



Mike Shy

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Society Radio Operators*



Volume 79 Number 6

December 2019

SRO Holiday Party Dec 11th - 6:15 PM Hibachi Grill



101 Busse RD. Elk Grove Village, IL 60007

Dinner will cost \$10 for members and \$20 for guests.

President's Message

Welcome to the Holiday Season! I hope you and your families are well. You should have already received your invite to the SRO Holiday dinner. This year we will be at Hibachi Grill Buffet, they have all kinds of food including a "pick out the ingredients and the Chef will cook them up while you watch". If you didn't let me know and I will send one to you.

Just a reminder that January starts a new year which means dues notices will be coming out.

I would like to offer you and your family's a Happy and healthy Holiday Season

We have all heard the hype on 5G. I received a bulletin TechRepublic on this subject and would like to share it with you. You may notice that T-Mobile has bought room on the old TV band, while the rest go to millimeter wave. What is mmWave? See below.

T-Mobile to launch 600 MHz 5G services on December 6

T-Mobile announced plans on Thursday to activate its 600 MHz 5G network on December 6. In contrast to the millimeter wave (mmWave) 5G network operated by other US carriers, T-Mobile's use of the 600 MHz spectrum allows for wider deployments than the "select neighborhoods" availability seen to date, with 5,000 localities expected to be serviced by the new deployment next month. The first 5G phones compatible with the network will be the Samsung Galaxy Note 10 Plus 5G and the OnePlus 7T Pro 5G McLaren Edition, the latter of which is exclusive to T-Mobile in the US.

The Sprint and T-Mobile merger saga is still ongoing, with the firm receiving FCC certification, and promising to give 10 years of free 5G access to first responders. Attorneys General from fifteen states, including New York and California, are continuing to oppose the merger, however.

*So far the FCC has approved the following frequencies/wavelengths for 5G Wireless base stations with wavelengths calculated here: 24 GHz (wavelength = 12.5 millimeters = 0.49 inches) 28 GHz (wavelength = 10.7 millimeters = 0.42 inches) 38 GHz (wavelength = 7.9 millimeters = 0.31 inches)

Well its time to QRT so

73 & 88 de WA9EVF

Mike Leibovitz WA9EVF@comcast.net

SRO Notes for October 8, 2019 (Or "Roverage": Seeking a Way-Station with a Soda Fountain)

By Jim Hawes AA9DT

TONIGHT'S MEETING opens at 7:24 p.m. Zoom! We set an SRO meeting speed record. The meeting adjourns five minutes later, at 7:29 p.m. Our main business issue is the upcoming party on December 11, at 6:15 p.m. The party location is the Elk Grove Village Hibachi Grill. This spot may have the longest sideboard in town! Hibachi is just north of Oakton on 83. Be there, or be a leaky capacitor.

TREASURER'S REPORT. This data is only available live, at meetings.

PROGRAM. At the last meeting, we started showing the DVD "Mars: Dead or Alive." But we ran out of time just as the parachute deployed on Mars. Tonight, we start the show over at the beginning. Here's a summary of tonight's program...

TONIGHT'S DVD divides its time between shots of Jet Propulsion Laboratory personnel, and various test sites across the country. Plus, coverage and simulations of events at Mars landing and excursion locations. During its journey in space, the Rover's systems had to withstand bombardment with solar radiation. The minimum distance (some 33.9 million miles) only occurs every two years. At other times, the span between Earth and Mars can stretch out another 20 million miles.

THE LANDING was perilous, and involved several steps that had to go exactly right. In fact, the most dangerous seven minutes of the mission occurred during the landing. Earth control was out of the picture. Communications with the landing rover would take too long to be effective. (About 14 minutes, each way.) For that reason, the rover's systems controlled the entire landing process. Here are the typical landing steps for the Mars rovers...

1--Slow down from 12,000 to 900 mph.

2--Deploy parachute.

3--Drop heat shield.

4--Lower bridle.

5--Image surface with radar.

6--Deploy air bags at 900 feet.

7--Seconds before impact, fire retro rockets.

8--Smaller Rovers (Spirit, Opportunity) Roll and bounce on balloons for about 1 km

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CFAR 2M Foxhunt - Oct 5th, 2019 by Mike WA9FTS
Fox - John WD9EXW

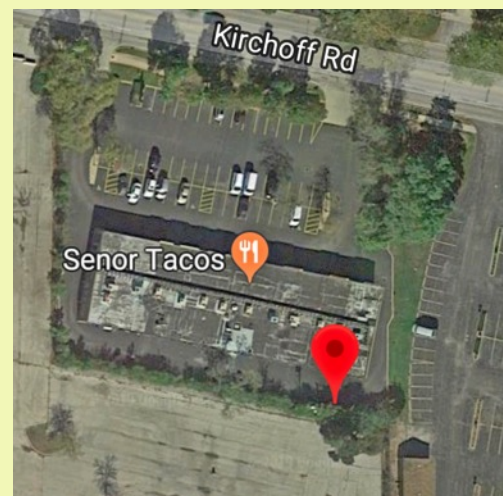
There were 5 hunt teams ready to find John WD9EXW. We got a weak signal to start us. Most hunters headed north (Exception - Pete and John on 290 and toward the repeater - they corrected quickly. Matt thought 290 was the best move not realizing they were headed downtown. All of the hunters to some extent got bad readings as they corrected and headed NW of the starting point. Hunters headed for Rolling Meadows and several parks near Euclid and Kirchoff Rd. It was a close finish as three of the hunters came within 1 minute of finding John. John was hiding under camp blanket behind Señor Taco off Kirchoff Rd. First to spot her Grandpa was Mac for the win. Then it was Don and then Pete. Kevin and crew arrived ten min later just ahead of Tom and David. We went to Moretti's for the munch. Results:

1. Mac, Matt KC9SEM, Jacob, Patty N9PLS, Mike WA9FTS - 8:49 PM
2. Don W9RA - 8:50 PM
3. Pete K9PW, John K9JK - 8:50 PM
4. Kevin N9JPG, KC9ZLS and Mason - 9:00 PM
5. Tom N9CBA, David KA9MAM - 9:00 PM



John in his hiding spot
taken by Matt
KC9SEM

John was in the weeds
next to a fence.



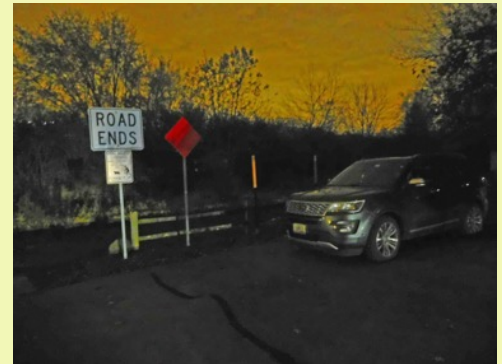
CFAR 2M Foxhunt - Nov 3rd, 2019 by Mike WA9FTS

Fox - Matt KC9SEM, Patty N9PLS, Mike WA9FTS, Jacob, Mac



The weather was cold but not windy or raining/snow. We found a spot in Wheaton at the southern end of Cottonwood Dr. This was just north of Graf Park and a great spot of the running trail around a hundred feet above us with stairs leading up to the lite trail. It was in front of Chris' house who is a good friend of Matt. We got the 4 hunt teams off at 8:03:50. Thirty-two minutes into the hunt, Tom and David (new call) arrived for the win. They took North Av to Pleasant Hill and south to us - great job! They drive off right away and two and a half minutes later Janet drove up with John getting out of the van. He walk right past us and made it to the top of the stairs and the trail. Janet drove up to us for 2nd. Seven minutes later, Pete arrived at the top of the stairs running down and found us for 3rd. Shortly Don quit and we all headed to Giordano's on Roosevelt. Results:

1. David AC9VW, Tom N9CBA - 8:35:50
 2. Janet, John WD9EXW - 8:38:20
 3. Pete K9PW, John K9JK - 8:45:20
- DNF Don W9RA - 9:00:40



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9--Larger Rovers (Curiosity) use retrorockets and sky crane. (Too large for balloons.)

10--Smaller rovers unfold (Complex for Pathfinder: Larger than Spirit, it fit in the same compartment!)

NO GLITCHES. Fortunately, there were no software or hardware glitches. Later, while driving on Mars' surface, the capsule had to withstand temperature gradients of 100 degrees between the Martian day and night.

LANDMARKS & WEATHER. Mars' surface has several remarkable landmarks. There are canyons 1,000 miles long, and two miles deep. There is ice, but as far as scientists know, no liquid water on the surface. Dust storms and radiation levels can be hazardous, even to robots.

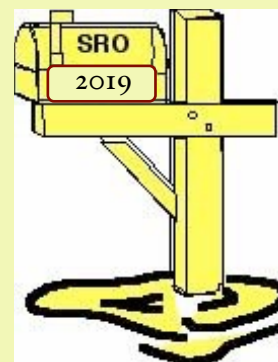
RAD-HARDENED. NASA contractors have rad-hardened the rover computers. Still, terrain and Martian weather restrict where the rover can go. For example, a rover can't land in a mountainous area, or an area with cliffs and canyons. A solar-powered rover must have plentiful and reliable sunlight. For that reason, landing locations with the most sunlight are necessary. The lowest Martian elevations get the most sun. So that's where a solar-powered rover must go. Unfortunately, that requirement eliminates 95 percent of the planet. Solar power also limits where a rover can land, and how long it will last. These are the reasons why the Curiosity rover used a nuclear power plant instead of solar cells.

Meeting Attendance



Regular Meeting
Salvation Army -
Norridge
Oct 8th, 2019

Danny KD9HIL
Mike WA9FTS
Pete WV9P
Jean KB9FXL
Jim AA9DT
Joe KD9KSE
Ed WB9AXH
Jim Barnard



**If you move, let
the Editor know
your new mailing
and email
addresses. It is
our way of getting
Mike Shy to you
each time.**



Mars Exploration Rovers



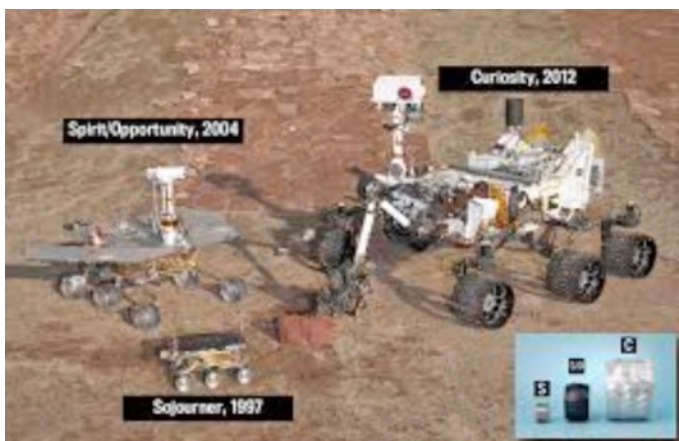
Mars Exploration Rover family photo



Sojourner (rover)



Curiosity apart from other Mars Rovers



Mars Rover Family Portrait



3 Generations of NASA's Mars Rovers

SRO Officers

President
Mike Leibovitz - WA9EVF
Vice President
Jean Pressel - KB9FXL
Secretary
Jim Hawes - AA9DT
Treasurer
Mike Brost - WA9FTS

SRO Directors

Wally Klinger - W9BEA
Jon Tammen - K9IQF
Jean Pressel - KB9FXL

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Mike Shy is published 6 times a year by the Society Radio Operators. Deadline is 2 weeks before the meeting. Contributions are welcome & should be sent to the Editor.

Regular Meeting Place

Salvation Army every even month at 7:30 PM unless other-wise indicated in Mike Shy and SRO web site. Check for exact date & time.

Standing Committees

Membership - WA9FTS
Program - AA9DT
Meeting Refresh. - KB9FXL
Foxhunting - WA9FTS
Repeater - K9IQF
Field Day - WA9EVF
Education - WA9EVF
Mike Shy - WA9FTS
Picnic - WA9FTS
Christmas / Hanukkah Party - WA9EVF
Webmaster - WA9FTS

SRO Web Site

www.w9sro.org
Mike Brost - WA9FTS

SRO Repeaters

	In	Out
CFAR (107.2) PL	147.750	147.150
TOOFAR (110.2) PL	223.260	224.860

Repeater Personnel

Trustee - WA9EVF
CFAR Chairman - K9IQF
Site Maintenance
K9IQF, W9RA & W9BEA
Control Operators
K9IQF, TBD
NW Maintenance
W9JEM
Northeast Maintenance
K9IQF & TBD
Lisle Maintenance
W9AEK

Regular meetings - Salvation Army
- 8354 W Foster Av, Norridge

Board Meetings - Usually every 5th Thursday

Mike Shy

Mike Brost - WA9FTS - Editor
5127 N. Monterey Dr.
Norridge IL 60706-3245



First Class Mail



SRO Holiday
Party
Dec 11th - 6:15 PM
Hibachi Grill

