

7-12 like no one else.

Anacapa's Near Space Probe Soars 111,814 Feet Over California

Student-built, homebrew weather balloon probe returned live video and data during three-hour flight



AAHAB-2's on-board camera systems captured images as it climbed to 111,814 feet above the Earth's surface.

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May 7, 2012 — Santa Barbara, Calif.

Members of the Anacapa Near Space Exploration Club (ANSEC) at Anacapa School are celebrating the weekend success of their second near space probe Anacapa Amateur High-Altitude Balloon 2 (AAHAB-2). The high school team launched two payload capsules tethered to a weather balloon on Saturday, May 5 at 6:52 a.m. from a site off Highway 166, northwest of New Cuyama, Calif.



The sunrise launch afforded the team some tremendous photo opportunities. This images shows the balloon's view climbing through 26,444 feet.

Equipped with GPS, atmospheric sensors, high-definition video and still cameras, a television transmitter and a Geiger counter, AAHAB-2 downlinked live data, video and images to the crew during its ascent. As the balloon climbed through the thinning air, the decreasing atmospheric pressure caused it to expand nearly ten times in diameter. Upon reaching its apex above California's Central Valley, the balloon burst, sending the payload back to the surface under the canopy of a small parachute. By reaching an altitude of 111,814 feet, AAHAB-2 shattered the record of the group's own AAHAB-1 flight by more than 20,000 feet.

AAHAB-2 was designed and built entirely by Anacapa students Grayson Baggiolini, Julio Bernal, Alex Carlson, Christian Eckert and Genevieve

Hatfield under the supervision of their faculty advisor Levi Maaia. The team has been working on the project since September 2011.

Anacapa School empowers students to excel at critical thinking, creativity, integrity and compassion through academic and experiential learning in a close-knit, diverse community.

Carlson, an 18-year-old senior at Anacapa, and Hatfield, a 15-year-old sophomore, earned their amateur radio licenses, allowing the group to use specialized higher-power wireless equipment to transmit live video images and data from the capsule to the ground crew throughout the flight. With the support of members of the Santa Barbara Amateur Radio Club, the Anacapa crew watched the live television downlink as the balloon climbed through the freezing, harsh conditions of the upper atmosphere into the dark, eerily-silent skies of near space.

"I am confident in saying that AAHAB-2 was a success," said Carlson, the mission's flight director. "There are some things we would do differently next time around, but overall we accomplished more than I ever expected."

The craft's three-hour and 18-minute flight was about one hour longer than the team anticipated, causing some moments of anxiety as they watched position reports creep eastward toward the Sierra Nevada.



AAHAB-2 was recovered from a ranch near Bakersfield four and a half hours after launch.

"Our initial projections showed that it would touch down near Taft," said Eckert, a 16-year-old junior. "We never expected it to climb so high and stay there for so long!"

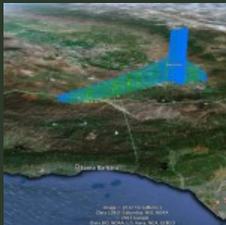
Fortunately for the crew, the descending capsules landed just short of the ridgeline, touching down in ranchland at the base of the foothills south of Bakersfield.

The students expect to thoroughly document the flight and analyze the collected data over the coming weeks.

More information, including additional photos and a condensed version of the in-flight video can be found online at www.anacapaschool.org/ansec.

Anacapa School is an independent, co-educational, WASC-accredited, college preparatory day school for students in grades 7-12. Founded in 1981 by Headmaster Gordon Sichi, Anacapa enjoys the best student-teacher ratio of any school, public or private, in Santa Barbara at its historic campus located in the heart of the Santa Barbara civic center.

Google Earth 3-D flight model (click for larger version):



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