

# **ARCS News**



**Alamo Radio Control Society** 

www.alamorcs.org

**AMA Charter 603** 

May, 2023

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CLUB FLYING SITE Is located just west of Macdona at 10025 Shepard Road

The next club meeting is scheduled for Tuesday, May 16, 2022, at 7 PM in the Acadiana Café, 1289 SW Loop 410.

#### The April Fun Fly

**Editor Note:** The April fun fly was cancelled due to bad weather. Although not an RC function, this is an article I published in the ham radio club newsletter that is about flying, **balloon flying**.

#### Balloon Shot Travis Few, N9EOD



On April 20th at 0752L, San Antonio Radio Club members and the Civil Air Patrol launched a High Altitude Balloon from the Old Kingsbury Aerodrome in Kingsbury, TX.

The objective of this launch was proof of concept that we could launch and recover the system.

With that goal in mind, our payload for this flight consisted of

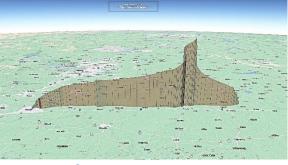
2 cameras, a PicoAPRS transmitter, A Spot Tracker, the MicroFox used in monthly fox hunts, and a warning buzzer. With a mindset of "two is one, and one is none," everything had a redundant system beside the buzzer.

The team successfully recovered the payload after 2 hours and 4 minutes of flight. The redundancies paid off as one of the two cameras malfunctioned during the flight, and the Spot Tracker did not post any locations besides the starting point.

The balloon traveled over 87 horizontal miles, reaching an altitude of 100,980ft or 19.1 miles. This altitude was slightly lower than the projected altitude of 108,267ft. The reduction in altitude is most likely due to adding more helium than



1The Payload



2Flight Path on Google Earth

necessary. We errored on the side of caution with lift to ensure we could reach a burst altitude. The most significant risk to a successful recovery was a lack of lift resulting in a balloon that floats at an altitude lower than its burst height. A balloon in this configuration will travel miles without bursting, typically resulting in a lost payload (Continued on Page 3)

#### **ARCS OFFICERS**

#### **President**

#### **Bill Ponseigo**

(210) 394-8976(Mob) president@

alamoradiocontrol.club

### **Vice President**

#### **Buck Murray**

(210) 884-8445(Mob) webmaster@

alamoradiocontrol.club

#### Secretary

**Richard Sanders** 

832-233-3956

1173 Pebble Beach Road

Lake Hills, TX 78063

secretary@

alamoradiocontrol.club

#### **Treasurer**

#### **Juan Galvez**

1907 Green Ash San Antonio, TX, 78227 760) 470-6096) treasurer@ alamoradiocontrol.club

## Support Staff Newsletter Editor

#### **Jimmie Neff**

(210) 563-2121

arcseditor@

alamoradiocontrol.club

#### **Hats and Nametags**

#### **Eric Amundsen**

hatsandtags@ alamoradiocontrol.club

Chief Photographer

Jim Witthauer

#### **Club Meeting:**

Held the 3<sup>rd</sup> Tuesday of each month (except Dec) 7:00 PM to 9:00 PM Tuesday. Acadiana Café, 1289 SW Loop 410 ARCS Newsletter May 2023

#### **ARCS Meeting Minutes April 18, 2023**

The meeting was called to order April 18<sup>th</sup> at 7:00 p.m. The reading of the March 2023 minutes were approved as published in the Newsletter. Treasurer's Report was read. Total assets is \$10,801. A motion was made to accept the Treasurer's Report. Approved.

#### **Guests:**

Leonard Banks Charolette Urrita Sandy Witthauer

#### **ANNOUNCEMENTS:**

The Fun Fly is April 23rd from 10 am to 2 pm. Bring snacks (donuts etc.) for the pilots and food for the Food Bank.

If you want a club shirt, check with Eric Amundsen, he will take your order. Shirts are \$20. Extended sizes are slightly higher. There is no minimum order. If you want a shirt, call Eric. Hats are \$15. Name Tags are \$6. New members, hats and name tags are free but you need to tell Eric if you want a nametag. Email Eric at <a href="mailto:cam@clevelandnet.com">cam@clevelandnet.com</a> if you want a nametag. Name tags will be attached to the board in the pavilion. New members check the board for your name tag if you ordered one from Eric.

The Club donated 160 lbs. of food to the San Antonio Food Bank in March 2023. Total for the year is 658 lbs. Thanks to all who donated. **Keep up the good work, folks!** Just put the food in the "Fun Fly Barrel".

#### FIELD CONDITIONS:

Field is in good shape and all mowed.

#### **OLD BUSINESS:**

IMAC Event- event group held 1st meeting. Group is going through ideas to promote event.

#### **NEW BUSINESS:**

Fourth of July Fly-In event- Club voted to hold event on Tuesday July 4<sup>th</sup> and fund \$300 for food. George Wilson and Jim Branaum will coordinate the event. A collection will be taken for fireworks.

#### **SHOW AND TELL:**

George Wilson showed his Tower Hobbies Slow Ride airplane. A beautiful ARF but unfortunately no longer available.

#### **CRASH OF THE MONTH:**

Bill Ponseigo was flying his yellow cropduster and was making a left hand turn when it abruptly corkscrewed into the ground. A stall was suspected.

#### Raffle:

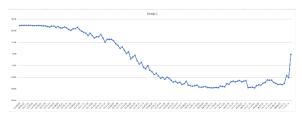
The monthly raffles are designed to break even. Any access monies are used for the Christmas Party Raffle. Our wives and guests receive a free raffle ticket for attending the meeting.

Unfortunately, we forgot the raffle ticket roll so the raffle was not held this month.

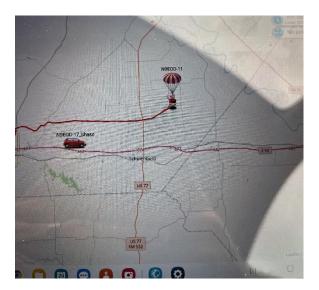
The meeting adjourned at 7:38 PM.

## Balloon Shot (Continued from Page 1)

While the payload didn't contain any significant data collection capability, it was able to record and transmit the temperature and pressure as it ascended through the atmosphere. This data was released back to the ground as part of the APRS packets and helped us to develop an idea of how the systems fared in relation to the cold. For instance, the one camera that did function during the flight shut down at 0930, roughly 10 minutes after the highest altitude and the lowest temperature. Our theory on why this camera shut down is that the battery voltage dropped due to the low temperature.



**Temperature Chart** 



The payload experienced a low temperature of -29.2C or -20.56F. This graph shows the change in temperature during flight. Take note of the slow rise in temperature compared to the decline caused by

the insulating properties of the payload box and the rapid descent experienced by the payload. The lowest pressure recorded was 22hPa.

From a radio perspective, our PicoAPRS transmitter did a fantastic job providing us with temperature, pressure, latitude/longitude/ and altitude data. We did see some abnormal reports, including one that claimed the balloon was at 36,6111m or 1,201,151.57ft. Our best guess is that another transmission simultaneously caused the packet to be partially corrupted.

As you may know, another "minor launch event" was on April 20th. That launch didn't go quite as expected, but we got some shots of it coming up through the clouds.

Geat success, and we would like to thank SARC and everyone who helped up both at the launch and elsewhere.



The Balloon camera caught the ill-fated SpaceX launch as it cleared the clouds.

On May 27th, we will have our second launch at Kitty Hawk Ultralight Flying Field. Kitty Hawk is at 20216 FM 2252, San Antonio, TX 78266. We will be launching at 0700, and the CAP Cadets will be on hand for this launch. Please come out and join us if you can. If you want to track the balloon, it will be flying again with APRS call sign N9EOD-11

For the YouTube video of the launch, go to: <a href="https://www.youtube.com/watch?v=MdYM\_GozdN0&t=16s">https://www.youtube.com/watch?v=MdYM\_GozdN0&t=16s</a>
For pictures and videos, go

to:  $\underline{https://www.dropbox.com/sh/ds3dfb6kh7259n9/AAAvxiMKb4V0Z98tJspDuq7xa?dl=0} \ and$ 

https://www.dropbox.com/sh/yx4thpd4y6d7sr4/AABba-GruYe RMENMQxQ1VqYa?dl=0

"Those who expect to reap the blessings of freedom, must, like men, undergo the fatigues of supporting it." -- Thomas Paine,

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#### **Servo Splines**

How many splines does your RC Servo have? Here is a listing to help you to select the right horn for the RC Servo. Pay close attention to your servo, some servos are rebadged servos from other brands. This is the case of the Hobbico CS-170 that uses 24 splines (Hitec) instead of 25 splines traditionally found on Hobbico servos. Ace/Thunder: 25T

Airtronics: 23T Blue Bird: 25T Cirrus: 25T Duratrax: 25T Futaba: 25T Hitec: 24T

Hobbico: 25T (Some servos like the CS-170 uses 24 splines)

HPI: 25T
Jr: 23T
KO: 23T
MRC: 23T
Multiplex: 23T
Power HD: 25T
Sanwa: 23T
Savox:25T
Spektrum: 23T
Tamiya: 25T

Team Associated: 25T

Tower: 25T Traxxas: 25T Xpert:25T

Find out more the following link: https://www.rcgroups.com/forums/showpost.

php?p= 13441675&postcount=2

