



MD SPACE GRANT CONSORTIUM NEARSPACE PROGRAM

NS-52 Launch Announcement

After much preparation, the **Maryland Space Grant Consortium Balloon Payload Team** is proud to announce its 52nd launch, scheduled for Saturday, April 16, around 8:00 AM, from Clear Spring, MD, weather permitting.

Join Us! Balloon Launch Details

When:

Saturday, April 16, 2016

Where:

Clear Spring Elementary School
12627 Broadfording Rd
Clear Spring, Maryland 21722

[Google Maps](#)

Payload Descriptions

Command Module (CMD)

Where would we be without Command Module?

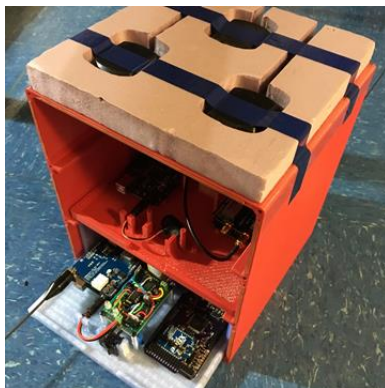
Command Module is the main flight tracking and telemetry system for every flight. It broadcasts GPS coordinates and altitude data from the balloon via VHF radio transmitters to the chase vans and operating ground radio stations.

Bach's Box

Bach's Box is a frequent-flyer weather unit that collects atmospheric data for forecasting predictions. This flight, Bach's Box will be testing its lidar to measure dust in the atmosphere while measuring temperature, pressure, and humidity.

TurtleNest

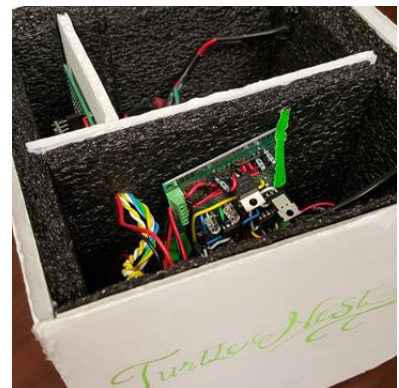
TurtleNest is a picture-focused payload flying temperature, pressure, humidity, and altitude sensors in addition to a GPS module. Throughout the entire flight, TurtleNest will be capturing photos. Expect great photos post flight!



Command Module



A typical day at the BPP Lab



TurtleNest 2.0

BADASS / HOSTed (Balloon Attitude Determination and Stabilization System)

The goal of BADASS is to provide attitude stability to a hosted payload, compensating for some of the turbulence experienced during a flight. This flight, BADASS will collect engineering data on the system throughout the flight and test out the elevation attitude compensation.

HOSTed, the payload that will be stabilized by BADASS will investigate solar panel output changes vs. altitude. In addition, this payload will record IMU data for the BADASS unit. A GoPro camera will be mounted inside for photos.

Link

Link is an experimental communication payload that is attempting to use a Yagi antenna and a

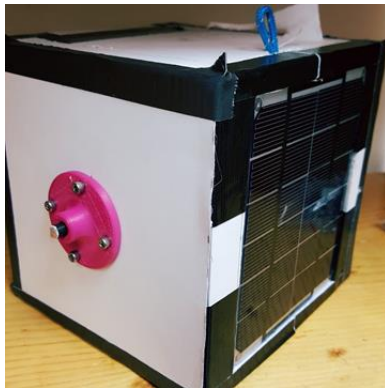
ground station antenna to test communication protocols. In addition, Link allows us to get real time data and command payloads from the ground.

ASMR (Altitude Sensing Magnetic Release)

The goal of ASMR is to devise a magnetic release system to ultimately release a payload and parachute from the balloon which, for future flights, will be able to control how high the payload string will travel.

PCS (Position Communications System) - CapTech

This payload is an experiment to determine the feasibility of an APRS tracker with science telemetry for Capitol Technology University's CubeSat mission.



A side view of HOSTed



CTU's very lightweight PCS

Questions?

Contact Dr. Mary Bowden

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Live Updates

You can follow our live tweetup of the launch day [here](#).

You can also track us on the [APRS website](#) using UMD's callsign: W3EAX-9.

*The NearSpace High Altitude Balloon Team thanks the **Maryland Space Grant Consortium** for its continued support and effort to make our program possible.*

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