

SECURING THE HIGH GROUND

**"With us, our business keeps growing.
The reliance on space, it grows every single day, and we
become more and more relevant to the current fight."**

Command Sgt. Maj. James Ross, command sergeant major of 1st Space Brigade



1st Space Brigade's many missions benefit warfighters

Stories by Clifford Kyle Jones

The men and women of 1st Space Brigade have you covered. With units across the world working around the clock and a network of satellites spanning the globe, they stand ready to serve any of your space needs — even though you might not realize you have them.

“Some people say, ‘Why is space important to me?’” said Command Sgt. Maj. James Ross, 1st Space Brigade’s command sergeant major. “Well, do you like to navigate? Do you like to communicate? Do you like to target? Those are all capabilities that are coming to you from space. Do you like situational awareness? These are key components to the fight right now that we’re involved in. Just imagine a day without space. It’s incredible how much people don’t realize that they rely on space.”

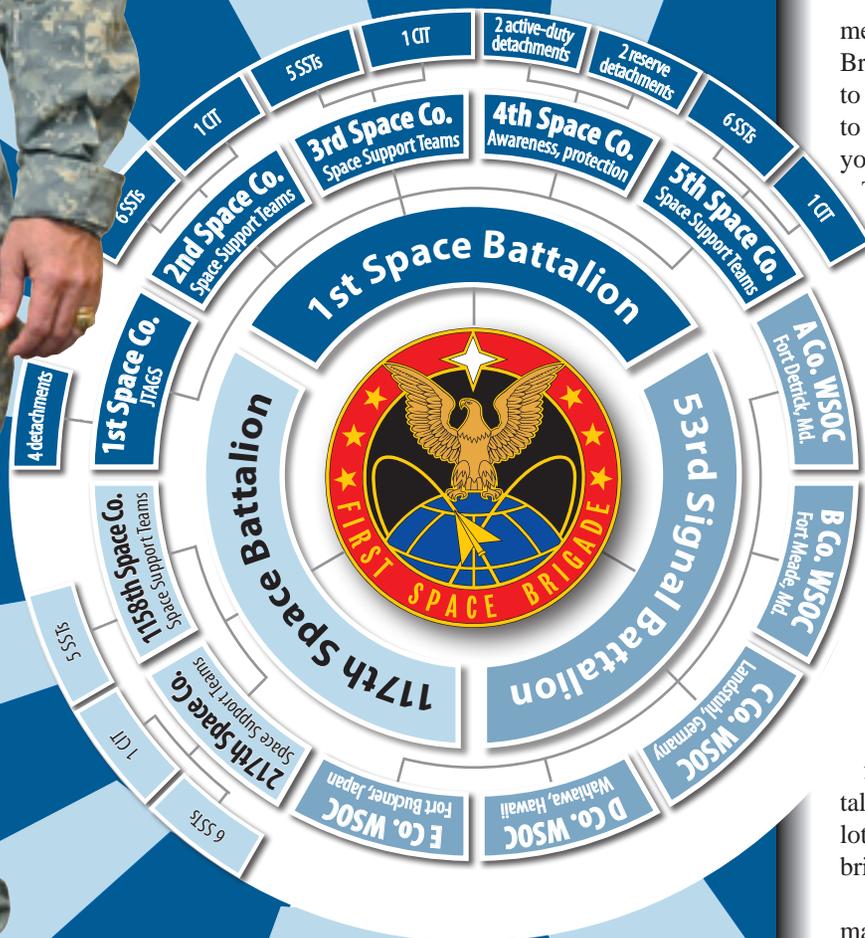
The three battalions of 1st Space Brigade have a multitude of missions. They provide missile warning, navigation support, imagery, surveillance, enhanced satellite communications and a host of other products and services.

The brigade, which is headquartered in rented office space just outside Peterson Air Force Base, in Colorado Springs, Colo., is unique in the Army, Ross says — and, not just because it’s the service’s only space brigade.

“Let’s say you’re an air defense brigade, everybody’s focused on taking out ballistic missiles and air threats coming in toward friendly forces,” he said. “Field artillery brigade? They’re all talking about steel on target. ... Our brigade is doing a lot of different mission sets where the average Army brigade is focused on one, singular area.”

Although their missions are important and affect many other units, the Soldiers of 1st Space Brigade, U.S. Army Space and Missile Defense Command/Army Forces Strategic Command, are accustomed to being little-known — and perhaps under-appreciated.

“A lot of the units don’t understand that they use





Photos courtesy of 1st Space Brigade

Members of an Army Space Support Team from the 117th Space Battalion deploy their satellite communications suite in support of an exercise.

space every single day,” said Staff Sgt. Tomina S. Hall of the 2nd Space Company, 1st Space Battalion. “I think a lot of units take it for granted. I know when I was in 10th Mountain [Division], I was the same way. We used space all the time. I had no idea that we did; I didn’t think about that. I just knew that I got the stuff that I needed, and I did my job, and everything was great.”

But now, as a member of one of the 1st Space Battalion’s Army Space Support Teams, or ARSSTs, she said she knows how critical space support is. Even more importantly, she knows what can go wrong in space.

“We’re the people who can let you know that this [problem] might happen, so you’re not blindsided, or you can mitigate that kind of issue,” Hall said.

For instance, solar flares can affect global positioning systems. So, daily space weather reports to combatant commanders become critical when the seven- or eight-member ARSSTs deploy. They’re usually



A sample of the unclassified maps that can be provided by a commercial imagery team.

attached to corps-level or higher staffs.

The space support teams make up the bulk of three companies in the 1st Space Battalion and the two companies of 117th Space Battalion, a Colorado National Guard unit that mirrors the functions of 1st Space Battalion.

“They are not our bench,” Ross said

of the 117th. “They are part of our strategic Army Force Generation model. It’s a pretty rare time when I don’t have one of my 117th teams out there in the fight, and usually more than one.”

Ross said the 1st and 117th Space Battalions average five or six deployed ARSSTs at a time. Four of the teams are in Afghanistan now.

In addition to space support teams, four of those five companies also include commercial imagery teams. While an ARSST is equipped to provide the latest satellite imagery and analysis to combatant commanders, that information is classified. The CITs, using resources from the Department of Defense’s National Geospatial-Intelligence Agency, can provide recent, unclassified satellite imagery to allies and civil authorities.

“If you’re an NCO in charge of a group of Afghan National Army soldiers and you’re planning a mission to go raid a village or take out a target and you need to get imagery, it’s not like you can call

up the [National Reconnaissance Office] and they're going to provide you imagery to share with your Afghan brothers," Ross said. "But, the commercial imagery team in Bahrain can get that imagery down to a user that wouldn't have access to normal national technical-means imagery and share it."

The teams also help civil authorities with, for instance, natural disaster recovery efforts. A CIT provided imagery after a tsunami struck Japan earlier this year, giving authorities information such as how much land had been lost and how much saltwater had crept into farmland.

The other two companies in 1st Space Battalion — the 1st and the 4th — have different missions entirely.

The 4th Space Company undertakes space missions and has space control mission sets.

"Obviously, we can't discuss it," Ross said. "But, I can tell you: It's ground-breaking what they're doing. It's absolutely unbelievable the amount of capabilities that we provide and continue to grow as a community. We've got the right folks with the right backgrounds who are figuring out problems. ... I don't even know what the problem is, but tomorrow, they're solving it."

The 1st Space Company's mission is less sensitive, but no less important. It comprises five Joint Tactical Ground Stations spread across the globe that provide around-the-clock missile warning to combatant commanders in-theater. JTAGS don't provide the United States' only missile-warning detection, but they do have some unique features.

"What's neat about the JTAGS folks is they're providing direct downlink missile warning straight to the warfighter, straight to the supported geographic combatant command," Ross said. "And, they're a big part of the U.S. Strategic Command theater event system missile-warning process. They do it in a way that nobody else does. The Air Force has a similar system, but the Air Force has to route its early warning all the way back to the States from a forward-deployed area. Then, it gets vectored out from an area near Denver, Colo. And they do it with about 20, 21 personnel sitting on a crew led by a lieutenant colonel. Our JTAGS

Time for a space MOS?

Functional Area 40 denotes space operations officers, but enlisted personnel in the space field don't have their own military occupational specialty. And, several NCOs in 1st Space Brigade think it might be time to reconsider that. Currently, the Army uses skill identifiers to tag Soldiers with space experience. Earlier this year, the Army approved a space badge to acknowledge Soldiers' space expertise. Those measures have sufficed so far, but the 1st Space Brigade's command sergeant major, **COMMAND SGT. MAJ. JAMES ROSS**, thinks it might be time to go further.

"Right now, with the mission continuing to grow at such a pace, we may be looking at a potential for another space brigade 10 years from now. So as our missions grow and the need grows, I think it might be time to open some dialogue in regards to a space MOS."

Other thoughts on a space MOS from 1st Space Brigade's NCOs:

◆ **STAFF SGT. ADAM TRIPSES:** "The big problem is even if the command wants to keep you, branch

is trying to pull you back. ... That's a big reason they made the 3Y identifier, but without having its own actual MOS it's going to continue to happen even with the 3Y identifier."

◆ **STAFF SGT. BENJAMIN SHARP:** "I'd rather have a professional space field than bring a person in, let a person go back out to his career field for three years, then try to bring him back in. There are so many updates that happen in this unit in three years. A JTAGS box will go through four series of upgrades in three years. So you're going to take a seasoned JTAGS operator, send him back down to a Patriot unit, and bring him back and the shelter's completely different now. ... There should definitely be a space MOS."

◆ **SGT. 1ST CLASS MICHELLE L. WAYCHOFF:** "Space is quickly becoming the new battlefield. You see it in CYBERCOM — when you talk CYBERCOM you're talking space also — so, if we are going to keep ahead of the enemy when it comes to defending our assets, I think moving to a space enlisted MOS is the right direction."

personnel is a three-person team, ... usually led by a staff sergeant. And, they're making that early-warning call. We're not competing with the Air Force, but we're extremely complementary as far as the missile-warning business."

1st Space Brigade's other battalion — the 53rd Signal Battalion — has yet another mission set. That battalion's Soldiers provide satellite payload control, meaning they ensure that anyone who needs to use Department of Defense satellites to communicate has the necessary bandwidth — and permission.

"What they do is pretty heady stuff," Ross said. "But, it's probably the most important mission we have. ... If they're not doing their job properly, the president of the United States, the Joint Staff, geographic combatant commands, maybe a small special forces team out in the Korengal Valley [in Afghanistan] — they can't talk."

The 53rd Signal Battalion is also headquartered in Colorado Springs, Colo., but has five wideband satellite communications operations centers, or WSOCs, at sites around the world. The most recent facility was opened earlier this year, when D Com-

pany moved from Camp Roberts, Calif., to the Navy installation in Wahiawa, Hawaii.

The Wahiawa installation is a prototype for an overhaul of other WSOCs and comes as the 53rd Signal Battalion moves to Wideband Global SATCOM, or WGS, satellites from Defense Satellite Communications System, or DSCS (pronounced "discus"), satellites.

The 53rd Signal Battalion is responsible for 11 satellites — three WGS and eight DSCS. Each of the new WGS satellites has the same capacity as the entire DSCS constellation of eight satellites.

And, that's just one example of the continual upgrades that take place in the 1st Space Brigade.

"With us, our business keeps growing," Ross said. "The reliance on space, it grows every single day, and we become more and more relevant to the current fight. One of the challenges we have is trying to figure out a way to make sure our force structure keeps up with the growing demand for space." 📺

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JTAGS

Missile-warning stations watch world for threats

Pulling 12-hour shifts with two other Soldiers in an 8-by-20-by-20-foot box isn't easy. But it is incredibly important, said Staff Sgt. Benjamin Sharp, the Joint Tactical Ground Station master gunner for the 1st Space Battalion.

The four JTAGS detachments in the 1st Space Battalion — in Qatar, Germany, Japan and Korea — can monitor the whole planet for missile launches and convey that information directly to combatant commanders. That ability alone would make the JTAGS units invaluable to the Army. But, their benefits don't end there.

"With the technology that we have inside of a JTAGS box, I can pick up a lot of stuff," Sharp said. "I can pick up an IED going off. So, what does that mean for the Soldier? That means something big just happened, they don't know the exact location and I can tell them where it's at. Say a plane's going down. I can see where that plane impacts. And, if the people who are looking for that plane [find] the black box isn't working, I can tell them where that plane landed. All they have to do is ask."

JTAGS work is demanding. The shifts are long; the additional training required of the 14J early warning system operators who make up JTAGS units is rigorous; and when they're at a JTAGS detachment, Soldiers don't get many days off. "We don't stop pulling mission," Sharp said. "Ever. We're always up."

JTAGS work requires constant focus, Sharp says, even though most "missile alert" warnings are "garbage scans."

"But, the two or three times something actually occurs are some of the most stressful and hectic times that you'll ever go through," he said. "There are 60,000 Soldiers in Afghanistan. Right now, I'm the only person providing theater missile warning overwatch for them. ... That's important. That's important to every one of us, because we take our job seriously and we know that supporting the warfighter is the most important thing."



D Detachment Soldiers adjust JTAGS equipment in Japan.

Space Brigade's global presence

Wideband satellite communications operations centers

- A Company: Fort Detrick, Md.
- B Company: Fort Meade, Md.
- C Company: Landstuhl, Germany
- D Company: Wahiawa, Hawaii
- E Company: Fort Buckner, Okinawa, Japan

Joint Tactical Ground Stations

- A Detachment: Stuttgart, Germany
- B Detachment: Qatar
- C Detachment: Osan Air Base, Korea
- D Detachment: Misawa, Japan

ARSST

Teams keep combatant commands informed, safe

Although much of 1st Space Brigade's action happens far from the fight on the ground, the brigade's Army Space Support Teams are right at the frontlines.

The groups of seven or eight Soldiers can provide a variety of space-based services to combatant commanders, including missile warning; precision navigation and timing; GPS and space weather reports; satellite communications; and intelligence, surveillance and reconnaissance.

They usually deploy for six to nine months and are critical in providing situational awareness and other combat necessities.

Four military occupation specialties are required to be represented on each ARSST, but each team member must be flexible.

"You definitely need to know how to step outside your comfort zone, as far as your MOS is concerned," Staff Sgt. Tomina S.



WSOC

53rd Signal Battalion ensures no calls dropped

The need for satellite communications never stops, and the 1st Space Brigade's 53rd Signal Battalion is always ready to take the call.

"We support every branch of service. We support the president of the United States. We support the Joint Chiefs of Staff and the secretary of defense," said Command Sgt. Maj. Marcus L. Campbell, the battalion's command sergeant major. "We have a very serious mission, and as far as we're concerned, it's a no-fail mission."

At the battalion's five wideband satellite communications operations centers around the globe, 1st Space Brigade Soldiers ensure the 11 satellites function properly and are in the correct location, assign bandwidth to users, and keep communication lines open, safe and secure.

"Our NCOs are charged with making those decisions," Campbell said.

The eight-person teams on any given shift at a WSOC are usually led by an NCO. "Operationally, he's making that floor run the way it's supposed to be run, to provide services, to provide space-based assets to our warfighters and to any other agency that requires that resource," Campbell said. "And, these Soldiers are warfighters.

We have a saying in the 53rd that we are warfighters supporting warfighters, and it is an intense job. Because, if they don't do their job, if they're not effective in what they're doing, then somebody's not communicating. That's the bottom line, because everything goes across a satellite."

Sgt. 1st Class Michelle Waychoff, the battalion's operations NCO, said, "We're not just there to manage the resources on the satellite, we're there to make sure the customers get what they need."

Those customers are often Soldiers, and she wants them to know something about the 53rd Signal Battalion.

"There are Soldiers in the Army who are fighting the war 24/7," she said. "It might not necessarily be in the same location as them, but they are there supporting and helping fight the fight."



Soldiers from the 53rd Signal Battalion manage Army satellites and satellite payloads.



A Soldier in Army Space Support Team 3 during a field setup.

Hall said. "And, I won't say, 'do somebody's else's job,' but step into that aspect of the mission and take on that mission if need be. And, we do that with a lot of training."

ARSST members play at least one other role, too.

"We're kind of like liaisons," said Staff Sgt. Adam Tripses, also of 2nd Space Company. "In addition to the products that we can do locally, we can liaison with the agencies back [in the United States]. ... We can coordinate easier with those kinds of agencies, as opposed to expecting somebody at the battalion or companies below us to try to figure it out on their own."