertical launch facility, which supporters believe could boost the local economy.

Lawyers for Mr. Povlsen believed the August 2020 decision failed to take into account the risks to the local environment and wildlife populations. The action was raised by Mr. Povlsen's company—Wildland Limited. Its advocate Malcolm Thomson QC told judge Lord Doherty earlier this year that Highland Council didn't follow correct legal procedures.

Mr. Povlsen is Scotland's largest private landowner. He owns the clothing empire Bestseller and is believed to have a net worth of more than £6bn. Experts say he owns more of the UK than

the Queen and the Church of Scotland combined.

The businessman objected to the development in Sutherland on environmental grounds and later announced that he had invested more than £1.4m in a rival spaceport on Shetland.

The Highlands and Islands Enterprise (HIE) project at A'Mhòine, near Tongue, in Sutherland, is expected to create more than 200 jobs, with satellites being launched from the station.

Highland Council received 457 objections and 118 representations in support of HIE's planning application. Wildland Limited has concerns over the spaceport's impact on "environmentally vulnerable protected areas".

Commercial satellites and launch vehicles designed and manufactured in Scotland could be taking off from the site within a few years. Up to 12 launches a year are expected. With a declining population and the decommissioning of nearby former nuclear power site Dounreay, MCE sees the spaceport project as an opportunity to secure the long-term future of the community.

Wildland Ltd chief executive Tim Kirkwood said the company was "surprised and disappointed". The firm remains convinced "the proposed space port will be completely inappropriate for such an environmentally vulnerable area and the protected habitats it sustains", he added. He said: "Our grave concerns remain about the justification for the impact on such a special landscape by a scheme, which we fear is both poorly thought out and based on a weak business plan. "There is a legacy here that goes well beyond our own interests for the area and we believe we have been right to make this challenge on behalf of our younger generation and their future."

Wildland Ltd is wholly controlled by Mr. and Mrs. Povlsen and owns 221,000 acres across Scotland. Its sister company Wild Ventures Ltd invested nearly £1.5m into the Shetland Space Centre on Unst last year.

—Parts reprinted from STV News.

### Michigan to host two rocket launch sites

by Eric D. Lawrence

Chippewa County in the Upper Peninsula (UP) has been picked as the future location for a proposed command and control center for Michigan's effort to launch rockets into space.

Rendering of an undeveloped, three-mile stretch of land along the Lake Superior about 16 miles north of Marquette in the UP, has been picked to host a vertical launch site.

The site is at Chippewa County International Airport, less than half an hour drive from Sault Ste. Marie. The airport was once home to the former Kincheloe Air Force Base, which closed in 1977.

The news, announced via Zoom, marks the final site selection for the Michigan Launch Initiative, a program aiming to send satellites into orbit in coming years. The effort is not guaranteed, but it has enjoyed support from both business and state government officials.

The command center, which, officials said, could employ 80-100 people, would be roughly midway between two launch sites. The center would, among other things, help track the increasing number of manmade objects in space in order to avoid collisions.

The site near Marquette on the Lake Superior shoreline was selected in July to host the vertical launch complex. A second, horizontal, launch location will be at Oscoda-Wurtsmith Airport, also a

former Air Force base.

The target dates for beginning operations at the sites are June 2023 for the command center, August 2023 for Oscoda and August 2025 for Marquette.

Gavin Brown, executive director of the Michigan Aerospace Manufacturers Association, who is the main spokesman for the launch initiative has said it could generate 40,000 direct and spinoff jobs across the state. The effort, he said, could boost Michigan's aerospace industry and help automakers in their push to build communications networks to support self-driving car development.

"There's no doubt that Michigan can and will be one of the leaders in (the) commercial and U.S. government space industry," Brown said. "We have the human talent, the manufacturing prowess, the critical infrastructure and the technical expertise to position our state as a leader in this dynamic field."

Critics, however, worry that the launch site near Marquette, which needs approval from the Federal Aviation Administration, could result in environmental damage to Lake Superior and the surrounding areas.

Details on cost and financing for the project have not been finalized. Funding would primarily come from private commercial entities, Brown said, noting that it is "being secured." He called it a multi-hundred million dollar investment in the state.

Previously, he indicated he expected to secure \$1.2 billion in private equity money.

The state of Michigan has also contributed financially, kicking in \$2 million for a feasibility study. —Reprinted in part from Detroit Free Press.



Activists in northern California wore the new Global Network T-shirts at one of their regular protests at Beale AFB. Beale flies spy planes, drones and also has a 'missile defense' radar facility on the base.

## Odds & Ends

### Yemen fires drones

Drone strikes have increasingly targeted the Saudi King Khalid Air Base in Khams Mushait since the beginning of the U.S.-Saudi aggression on Yemen. The series of intensive attacks against the most important military base in the southern region of the Saudi Kingdom has shown the inability of modern U.S. defense systems to intercept or destroy these drones. The impact that the (Yemeni) drone operations have had on the workflow of the air base can be clearly seen in the disruption each drone operation brings about at most airports in the south of the Kingdom. The operation of defense systems throughout the southern region requires stopping air traffic in order for the radars to efficiently monitor the airspace. Riyadh realizes that the military capabilities that Yemen possesses have greatly influenced the course of the battle. It also realizes that its military spending on additional weapons did not put an end to its military retreat, especially as U.S. reports acknowledge the difficulty of dealing with this new generation of drones. The U.S.-Saudi reliance on its air and military superiority is dwindling in the face of the effectiveness of the Yemeni (military) capabilities, which the (Yemeni) armed forces assert are meant for deterrence and responding to the continuing aggression and siege.

### Biden's drone blast in Kabul

The Intercept reported that an August 29 drone strike in Kabul, Afghanistan initially claimed by U.S. officials to have destroyed a car packed with 'multiple suicide bombers' reportedly

killed 10 civilians from one family, including several children. The drone strike that hit Khwaja Burgha, a working-class residential neighborhood in Kabul, was said to have killed numerous members of the Ahmadi family, with the youngest alleged victim being a 2-year-old girl. "The Americans said the airstrike killed Daesh members," a neighbor of the family angrily told reporters after the strike, referring to the Islamic State. "Where is Daesh here? Were these children Daesh?" The Pentagon continued to describe the drone attack as a 'successful' strike against the militant group Islamic State-Khorasan, or ISIS-K, which had taken responsibility for a suicide bombing at the Kabul airport.

### Rwanda's first steps into space

Rwanda is one of the world's poorest countries, and its space program is nonexistent. Rwanda was active in the African Union Space Science and Technology Working Group which drafted the African space policy and strategy and launched its first RWASAT-1 satellite in 2019. It was launched in partnership with the Japanese Aerospace Exploration Agency (JAXA). The second Rwandan satellite was put into orbit on the night of February 27, 2019, launched from the Kourou base in Guyana by a Russian Soyuz rocket. Rwanda's telecommunications ministry has formed a partnership with the OneWeb program, an American company based in Arlington, Virginia which was carrying out its first launch of six dedicated Internet communications satellites. The satellite called Icyerekezo was built in Toulouse, France. Its purpose is to provide high-speed Internet access to St. Pierre Nkombo secondary school, located in the District of Ruzizi Island. The president of OneWeb said "Rwanda will be connected with the rest of the world next year around April. They will have free internet access for ten years. After ten years, prices will be negotiated by OneWeb and the Rwandan government depending on the quality of the internet and the competition in the global internet market by then."

### Kessler Syndrome

The Kessler syndrome (also called the Kessler effect or collisional cascading) is a scenario in which the density of objects in Low Earth Orbit (LEO) is high enough that collisions between objects could cause a cascade where each collision generates space debris that increases the likelihood of further collisions. One serious implication is that the accumulation of debris in orbit could render space activities and

the use of satellites in specific orbital ranges impractical for many generations. Every satellite, space probe, and manned mission has the potential to produce space debris. A cascading Kessler syndrome becomes more likely as satellites in orbit increase in number. The most commonly used orbits for both manned and unmanned space vehicles are LEO.

### Covert Action runs Grossman article

In August, *CovertAction Magazine* printed a block-buster piece by journalist Karl Grossman (founding member of the Global Network) "Insane U.S. Plan to Spend Billions on Weaponizing Space Makes Defense Contractors Jump for Joy—But Rest of World Cowers in Horror at Prospect of New Arms Race Leading to World War III." Many thanks to Louis Wolf (who co-founded *CovertAction* along with Philip Agee, William Kunstler and a few others) for inviting Karl to write this 4,000 word piece for the highly-influential publication. You can find it at <https://covertaction-magazine.com/>

### Black soot in the atmosphere

CBC (Canada) reports the stratosphere is an important weather driver for Earth's systems, and that's where some particles from rocket launches are ending up. While some may be worried about potential greenhouse gas emissions that's not the main issue. Instead, it's ozone depletion and the potential effects in our upper atmosphere, specifically the stratosphere, along with concerns about toxic fuels. There are also alumina particles in the stratosphere, such as those in solid rocket boosters, which were also used in past shuttle launches, and are still being used today by some launch companies. Finally, there are those that deposit black soot in the stratosphere, such as kerosene used in SpaceX's Falcon 9 and Russia's Soyuz rockets. It's the alumina and black soot that is most concerning to experts.

### Arctic war zone?

Breakingdefense.com reported in August that the biggest focus of collaboration between U.S. Northern Command and U.S. Space Command will be on secure communication capabilities in the Arctic. The Air Force has also been running a series of wargames to flesh out its Arctic Strategy, with the far north seen as critical in any future conflict with Russia or China. The Navy too has been doubling down on Pentagon concerns that the warming environ-

ment is upping the ante in competition for Arctic resources, including oil and natural gas. Canadian Prime Minister Trudeau and President Biden have noted the importance of the Arctic. The two leaders "agreed to modernize the North American Aerospace Defense Command—NORAD—which is still the only bi-national military command of its kind," Biden told reporters earlier this year. "And we will launch an expanded U.S.-Canadian Arctic dialogue to cover issues related to continental security, economic and social development, and Arctic governance."

### Mounting problems in LEO

U.S. Space Command is tracking almost 35,000 objects in Low Earth Orbit (LEO), a 22 percent increase from just two years ago says Defense One. The jump is due to the mega constellations that are presently being launched. Mega constellations are the large groups of mini-satellites launched by private firms to provide relatively inexpensive global telecommunications services (5G). LEO is also seen as key to Pentagon efforts to detect a new generation of hypersonic missiles.

### Pentagon to Demonstrate Classified Space Weapon

For months, top officials at the War Department have been working toward declassifying the existence of a secret space weapon program and providing a real-world demonstration of its capabilities, *Breaking Defense* has reported. The system long has been cloaked in the 'blackest of black' secrecy veils—developed as a so-called 'Special Access Program' known only to a very few. Insiders say the disclosure is likely to include a real-world demonstration of an active capability to degrade or destroy an 'enemy satellite and/or spacecraft'. Expert speculation on what could be used for the demonstration ranges from a terrestrially-based mobile laser used for blinding adversary reconnaissance sats to on-board, proximity triggered radio-frequency jammers on certain military satellites, to a high-powered microwave system that can zap electronics carried on maneuverable satellites. Experts say it probably does not involve a ground-based kinetic interceptor, a capability the U.S. already demonstrated in the 2008 Burnt Frost satellite shoot-down by an interceptor missile fired from a destroyer built at Bath Iron Works in Maine

### BIW's role in Pentagon first-strike attack capability

Bath-built ships will be first in Navy's fleet armed with new hypersonic missiles. Bath Iron Works in Maine was chosen to build all three Zumwalt-class

### Check Spam Filter



We have found that many of the emails sent to our members and friends are ending up in their spam filters. Please be sure to regularly check your spam filters for our emails and others who are trying to share important news. You can keep up with the work of the GN at our website [www.space4peace.org](http://www.space4peace.org), and Bruce Gagnon's blog called *Organizing Notes*

## Odds & Ends

destroyers, the last of which is still under construction at the shipyard. The Navy's 'Conventional Prompt Strike' program will provide hypersonic missile capability to hold targets at risk from longer ranges. This capability will be deployed first on newer Virginia-class submarines and the Zumwalt-class destroyers. Eventually, all of the Arleigh Burke-class destroyers will field this capability.

### Costly drone crash in North Dakota

An Air Force drone that costs more than one of the most expensive fighter jets in history crashed in a rural field north of Grand Forks Air Force Base, North Dakota in early August. The RQ-4 Global Hawk is a \$222 million spy drone that can survey an area the size of South Korea or Iceland in one day. The drone costs \$144 million more than the F-35 fighter, which now goes for around \$78 million.

### Space adverts

SpaceX is partnering with a Canadian tech startup to launch a digital billboard into orbit. Samuel Reid, CEO of Geometric Energy Corporation, said that his company is working with SpaceX to launch a small advertisement satellite into space, according to Insider. The satellite will have a screen on one side where people and companies can bid to have their logos and advertisements displayed, along with a "selfie stick" that'll snap photos of the ads with the Earth in the background. Thankfully, the system won't be visible from the ground—though others have pondered space adverts. Coca-Cola once floated the idea to put its corporate name on the Moon, to be visible from Earth. The plan got shot down by a hail storm of condemnation.

### More nations create a Space Force

The German military has announced the creation of a separate command dedicated to space, becoming the latest of a handful of nations prioritizing more resources and missions among the stars. The Ministry of Defence introduced the new space command in a July ceremony at the German Space Situational Awareness Centre in Uedem. The military is "responding to the increasing significance of space for our state's ability to function, the prosperity of our population, and the increasing dependency of the armed forces on space-supported data, services and products," the ministry said in a statement. In fall 2020, France renamed its Air Force to become the Air and Space Force, after creating its

new space command Commandement de l'espace in 2019. The UK also established a separate space command in spring 2021 as a joint command.

### Nuclear powered rockets to Mars?

Nuclear thermal propulsion (NTP) systems appear to be the 'preferred power source' for manned missions into deep space. After sidelining the Mars-nuke option in the 1970s due to budget constraints, NASA recently returned to NTP as a means of getting humans to the red planet. The system, which works by transferring heat from a nuclear reactor to a liquid propellant to generate thrust, provides twice the propellant efficiency of chemical rockets. To speed up the pace of NTP tech development, the Pentagon's Defense Advanced Research Projects Agency (DARPA) has selected a trio of companies to build and demonstrate a nuclear-based propulsion system on a spacecraft above low-Earth orbit by 2025. The prime contractors include Jeff Bezos' private space project Blue Origin, Lockheed Martin, and General Atomics. (Let us repeat—the plan is to test a nuclear reactor engine just above Earth's atmosphere. Not a good idea.)

### Military applications for 5G

Space Force officials intend to tap 'rapidly emerging 5G technologies to support space data transport terrestrially, in space, and in the space-ground links'. The Pentagon views 5G (and coming 6G) as a serious tool to expand military global surveillance, signals intelligence and targeting operations. The Pentagon 'boasts' 5G will increase the lethality of war by enabling near real time communications and the use of hypersonic weapons and missiles, spy systems, and Facial Recognition Technology.

### Congress forces Army to purchase Israeli MD

The U.S. Army is studying the Israeli SkyCeptor interceptor as an option for mid-tier air and missile defense. In Israel, SkyCeptor is fired from the David's Sling system. Israel's American partner on SkyCeptor is Raytheon, which makes the Patriot missile defense system—and the companies call SkyCeptor a "plug and play" weapon that can fire from existing Patriot launchers. Together with Raytheon, Israel wishes to integrate the SkyCeptor with the U.S. Army Patriot launchers. The U.S. has already bought two Iron Dome systems from Israel. But the U.S. Army bought Iron Dome reluctantly, under pressure from Congress, and

military leaders have complained it's difficult to integrate a foreign system—complete with radars, launchers, and command posts as well as interceptors—with U.S. command networks.

### Opposition to U.S. expansion on Guam

The head of the U.S. Navy's Indo-Pacific Command is urging Congress to build a new 'missile defence' (MD) base in the Pacific as part of a larger strategy aimed at China. The Pentagon is seeking \$98 million to build a permanent 'land-based integrated air and MD system and associated weapon delivery system on Guam', as outlined in the Indo-Pacific Deterrence Act. In addition to the MD system, the U.S. is considering an increase to its ground-based missiles on Guam that could fire on targets over 500 kilometers away. In submissions to the U.S. Senate Armed Services Committee, the Indo-Pacific Command outlined the need to develop other defense facilities in addition to the one in Guam, in Japan and Hawaii. The proposal includes an upgrade of 'undersea warfare capabilities' and a greater military partnership with Australia. For some residents in Guam—particularly the island's indigenous Chamorro people—the proposal for greater military presence on the island is an insult. Almost a third of Guam's land is controlled by the U.S. military, and local activists fear its presence is destroying the island's natural environment and making the people a target during U.S. warmongering.

### Ban Killer Drones

A grassroots international movement to ban weaponized drones as well as military and police surveillance (named Ban Killer Drones) has been launched. Go to [bankillerdrones.org](http://bankillerdrones.org) to see the coalition underway at this excellent resource on U.S. 'not so secret' assassinations around the world. A group of long-time anti-drone war organizers have worked to make this site the prime resource base to ban killer drones internationally.

### Renewed calls for space weapons ban

Russia has, since at least 1984, called for talks to create a legally binding international treaty that would ban the deployment of any type of weapons in space. Russian Foreign Minister Sergey Lavrov, on the 60th anniversary (April 12) of Yuri Gagarin's historic space flight, stated, "We consistently believe that only a guaranteed prevention of an arms race in space will make it possible to use it for creative

purposes, for the benefit of the entire mankind. We call for negotiations on the development of an international legally binding instrument that would prohibit the deployment of any types of weapons there, as well as the use of force or the threat of force." China is also calling on the global community to urgently demand serious negotiations on a space arms control treaty. The U.S. (during Republican and Democrat administrations) continues to refuse to negotiate a global ban on weapons in space. Why?

### X-37 unmanned super-drone with nukes?

RIA Novosti reported in June that the U.S. X-37 military spacecraft could carry up to six warheads and, with the U.S. planning to deploy eight X-37's by 2025, it looks like a serious escalation. Director-general of Russian defence company Almaz-Antey, Yan Novikov, said. "The official story is that these platforms were developed for scientific purposes and, well, surveillance. But we understand that having these capacities and possibilities, the smaller spacecraft can carry up to three nuclear warheads, the large one up to six," Novikov claimed. "This is, without any doubt, a serious challenge," Novikov said. In annual U.S. Space Command computer wargames it is the X-37 military space plane that flies down from orbit and drops the first attacks on Russia and China. The X-37 has demonstrated the ability to stay in orbit for more than one year at a time.

## Planned Gift to GN



If you are in the process of estate planning, please consider making a gift of a tax-deductible donation in the form of a bequest, donation of stock, or other instruments to the Global Network. Your planned gift would be an important contribution to our movement to stop the militarization and nuclearization of space. Thank you for your consideration.

## Starbase Texas?

For better or worse, Boca Chica belongs to Elon Musk now. He's even come up with a new name for the town. "Creating the city of Starbase, Texas," he tweeted in March. Local officials gently reminded the billionaire that he had to ask for permission first.

When SpaceX first proposed a launch site in Boca Chica, south Texas, the company suggested that its footprint would be minimal. After buying up tracts of private land amid the wildlife refuge, SpaceX told regulatory agencies that it planned to launch its proven Falcon rockets at the site, along with the Falcon Heavy, the same rocket, with boosters attached.

But after federal and state authorities gave their approval and construction began, SpaceX changed its plans. Instead of launching the Falcon, the company would use the site as a test facility to develop its much larger and louder Starship and the Starship Super Heavy configuration.

SpaceX has plans to expand its facilities and launch rockets more frequently. The company is building an orbital launch pad, which will be the tallest building in the region. Musk envisions Starbase, Texas, as a much larger company town to sup-



port his projects—with more workers, more housing, more traffic, and more visitors.

Musk tweeted: "If we make life multi-planetary, there may come a day when some plants & animals die out on Earth, but are still alive on Mars."

The launch site in Boca Chica is surrounded by protected lands that host a huge range of local wildlife including turtles and hundreds of bird species.

SpaceX, the company founded by Elon Musk in 2002, has a "test,

fly, fail, fix, repeat" method for its commercial space program. That approach is part of why Musk wanted to put the launch site on a tract of land just off the Gulf of Mexico, close to the Texas border with Mexico. "We've got a lot of land with nobody around, so if it blows up, it's cool," Musk reportedly said at a press conference in 2018.

But David Newstead, director of the nonprofit Coastal Bend Bays and Estuaries, felt sick as he saw the fireball explode on the launchpad. The explosion littered parts of the

delicate ecosystem of the Boca Chica tract of the Lower Rio Grande Valley national wildlife refuge – comprising tidal flats, beaches, grasslands and coastal dunes that host a huge range of wildlife – with rocket debris.

"I knew from the other explosions that the rocket would be scattered all over the refuge," Newstead said. Cleanup took three months, he added.

"It's really been shocking to witness the way the federal government has allowed this to happen," said Bryan Bird, of the national environmental nonprofit Defenders of Wildlife. "Elon Musk is building a space complex in one of the most environmentally diverse, and inappropriate, places in the world."

—Reprinted in part from *Texas Monthly* and *The Guardian (UK)*.

## US-Japan prepare for China war

VFP Japan reports: Amami Oshima Island, located roughly halfway between Kagoshima Prefecture and the main island of Okinawa, is becoming a base for a "Southwest Islands contingency" with China in mind. This summer, Japan and the U.S. held joint military drills, and in the fall, the largest-ever Self-Defense Forces exercise will mobilize about 100,000 people. However, there is no concrete plan on how to evacuate the nearly 60,000 islanders in the event of a real emergency. This is not limited to Amami Oshima. In the event of an emergency, who will be in charge of getting the residents off the island? Who will be responsible for evacuating residents from the island, and how will they protect their lives?

On June 26 this year, the normally quiet Naze Port in Amami City was enveloped in a strange atmosphere. A large U.S. military transport ship arrived on the shore, and large military vehicles equipped with launch pads for ground-based interceptor missiles appeared one after another. It was the U.S. Army's Patriot unit, a surface-to-ship guided missile unit from Kadena Air Base in Okinawa.

## 'I am over paying for a zillionaire's rocket ride'

On July 20, the billionaire Amazon cofounder Jeff Bezos briefly went to space on a rocket launched by his company Blue Origin. Upon returning to Earth, Bezos thanked Amazon's customers for funding his space trip.

For some Amazon Prime members (subscription benefit service with reported 200 million customers worldwide) it was a gross display of wealth that made them cancel their subscription.

Upon returning, Bezos thanked Amazon customers and employees for making the trip possible. "I want to thank every Amazon employee and every Amazon customer, because you guys paid for all of this," Bezos said during a press conference.

Some of those customers he thanked, however, saw the jaunt to space as a good sign to quit paying

\$120 annually for Amazon's wildly popular Prime subscription service.

"You guys, I just canceled my Amazon Prime membership and feel GREAT about it," one such customer said in a private Facebook group post. "I am over paying to shop on a website and/or for a zillionaire's rocket ride. Just had to tell the world."

They were one of several people Insider spoke with who said they canceled their Prime subscription in the days after Bezos' trip to space and were directly inspired by the trip to cancel.

For Katie, the decision was a long time coming.

She signed up for Amazon Prime in 2004. "Back then, it simply seemed like a good place to buy books online," Katie.

But as time went on, reasons to

feel differently about Amazon began to build.

"First it was realizing how this company negatively affects the publishing industry," she told Insider, referring to Amazon's tumultuous relationship with book publishers over the years. "Then it was discovering the abysmal treatment of the warehouse workers. Next, a growing awareness of my own consumerism that was really starting to gross me out."

For Katie, Bezos' trip to space was the straw that broke the camel's back.

"I saw a few posts from people in some of my online groups that they finally pulled the plug, and reading all of the positive replies, it's like it just clicked for me," she said.

—Parts reprinted from *businessinsider.com*.

# SpaceX Constellation Faces Legal Challenges

By Jonathan O'Callaghan

Should the natural beauty of our night sky be protected under law, or should it be free and open for anyone to use as they see fit?

That is a question many have grappled with for the past two years, since the arrival of so-called mega constellations. These vast groups of satellites number in the thousands, exemplified by SpaceX's Starlink network, which is designed to provide global [5G] Internet coverage from space—at the potential cost of despoiling the heavens as its orbiting components reflect sunlight to the ground.

By some estimates, in the coming years, thousands of these satellites could be visible in the night sky at any given hour. Now a U.S. court may be on the cusp of ruling on the issue for the first time. One way or the other, that decision could have ramifications

across the satellite industry, astronomy and our very culture itself. And depending on the outcome, it might well be contested in the Supreme Court.

Last year *Scientific American* was the first outlet to report on a paper in the *Vanderbilt Journal of Entertainment and Technology Law* that argued that the Federal Communications Commission's (FCC's) approval of mega constellations such as

Starlink may have been in breach of U.S. environmental law—specifically, the National Environmental Policy Act (NEPA).

Since 1986, the FCC has had a “categorical ex-

changing of the night sky, too—and it might have unforeseen consequences. “A good example is the Native Hawaiian/Polynesian tradition of wayfinding,” says Aparna Venkatesan of the University of

San Francisco, who is assessing the cultural impact of mega constellations for SATCON2. “It's celestial non-instrument navigation where you read wind and ocean currents but also the stars. [Natural] constellations at dawn and dusk are very important. We want to make sure [satellites] don't interfere with [such] cultural traditions.”

Outside of the U.S., efforts are underway to draw up new international rules on satellite brightness through the United Nations. In April 2021 Piero Benvenuti, former general secretary of the International Astronomical Union, presented a report to the U.N.'s Committee on the



clusion” that means almost none of its activities require an environmental review under NEPA. The paper argued this exclusion should no longer be valid, considering the FCC's current activities. “It's clear from a legal standpoint that the FCC is not following NEPA,” says Ramon Ryan, a recent law graduate of Vanderbilt University and the paper's author.

The outcome of the case could provide U.S. courts' first written record on whether the natural aesthetic of our night sky is protected under environmental law. The process is not expected to be especially quick: it could be up to a year or more before a decision is reached.

An outcome in favor [of further regulation] might be welcome news to many astronomers. The current projected impacts of mega constellations on their studies of the heavens are expected to be stark. If all publicly known plans for such systems proceed—including mega constellations from the U.S., China and the U.K.—there could soon be about 65,000 satellites in orbit. That figure would far eclipse the current number of all active satellites, which is approaching 4,000. A recent analysis by Samantha Lawler of the University of Regina in Saskatchewan and Aaron Boley of the University of British Columbia shows that, in this event, there would be “more than 2,500 satellites visible all night during the summer,” Lawler says. “I was really horrified to see that number. You would potentially be seeing more satellites than stars for most of the population of North America and Europe.”

And there would be a cultural impact in the

Peaceful Uses of Outer Space about the effects of satellites on astronomy and the night sky. Although those discussions were promising, with 18 out of 90 delegations showing support for the findings, no consensus about taking action was reached.

~ Jonathan O'Callaghan is a freelance journalist covering commercial spaceflight, space exploration and astrophysics. Reprinted in part from *Scientific American*.



## GN YouTube channel

Each month for the past year, GN board member Will Griffin (Iraq & Afghanistan war veteran) has been making a video depicting a different aspect of the new U.S. effort to ‘control and dominate’ space. He's putting them on our new YouTube channel, which can be found on YouTube at ‘GNspace4peace’. If you click on the ‘Subscribe’ button, you'll get a notice each time a new video is posted on our channel. You can help by sharing the links to these videos so that more people can watch and learn. Thanks.



# Space news from South Korea

## The new chapter of ROK-US Space Cooperation

On June 9, the Republic of Korea (ROK) Ministry of Science and ICT made public its press release on the 19th National Space Committee meeting which concretized some agreements from President Moon and President Biden's summit meeting on May 21 regarding the U.S. lift of restrictions on ROK missiles, ROK-US satellite navigation cooperation,

and the ROK's participation in the U.S.-led Artemis Accords. The topics of the 19th NSC meeting were: development of civilian-led solid fuel projectiles (by 2024), establishment of a launching site (within Naro space center, currently the only space center in South Korea, located in Goheung, in the southern part of the mainland), actualization of an ROK satellite navigation system following the ROK-US satellite navigation cooperation,

founding of a roadmap to develop micro satellites, preparation for a satellite communication technology strategy in the 6G era (support to establish a low earth orbit satellite constellation testbed network through the launch of 14 low orbit communication satellites by 2031) and an introduction to the goals and visions of representing corporations who joined the NSC meeting. Otherwise, South Korea signed the Artemis Accords at the end of May, becoming the 10th participating country to join the U.S.-led Artemis program by which NASA aims to send human beings to the moon by 2024. NASA further aims to leap into deep space including Mars. Is South Korea becoming more subordinate to the U.S. and getting involved in the growing space confrontation between the U.S. vs. China & Russia?

U.S. soldiers and THAAD equipment, which the Pentagon has persistently demanded.

Recently, 9 people were diagnosed with cancer in Nogok-ri, Gimcheon-si, the nearest village to the THAAD radar. In a small town with only 100 residents, 9 people were diagnosed. Among them 4 died and 5 are struggling with the disease. Considering that there were no other environmental factors other than the electromagnetic effects of the THAAD radar, this raises suspicions that the long-term exposure to electromagnetic waves from the THAAD radar may have had a serious impact on residents. Residents have warned of the dangers of THAAD's electromagnetic waves since five years ago, but the South Korean government and the Ministry of National Defense have dismissed the warning as a myth.



## Cancer cases in village close to THAAD radar

Since May 14, twice a week on Tuesdays and Thursdays, South Korea's Ministry of National Defense has been attempting to secure land routes to the U.S. THAAD (Terminal High Altitude Area Defense) base under the pretext of construction. The attempt to fully deploy THAAD has been enforced using all kinds of illegalities and violence for five years since the decision to deploy THAAD in Korea. Korean law regarding environmental impact evaluation and the demands of residents who oppose the THAAD deployment have been ignored. The attempt continues to secure humiliating and unreasonable land routes to meet the demands of the U.S.. As a result, the residents of Soseong-ri, residents from nearby villages in Seongju and Gimcheon, and countless people who drive through the night from across the country in solidarity have been fighting to block the land passage into the base. As of August 5, there have been 28 clashes this year between large forces of mobilized police and residents who cannot just stand by and watch the smooth operation of the illegal THAAD base. Moreover, South Korea's Ministry of National Defense is using the THAAD base construction as an excuse, but it seems that its purpose for securing land routes is to ensure free access for

## Space Force in Korea

On Feb. 3, Lt. General Scott L. Pleus, Deputy Commander, U.S. Forces Korea, Osan Air Base, South Korea, made public that U.S. Space Forces ('guardians') were officially deployed in South Korea. There are eight known U.S. Space Force personnel in Osan base. Pleus said that the U.S. space force is working in the 607th Air Operations Center of U.S. Osan base to maintain 'fight tonight' ready posture. He also said that the Space Force in Korea would help Fifth Air Force stationed in Japan and Eleventh Air Force in Alaska to deploy Korea in an emergency. It is also known that three U.S. soldiers in Kunsan were assigned exclusively to the U.S. Space Force. Otherwise, the chief of staff of the U.S. Space Force, the chief of the staff of the ROK air force and the chief of staff of the Japanese air force secretly met in the headquarters of the Pacific Air Force Command, Hawaii, in Nov. 2020, and concluded an operations agreement between the three forces. (Source: Jaju Sib0)



# In Memoriam: J. Narayana Rao Presente!

By Bruce K. Gagnon and Dave Webb

In the late 1990's the Global Network held our annual space organizing meeting in Darmstadt, Germany (1997 & 1999). At one of those two meetings J. Narayana Rao from Nagpur, India showed up for the first time. To this day I don't remember how Rao heard about the GN but somehow he did and we were very lucky to have his membership and strong support.

When Rao arrived in Darmstadt he handed me a couple space issue journals that he had put together at his own expense and distributed throughout India. Needless to say I was very impressed.

Rao was from a village near Visakhapatnam in Andhra Pradesh.

In 1958 he went to work for the Indian Railways and joined the Railway Trade Union movement. While in Railway Service and in the Railway Trade Union he was attracted to the peace movement and joined the All India Peace & Solidarity Organization (AIPSO) in 1982. AIPSO is an Indian affiliate of the World Peace Council.

Rao's zeal to work against nuclear weapons, war, and to support the struggles of the developing countries against imperialist domination led him to believe that unless women and youth are brought into the peace movement there would not be a real movement in India.

With this idea he took the initiative to establish the National Association of Indian Women for Peace and Development and Indian Youth for Peace and Development.

He retired from Railway service in 1994 and after retirement established the Southeast Central Railway Pensioners Association and served as General Secretary.

In 2006 Rao organized a speaking tour throughout India for Mary Beth Sullivan and myself. While on this trip Rao took us to the Gandhi Ashram

Sevagram.

He organized space issue conferences numerous times in various Indian cities and invited various GN leaders to speak at the events. All the while he was reaching out to Indian political leaders, academics, union members, students, media and others with our message.

One of the most memorable speaking tours Rao organized was when he took me north to Kashmir during a time of martial law. Just the trip there was a miracle in itself.

Rao was also the organizer of our 2016 speaking tour throughout India & Nepal. GN board members Dave Webb (UK) and Will Griffin (US) were on the trip as well.

In 2019, a space law conference was held in Visakhapatnam at the DSNLU law university and organized by Dr. Aruna Kammila who Rao had earlier

*In remembrance and celebration of J. Narayana Rao from Nagpur, India—Global Network Board Member and our dear friend, colleague and comrade who sadly passed away during the Covid pandemic.*

brought to the GN. This historic event was the first time that I am aware of where the agenda was to discuss the need for space law to prevent warfare and the colonization of planetary bodies for private profit. The hall was full of students and faculty from 20 law universities across India. It was a great tribute to Rao's vision and determination.

At that time Rao had just had a serious illness and operation and could not come to the conference. I was able to talk with him on the telephone and share with him how well the event was going. I took the opportunity to express my deep love and admiration to him. As it turned out it was the last time I would speak to Rao other than on email.

These days India is having a terrible time with the Covid virus. The country has little public healthcare. Agribusiness corporations like Monsanto are attempting to destroy India's long tradition of village farming. Much of the huge population in India has become 'expendable' in the eyes of its corporate friendly government. A 'modern brand' of neo-feudalism is now replacing India's hard fought for democracy—much like the rest of today's world.

The U.S. is attempting to turn the Indian government into an ally against China. India is also becoming a major space power. India's health budget is around \$30 billion while they spend \$49.6 billion on their military.

Unfortunately Rao was eventually taken by the Covid Corona virus on 18th May. On June 2, 2021 (Rao's birthday) a Zoom meeting was held for family, friends and fellow members of the Global Network—many wonderful tributes to Rao were made. During the Zoom memorial Rao's granddaughter paid him the ultimate compliment when she said, "He stepped beyond his abilities."

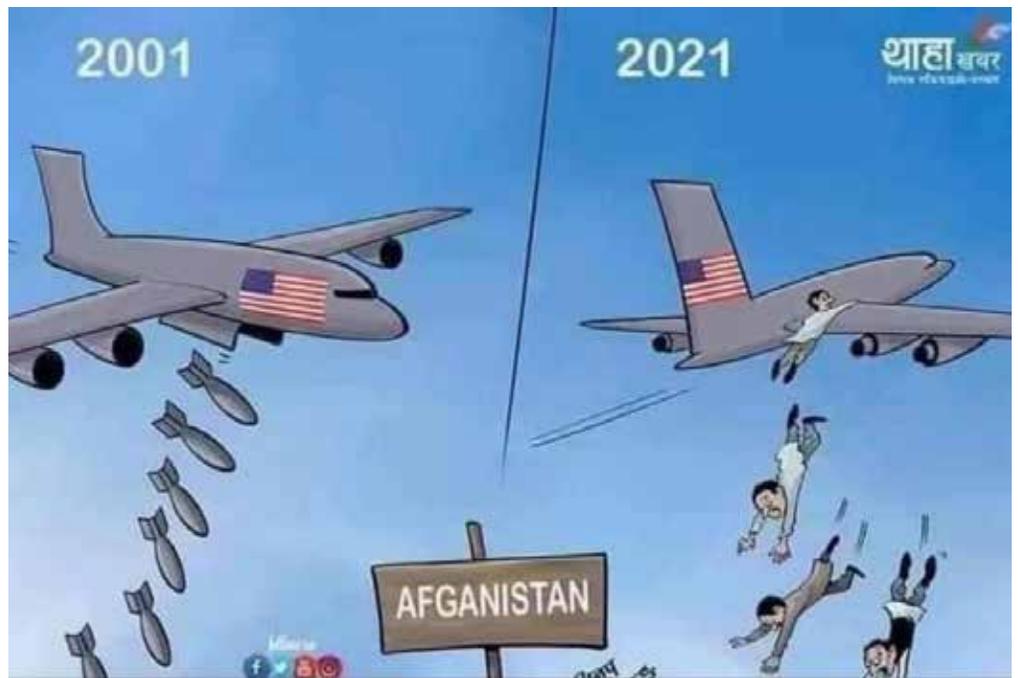
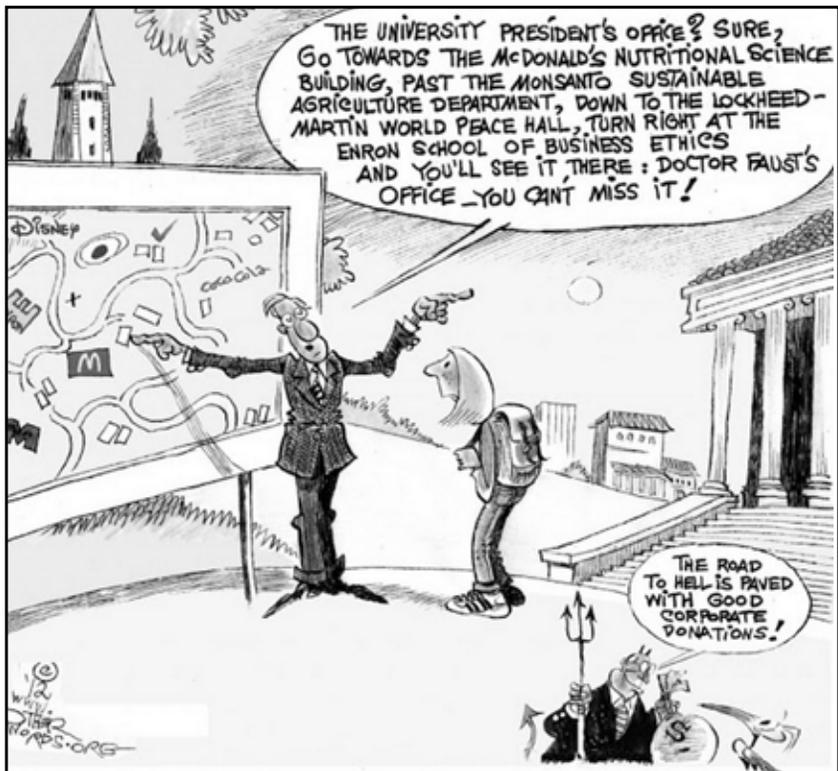
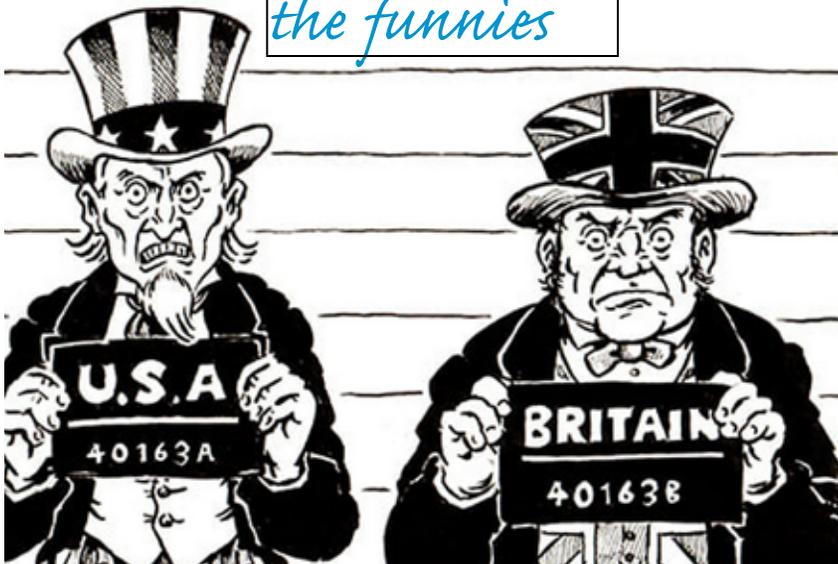
Rao will always be remembered by us for his wisdom and understanding, his great organizing skills, his dedication to the cause of peace and for his many other qualities. He was a humble man but extremely effective in his work—he will live long in our hearts and memories.

He was one of our greatest leaders.



J. Narayana Rao (3rd from left behind banner) frequently spoke to students at all levels of education about space issues. He organized several national conferences for students, faculty and the public in different cities across India.

the funnies



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