It's Rocket Science

Lt Col Devon Christensen (Class of '97) Made Sure Space Force Rockets Launched Safely

Lt Col Christensen at his retirement ceremony

"There is no more visceral experience than observing a rocket launch," says Lt Col Devon T. Christensen (SGS class of 1997). "Whether you're on console in the control room listening to countdown conversations on multiple comms channels, or if you're out at the observation point, as soon as that rocket clears the tower, the glare of the plume, and the thunderous sound of the rocket motors splits the air and rattles you and everything around you. It's exciting knowing that another satellite is on its way to orbit to start its operational mission."

On March 25, 2023, Lt Col Christensen retired from the U.S. Air Force after a 21-year career that led to key roles involved in launching rockets into space.

After his time at Saint George's School, he attended the US Air Force Academy, earning his degree in aeronautical engineering and his commission as an Air Force officer. During his career, Lt Col Christensen ran developmental testing of combat unmanned air vehicle systems. He led teams of engineers and technicians at the Air Force Research Laboratory developing next generation, fuel efficient turbine engines for use in the F-35 and Next Gen Bomber aircraft. And he conducted the operational testing and certification of new missile and high-energy laser weapon systems for the Air Force Special Operations Command's AC-130J gunship.

In his final assignment, Lt Col Christensen served in two different roles at Vandenberg Space Force Base on the central coast of California. From July 2020 through Dec 2021, he was the Director of Support in the 2nd Space Launch Squadron (2 SLS), ensuring the squadron was appropriately staffed and that the personnel had the correct training to conduct the Mission Assurance duties required for government space launch.

Mission Assurance came about in the mid to late 1990's following a series of launch mishaps resulting in the complete destruction of the payloads being launched, several of which were US intelligence satellites worth billions of dollars that had taken years to produce. These mishaps also caused severe damage to launch infrastructure, which delayed subsequent launches.

"Interestingly, in several instances the root cause of these mishaps came back to simple issues," according to Lt Col Christensen, "such as improperly installed hydraulic lines, frayed or shorted electrical connections, or contamination in liquid nitrogen or liquid oxygen used as fuels."

To prevent this from happening again, the Department of Defense established Mission Assurance criteria. "Military officer engineers and enlisted missile maintenance technicians would train on and understand the rocket systems used for government launches with the engineers from launch companies like NASA, Boeing, or Northrop Grumman," he explained. "Then they would work side by side with the industry partners to ensure all of the steps required to prepare both a rocket and a payload for launch were correctly carried out, providing the maximum assurance that the launch mission would successfully deliver its payload to orbit."

As the 2 SLS Director of Support, Lt Col Christensen continued the relentless pursuit of Mission Assurance by identifying the newest mechanical, electrical, and system engineering officers and building assignments for them in the squadron. Upon arrival, he ensured they completed the mandatory training on both the ULA Delta IV-Heavy and Atlas rockets, as well as the SpaceX Falcon-9 rocket, to work at the launch complexes with those companies preparing for launches from Vandenberg SFB.

"In addition, the 2 SLS shepherded the

The officer and enlisted leadership crew from the 2 SLS who ran mission assurance for the ULA Delta IV Heavy rocket (in the background) that launched an intelligence satellite for the National Reconnaissance Office.

Firefly launch company through its demonstration launches to become one of the newest private companies certified to launch government payloads," he said.

In January 2022, Lt Col Christensen transitioned from the 2 SLS to the headquarters of Space Launch Delta 30, the command staff that runs all operations at Vandenberg. In his new role as Chief of Range Policy and Integration, Lt Col Christensen sought to update Federal and State policies for how new launch companies are certified to operate.

"Since the beginning of the space age, most of the launch and orbital space activity has been government or military related," he noted. "Only in the last decade or two have companies like SpaceX and their Starlink internet service, or Google Earth and DigiGlobe with their commercial imagery, truly changed the nature of the space industry to one that services a far more commercial market. However, the launch ranges and processes are still government controlled."

Considering the shift to a commercial focus, the US Government is having to review and revise federal policy to allow space launch companies to operate from federal ranges in a manner much more analogous to how airlines operate out of any domestic or international airport.

Throughout his career, Devon has always been supported by friends he made at Saint George's. And he relied on the solid foundation in mathematics, science, and critical thinking he gained in the classrooms as keys skills enabling him to fulfill the mission assurance and policy development duties he held at Vandenberg SFB.

"The most valuable take aways from my Air Force career have been working for some incredibly intelligent leaders and being able to galvanize the talents and capabilities of countless men and women into teams working together to achieve unimaginable technical advances that help ensure the supremacy and national safety of our country."

"While it is sad to leave that chapter of my life behind, I'm grateful to have served my country, and look forward to starting the next chapter of the adventure with my family in Omaha."

Lt Col Christensen (at right) administering the US Space Force Oath of Office to friend and colleague Darin Lister as he promoted to Lt Col in the US Space Force. In the background is the coast of Vandenberg SFB and the launch site for the SpaceX Falcon-9 rockets.