Space—The Final Frontier: The 2004 ARRL EME Competition

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Space: the final frontier! So goes the phrase from the popular *Star Trek* TV series. This declaration is not only true for space exploration, but for radio amateurs as well. Today, EME (Earth-Moon-Earth, otherwise known as "moonbounce") communication is commonplace on 24 GHz and experiments on 47 GHz are occurring now. EME activity is alive and well!

The 2004 contest saw a slight drop in log submissions from 2003, down 14% to 131, but the number of different stations active and worked during the competition remained high. This was the first year to officially sanction a three weekend concept for the EME competition, incorporating 50 MHz through 1296 MHz on the two original traditional weekends, and adding a third weekend for microwave activity on 2304 MHz and above.

Six-meter EME has found a resurgence and Dennis, K7BV/1, took top honors on that band.

Two-meters had a fierce shoot out for the single-op top slot between Dave, W5UN, Gary, KB8RQ and Alex, RU1AA. Alex finished with the most QSOs at 170, but Dave and Gary managed to edge slightly ahead, respectively, with multipliers. IK3MAC and I2FAK took the top two slots in the multi-op category.

The top four single-op shoot out on 432 MHz was just as close with Jan, DL9KR, Andy, N9AB, Uwe, DJ6MB and Doug, VK3UM. Jan took the top slot with 71 QSOs. In the multi-op category, OH2PO garnered first place with a valiant effort after being hampered in the second leg with –15°C temperatures and heavy snow.

The temperature was hot on 1296 MHz, though, with a six-way bout for the top slot between HB9BBD, K9SLQ, G4CCH, OK1CA, DLØSHF (by DF9CY) and F6CGJ. HB9BBD nailed down first place, but second place was decided by the difference of only one additional multiplier by K9SLQ! In the multi-op category, the gang at SKØUX edged out OH2AXH and W2DRZ.

On 2304 MHz, Viljo, ES5PC, operated single band from Estonia for the fist time. ES5PC, OZ4MM and F2TU each individually garnering as many QSOs as had ever been made on that band in past competitions, bringing a smile we're sure to the spirit of W4HHK!

Al, W5LUA took the top spot on 3.4 GHz while Tommy, WD5AGO made his first 5.7 GHz EME contact to take single band first place.

On 10 GHz, F6KSX squeezed past OK1UWA by one QSO and one multiplier to take the top slot in single-op. In the 10 GHz multi-op category, WA7CJO, IQ4DF and DLØEF were the rally leaders with Jim, WA7CJO setting a new 10 GHz QSO record for the contest.

In the single-op, multi-band arena, Jimmie, SV1BTR, solidly won the 50-1296 MHz category with his effort, racking up 95 Qs on 2 meters and 33 Qs on 70 cm.

In the single-op 2304 MHz and up category, F2TU took command with his 2.3/5.7/10 GHz approach.

Stig, OZ4MM, finished with an impressive single-op, all band category first place finish with G3LTF and WA6PY close behind.

HB9Q had an impressive finish with a whopping 2,605,100 points in the multi-op, 50-1296 MHz category with S53J and JL1ZCG capturing the second and third spots.

A number of stations tried EME for the first time in this year's event, including VK4CDI, and digital activity continued to increase.

Soapbox comments ranged from the effects of weather, bad conditions at some locations, and the need to consider an "Assisted" category. These will all be reviewed and discussed for the 2005 competition, but one thing is a solid bet: the excitement and intensity will continue. Be sure to check the ARRLWeb for expanded coverage, line scores and dates for the 2005 ARRL International EME Competition!

The 2-meter array (16×6 cross-polarized, 1.1 wavelength, 22 dBd) of Jimmie, SV1BTR.

The Ohio Big Gun array of Gary, KB8RQ, who finished second in the 144 MHz Single Operator category. QST

Scores

Each line score lists call sign, score, stations worked, multipliers, and band (A= 50 MHz, B = 144 MHz, C = 222 MHz, D = 432 MHz, 9 = 902 MHz, E = 1296 MHz, F = 2304 MHz, I = 10 GHz).

Single Operator All Band

OZ4MM	1,702,800	24	16	B
		65	32	D
		64	36	E
		19	15	F
G3LTF	907,500	6	5	B
		49	27	D
		54	32	E
		12	11	F
WA6PY	643,500	30	17	B
		7	7	D
		43	26	E
		14	11	F
		5	4	I
SM3AKW	414,400	5	4	B
		40	27	D
		18	16	E
		11	9	F
W5LUA	96,100	13	13	E
		11	11	F
		1	1	G
		2	2	H
		4	4	I
JA4BLC	56,700	19	13	E
		8	8	F
IK2RTI	25,500	6	5	E
		6	5	F
		5	5	I

Single Operator Multiband 50 - 1296 MHz Only

SV1BTR	806,400	95	40	B
		33	23	D
DF3RU	264,600	1	1	B
		27	18	D
		35	23	E
OE5EYM	261,000	17	13	B
		18	14	D
		23	18	E
EA3DXU	241,800	43	25	B
		19	14	D
JA6AHB	187,200	33	20	D
		19	16	E
DL1YMK	177,600	18	15	D
		30	22	E
UT3LL	46,000	16	14	D
		7	6	E
JA9BOH	46,000	5	5	B
		18	15	D
DL7UDA	41,800	9	7	B
		13	12	D
PY5ZBU	35,700	6	5	D
		15	12	E
UR5LX	22,100	8	6	B
		9	7	E

Single Operator Multiband 2304 MHz and Up Only

F2TU	92,400	19	15	F
		3	3	H
		11	10	I

Single Operator 50 MHz

K7BV	1,600	4	4	A

Single Operator 144 MHz

W5UN	1,132,300	169	67	B
KB8RQ	988,000	152	65	B
RU1AA	884,000	170	52	B
F3VS	269,700	87	31	B
RA3AQ	234,500	67	35	B
I3DLI	210,800	68	31	B
G3ZIG	179,800	58	31	B
RK3FG	163,800	63	26	B
IK2DDR	127,400	49	26	B
SP7DCS	120,000	50	24	B
LZ1DP	103,200	43	24	B
LZ2US	98,900	43	23	B
UA4AQL	96,600	42	23	B
YU1CF	86,100	41	21	B
W3SZ	82,800	36	23	B
K7MAC	77,000	35	22	B
K6PF	71,300	31	23	B
EA6VQ	58,000	29	20	B
K1CA	42,500	25	17	B
I3EVK	41,600	26	16	B
SM5CUI	33,000	22	15	B
PA3CWI	24,700	19	13	B
AC3A	24,000	20	12	B
SM7WSJ	18,000	15	12	B
9A9B	16,000	16	10	B
RU3ACE	13,500	15	9	B
JM1GSH	13,500	15	9	B
YO3FFF	13,500	15	9	B
EB1DNK	12,600	14	9	B
JR3REX	9,600	12	8	B
W0EKZ	6,000	10	6	B
K1JT	4,900	7	7	B
W5UWB	4,800	8	6	B
N3FA	3,500	7	5	B
KJ9I	3,000	6	5	B
IK1SPR	2,400	6	4	B
SM1MUT	2,400	6	4	B
RK6MC	2,400	6	4	B
LY2SA	1,600	4	4	B
WB2SIH	1,600	4	4	B
YO7IV	1,200	4	3	B
JF4TGO/8	1,200	4	3	B
WB8TGY	400	2	2	B
WA8RJF	400	2	2	B
UX3LV	400	2	2	B
W5ZN	400	2	2	B
HA8V	200	2	1	B
VK4CDI	100	1	1	B
KG6SZC	100	1	1	B
W6TE	100	1	1	B

Single Operator 432 MHz

N2IQ	302,400	84	36	D
DL9KR	255,600	71	36	D
N9AB	198,400	62	32	D
DJ6MB	176,900	61	29	D
VK3UM	129,600	48	27	D
K0RZ	87,400	38	23	D
G4ERG	74,400	31	24	D
JJ1NNJ	40,000	25	16	D
S52CW	39,100	23	17	D
KE2N	19,600	14	14	D
SK0CC (SM5LE,op)	18,200	14	13	D
YO2IS	12,000	12	10	D
JH4JLV	10,000	10	10	D
JA2TY	8,100	9	9	D
LA9DL	6,000	10	6	D
UA3DJG	2,500	5	5	D
DK3FB	2,000	5	4	D
I1NDP	400	2	2	D

Single Operator 1296 MHz

HB9BBD	307,500	75	41	E
K9SLQ	247,900	67	37	E
G4CCH	244,800	68	36	E
OK1CA	225,700	61	37	E
DL0SHF (DF9CY,op)	205,200	57	36	E
F6CGJ	154,000	55	28	E
K4QI	101,400	39	26	E
N2UO	93,600	39	24	E
W9IIX	52,000	26	20	E
IK3COJ	39,100	23	17	E
JA8IAD	28,000	20	14	E
NA4N	27,000	18	15	E
LA9NEA	14,300	13	11	E
OM6AA	14,300	13	11	E
JR4ZZS	13,200	12	11	E
N7AM	4,200	7	6	E
WA4OFS	3,600	6	6	E
JH5LUZ	900	3	3	E
JH1EFA	100	1	1	E

Single Operator 2304 MHz

ES5PC	16,500	15	11	F
OH6NVQ	12,000	12	10	F

Single Operator 5760 MHz

WD5AGO	100	1	1	H

Single Operator 10 GHz

F6KSX	14,300	13	11	I
OK1UWA	12,000	12	10	I

Multioperator Multiband 50 - 1296 MHz Only

HB9Q (HB9CRQ, HB9DBM,ops)	2,605,100	103	42	B
		95	39	D
		41	28	E
S53J (S56TZJ, S56TZK, ops)	231,800	46	25	B
		15	13	D
JL1ZCG (JA1DYB, JA1MOH, JR4ENY,ops)	39,600	6	5	B
		16	13	D

Multioperator 144 MHz

IK3MAC (+I3YXQ, I3MEK)	1,008,800	194	52	B
I2FAK (+IK2LZT)	837,000	155	54	B
IK1UWL (I1OCQ, I1NVU,ops)	125,000	50	25	B
N0AKC (+K9MU)	20,400	17	12	B
F1DDG (+F6HEO, F1UKQ, F5UNH+logger)	9,100	13	7	B

Multioperator 432 MHz

OH2PO (OH2HYT, OH6DD,ops)	316,800	88	36	D
DL7APV (+DL7AIG)	172,800	54	32	D
SP6JLW (+SP5NHF, SP6GWN, SP6OPN)	40,800	24	17	D
K4EME (+KR4V, AD4TJ)	34,000	20	17	D

Multioperator 1296 MHz

SK0UX (SM0MXO, ES5PC, SM0LPO, SM0ERR, SM0KAK, SM0SBI,ops)	219,600	61	36	E
OH2AXH (+OH2LRE, OH2LH, OH2BDQ)	171,100	59	29	E
W2DRZ (+K2TXB, AK3R, KA2ONY)	150,000	50	30	E
VA7MM (VE7CMK, VE7CNF,ops)	56,700	27	21	E
HA5SHF (HA5AWS, HA5BGL, HA5BMU,ops)	46,800	26	18	E
ON7UN (+ON4ACA, ON4ALT, ON6LY)	37,400	22	17	E

Multioperator 10 GHz

WA7CJO (+W7GNP)	18,000	15	12	I
IQ4DF (I4ZAU, I4TMA, IK4PNJ, IZ4BEH, IW4CJM,ops)	14,300	13	11	I
DL0EF (PA3GLB, DF3GL,ops)	12,600	14	9	I