

Soapbox 6m KJ9I:

Exceptional meaning returned from special efforts 6m EMERs delivered for ARRL EME 2022. ZL1RS completed a 6m EME QSO with *just a dipole* (and a 3-element yagi before that) while pressing limits of the 'how low can we go' space (QSOs I will remember forever)! Iowa friends KODAS, NROX, ACORA, and KCOSKM braved sub 30°F temperatures in an unheated trailer to activate 'cornfield EME.'

406AH repaired his weather-damaged rotor to return to 6m EME CQing all night. Numerous portable operators including AG6EE did a fantastic job from remote/field locations using 1 x yagi! K5QE team erected a 2 x 5 array for this event.

Nearly 100 6m EME friends came on during disruptive or sleeping hours to give it a try in the face of 6dB degradation/adversity. Many participants used 1 x yagis horizon-only where ground gain could be leveraged. Within this event, first EME QSOs were JA1QJI, W5WP, N9BX, and W8TN (first 6m EME). I am truly grateful for all who showed up to try and also for those who squeezed 6m EME into their already full family/life schedules (sometimes Mother Nature compounded the intervention).

Near-misses included: PA7MM (one-way propagation), VE1SKY with 1 x 5 elements horizon-only and N5DG with whom we tried during final hours of 2nd weekend. W0GJ and most Iowa stations were too close (and too closely aligned with moon azimuth) such that terrestrial signals completely masked EME signals. One-way propagation and deep fading (-17 through -35 SNR/blackout in 2 to 10 minute cycles) typified 6m EME conditions across both weekends.

It brings great pleasure to deliver every QSO vacuumed from the moon (dislodging the CQs from sticking in the rounded moon craters) so we could hear them back on earth.

Table I. system capability range of stations worked during ARRL EME 2022 on 6m

Callsign	Antenna detail	Antenna gain (dBd)
ZL1RS	Dipole	0.0
OH2BC	8 x 7 LFA X-pol	20.0
Difference	55 (same plane) elements	20.0

David J. Schmocker, KJ9I 4 x 10 LFA array with full Azimuth and Elevation rotation
Software used: WSJT-X v2.5.4 (for Mac): Q65-60A. dual receive paths: Rx path 1) SSB Electronic LT6S transverter behind Elecraft K3S (to Mac computer) and Rx path 2) AirSpy R2 with SDR-Console v3.1.