

In September KOWALU in EN37ed worked both VE4MA & VE4CY on 432&1296MHz using Q65@~400km and then VE4MA on 10 GHz. What is notable about the 10 GHz QSO is that KOAWLU has only been able to complete with VE4MA previously via rain-scatter. At KOAWLU's end the path is obstructed with rising elevation. Trees are in the immediate area and the adjacent forest exceeds the tower height on both 1296 MHz and 10 GHz. The KOAWLU 10 GHz station is 6 watts to an 18-inch Direct TV dish. During his QSO with VE4MA he tilted the dish upwards 5 degrees for best signals. KOAWLU reports that tropo locally is very rare (48-year observation) and that his QSO with VE4MA was the first documented 10 GHz tropo to EN19 in the last 18 years. "Good" tropo in the past for KOAWLU on 10 GHz has meant working W0GHZ @ 255km to his southeast. KOSM noted that the MSP (Minneapolis) sounding (Skew-T Log P diagram) indicated a fairly strong radiation inversion. A few days later, VE4MA worked N0OY @ 1,226km for the second time in less than a month on 10 GHz with signals peaking 30dB out of the noise. Not all the DX to be had was on 1296 MHz or 10 GHz. On August 27th, VA3TO in FN03cn worked K2UA in FN121fs on 47 GHz @ 203km for VA3TO's VUCC grid # 7 on the band.

The main activity on 10 GHz and bands above during this reporting period was the ARRL 10 GHz & Above contest held the weekends of August 20th and September 17th. K2UA will report on the contest in detail after the results are scored. See the ARRL website for the full report. Wishing all a healthy & happy 2023 with plenty of DX on your favorite microwave band.

## Microwave Japan

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**Toshio, JA6AHB achieved DXCC on 70 cm with all QSOs via EME by Seiji Fukushima, JH6RTO**

Toshio reports his great achievement of 432-MHz DXCC with all QSOs made via moon bounce. I summarise his past and current activities, dedicating this report to him. Toshio became interested in moon bounce when he read a January-1975 issue of 'CQ ham radio (in Japanese)'. He

started his moon bounce career at the age of 45 in Kanoya City, Kagoshima Prefecture, a locator of PM51. His 70-cm, 500-W EME station was licenced on the 20th of January, 1977. He put out only 180 W and failed a full-power (500 W) operation at authority's onsite inspection due to poor capability of main line. The authority granted a 500-W licence, though. Here, I refer this shack as the #1 shack that was equipped with a FT-101 TRX, a 4F20x2 homebrew power amplifier (PA), and a MGFF1400 low noise amplifier (LNA). His antenna was a 7-metre polar-mounted dish with a feeder of dual dipoles. He changed his FT-101 to TS-830 in August 1991. His first EME QSO on 70 cm was established with JA6CZD on June 16, 1979. The next was ZESJU on July, 26, 1979. With his continuous effort, he achieved WAC (70 cm, EME) on the 20th of April, 1980 and worked 21 stations. He worked 31 DXCC entities, including, JA6CZD, ZESJU, DL9KR, VETBBG, SM6CKU, W7GBI, G3WDD, I5MSH, HB9SV, PA0SSB, F2TU, YV5ZZ, ZL3AAD, OK3CTP, OH3TH, LX1DB, VK5MC, YU1AW, OE5JFL, RA3YCR, UT5DL, T70A, LA8LF, OZ7UHF, ZS6AXT, HG1YA, VS6BI, YO2IS, UA9FAD, EA6/DF5J, CS1EME by the 10th of May, 1981, when he went QRT due to his business. He came back to EME on August, 1991 at his retirement. He was forced to be QRT again because his antenna was seriously damaged due to a typhoon in September 1993.

He moved to a new QTH of Fukuoka City, Fukuoka Prefecture, PM53 in March, 1998 and started his EME career again in June, 1999 at the age of 67 at his #2 shack. His new equipment is a TS-2000SX TRX, a 3CX800A7X2 PA, a LNA of G4DDK and a post-amplifier. Figure 1 shows his current shack. His new antenna is a 7-metre dish with fld of 0.5 with dual folded dipole antennas, as shown in Fig. 2. The antenna is controlled on an azimuth/elevation mount. The number of new entities is 31 and 72 at his #1 and #2 shack, respectively. He earned 103 entities from these shacks. All the list is shown in the table below.

He has added his activities of 23cm EME eagerly since 2001. These include: 2001.03.14 23-cm, 200-W licence permitted; HPA=M57765X8, LNA=FXH35 2003.09.05 WSJT licence permitted 2009.05.01 1296-MHz WAC achieved with an ever-first EME of JA-PY, 18853 km