

Computer used to guide balloon

By GEORGE ROWE
Battalion Reporter

Helium balloons aren't just for kids any more, as Robert H. Bishop, a Texas A&M University senior, proves.

Bishop, an aerospace engineering major, is working on a project that involves helium balloons. They are not the small ones kids carry around, but weather balloons that hold 20 million cubic feet of gas.

Bishop's project involves designing methods to control balloon flight. Bishop said that until now, research balloons have used gas vents and ballast to control balloon flight. They are radio-controlled to drop ballast or vent gas to maintain a certain altitude.

Bishop's project corrects for altitude problems caused by the heating and cooling of the balloon during the day. In the morning the sun heats the gas in the balloon, increasing pressure, and giving the balloon more lift. He said with the present system people on the ground monitor instruments that indicate internal pressure of the balloon, venting gas when pressure increases and dropping ballast when it decreases to maintain the same altitude.

Bishop said his system differs from the present system in that he uses temperature instead of pressure to maintain altitude.

Bishop said his system monitors the balloon's temperature and automatically corrects the balloon's altitude by using a computer to calculate how much gas to vent or ballast to drop. He said his system is better

than one in which a person ground monitors pressure gauges. By the time the person on the ground notices the pressure change, the balloon has already gained an upward or downward motion. Then he would correct the change by venting gas or dropping ballast to stop the balloon as it drifts away from the desired altitude.

Bishop said his system would overcome this time lag by making corrections before the balloon gains inertia. He said that with his refinement the balloons used by researchers wouldn't need to carry as much ballast. Instead, they could carry more equipment.

Bishop said he doesn't develop the hardware, but only creates the computer program to design the balloon. Bishop uses computers to simulate balloon flight and determine how his system works. The engineer said his project is not finished, but he hopes to complete it by next May.



Battalion photo by Monte Schara

E-a-s-y does it!

Aggie Band freshmen, under the strict supervision of seniors Ray Miessler and Robbie Gerhart, both from Conroe, constructed this Coke can pyramid last week in Duncan. The pyramid consisted of 821 soft drink cans.

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