

# THE PLATTSMOUTH AMATEUR RADIO CLUB

# Communicator

# October 2018

## Radio Amateurs Receive Images from Chinese Lunar Satellite

(ARRL 09/05/2018) Some earthbound radio amateurs and sky watchers have received images from a tiny Chinese satellite now orbiting the moon. In May, China launched the DSLWP-A and DSLWP-B microsattellites — also known as Longjiang-1 and Longjiang-2 — into a lunar transfer orbit, although Longjiang-1 was apparently lost in the process and likely remains in deep Earth orbit. They were deployed as secondary payloads with the Queqiao relay satellite as part of the Chang'e 4 mission to the far side of the moon. DSLWP stands for "Discovering the Sky at Longest Wavelengths Pathfinder." The satellite will test low-frequency radio astronomy and space-based interferometry, and while it carries Amateur Radio and educational payloads, no transponder is aboard.

The Chang'e 4 mission will be the first-ever attempt at a soft landing on the far side of the moon. The Chang'e-4 lander and rover are scheduled to launch in December. The Harbin Institute of Technology (BY2HIT) developed and built the DSLWP spacecraft and is overseeing that mission. The microsat also carries optical cameras from Saudi Arabia.

An open telecommand protocol allows radio amateurs to take and download images. The spacecraft transmits on 70 centimeters (435.400/436.400 MHz) with 250/500 bps GMSK using 10 kHz wide FM single-channel data, with concatenated codes or JT4G. JT4 uses four-tone FSK, with a keying rate of 4.375 baud; the JT4G sub-mode uses 315 Hz tone spacing and 1,260 Hz total bandwidth.

According to an article in GBTimes, Longjiang-2 (DSLWP-B) used its own propulsion system to slow down and enter lunar orbit, while the relay satellite "continued past the moon to its special destination." Longjiang-2 has used a student-developed camera to take images of the moon, Mars, the sun, and other celestial objects. Data and images have been downloaded by hams and satellite tracking enthusiasts around the world, including the US, Brazil, China, the Netherlands, and Italy.

The Harbin Institute of Technology team also operates LilacSat-1, a 2U Amateur Radio CubeSat launched as part of the European QB50 initiative, and LilacSat-2 (CAS-3H), an Amateur Radio and technology test satellite.

## Radio City Announces Closing Owners to Retire

(ARRL 09/16/2018) Amateur Radio retailer Radio City, Inc. of Mounds View, Minnesota, has announced it is closing.

"It's been a wonderful 36 years for us at Radio City, and we have decided to retire and close," owners Dan, KB0XC, and Maline Fish said in a message on the retailer's website. "We are so thankful for the many years of support and we have enjoyed working you, our customers. The technical, intelligent and polite conversations plus advice have been invigorating, thus making this decision extremely difficult for us."

The Fishes said they will shut down by year's end, "or a bit sooner, as we empty our shelves of new and used materials."

As part of a "final good-bye tour," Radio City will attend SMARTSFEST in Cologne, Minnesota, on September 22, and Fallfest in Carlton, Minnesota, on September 29. A good-bye party is set for October 6 at the store.

Radio City said it will wrap up service on any items already in the shop but will not accept any additional out-of-warranty repairs. The store no longer will accept additional consignment items. Those not sold must be retrieved during the week of October 13.

<http://www.arrl.org/news/radio-city-announces-closing-owners-to-retire>

The Queqiao communications relay satellite is required for the lunar far-side landing to facilitate communication with a not-yet-launched lander and rover because the moon's far side never faces Earth, and some significant scientific measurements from the dark side of the moon require real-time contact with Earth. Queqiao was developed by the China Academy of Space Technology (CAST).

The Harbin Institute of Technology Amateur Radio Club has invited more radio amateurs to get involved with the DSLWP mission, and QSL cards have been designed for different flight phases for amateurs who successfully receive telemetry or make contact.

<http://www.arrl.org/news/radio-amateurs-receive-images-from-chinese-lunar-satellite>  
<https://gbtimes.com/a-tiny-chinese-satellite-is-orbiting-the-moon-and-allowing-radio-amateurs-download-images>

**2018 PAID MEMBERSHIP**

- AGØL .....Steve Loyd [E]
- AIØN..... Chuck Engberg\* [E]
- K3CRF.....Dave Smith [E]
- K5LBS ..... Jerry Gault [E]
- KA0IJY ..... Keith Keene [E]
- KBØFSI ..... Pat McCollum [T]
- KBØLF ..... Fred Eriksen [E]
- KBØOGO .....Roger Behrns\* [E]
- KBØZZT.....George Bellairs [T]
- KCØDTK.....Joan Bellairs [T]
- KCØHYD ..... John Titsworth [G]
- KCØHYE.....Shirley Titsworth [T]
- KDØNMD.....Dudley Allen [G]
- KEØBXB ..... Kim Allen [T]
- KEØXQ.....Bill McCollum [E]
- KGØKR ..... Beth Engberg\* [E]
- KIØPY ..... Kevin Faris [E]
- N5SEZ..... Ray McNally [E]
- NØLZH.....John Harrington [T]
- WØDBW.....Derek Winterstien [G]
- WØZY.....Dave McLaughlin [E]
- WØZYD.....Debbie McLaughlin [G]
- W3DCQ ..... Bill Pulsifer [G]

*\*Charter Members #New Ham*

Note: Thanks to all who have paid their dues and many who have given additional donations. All donations are greatly appreciated. Please let me know of any corrections.

**Meetings are 8am the last Saturday of most months at Mom's Café in Plattsmouth.**

**Tuesday night get-togethers at Plattsmouth Burger King at 7 PM**



**P.A.R.C. Officers**

**President**  
**KBØOGO .....Roger Behrns**  
**rb55930@windstream.net**

**Vice President**  
**KCØHYD .....John Titsworth**

**Secretary**  
**WØDBW.....Derek Winterstien**

**Treasurer**  
**KIØPY ..... Kevin Faris**

**Newsletter Editor**  
**KBØOGO .....Roger Behrns**  
**rb55930@windstream.net**  
**513 Vine St.**  
**Louisville, NE 68037**  
**(402) 234-6775**

**Repeaters:**

443.45<sup>+</sup> is located in downtown Omaha  
 443.225<sup>+</sup> is located in Murray.  
 147.48 Simplex is also in Murray.

**Web Site**  
**[www.kb0smx.com](http://www.kb0smx.com)**  
 Maintained by Derek (WØDBW)

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**MINUTES of the MEETING**

The August 25, 2018 meeting was held at at Mom's Café in Plattsmouth. The meeting was called to order at 8:18 am by President Roger Behrns.

Those in attendance were Roger (KBØOGO), Kevin (KIØPY), John (KCØHYD), Steve (AGØL), Dave (WØZY), Bill (KEØXQ) Dudley (KDØNMD) and Keith (KA0IJY).

The Minutes of the July meeting were approved on a motion by Bill and second by Keith.

The treasurer reported expenses of \$35 for the NE QSO Party Plaque and \$50 to the Village of Murray. This leaves \$285 in the repeater fund and \$670.35 in the general fund for a balance of \$955.35. John moved and Dave seconded a motion to accept the treasurer's report. Passed.

Dudley reported that the Scout Jubilee will be held at Mahoney Park on October 12-14 and encouraged everyone to try to work the scouts.

JOTA will be October 20 and they will be working from the Scout Shop on 120th and Maple. Try for them on 12 & 17 meters.

The meeting adjourned on a motion by Dave and second by Keith at 8:25.



PLATTSMOUTH ARC MEMBERSHIP REGISTRATION FORM					
Name		Call Sign		Class	
Address		City		State	Zip
E-Mail			Phone #		
Spouse Name			Call Sign		Class
Membership Type <input type="checkbox"/> Primary(\$15) <input type="checkbox"/> Spouse (\$5) <input type="checkbox"/> Student (\$5) <input type="checkbox"/> New Ham	● Additional donations are gratefully accepted. ● New Hams are free during the year they receive their first license. ● Please give this form and dues to the club treasurer or any club officer.		Donation for: <input type="checkbox"/> Repeater fund <input type="checkbox"/> Insurance <input type="checkbox"/> Other _____ <input type="checkbox"/> General		Amount:  <input type="checkbox"/> I prefer my donation to be anonymous.
Any additional e-mail or cell phone #s?					

**Meeting Calendar**  
**8am, Sept. 29, 2018**  
**8am, October 27, 2018**  
**8am, November 24**  
**at Mom's Café**  
**No meeting in December**