

The South Texas Balloon Launch Team

April 8, 2019

Andy W5ACM



How we launch them



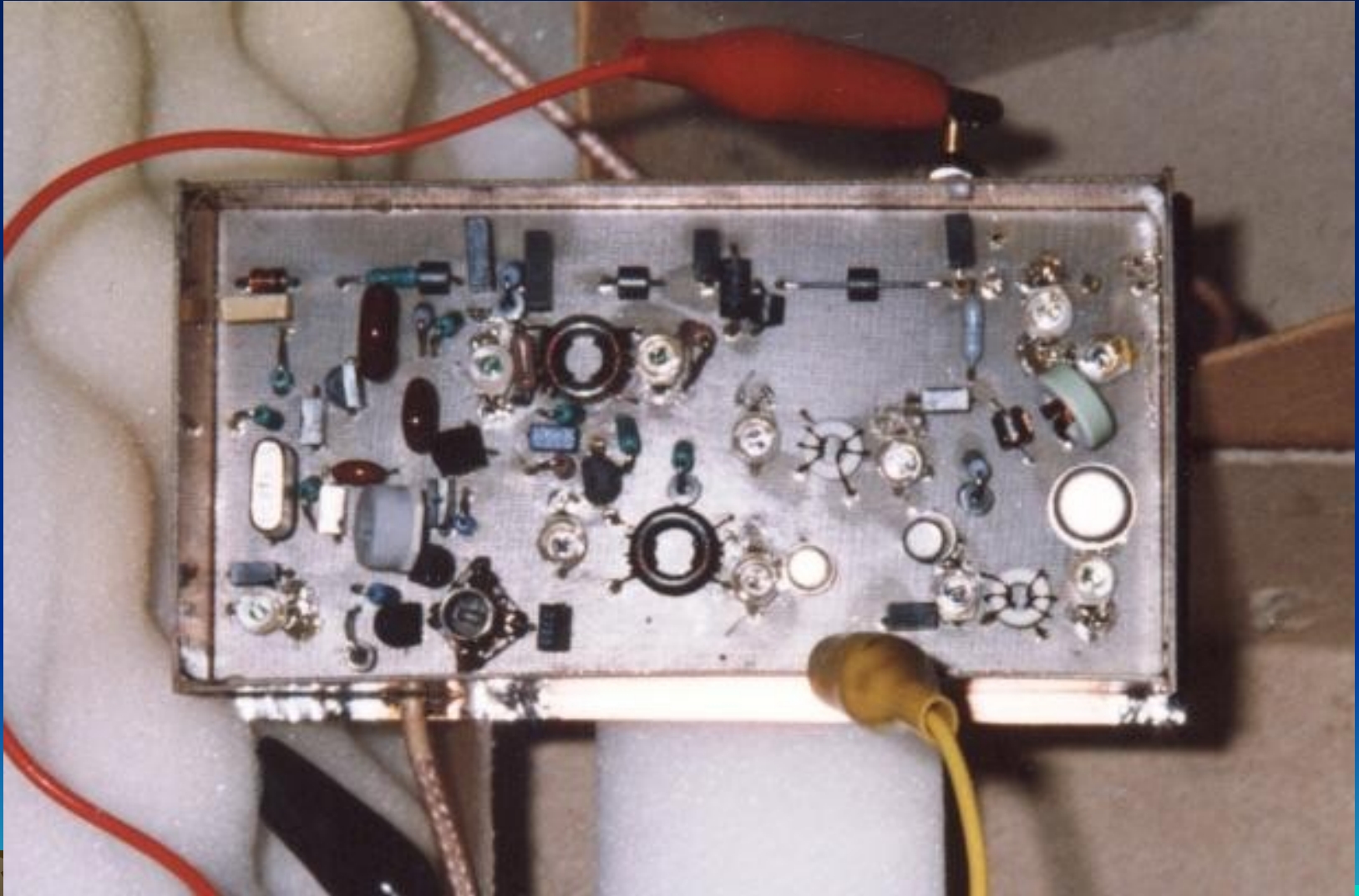
How we get them down



- 2019 is the 29th Anniversary of the flight of BLT-1 from Huntsville, Texas
- Our goal has been to fly interesting, useful and fun amateur-radio payloads to the Edge of Space
- In 2018 we flew BLT-49.1 and BLT-49.2 from The Greater Houston Hamfest
- We also flew BLT-50 from the Wharton Intergalactic Spaceport!
- On March 23, 2019 we flew BLT-51 and BLT-52 from the Greater Houston Hamfest



BLT-1 2M FM Xmtr - 1990



BLT-1 Ground Equipment



BLT-1 Payload Preparation



Huntsville Hanger - 1990



Wharton 1994

Wharton Journal Spectator Wednesday, July 27, 1994 Sec. A Page 9



Members of the South Texas Balloon Launch Team wrestle balloon out of hangar at Wharton's airport.



BLT members check pictures being sent by probe while others watch balloon ascend.

Photos
by
Burlon
Parsons

High in the sky Balloon launchers like Wharton

By BURLON PARSONS
Journal Spectator Lifestyle Editor

It was a "rough launch." The 16-foot diameter balloon had been jerked around in the gusting surface winds as it began its ascent.

But after two delays, the launch was completed and the probe equipment was headed for the edge of space. Once free of the surface winds, the balloon and its payload rose almost straight vertically at an astounding rate.

This was no top-secret government space probe. In fact, it was neither secret nor government.

Instead, it was the latest outing for a high-tech spectrum of ham radio operators calling themselves the South Texas Balloon Launch Team. And a handful of interested local residents came as spectators for the event at the Wharton Municipal Airport on Saturday.

This was their fourth launch from the Wharton site since forming in 1990. Most of their 25-30 members, some of whom are NASA employees, were at the launch.

Their probe package was designated BLT-9.

Its goal was to send information and pictures from the edge of space back to their receivers below. The balloon can carry the payload to a height of 100,000 to 120,000 feet. Swelling to nearly twice its normal size in the thin atmosphere, the balloon finally bursts. Its payload returns to earth via parachute.

Saturday's launch, however, was a "replacement probe." Payload equipment on the previous launch was lost "... when BLT-8 decided to take a dip in the Gulf of Mexico."

So the STBLT members, who are all from the Houston area, had to put together a new payload of equipment. BLT-9 carried a number of directional signal devices, temperature gauges for inside and exterior readings and a remote controlled 3-Watt FM high resolution black and white television transmitter.

All of this and more was bundled into a styrofoam package weighing less than eight pounds. Its tiny payload carried some \$2,000-\$4,000 worth of research equipment purchased and built by club members.

Also attached below the payload was a glider with a four foot wingspan. It would be remotely detached from the balloon to soar back to earth. Free flying, the glider was equipped with beacon devices on it so

it could be recovered.

If all goes right, all the equipment is reusable except the balloon and the helium to fill it. That's about a \$100 expense.

Various members vehicles were rigged with special receiving antennae and equipment which would monitor the flight and track both probe and glider. One held the TV receiver.

Wharton's airport was chosen as a launch site for a number of reasons.

"Wharton is close to Houston's proximity," said Andy MacAllister, a spokesman for the group. "Wharton is in flat country with good winds, no large obstructions and a lot of good people who are willing to help us out."

Why do they launch balloons?

"There are very few men who have been to the altitude this balloon will go," MacAllister said. "We don't have access to those people and NASA does not readily share their research information."

What was the goal for this sort of "hobby"?

"We will be looking at the balloon, space and the horizon of the earth," MacAllister added. "Really our ultimate goal is to have fun."

For amateur radio operators, the fun really begins after launch. Various signals are beeping, receivers are picking up information. Team members and their families gather around the TV to see the pictures being sent back.

Once the probe has returned to earth, team members track its location to recover the equipment.

But like BLT-8, STBLT member Burns Cleland said on Monday that BLT-9's equipment hadn't yet been recovered either. It is boxed in a fluorescent orange styrofoam package.

"We think it is in the Louise or Ganado area," Cleland said. "We would ask your readers to be on the lookout for it."

"We got some good videos until the camera froze at about 60,000 feet (where the temperature was) a minus 40 degrees," he added. "We figure this payload made it to 85,000 feet, where it was minus 60 degrees."

The team's next project will be even more ambitious. Along with the transmitting equipment the launch will include a larger glider which can be flown by remote control.

"What we want to do is take it to the edge of space and fly it back to us, just like NASA does," MacAllister said.

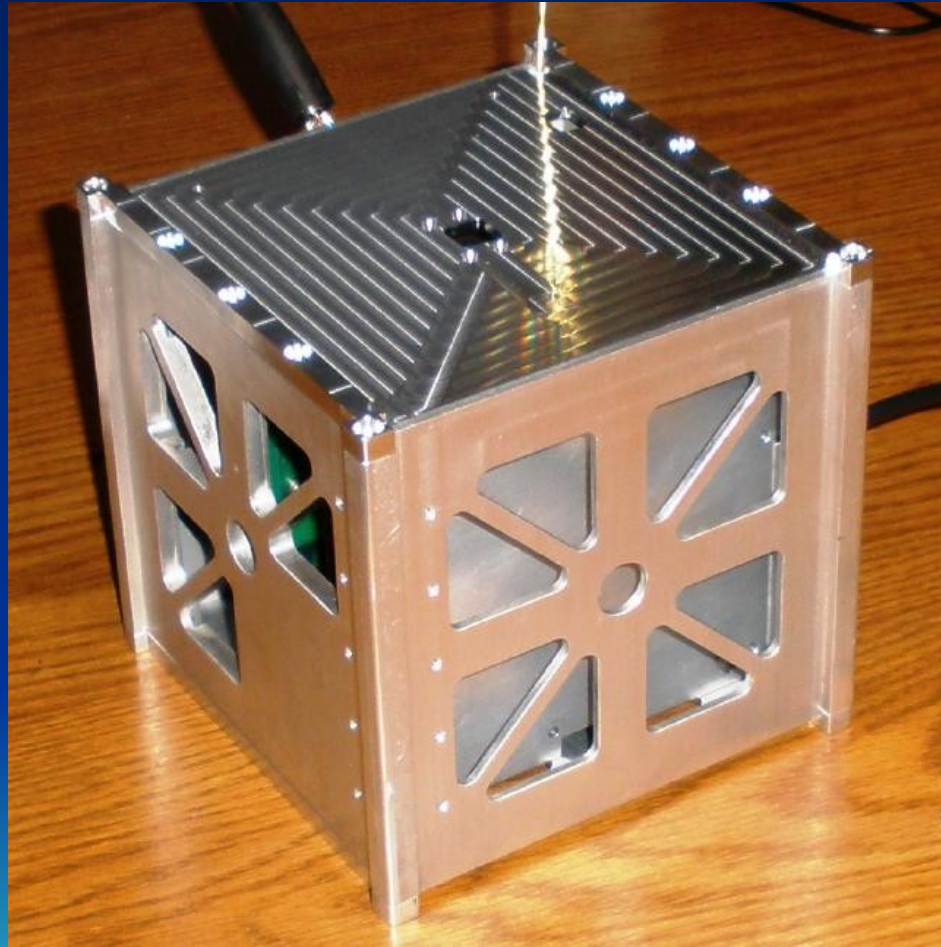
A Favorite from BLT-6



Testing a Rocket for BLT-23



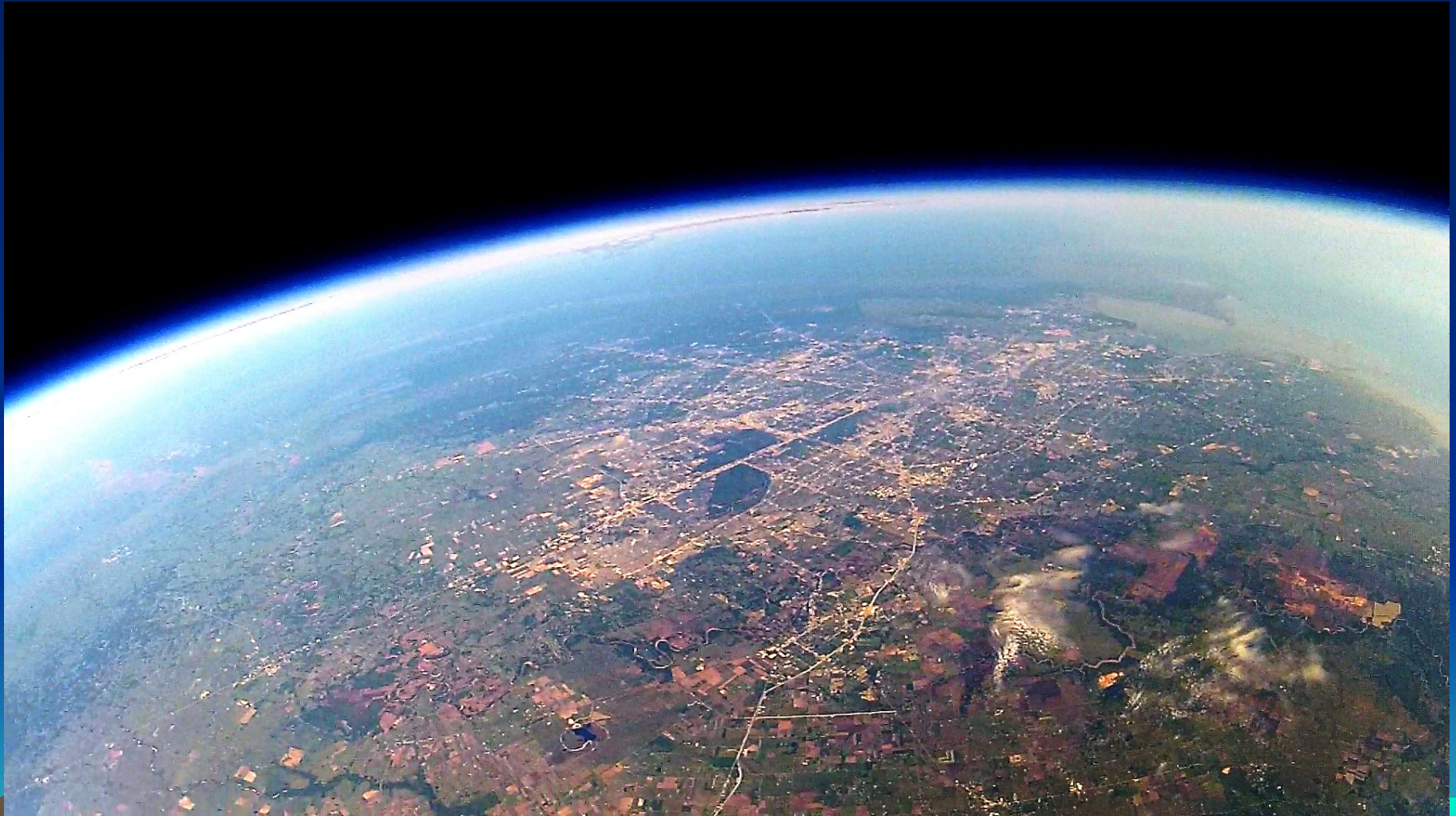
University of Texas Engineering Model Micro-Sat on BLT-24



We Flew Beer on BLT-25

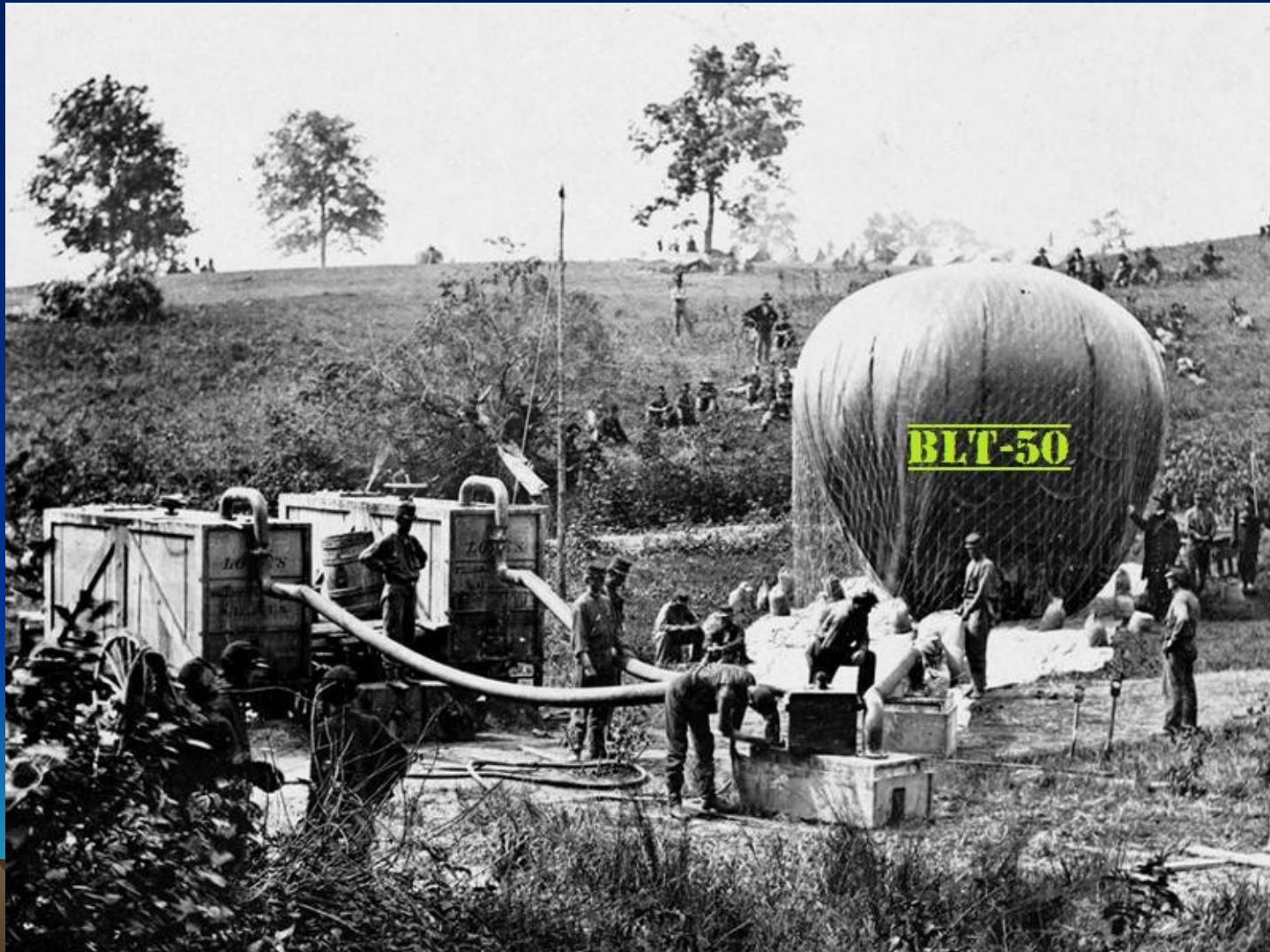


BLT-49 says “Hello Houston
from 97,000 ft!”



New Experiments!

BLT-50 on August 25, 2018



**K5WH DMR/Fusion/D-Star Repeater on 446.5 MHz Up / 441.000 Down
(Color Code 1, Timeslot 1, Talkgroup 98006 - Standard DMR settings)***

**Sain Sonic AP510 APRS Trackers - 144.390Mhz
W5ACM-12 and KG5FQX-11**

Track via Google Maps APRS

K5SAF Live DVB-T Digital ATV on 434 MHz

W5MAB 360-degree Down-looking Video camera

KG5FQX Wide-Angle Balloon Burst Video Camera

Horizon-Viewing GoPro

KD5ELH Crossband FM Repeater on 446.000 Up / 147.435 Down



BLT-50 Balloon Info

8245-H Hwoyee Meteorological Balloon, 1600 Grams Natural

Color: Natural

Neck Diameter: 8.3 cm

Uninflated Diameter: 72"

Standard Inflated Diameter: 22'

Burst Diameter: 27'



Where We Buy Balloons

Scientific Sales

<https://www.scientificsales.com>

Home > METEOROLOGICAL/WEATHER BALLOONS >



LARGE PHOTO

EMAIL A FRIEND



Share

Lowest prices on the Internet!

8245-H Hwoyee Weather Balloon, 1600 Grams Natural

OUR PRICE: \$155.99

SALE PRICE: \$119.99 (Contact us for Special Government Prices)

You save \$36.00!

Availability:: Usually Ships in 24 Hours

Product Code: 8245-H

QTY: 1



ADD TO CART



ADD TO WISH LIST

BLT-50 Video Time!



8/25/18 – Perfect Weather!



Antennas! DVB-T & APRS



KK2Z – Auto-Tracking Antennas



Gabe's Balloon Telescope



BLT-49 ATV Ground Control



Superb Live BLT-50 Digital ATV!



The View from 98,000'



South Texas Balloon Launch Team
25 Aug 2018
BLT-50, 98,000 ft
Bill, KG5FQX

Burst!



South Texas Balloon Launch Team
25 Aug 2018
BLT-50
Bill KG5FOX

Perfect Parachute Deployment!



South Texas Balloon Launch Team
25 Aug 2018
BLT-50
Bill, KG5FQX

KE5GDB's Drone – Landing Site



The Dedicated Chase Team!



The Dedicated BBQ Fans!



What Flew at the GHHF?

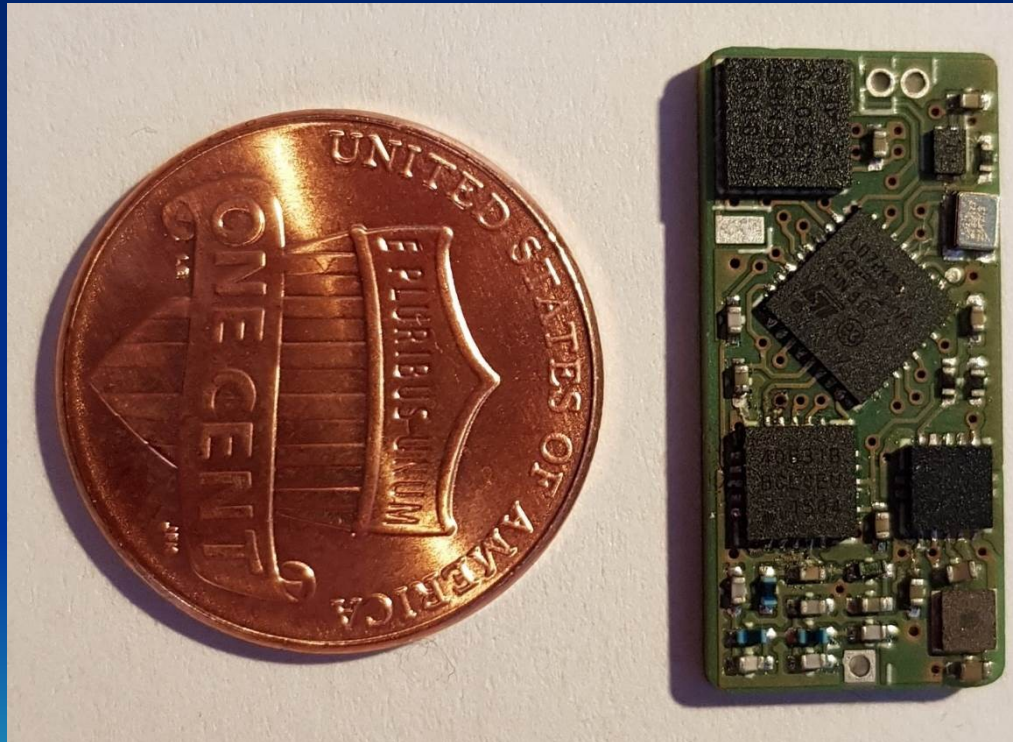
BLT-51 and BLT-52

With Displays, Ground Control, and
Presentations at The Greater
Houston Hamfest March 23, 2019

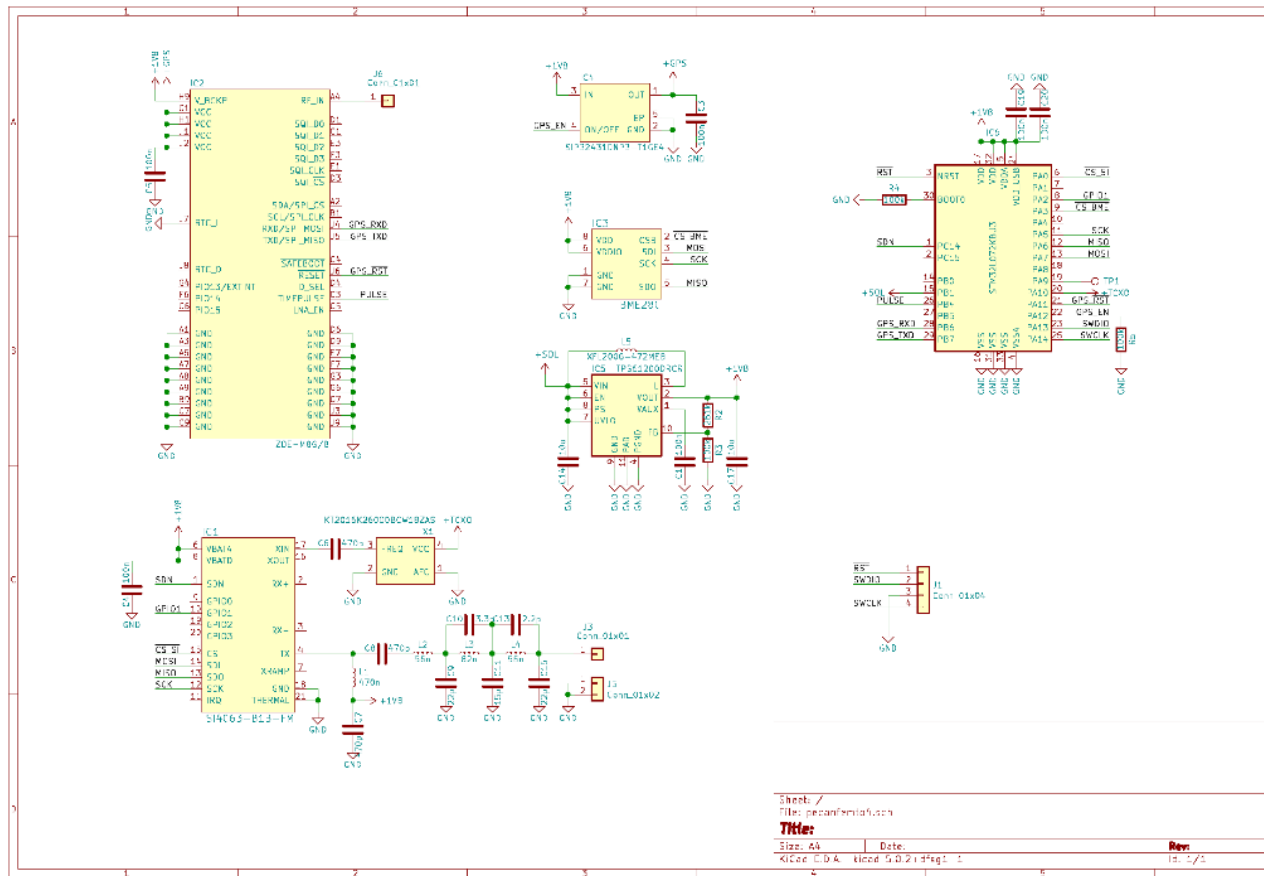


The *NEW* BLT-51

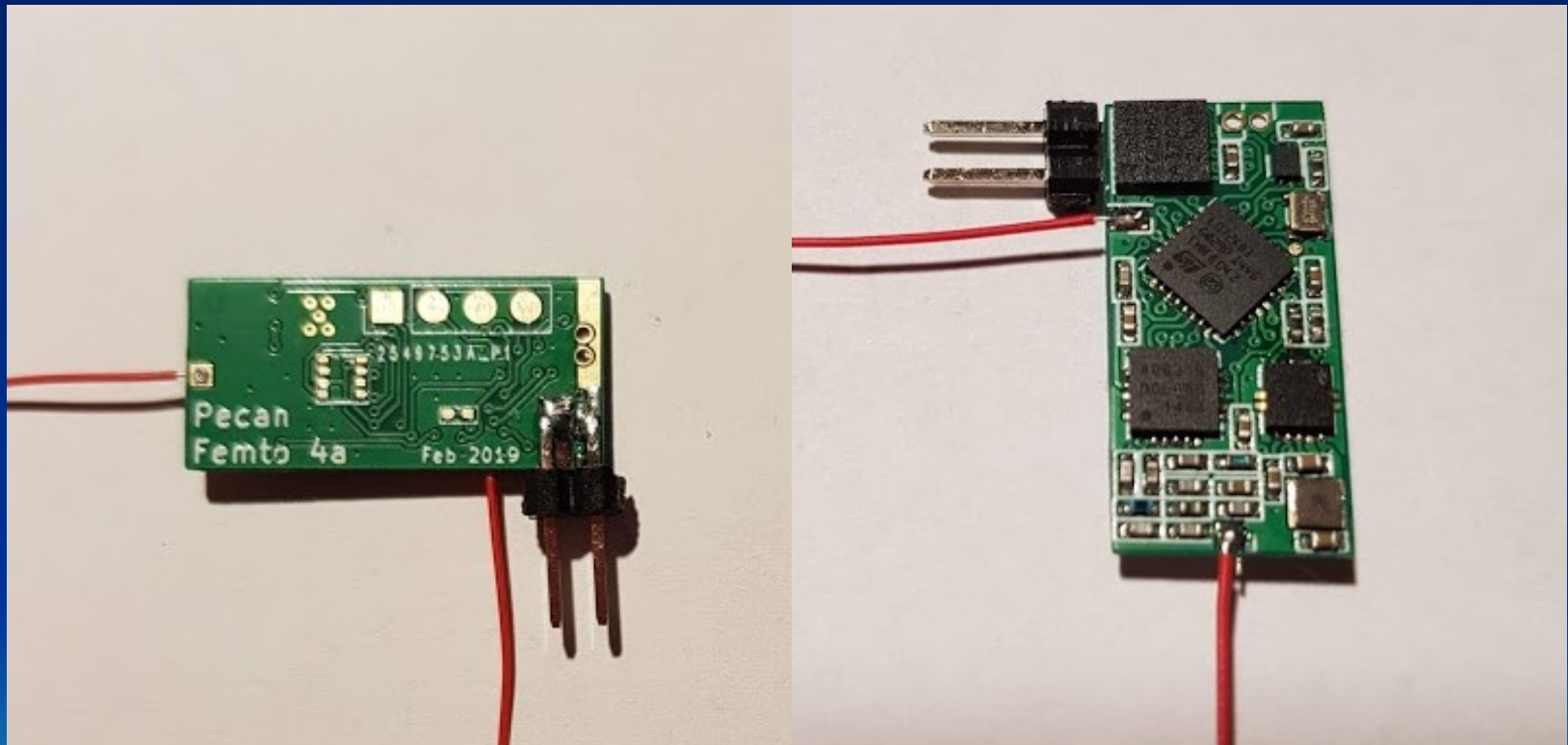
- Femto-Pecan Ver. 4a de KT5TK & AF5LI



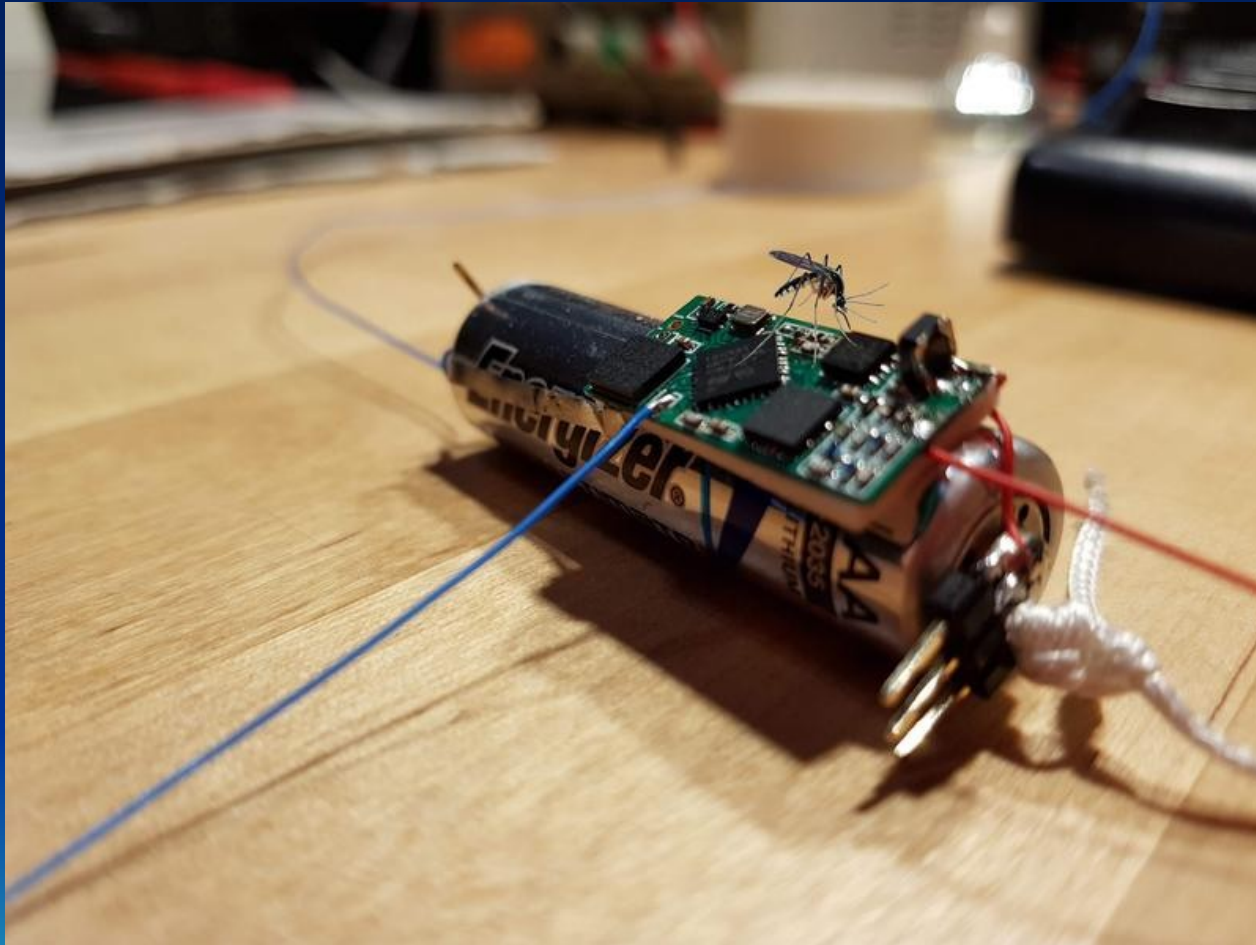
Femto 4a



BLT-51 = W5ACM-10



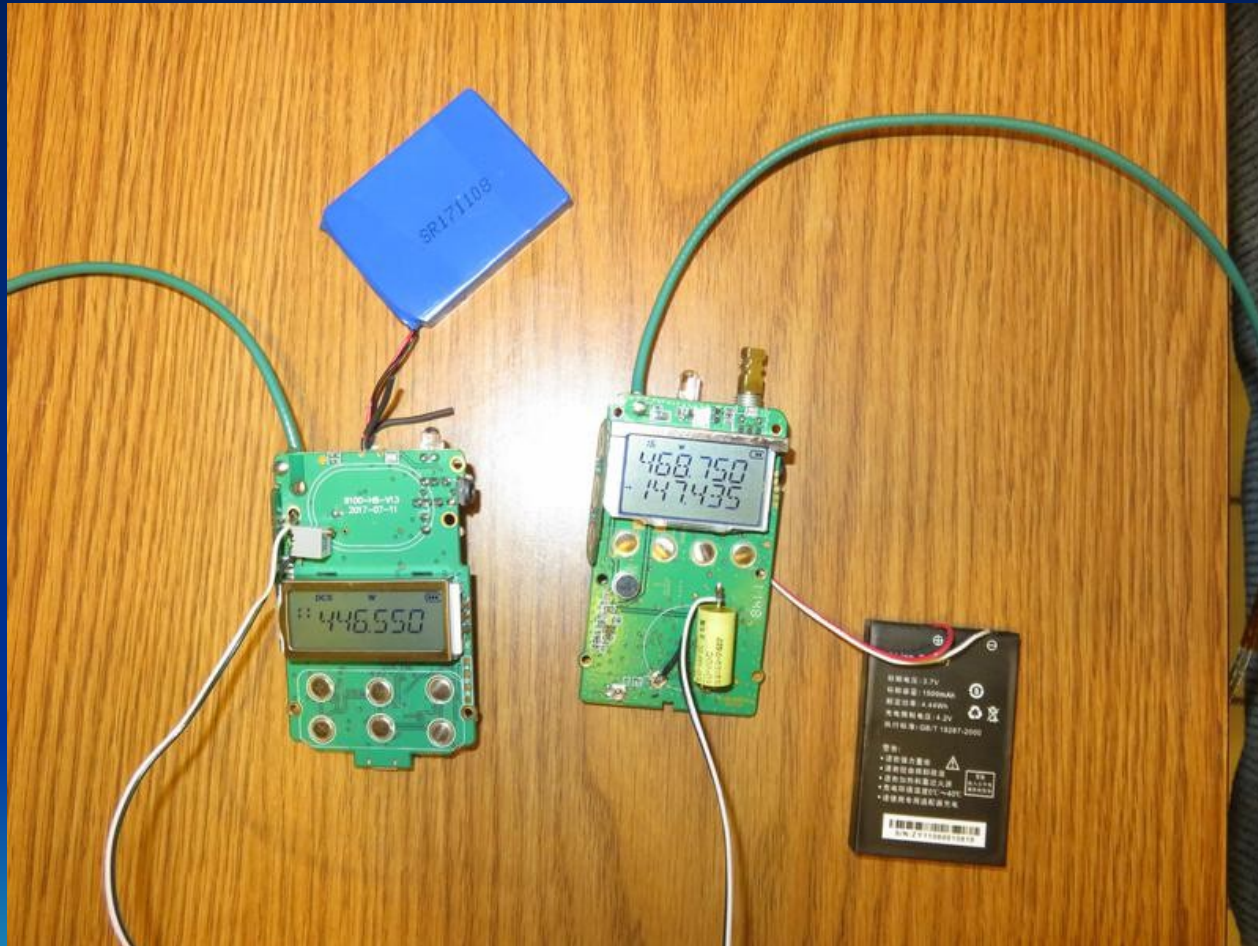
Add a BIG Battery!



BLT-52 Cross-Band Rptr

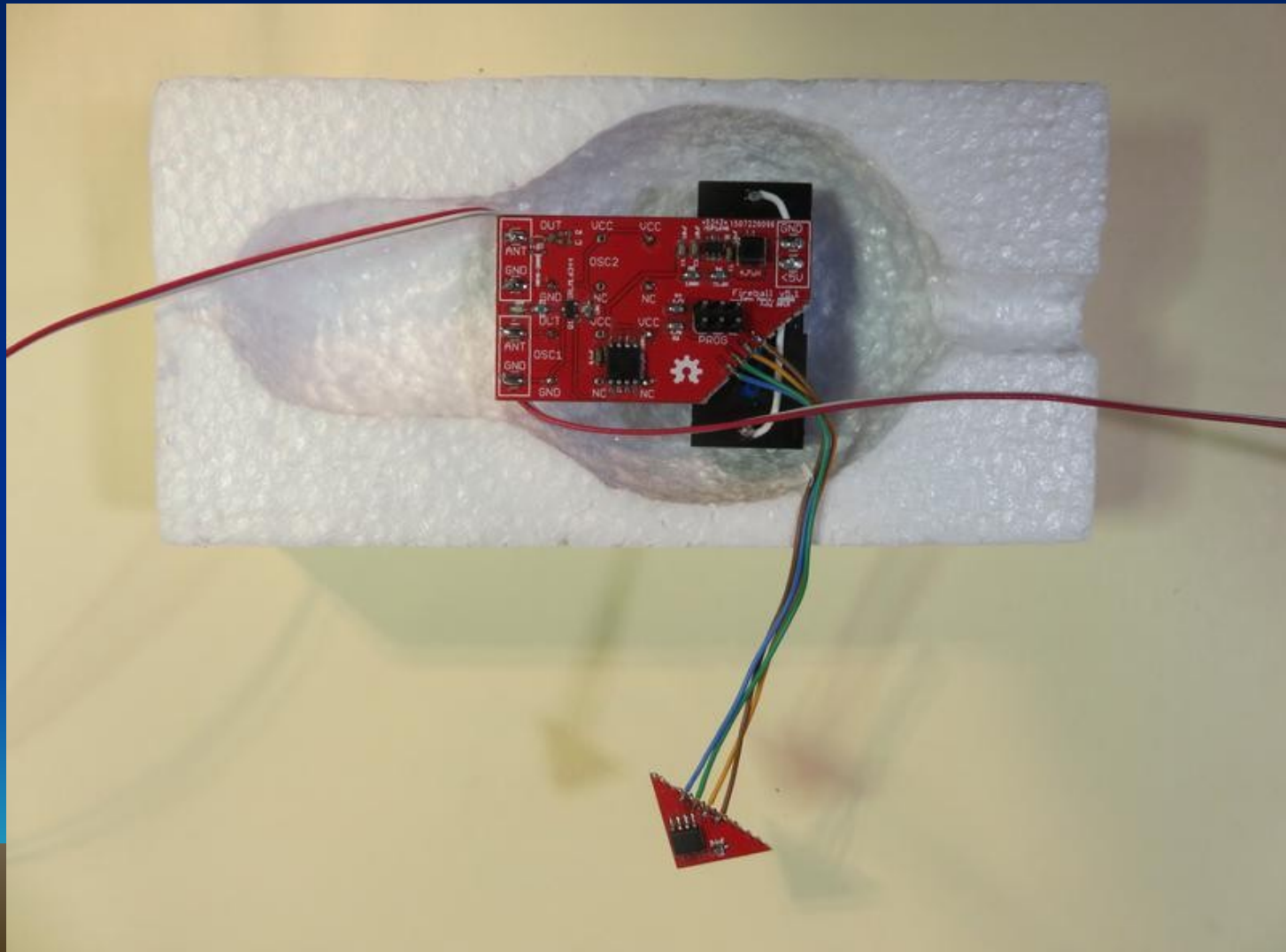


Lighten the Load...

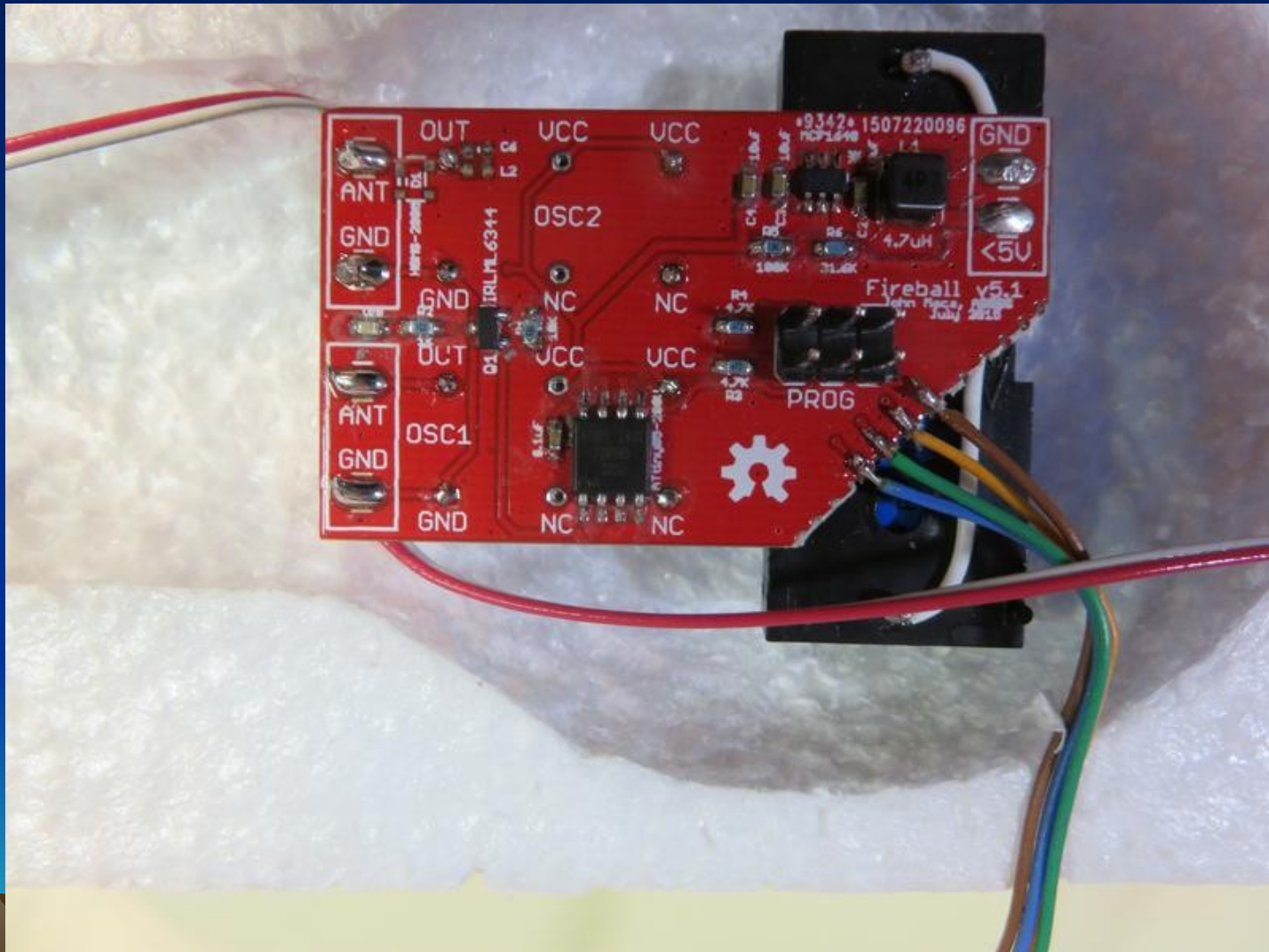


BLT-52 Smart Beeper

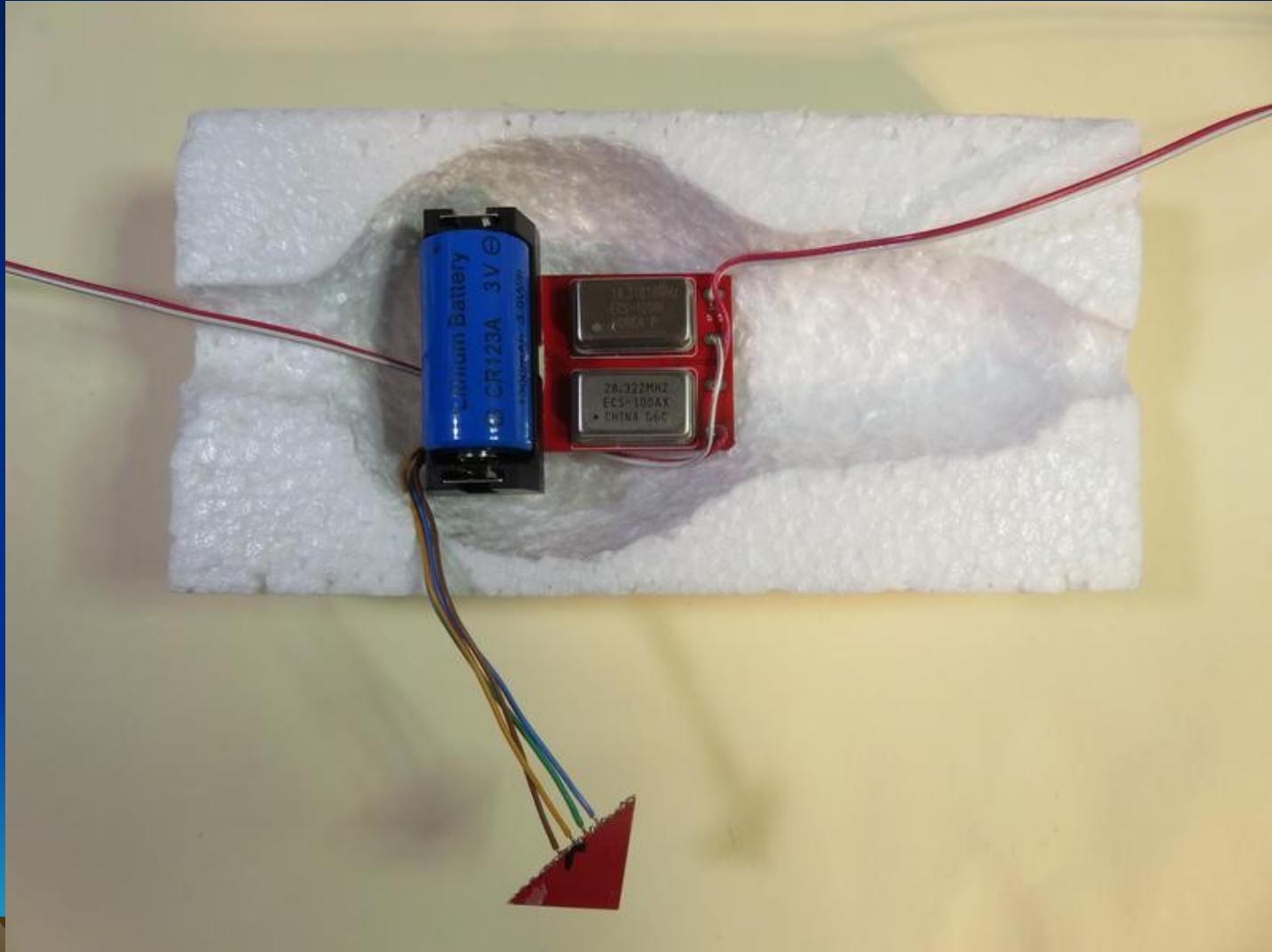
CW Temp in F & W5ACM



Closeup of PCB



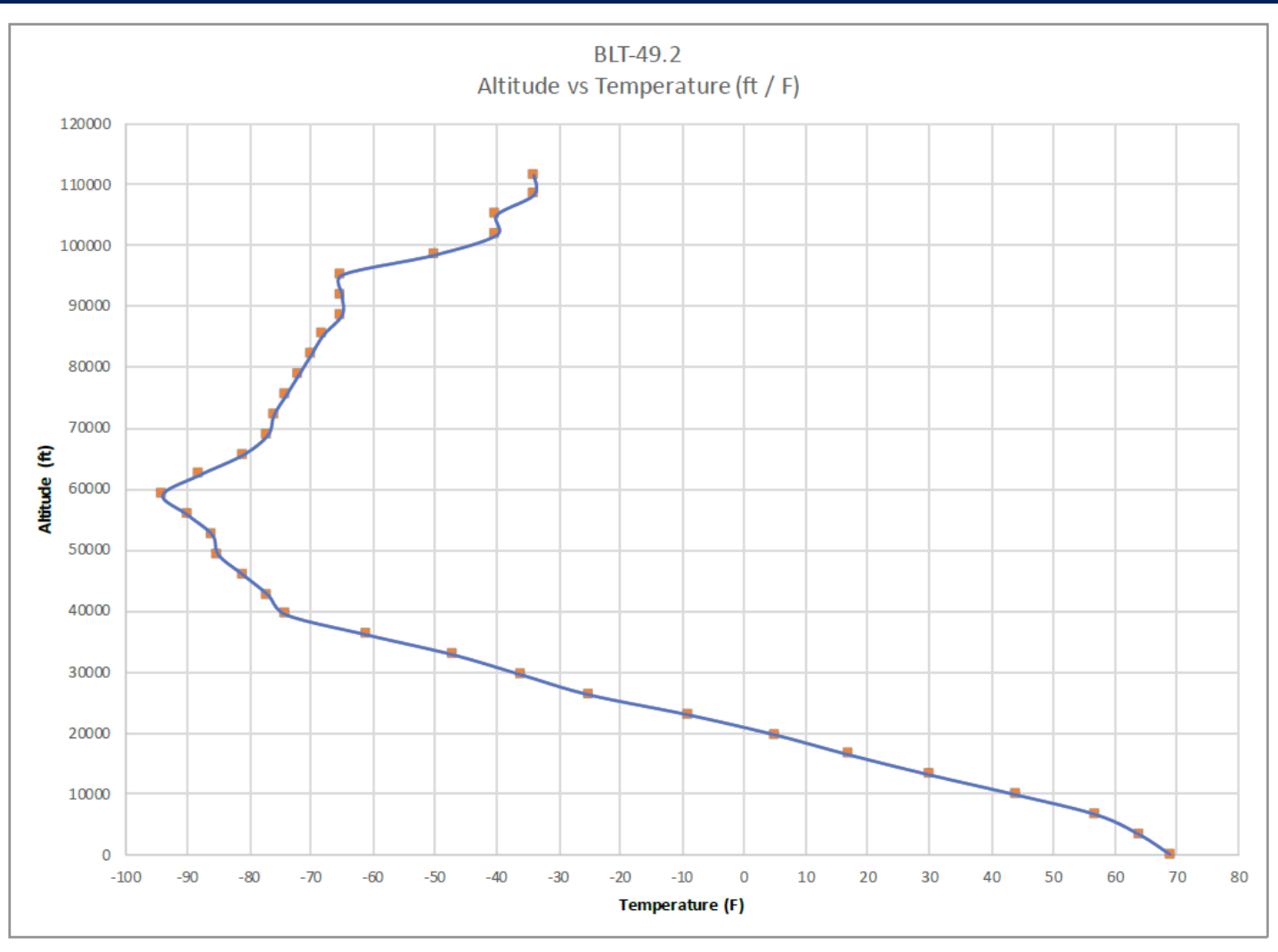
Lithium Battery and Oscillators



14.318 MHz & 28.322 MHz

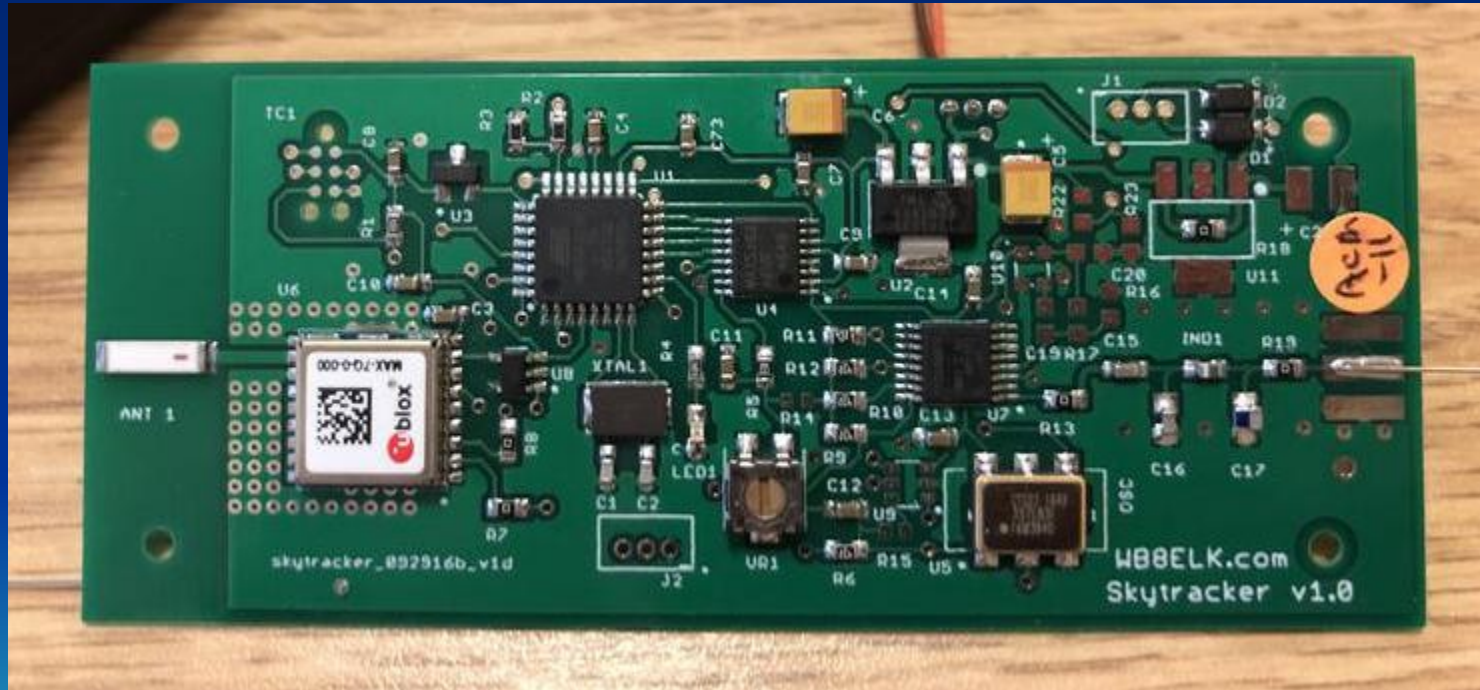


Projected Temperature Info



WB8ELK APRS Tracker

- BLT-52 = W5ACM-11
- 25mW on 144.390 MHz



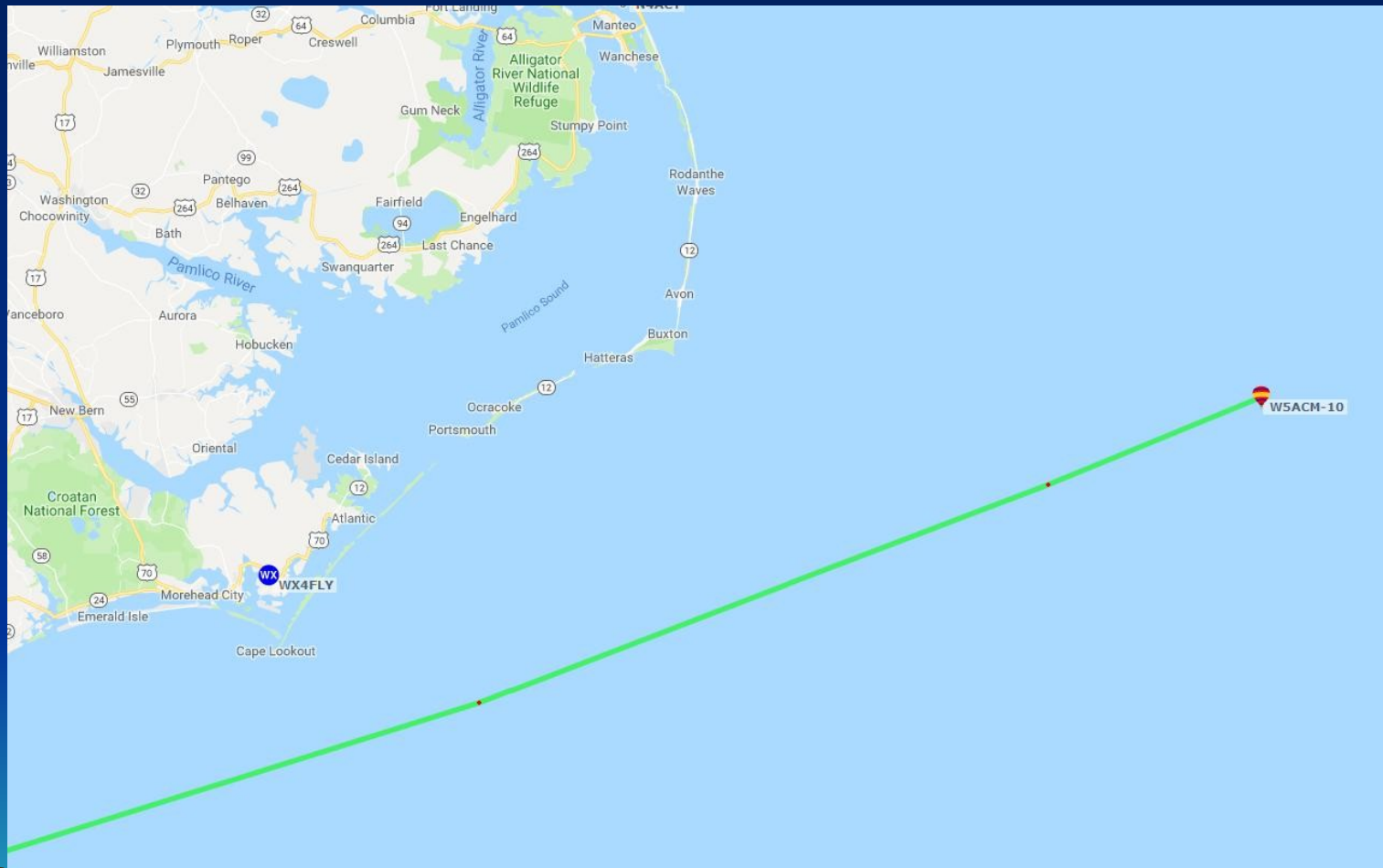
The map displays the flight path of the 1978 Pan Am flight 73, which originated in New Orleans, Louisiana, and terminated in Norfolk, Virginia. The path is marked by a red line with a yellow dot at the starting point and a red dot at the ending point. The flight path follows a route through the Southeastern United States, passing through or near the following locations:

- New Orleans, Louisiana (KMSL)
- Birmingham, Alabama (KBMG)
- Atlanta, Georgia (KATL)
- Charlotte, North Carolina (KCLT)
- Norfolk, Virginia (KOKF)

The map also shows various other airports and flight numbers, including:

- KD50XM-10, W5UOK-10, K5TYR-10, K5000-10, K5001-10, K5002-10, K5003-10, K5004-10, K5005-10, K5006-10, K5007-10, K5008-10, K5009-10, K5010-10, K5011-10, K5012-10, K5013-10, K5014-10, K5015-10, K5016-10, K5017-10, K5018-10, K5019-10, K5020-10, K5021-10, K5022-10, K5023-10, K5024-10, K5025-10, K5026-10, K5027-10, K5028-10, K5029-10, K5030-10, K5031-10, K5032-10, K5033-10, K5034-10, K5035-10, K5036-10, K5037-10, K5038-10, K5039-10, K5040-10, K5041-10, K5042-10, K5043-10, K5044-10, K5045-10, K5046-10, K5047-10, K5048-10, K5049-10, K5050-10, K5051-10, K5052-10, K5053-10, K5054-10, K5055-10, K5056-10, K5057-10, K5058-10, K5059-10, K5060-10, K5061-10, K5062-10, K5063-10, K5064-10, K5065-10, K5066-10, K5067-10, K5068-10, K5069-10, K5070-10, K5071-10, K5072-10, K5073-10, K5074-10, K5075-10, K5076-10, K5077-10, K5078-10, K5079-10, K5080-10, K5081-10, K5082-10, K5083-10, K5084-10, K5085-10, K5086-10, K5087-10, K5088-10, K5089-10, K5090-10, K5091-10, K5092-10, K5093-10, K5094-10, K5095-10, K5096-10, K5097-10, K5098-10, K5099-10, K5100-10, K5101-10, K5102-10, K5103-10, K5104-10, K5105-10, K5106-10, K5107-10, K5108-10, K5109-10, K5110-10, K5111-10, K5112-10, K5113-10, K5114-10, K5115-10, K5116-10, K5117-10, K5118-10, K5119-10, K5120-10, K5121-10, K5122-10, K5123-10, K5124-10, K5125-10, K5126-10, K5127-10, K5128-10, K5129-10, K5130-10, K5131-10, K5132-10, K5133-10, K5134-10, K5135-10, K5136-10, K5137-10, K5138-10, K5139-10, K5140-10, K5141-10, K5142-10, K5143-10, K5144-10, K5145-10, K5146-10, K5147-10, K5148-10, K5149-10, K5150-10, K5151-10, K5152-10, K5153-10, K5154-10, K5155-10, K5156-10, K5157-10, K5158-10, K5159-10, K5160-10, K5161-10, K5162-10, K5163-10, K5164-10, K5165-10, K5166-10, K5167-10, K5168-10, K5169-10, K5170-10, K5171-10, K5172-10, K5173-10, K5174-10, K5175-10, K5176-10, K5177-10, K5178-10, K5179-10, K5180-10, K5181-10, K5182-10, K5183-10, K5184-10, K5185-10, K5186-10, K5187-10, K5188-10, K5189-10, K5190-10, K5191-10, K5192-10, K5193-10, K5194-10, K5195-10, K5196-10, K5197-10, K5198-10, K5199-10, K5200-10, K5201-10, K5202-10, K5203-10, K5204-10, K5205-10, K5206-10, K5207-10, K5208-10, K5209-10, K5210-10, K5211-10, K5212-10, K5213-10, K5214-10, K5215-10, K5216-10, K5217-10, K5218-10, K5219-10, K5220-10, K5221-10, K5222-10, K5223-10, K5224-10, K5225-10, K5226-10, K5227-10, K5228-10, K5229-10, K5230-10, K5231-10, K5232-10, K5233-10, K5234-10, K5235-10, K5236-10, K5237-10, K5238-10, K5239-10, K5240-10, K5241-10, K5242-10, K5243-10, K5244-10, K5245-10, K5246-10, K5247-10, K5248-10, K5249-10, K5250-10, K5251-10, K5252-10, K5253-10, K5254-10, K5255-10, K5256-10, K5257-10, K5258-10, K5259-10, K5260-10, K5261-10, K5262-10, K5263-10, K5264-10, K5265-10, K5266-10, K5267-10, K5268-10, K5269-10, K5270-10, K5271-10, K5272-10, K5273-10, K5274-10, K5275-10, K5276-10, K5277-10, K5278-10, K5279-10, K5280-10, K5281-10, K5282-10, K5283-10, K5284-10, K5285-10, K5286-10, K5287-10, K5288-10, K5289-10, K5290-10, K5291-10, K5292-10, K5293-10, K5294-10, K5295-10, K5296-10, K5297-10, K5298-10, K5299-10, K5300-10, K5301-10, K5302-10, K5303-10, K5304-10, K5305-10, K5306-10, K5307-10, K5308-10, K5309-10, K5310-10, K5311-10, K5312-10, K5313-10, K5314-10, K5315-10, K5316-10, K5317-10, K5318-10, K5319-10, K5320-10, K5321-10, K5322-10, K5323-10, K5324-10, K5325-10, K5326-10, K5327-10, K5328-10, K5329-10, K5330-10, K5331-10, K5332-10, K5333-10, K5334-10, K5335-10, K5336-10, K5337-10, K5338-10, K5339-10, K5340-10, K5341-10, K5342-10, K5343-10, K5344-10, K5345-10, K5346-10, K5347-10, K5348-10, K5349-10, K5350-10, K5351-10, K5352-10, K5353-10, K5354-10, K5355-10, K5356-10, K5357-10, K5358-10, K5359-10, K5360-10, K5361-10, K5362-10, K5363-10, K5364-10, K5365-10, K5366-10, K5367-10, K5368-10, K5369-10, K5370-10, K5371-10, K5372-10, K5373-10, K5374-10, K5375-10, K5376-10, K5377-10, K5378-10, K5379-10, K5380-10, K5381-10, K5382-10, K5383-10, K5384-10, K5385-10, K5386-10, K5387-10, K5388-10, K5389-10, K5390-10, K5391-10, K5392-10, K5393-10, K5394-10, K5395-10, K5396-10, K5397-10, K5398-10, K5399-10, K5400-10, K5401-10, K5402-10, K5403-10, K5404-10, K5405-10, K5406-10, K5407-10, K5408-10, K5409-10, K5410-10, K5411-10, K5412-10, K5413-10, K5414-10, K5415-10, K5416-10, K5417-10, K5418-10, K5419-10, K5420-10, K5421-10, K5422-10, K5423-10, K5424-10,

Last Position of BLT-51



The map displays the Houston metropolitan area and the Gulf Coast region. A proposed expressway route is shown, starting near Sugar Land and extending eastward towards Galveston. The route is marked with a red and blue line. Key locations along the route include Sugar Land, The Woodlands, Spring Branch, Humble, Houston, Pasadena, Baytown, League City, and Galveston. Major highways such as I-10, I-45, I-69, and I-27 are visible. The map also shows the Brazoria National Wildlife Refuge and the Anahuac National Wildlife Refuge. The proposed route is labeled with 'N5H3W-1' and 'W5ACM-11'.

BLT-51 Video Time!



The South Texas Balloon Launch Team

BLT-52.5 = 5/4/19 @ 8PM

Lake Livingston, Texas

A repeat of the Smart Beeper from
BLT-52



The Next BIG Launch!

BLT-53 = 9/28/2019

@10AM

Wharton Intergalactic Spaceport

DMR Repeater

DVB-S Live TV

& Much More!

