

Nacogdoches Amateur Radio Club

2015 CLUB OFFICERS

Pres: John Cechin - W5FWR

Sec/Treas: Army Curtis - AE5P

Visit our web site at

<http://w5nac.com/>

MISSION STATEMENT

The Mission of the Nacogdoches Amateur Radio Club is to support and promote Amateur Radio by public service, offering training to unlicensed interested parties and licensed Amateurs, mutual support of other Amateurs, engaging events that promote Amateur radio to the general public and other Amateur radio operators, and continuing fellowship by regularly scheduled organized meetings and events.



FEBRUARY MINUTES

The February meeting of the Nacogdoches Amateur Radio Club (NARC) was held as scheduled on February 4th. **President John W5FWR**, opened the meeting at 7:00 p.m. in the Parish Hall of Christ Episcopal Church. Seventeen members and three guests were present. Each person present introduced himself. Minutes of the previous meeting were approved as published. The Treasurer's report was read.

Old Business:

Bob K5ME reported his activity in the NAQP CW

and CQWW 160 CW contests. Anyone else getting on for contests? Please report them even if you only made a just a few contacts.

The **Shuttle Columbia Special Event Station** was held the weekend of February 7, 2015 using the callsign K5C. Several club members operated the event from their home stations. **Jim WA5GVQ** operated both days from AE5P and added many contacts to the log. Final results found 939 contacts in the logs. Many thanks to all who participated.

New Business:

Marshall K5QE is planning a moonbounce DXpedition to the Falkland Islands in early March. Anyone want to go along? Should be quite the adventure.

Tom W5TV was thanked for his several years of excellent antenna articles that have been published in this newsletter.

Meeting closed at 7:40 p.m.

Program: Roy KF5YSG presented a great program on the recent Timpson ISD balloon flight. Some pictures from the flight are presented later in this newsletter.

2015 DUES ARE NOW PAYABLE

Club dues for 2015 are now payable. Dues are just \$24 for the year, and cover all licensed Amateurs in a family. Have a large family? Just \$24 will cover all of them for a year. Dues can be paid at any club event or mailed to the club Secretary/Treasurer.

Checks should be made payable to NARC.

MY 2 CENTS FOX WILLY ROGER

MARCH 2015:

That's right, it's March 2015, and will you not give my word tree "TWT" a chance to re-group?

Put another log on the fire, it took me an hour to find a computer that would work next to the fire place. Now is the time to tell all about your Groundhog Day, your contesting, your Valentine's Day, and your SES. In the last NL AE5P asked for help with a column or two. KD5GEN "Rusty" responded with some great bits of information, thanks Rusty. Now if you think that you can't come close to Rusty's first column, remember that Rusty has a lot of years of BS, what I mean to say is that he has a lot of experience. Don't let that stop you, drop Army a line and tell the club of your experiences and maybe some of the club members will be better for it.

Well now the other day my car and plants were iced over and the 25th saw snow. A white Xmas, Feb 25th, when I looked out doors I saw deer tracks, eight tiny deer tracks in the snow. Santa visited me and I wasn't asleep, just my luck, a day late and a dollar short. Some of you may be wondering about Xmas on the 25th of Feb, well when I was growing up we were so poor that our parents told us kids that the 25th of Feb was Xmas day, that gave them time to go through the sales and returns for our gift, and that why I have Xmas on the 25th of Feb.

Many more contests are coming up and Army will be reminding us of them, remember a little contesting is fun and gets you away from chores. The SES is just a memory now but remember too that it will come around again, so don't be sad be happy. My TWT still has the "CLOSED FOR THE SEASON" sign on it so I will make this short.

PHASE II.V.V:....

HE-MAN is still missing. I hope he found what he was looking for. The inside cats are still into the get up, eat, play, nap, get up, play, eat, nap, play, go to bed, a rough life, as I reported last month. TB is still managing to open more cabinets and explore its interior. On another note, TB will be two years old on March 11th and CU and GB will be two years old on Sept 1st. If you don't know what to give them, money is always good.

GB is still an outside cat but comes inside to visit with TB and CU, but just for a short time.

**THOUSANDS OF YEARS
AGO CATS WERE
WORSHIPED AS GODS,
THEY HAVE NEVER
FORGOTTEN THIS**

WHY IS IT?

Why are meatballs round, why not cubed? It would be easier browning them; of course they would have to be re-named to meatcubes and Spaghetti.

Why does Heat rise and cold sink?
HMMMM

GREAT INVENTIONS OF ALL TIME:

Beer mugs over glasses, when you hold a glass of Beer your hand transfers heat to the Beer, the mug doesn't seem to suffer that fate. Unless you're in England, then it doesn't matter, does it?

That's about it for this trip; I will leave room for Army and the others to fill the empty spaces.

Remember: keep your powder dry and your head below the horizon.

Happy Trails

73 Enjoy, what do you think, let me know?

John Cechin W5FWR
Carrots4ever2u@suddenlink.net

VE TESTING

Our next VE testing is scheduled for Wednesday, March 18 at 7:00 p.m. in the Bailey Library of Christ Episcopal Church. Note the location change due to Easter activities at the church. Applicants should bring a picture ID, the original and a copy of their current Amateur license, the original of any CSCE's and \$15 to cover the cost of the exam(s). Correct change is always very much appreciated. 73 de AE5P

email: ae5p@arrl.net

CLUB NETS

Remember to join us each week for the nets sponsored by NARC. Each **MONDAY** is the **NARC ARES/RACES** net, at 8:00 p.m. on the club's 146.84 repeater (PL 141.3). Second, on **THURSDAY** evenings at 8:00 p.m. is the **Deep East Texas Skywarn Emergency Weather Net** on the 147.32 repeater (PL 141.3). Please join us for one or both.

The actual operating frequency for each net is at the discretion of the net control operator. The Monday night nets have been meeting recently on the club 444.050 UHF repeater or the 147.32 VHF repeater. Stay alert to other possibilities such as a simplex frequency or even HF.

REPEATERS

As has been reported here several times, we continue to have problems with the club 146.840 repeater. Following up on a tip from former member **Mark Lacy W5TXR**, Yaesu is currently offering clubs a new DR-1X analog/digital VHF/UHF repeater for just \$500. This is a substantial discount from their normal price.

NCEC has agreed to fund the purchase of two of these repeaters, with one to replace the present 146.840 VHF repeater, and one to replace the present 444.050 UHF repeater. There is a one to two month backlog on

this equipment, so we may not actually receive them until sometime in April.

There is a large two page advertisement in the latest QST that gives more information on the DR-1X, and information is also available on the Yaesu web site. While you're looking at the web site, take note also of the new HT's FT1DR and FT2DR with digital capabilities. The new repeaters will permit full use of such new radios and keep NARC prepared for the future.

NCEC

Nacogdoches County Emergency Communications (NCEC) is a 501C3 association formed in 2002 by several members of NARC. NCEC serves as a funding mechanism for NARC in areas of emergency communications and severe weather training. Donations made to NCEC are tax deductible to the extent allowed by law.

NCEC in the past has funded the club's repeater systems and "orange box radios", providing first class equipment that otherwise would not have been possible. Tax deductible donations are always welcome.

NEXT MEETING

The next meeting will be on **Wednesday March 4th** at **7:00 p.m.** in the Bailey Library of Christ Episcopal Church. Note the location change due to Easter activities at the church. The Bailey Library is in the same building as the Parish Hall where we normally meet. The church is at the corner of Starr and Mound Streets in Nacogdoches. Please join us and bring a friend.

UPCOMING EVENTS OF NOTE

Mark your calendars for the following events coming up in the next few months:

IRVING HAMFEST

Irving TX

1400Z - 2000Z Mar 7

<http://irvingarc.org>**ARRL International DX Contest, SSB**

0000Z Mar 7 to 2400Z Mar 8

<http://www.arrl.org/arrl-dx>**HOUSTON HAMFEST**

Ft Bend County Fairgrounds, Rosenberg, TX

1400Z - 2130Z Mar 28

<http://houstonhamfest.org>**CQ WW WPX Contest, SSB**

0000Z Mar 28 to 2400Z Mar 29

<http://www.cqwp.com/rules.htm>**ARRL Rookie Roundup, SSB**

1800Z-2359Z Apr 19

<http://www.arrl.org/rookie-roundup>**7th Call Area QSO Party**

1300Z May 2 to 0700Z May 3

<http://ws7n.net/7QP/new/Page.asp?content=rules>**HAMVENTION**

Dayton, Ohio

May 15 - 17

<http://hamvention.org/>**CQ WW WPX Contest, CW**

0000Z May 30 to 2400Z May 31

<http://www.cqwp.com/rules.htm>**HAMCOM HAMFEST**

Irving TX Convention Center (New Location)

June 12 - 13

<http://www.hamcom.org/>**ARRL June VHF Contest**

1800Z Jun 13 to 0259Z Jun 15

<http://www.arrl.org/june-vhf>**ARRL Field Day**

1800Z Jun 27 to 2100Z Jun 28

<http://www.arrl.org/field-day>**IARU HF World Championship**

1200Z, Jul 11 to 1200Z, Jul 12

<http://www.arrl.org/iaru-hf-championship>**CQ Worldwide VHF Contest**

1800Z, Jul 18 to 2100Z, Jul 19

<http://www.cqww-vhf.com/2014VHFcontest%20rules.pdf>**North American QSO Party, RTTY**

1800Z, Jul 18 to 0600Z, Jul 19

<http://www.ncjweb.com/NAQP-Rules.pdf>**North American QSO Party, CW**

1800Z, Aug 1 to 0600Z, Aug 2

<http://www.ncjweb.com/NAQP-Rules.pdf>**North American QSO Party, SSB**

1800Z, Aug 15 to 0600Z, Aug 16

<http://www.ncjweb.com/NAQP-Rules.pdf>**ARRL Rookie Roundup, RTTY**

1800Z-2359Z, Aug 16

<http://www.arrl.org/rookie-roundup>

The Half Square Antenna, Part 3

by

Thomas Atchison W5TV

The half-square antenna is again the focus of our discussion. In this case I would like to explore what different feed points would do for the antenna. For example, suppose we consider the 40-meter half-square that we talked about in the first article. That antenna is shown in Fig. 1 below.

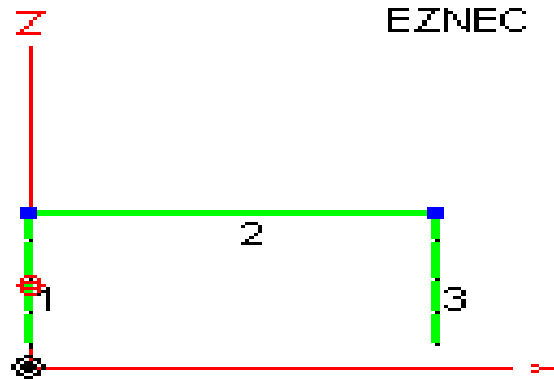


Fig. 1

Suppose we feed this antenna at the middle of wire 1 (the red circle) and assume we have a 50-ohm transmission line leading to our transmitter. When we sweep the SWR from 7.0 to 7.3 we get the plot shown in Fig. 2.

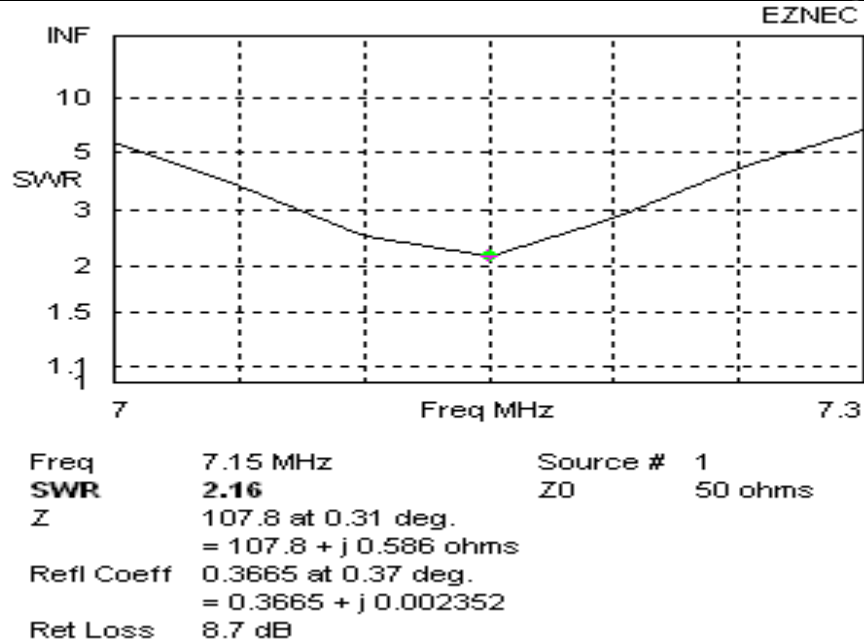


Fig. 2

The SWR at 7.15 MHz is about 2:1 so we could use a 50-ohm transmission line to connect to our transmitter. Since the ratio of the impedance at the feed point to our transmission line is 2 to 1, then we could improve our situation by placing a 2 to 1 balun at the feed point. This will result in an SWR sweep from 7.0 to 7.3 MHz that is shown in Fig. 3 below.

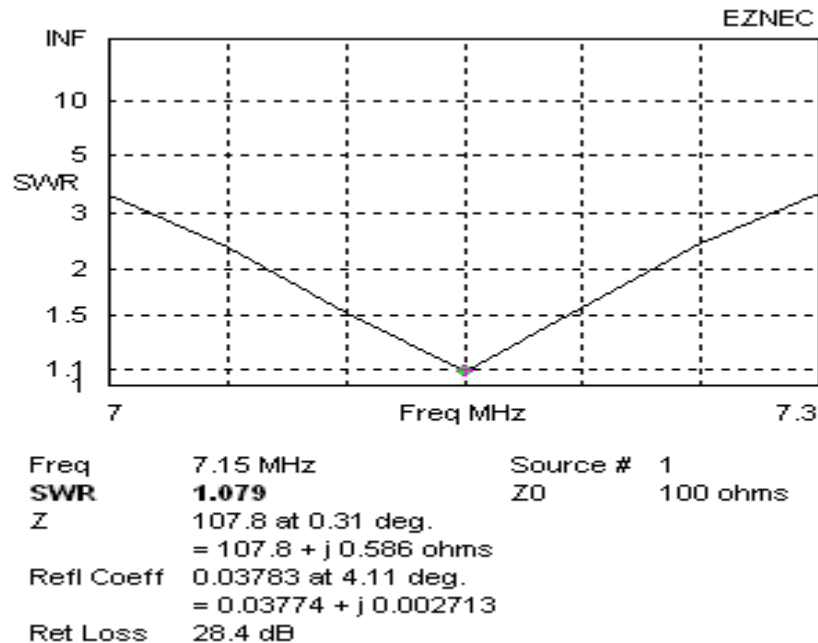


Fig. 3

This allows us to use 50-ohm coax as a transmission line and keep the SWR across the entire band less than 3 to 1.

Now suppose we want to feed the horizontal wire in our half-square antenna (wire 2 in Fig. 4).

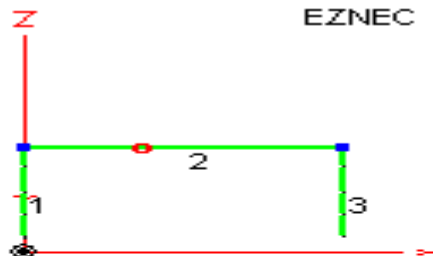


Fig. 4

If we look at an off-center feed point about 25 feet from the left end of wire 2 (red circle) and consider a 50 ohm transmission line, we get the SWR sweep shown in Fig. 5.

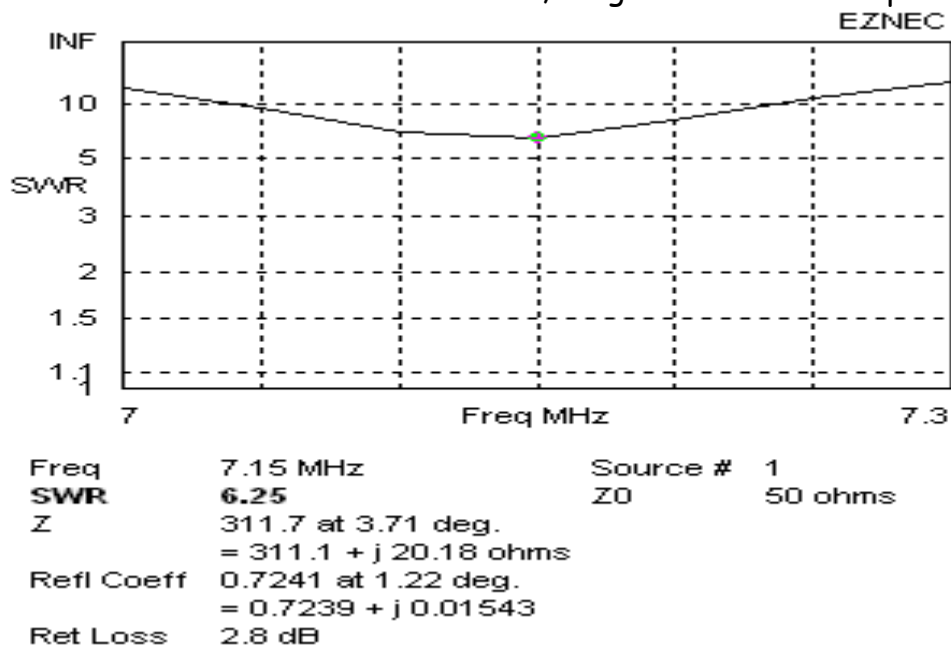


Fig. 5

Notice that the SWR at 7.15 is about 6 to 1. This is higher than we want for a 50-ohm transmission line and the SWR rises to above 10 to 1 at the band edges. We could

consider using a 6 to 1 balun, however, since the actual impedance is about 6 times the 50-ohm load, we might consider using 300-ohm twin-lead for our transmission line. If we do so we get the SWR sweep shown in Fig. 6.

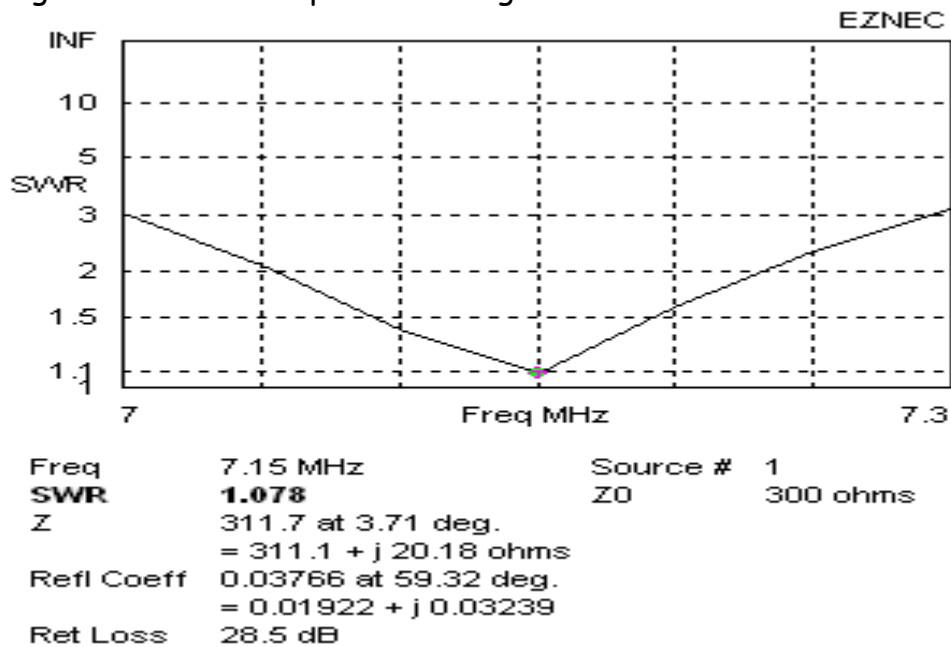


Fig. 6

Once again the SWR at 7.15 is near 1 to 1 and the SWR across the band is less than 3 to 1.

The elevation radiation pattern for this last case is shown in Fig. 7.

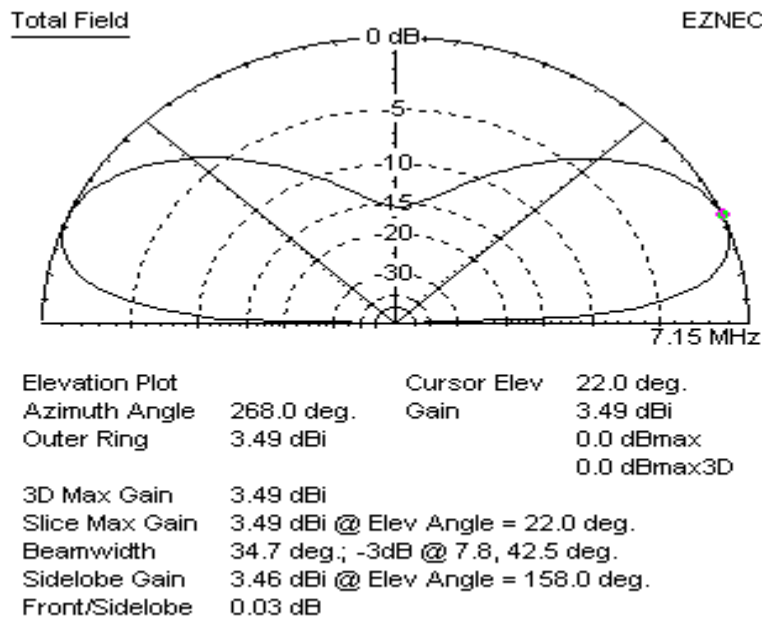


Fig. 7

The maximum radiation occurs at an elevation of 22 degrees and it is perpendicular to the plane of the wires.

The half-square antenna is an excellent antenna to experiment with on any band so I urge you to give it a try. Remember the horizontal wire should be of length $\lambda/2$ and the vertical wires should be of length $\lambda/4$.

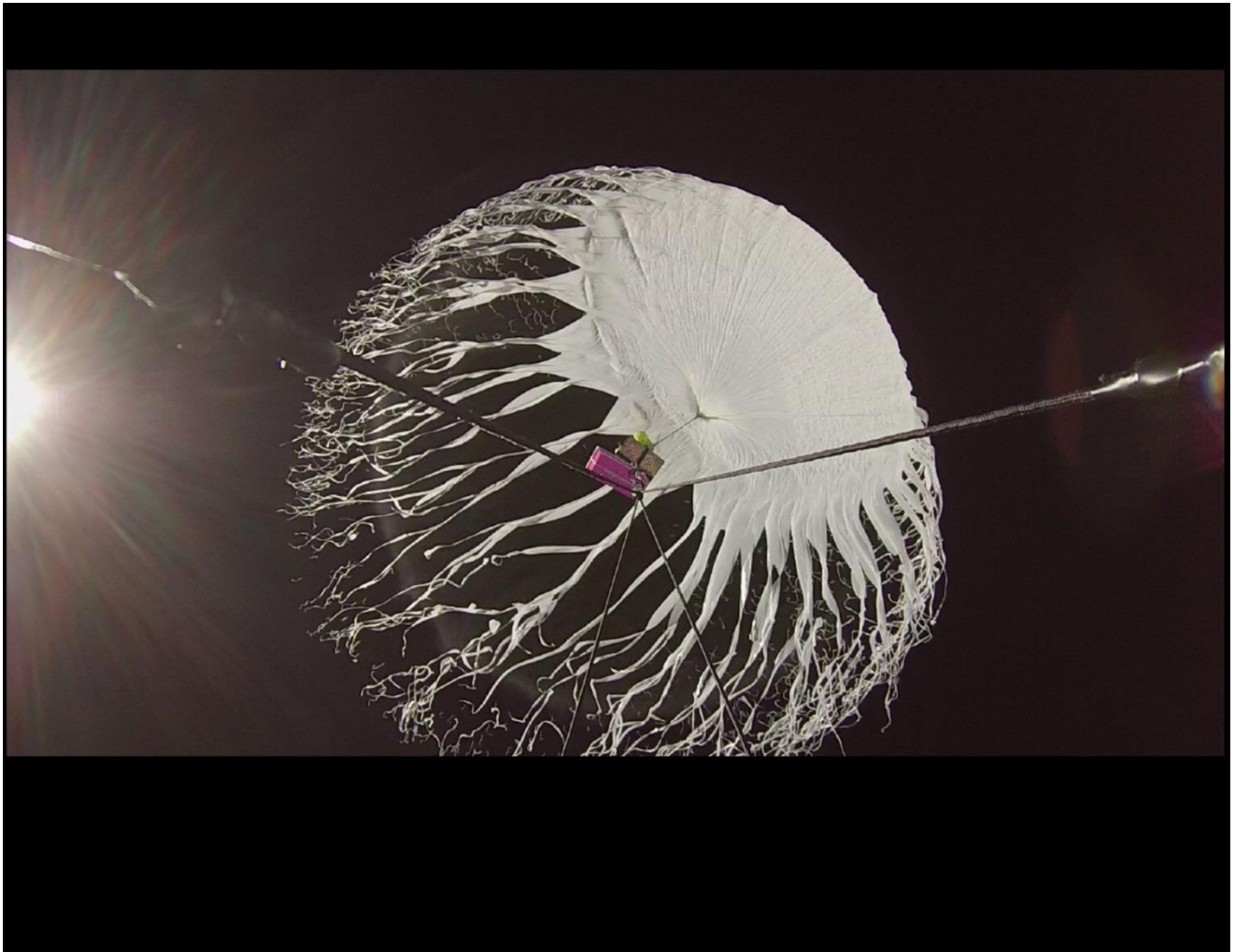
Timpson ISD Near Space Balloon Flight NS6

January 2015

Following are some pictures taken from the balloon using GoPro video cameras.



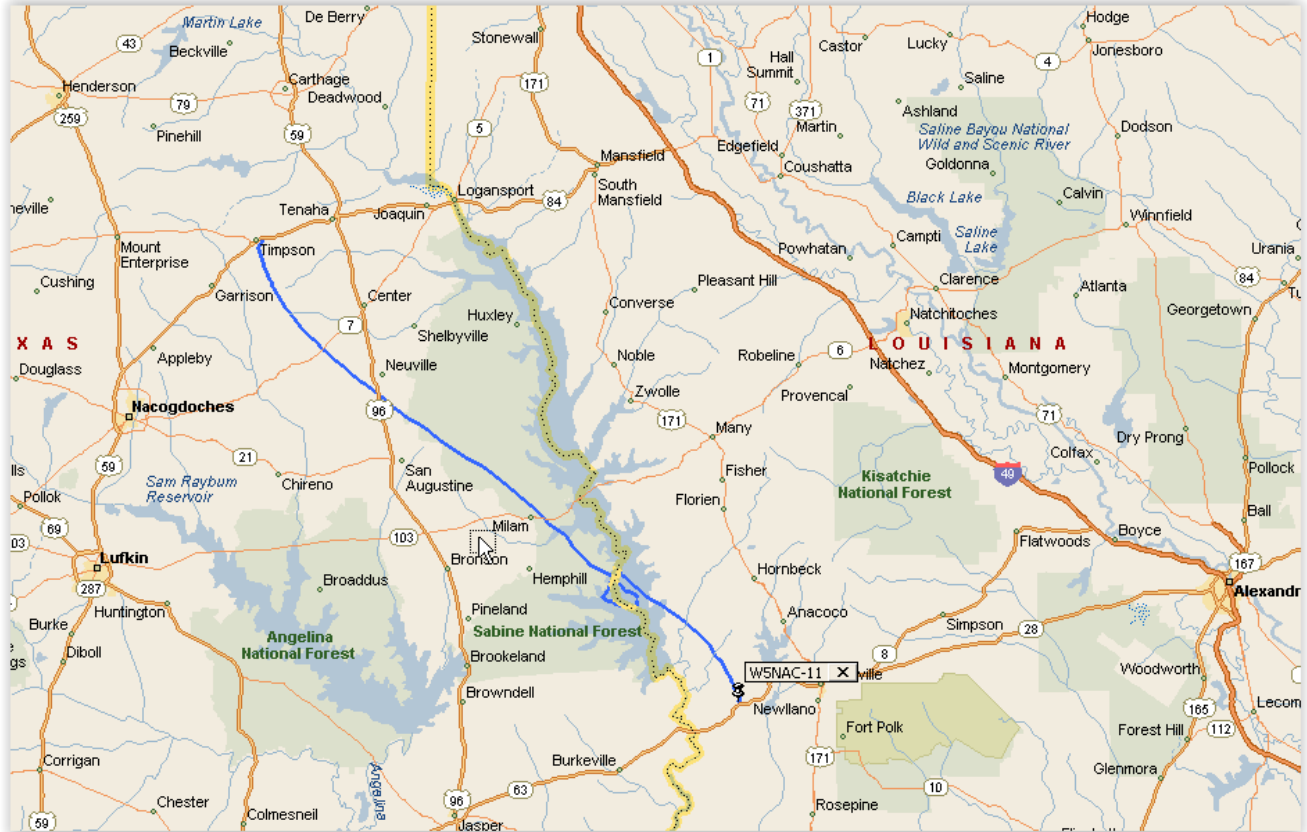
Picture taken when balloon was over 100,000 feet high. Balloon was directly above Toledo Bend Reservoir looking south at the gulf coast. The flags and art work are on a stabilizing fin attached to the payload package.



Picture taken looking up at the balloon at the instant it burst. The pink box in the picture is the APRS tracker used by NARC to provide GPS tracking of the flight.



A Google Earth shot of the landing spot in Louisiana, just west of Leesville. The flight package landed in the backyard of a fellow, avoiding many acres of forest and lakes. We were able to literally drive right to the package for recovery. The APRS tracker package was not damaged and is ready to fly again.



This is the flight path taken by the balloon, launching from the football field at Timpson High School, doing a full 360 degrees right over Toledo Bend, and then descending to a soft landing in heavy grass west of Leesville, LA. Skies were totally clear, winds were favorable, it really can't get much better than this. The APRS tracking was available to everyone via the internet thanks to many APRS iGate stations from east Texas and west Louisiana.

Many thanks to the many folks who provided assistance and advice to make this flight a success, and special thanks to Tom W5TV who came with me in the "chase truck".

Timpson ISD is planning another balloon flight before the end of this school year, and we expect to fly our APRS tracker again. This is way too much fun to only do it once.

73, de Army AE5P