

A 'WIALD' Ride

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August 25, 2010

Nine months ago, a group of eager women in the UT Aerospace Engineering department joined together for the purpose of collaborating on a project to encourage the enhancement of their engineering leadership skills. This newly formed group, WIALD (Women in Aerospace Leadership Development), accomplished taking on the task of creating a successful payload designed to capture real-time video aboard a hybrid ballistic rocket. Members had the opportunity to join Fredericksburg High School Aerospace program's dream of reaching the edge of space, a dream that may not have occurred had we not received the overwhelming support and true dedication from many people, organizations, and companies.

The moment we had all been waiting for finally arrived on Friday August 6 when the White Sands personnel began the 5 second count down to our rocket launch. We held our breath as the rocket sat on the launch pad for 22 seconds—it was firing, but not moving. Our hearts began to sink as we believed our payload would not leave the launch pad as anticipated. Nearly ready to call it a day, the rocket suddenly launched into the air at an incredible speed—19.77 G's—reaching its maximum altitude at a couple of hundred feet before our parachute opened to bring our payload safely to the ground.



Members of WIALD with faculty advisor, Dr. Armand Chaput, in White Sands, New Mexico. Back row, left to right: Jessica Conde Lopez, Kristina Baltazar, Suzanne Plaisted, Katie Lodrige, Dr. Armand Chaput, Rebekah Sosland. Front row, left to right: Alexandra Long, Harmony Mones-Murphy, Bryce Ed, Denise Salazar, Sarah Hand

An amazing group of students at Fredericksburg High School designed and built an incredible hybrid Ballistic rocket, including the motors and propulsion system. Our payload's (an electrical component of the rocket) main mission was to capture live video feed, and it was a true success. The payload landed beautifully and virtually unharmed, and provided clear video as well as on board data—data that will help Fredericksburg High School understand their rocket's performance and help them reach their intended goal, to reach the edge of space.

Our moment of success lends most of its credit to the tremendous people who have supported the WIALD group along way. Through the help of Texas Space Grant Consortium, the Cockrell School's Women in Engineering Program, NASA, White Sands Missile Range, Fredericksburg High School's Aerospace Program and the generous staff and students at the University of Texas, WIALD was able to have a privileged experience at the birthplace of the aerospace industry in White Sands, New Mexico.

It is our group's mission to continue to apply our college-learned skills toward challenging hands-on projects in hopes of mastering these skills. First and foremost, we plan to analyze every detail of our recent launch in order to assess the problems and triumphs we faced. It is also our goal to introduce our university to new unexplored projects that will solve relevant problems in the aerospace industry.

WIALD is a newly founded student interest group that was created during the late fall of the 2009-2010 school year. We believe our success stems from our carefree persona, consideration of all ideas and efficient communication. We emerge not only as a group of women able to launch a component of a rocket, but also as a close-knit group of friends who encourage each other to achieve

our highest goals and dreams. Ultimately, WIALD seeks to provide confidence and support that will empower all women in the aerospace field of study to successes at any hands-on endeavor.

To **learn more** about student projects and/or to **support our student teams**, please contact Amanda Brown at 512-471-4046 or amanda.brown@austin.utexas.edu