Can you answer these questions? Cadets who attend Air Force

What is the cheapest and easiest way for an adversary to disrupt spacecraft command and control activities?

a. Direct ascent Anti-Satellite System
b. Attacking the ground segment
c. Spoofing the satellite command and control
d. Degrading solar arrays with directed energy weapons

Which is the primary objective of the Evolved Expendable Launch Vehicle Program?

a. Compensate for the retirement of the shuttle program
b. Enable the Operationally Responsive Space initiative
c. Replace Titan, Atlas and Delta heritage launch systems
d. Reduce expenses and timelines required to tailor bus/payload interfaces

What is roughly the speed required in order to remain in low earth orbit?

a. 180 mph
b. 1,800 mph
c. 18,000 mph
d. 180,000 mph

(The answers are at the end of this story.)

By Lt. Col. Steven Solomon

Don't feel bad if you have trouble with questions like these...

The two dozen cadets specially chosen to attend this summer's Air Force Space Command Familiarization Course in Colorado couldn't answer these questions either. At first.

Cadet Lt. Col. Dominic Romeo, 19, of the Maryland Wing's St. Marys Composite Squadron applied to attend AFSPC-FC in Colorado to find out more about career opportunities in space. "I liked visiting the operational squadrons. It provided a unique opportunity to see firsthand the day-to-day work of an Air Force officer in Space Command," he said. Romeo, who previously attended AFSPC-FC at Patrick Air Force Base, Fla., was named this year's co-distinguished graduate.

Romeo and the other cadets spent a week touring and receiving briefings at Air Force and private contractor facilities that are off-limits to the general public. That included Peterson Air Force Base, where cadets learned about space surveillance, command and control; Cheyenne Mountain Air Force Station, command and control, which features joint U.S./Canada operations; Schriever AFB, which is focused on satellite operations and missile defense; and Lockheed Martin Corp., which provides spacelift and space engineering capabilities.

Briefings conducted by Air Force officers and civilians at the Space Education and Training Center at Peterson AFB focused on space operations, including missiles, satellites and cyber operations. At the

Cadet 2nd Lt. Christian Tynan of the Connecticut Wing takes photos at Peterson Air Force Base Air and Space Museum, one of the educational sites included in the Air Force Space Command Familiarization Course.

Space Command Familiarization *can*

nearby North American Aerospace Defense Command, cadets were personally greeted by Brig. Gen. Richard Scobee, deputy director of operations and son of astronaut Dick Scobee, the spacecraft commander who died when the Challenger shuttle exploded in 1986.

"I'm a big fan of CAP," Scobee said, noting that almost once a week CAP pilots fly missions as targets for fighter jets practicing intercept sorties. "It's a great partnership we have."

Cadets also toured the U.S. Air Force Academy to sample student life and what an astronautical engineering education encompasses. A dozen cadets helped the Protestant chaplain during various parts of the Sunday service, giving readings and helping with offerings.

At Lockheed Martin's campus, cadets watched commands being sent to vehicles on or around Mars, saw where GPS satellites are being built and visited facilities that simulate actions in space.

They also had some time away from presentations and tours, visiting the 14,110-foot Pikes Peak summit and the 1,350-acre Garden of the Gods rock formations and attending a Colorado Springs Sky Sox Triple-A baseball game, where the cadets were featured on the main video screen. One even caught a foul ball.

"I'd say the best thing about this was getting to see an operational perspective of the Air Force with fellow cadets that were equally interested in learning about aviation and the Air Force Space Command," said Cadet Lt. Col. Charles Arvey of the Georgia Wing's Griffin Composite Squadron. "There were an exceptional group of cadets at this event, and the presence of cadets who were both professional and relaxed made the experience significantly more enjoyable." Arvey received the professionalism and peer awards at graduation.

CAP cadets gather inside a Lockheed EC-121T Warning Star, a U.S. Air Force and U.S. Navy airborne early warning radar surveillance aircraft on display at Peterson Air Force Base Air and Space Museum. The tour was one of many experiences the cadets enjoyed as part of AFSPC-FC. Photo by Col. Mike Mouw, Iowa Wing

"The course is designed to give cadets an idea about space career fields in the Air Force, other military branches and the civilian sector," said Lt. Col. Adam Brandao, cadet programs officer for Group IV in the California Wing and also an active-duty Air Force captain at the Joint Air and Space Operations Center at Vandenberg AFB. "The activity gives the cadets some of the training a space professional would receive, the STEM (science, technology, engineering and math) education behind the training, tours of some of the most important and interesting space facilities and a chance to evaluate the knowledge they gained in the course."

The cadets' favorite tour was of Cheyenne Mountain Air Force Station, popularized by the 1983 adventure movie "WarGames" starring Matthew Broderick and Ally

Civil Air Patrol cadets and staff pose for a photo with Air Force Brig. Gen. Richard Scobee, deputy director of operations at North American Aerospace Defense Command (NORAD), in front of NORAD/US NORTHCOM headquarters at Peterson Air Force Base. Scobee's father was Lt. Col. Dick Scobee, commander of the Space Shuttle Challenger, which exploded shortly after it was launched in 1986.

Photo courtesy of U.S. Air Force

Sheedy. Behind the 50-ton door, cadets were allowed into the alternate command center, which would be used when the nuclear blast- and electromagnetic-hardened facility is activated in the event of a ballistic missile attack. Cadets were also allowed into a conference room set up for a meeting the following day chaired by Secretary of Defense Chuck Hagel.

"The best thing was being able to go on all the tours, especially the tour of Cheyenne Mountain Air Force Station," said Cadet Capt. Micah Gale, cadet commander and cadet information technology officer of the Idaho Wing's Boise Composite Squadron. "I really liked this because the tours took what we were learning and showed how this information is actually used, which made it click," said Gale, an academic award winner and co-distinguished graduate this year.

"Cadets attending AFSPC-FC gain an appreciation and understanding of the role of space operations within the Department of Defense," added Capt. Robert Wray, deputy director of the activity, Colorado Springs Cadet Squadron public affairs officer and also an active-duty Air Force captain serving as counterspace training flight commander for the 21st Operations Support Squadron at Peterson.

"This includes the science behind what space personnel do, the impact on national security and the integrated role of the civilian sector as they support, operate and manufacture satellites and other devices employed in space," he added. "It also highlights to cadets the diversity of the missions within Air Force Space Command, from geolocation to cyber security to providing GPS for billions of users around the world."

It's no wonder more than 200 cadets applied for the 26 spots offered for this National Cadet Special Activity.

"In all, it was a fun-packed, nine-day course," Wray said. "I only wish more cadets could attend." ▲

Answers:

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Which is the primary objective of the Evolved Expendable Launch Vehicle Program? *Replace Titan, Atlas and Delta heritage launch systems*

What is roughly the speed required in order to remain in low earth orbit? *18,000 mph*