BalloonSat 20 Flight Report

BalloonSat 20 launched Sunday, June 15, 2012 from behind VBRH on campus. The flight included:

1. 1600g latex balloon with 1 K bottles of Helium (4lbs of payload, +3lbs for lift)
2. 5 foot parachute with spill hole (purple and black)
3. 2m tracker beaconing every 60 seconds (56 second offset) on 144.390MHz broadcasting APRS packets
   b. Transmitting K4UAH-12
4. SPOT GPS Messenger (secondary tracker)
5. Recovery Drop Pod

This flight had our standard flight tracker configuration, with new settings for the Byonics radio. We had an easy liftoff at 8:36 am. The ground station had a computer failure, but a new mobile ground station was fully operational in the recovery car. Though the website was not broadcasting live data, the vehicle was able to track through burst. The SPOT tracker worked up 36,000ft, probably stopping due to temperature.

Max altitude: 124,198ft Club Record

2012-07-15 15:26:48 UTC: K4UAH-12>APT314,WIDE1-1,WIDE2-1,qAR:/152646h 3448.26N/08716.34WO268/060/A=124198/ space.uah.edu |“b$s’8|

APRS tracker failed on the descent at 2 hours into flight, probably due to long soak time in the cold temperatures.

Last packet in flight:

2012-07-15 15:38:42 UTC: K4UAH-12>APT314 ,WIDE2*,qAR:/153446h 3448.16N/08721.96WO269/021/A=070176/ space.uah.edu |“j$x’7|

With the help of ground station crew and a new prediction, we were able to navigate the recovery crew into range of the tracker. There was a delay (for lunch) that permitted the tracker to warm up and start again. Final coordinates were at 34°56.15'N 87°20.08'W. After easily finding a nearby house who owned the property, we dug through 0.16miles of sticker bushes and heavy vegetation. The payload was on the ceiling of the trees, just 20 ft up in the air. We deployed the recovery pod and pulled the payloads out of the trees. It was a hard and fun recovery.

The mission of the flight to test the trackers was very successful and showed that the settings worked.


Contact us to ask questions or get involved: [space@uah.edu](mailto:space@uah.edu)