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Center Planning and Development Student Engineer at KSC

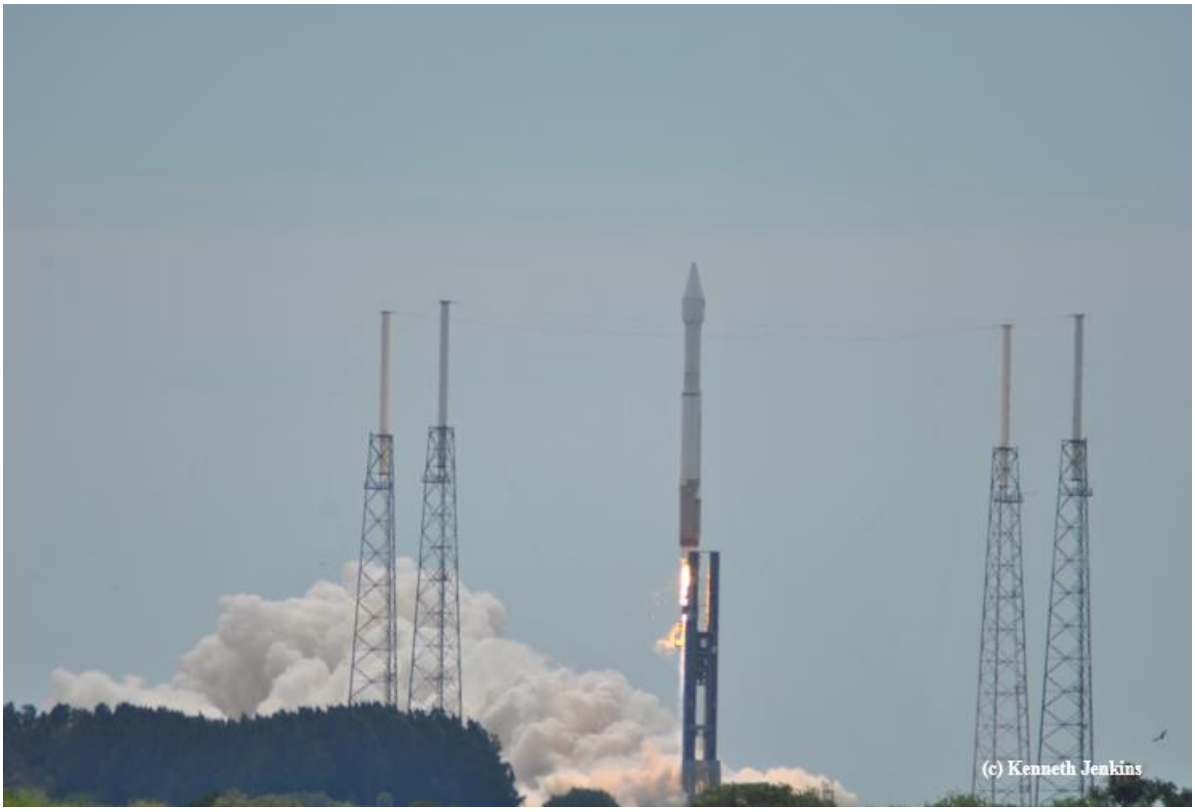
This summer I was the Student Trainee (Engineering) Pathways Intern (co-op) at the Kennedy Space Center (KSC) in the Center Planning & Development (CPD) Directorate. CPD works with commercial companies who are interested in using KSC's unique capabilities for spaceflight, spacecraft processing, ground systems and Research & Development (R&D) projects that fall in line with NASA's Mission and Vision. CPD is divided into three (3) groups: (1) AD-A, which works on the Master Planning for the center, (2) AD-B (where I am), which works on project control, management and integration, and (3) AD-C, which works on partnership development. CPD's main goal is to make KSC the world's preeminent multi-user spaceport and maintain the center as a leader in space exploration. CPD is a very diverse group of employees having a wide knowledge of not only the Space Shuttle, but also Expendable Launch Vehicles (ELV). The director of CPD, Scott Colloredo, is on the advisory board for Commercial Space Operations (CSO) and has a degree from ERAU. I worked on a number of different tasks for AD-B, as well as CPD, that includes, but not limited to: reviewing and reissuing engineering documents, weekly notes for CPD and senior management, engineering familiarizations with facilities at KSC, leading a tour for the Embry-Riddle Aeronautical University Career Services office, and working on actual agreements/proposals that will be used in the partnership process with multiple partners, along with other projects. Most of the work I have done is sensitive information and cannot be disclosed.

The main project that I worked on this summer was the American Towers, LLC cell tower Enhanced Use Lease (EUL). American Towers had an EUL with KSC from 2005 and recently expired in on July 31st, 2015. I worked primarily on the revisions of the new EUL and made sure the necessary people would sign/concur in the time allotted. This project is finished, pending NASA Headquarters approval.

Another project task I completed was a Briefing Note package for a potential partner. Right now we are in the process of getting approvals of CPD management.

During the week of July 20th, I was given the opportunity to shadow the Mechanical Engineering Division, NE-M, at KSC. I was taken around to five (5) different branches to see each branch's duties and responsibilities. I got to climb in the 175-ton and 325-ton cranes in the Vehicle Assembly Building (VAB) and see all the different modifications they were doing to both. I also, got to see a test of one of the Solid Rocket Booster (SRB) umbilical's for the new Space Launch System (SLS) at the Launch Equipment Test Facility (LETF). I also got to see the Orion tiles and capsule after its flight on EFT-1! I saw so many cool things while I was there, so many I could write a chapter about everything I saw. There is a very high chance that I will be rotating out to NE-M4 in the Fall to do more really cool SLS and hypergolic design and testing.

I was also given a really great opportunity to give a tour of KSC to the Embry-Riddle Aeronautical University Career Services (ERAU CS) office. I made my own itinerary and ran with it. The NASA VIP Tour Coordination, Tiffany Fairley, was a big help to me to get things rolling. When the ERAU CS office employees arrived, they were so excited and could not wait to get started. I took them to the VAB, Pad 39B, the Launch Control Center (LCC), and the Astronaut Crew Quarters (ACQ) as well as a drive by of the Mobile Launch Platforms (MLP's), the new Mobile Launcher (ML), and the second Crawler Transport (CT) outside of the VAB to see what has been going on for decades. They were extremely pleased and loved the fact that I was able to get them out to all the facilities at NASA KSC.



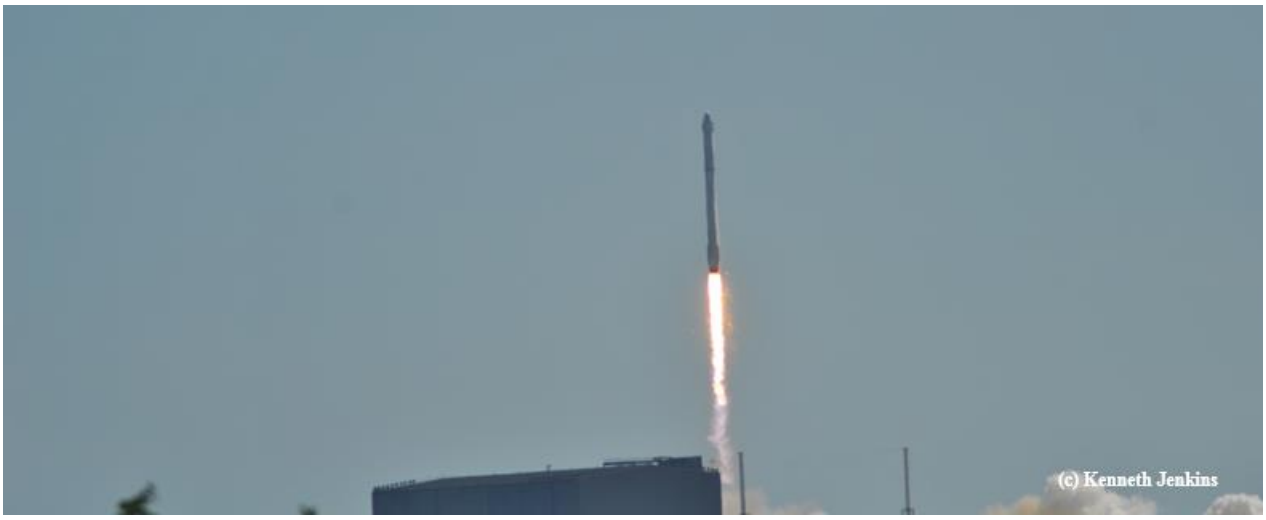
During my thirteen weeks here at KSC, I participated in numerous engineering walk-downs. The majority of them were at the VAB and Launch Complex 39 (LC39) areas. Some of the areas that were shown were: the VAB transfer isle, the "rocket" cranes, and the High Bays. These walk-downs were conducted mainly for me to get familiar with the areas that I would be potentially working in.

Along with everything else, I was tasked with helping a fellow co-worker with updating and maintaining an Excel Spreadsheet and MS SharePoint database for current/potential partners of NASA and NASA KSC. Some of the tasks involved going around to the Project Development Manager (PDM) and asking them to add/update their information in MS SharePoint so we could update their project for CPD senior management. Most of the work I am doing is sensitive and cannot go into details, but I can say that my COM 221 and EC 225 courses at ERAU have helped me with these tasks.

The new skills and knowledge that I gained have been extremely beneficial in preparing me for future projects and additional studies at school. I learned how to do even more powerful and meaningful tasks in MS Office such as effective PowerPoint presentations, how to present data in a staff meeting with upper and senior management, and how to write and review engineering documents/agreements. I also learned how the different organizations work together to make a

project come together. I feel that my educational background at ERAU truly helped me learn how the work atmosphere operates. I feel that my dream of working at Kennedy Space Center has come true.

While the last thirteen (13) weeks went by very fast, I was able to make a lot of decisions on my own, as well as proposing solutions and taking some direction with tasks I wasn't 100% sure about. My mentor was very supportive with all the work that I completed. I would say I was under about 40% to 60% control of my mentor. Mr. Connell allowed and encouraged me to take some of the tasks at hand and just go with it, but allowing me to ask questions, as I needed throughout the duration of the task.



In closing, I truly learned a great deal this summer. I also got an excellent chance of a lifetime, to take a tour of and walk on the Launch Pad 39B, Shuttle Landing Facility (SLF), the VAB and VAB "rocket" cranes, the Launch Control Center (LCC), Astronaut Crew Quarters (ACQ), and the Orion Capsule in the Neil Armstrong Operations & Checkout (NAOC) building at KSC, just to name a few. All the different tasks that I worked on both strengthened and challenged me, not only educationally, but mentally as well. I feel at home at Kennedy Space Center. As I mentioned above, I feel my dream of working at NASA full time has come true. The Center Planning & Development (CPD) Directorate welcomed me with open arms two years ago and continues to make me feel at home. I learned a lot about the corporate culture working in CPD, such as work ethic and deadlines. The tasks given to me will help my education in the future. I have learned an immense amount of life and work lessons. Some were difficult at first, but as time went on those lessons became every day habits. I feel the tasks given to me were everything I expected as well as some I didn't expect. I can't emphasis enough how much I learned this summer and that I am truly grateful for this opportunity. My mentor was extremely supportive of me and I know that we will always be in touch with everything NASA.