

ARRL World Above 50 MHz Distance Records

Maintained by Ned Stearns, AA7A

Last Updated: 19 May 2023

Propagation	Distance	Stations (grid locators)	QSO Date
Mode	(km)		
144 MHz			
Aurora	2,178	WA0TKJ (EM18ct) - KA1ZE (FN31tu)	08-Feb-86
Aurora	2,178	WB0DRL (EM18ct) - KA1ZE (FN31tu)	08-Feb-86
Aurora	2,145	K5CM (EM25ir) - WA1VTA (FN42am)	15-Jul-00
Aurora	2,106	K5CM (EM25ir) - W3EP (FN31vp)	15-Jul-00
Aurora E	2,446	NU7Z (CN87ts) - W9RPM (EN43jt)	10-Oct-03
Auroral E	2,295	WB7UZO (CN78qi) - VE3KNI (EN38hn)	15-Aug-89
Auroral E	2,236	VE4AQ (EN19lu) - K5MA (FN41qo)	09-Jun-91
Auroral E	2,128	W7FI (CN87ws) - VE3KNI (EN38hn)	15-Aug-89
Auroral E	2,044	W7MEM (DN17nt) - VE3KRP (EN58ij)	15-Aug-89
Auroral E	1,911	KB0ZQ (EN34it) - N1BUG (FN55mf)	14-Mar-89
FAI	2,370	W0LD (DM78pu) - W4CHA (EL88qa)	19-Jun-93
FAI	1,981	W5UN (DM82wa) - W5HUQ (EM90gc)	25-Jul-83
IFS	2,856	K5JL (EM15dp) - VE1ALQ (FN65vh)	08-Nov-99
IFS	2,587	K5JL (EM15dp) - W1REZ (FN55ea)	08-Nov-99
IFS	2,552	K5JL (EM15dp) - WA1JOF (FN44xw)	11-Nov-99
IFS	1,849	K0MQS (EN13uh) - WA1JOF (FN44xw)	31-Aug-00
Meteors	3,162	K5UR (EM35wa) - KP4EKG (FK68vg)	13-Dec-85
Meteors	2,528	N6RMJ (DM14cp) - K2DRH (EN41vr)	13-Aug-09
Meteors	2,496	KB5WMY (EM32dm) - W1REZ (FN55ea)	11-Aug-98
Meteors	2,406	VE4AMU (EN19kv) - AB4OO (EM81tg)	18-Nov-01
Meteors	2,364	W5ORH - K1ABR	12-Aug-68
Meteors	2,339	W2CRS (DM78lx) - KA2RDO (FN12ex)	12-Aug-96
Meteors	2,334	AF6O (DM14ej) - N0PB (EM39wo)	12-Aug-04
Meteors	2,293	W8BYA (EN70jt) - KE7NR (DM54ah)	12-Dec-18
Meteors	2,269	W8BYA (EN70jt) - K7NX/P (DM53gx)	13-Aug-13
Meteors	2,253	NY2NY (FN30rw) - ND0B (EN07gn)	12-Aug-12
Meteors	2,232	W0VB (DN84am) - K3SX (FM19dk)	08-Dec-20
Meteors	2,220	K7ULS (DN41cj) - W8BYA (EN70jt)	29-Apr-12
Meteors	2,192	XE2AT (DL81uu) - N0PB (EM39wo)	12-Aug-07
Meteors	2,175	W1VD (FN31ls) - ND0B (EN07gn)	03-Aug-18
Meteors	2,175	W1VD (FN31ls) - K5QE (EM31CJ)	19-Jul-20
Meteors	2,173	K5DOG (EM00wh) - K3SX (FM19dk)	24-Sep-20
Meteors	2,148	KC4PX (EL98QG) - N1BUG (FN55MF)	08-Aug-17
Sporadic E	3,635	WA7GSK (DN13so) - W4FF (EL96am)	29-May-98

Sporadic E	3,617	KF7UV (DM08dv) - W4UE (EM90gc)	29-May-98
Sporadic E	3,501	W7YOZ (CN87vr) - WA4CQG (EM72fo)	06-Jun-88
Sporadic E	3,472	K2DRH (EN41vr) - WP4KJJ (FK68xf)	13-Jul-21
Sporadic E	3,390	K2DRH (EN41vr) - NP4BM (FK68)	13-Jul-21
Sporadic E	3,389	W1VD (FN31ls) - W6OUU (DN22sn)	14-Jul-21
Sporadic E	3,389	W7FI (CN87ws) - KB4WM (EM63tg)	06-Jun-88
Sporadic E	3,224	K2DRH (EN41vr) - HI8T (FK58)	14-Jul-21
Sporadic E	3,223	KT6KT (DM26jg) - KD4ESV (EL87rl)	22-Jun-11
Sporadic E	3,221	K2DRH (EN41vr) - HI8DL (FK58)	13-Jul-21
Sporadic E	3,016	WA9DU (EM69su) - NP4BM (FK68lm)	13-Jul-21
Sporadic E	2,981	N7MWV (CN86LT) - K5IM (EM20FJ)	01-Jul-17
Sporadic E	2,798	K0GU (DM70mq) - N4QV (EL96vc)	19-Jun-10
Sporadic E	2,793	W1VD (FN31ls) - K0NR (DM78av)	20-Jul-19
Sporadic E	2,719	N0KE (DM69em) - N3LL (EL86tx)	18-Jun-10
Sporadic E	2,688	K5DYY (EL07ws) - KA7SAG/7 (CN92cj)	15-Jun-05
Sporadic E	2,674	W1VD (FN31ls) - W0ETT (DM79pm)	20-Jul-19
Sporadic E	2,605	KF6A (EN73pj) - WA7JTM (DM33xo)	25-May-17
TE	6,412	KP4EIT (FK68si) - LU8YYO (FF50)	05-Oct-91
TE	6,327	KP4EOR (FK78aj) - LU5DJZ (GF11lu)	12-Feb-78
TE	6,122	LU4DJC (GF05po) - HO3O (FK49ql)	02-Jul-22
TE	6,083	HI8DL (FK58al) - CX1DDO (GF15xd)	05-Nov-21
TE	6,079	HI8PLE (FK58AK) - CX1DDO (GF15XD)	20-Dec-14
TE	6,065	LU2EPO (GF14fx) - HI8DL (FK58al)	29-Nov-20
TE	6,031	LU7DW (GF05sh) - HI8PLE (FK58ak)	14-Dec-14
TE	5,966	LU7DW (GF05sh) - WP4JT (FK68mi)	02-Oct-12
TE	5,991	KP4EIT (FK68si) - CX1DDO (GF15xd)	26-Feb-89
TE	5,955	KP4EIT (FK68si) - LU2EG (GF05xd)	04-Jan-99
TE	5,750	WP4LNY - LU7FA	02-Feb-01
TE	5,555	KP3A (FK68ol) - LU5EJE (FF98jn)	04-Jan-99
TE	5,554	WP4IPM (FK68pl) - LU5EJU (FF98jn)	04-Jan-99
TE	4,267	J69DS (FK94ma) - PU2OAL (GG57ba)	01-Feb-13
Tropo (A)	2,365	W1JSM (FN43nc) - VP5D (FL31ut)	10-May-88
Tropo (A)	2,340	CO2OJ (EL83td) - W1LP (FN41sr)	15-May-98
Tropo (A)	2,148	N0JK (EM17jq) - CO2OJ (EL83td)	14-May-98
Tropo (A)	1,931	N3LL (EL86tx) - WP3UX (FK68we)	03-Apr-10
Tropo (A)	1,892	N3LL (EL86tx) - KP4EIT (FK68si)	02-Apr-10
Tropo (A)	1,624	WB4MJE (EL94hq) - WP4O (FK68km)	18-Jan-95
Tropo (C)	2,715	WB4MJE (EL94hq) - VE1KG (FN84cm)	05-Nov-94
Tropo (C)	2,567	KA5DWI (EM12ju) - K1WHS (FN43mj)	07-Sep-03
Tropo (C)	2,558	W5FKN (EM13gh) - K1WHS (FN43mj)	07-Sep-03
Tropo (C)	2,508	N5TIF (EM12hl) - K1CMF (FN42bq)	07-Sep-03
Tropo (P)	4,754	KH6HME (BK29go) - W1LP/MM (DL51ce)	21-Aug-99
Tropo (P)	4,669	KH6HME (BK29go) - XE2HWB (DL44uc)	24-Jun-10

Tropo (P)	4,333	KH6HME (BK29go) - W7FI (CN87ws)	01-Jul-95
Tropo (P)	4,325	KH6HME (BK29go) - N7MWV (CN87vr)	01-Jul-95
Tropo (P)	4,325	KH6HME (BK29go) - W7YOZ (CN87vr)	01-Jul-95
Tropo (P)	4,281	KH6HME (BK29go) - XE2/N6XQ (DL28uq)	13-Jul-89
Tropo (P)	4,095	KH6/N6NB (BK29hq) - W6IT (DM14kf)	30-Jun-16
Tropo (P)	4,054	NC7K (DM090a) - KH6HME (BK29go)	13-Jul-94
Tropo (P)	4,047	KH6HME (BK29go) - NY7C (CN85ab)	12-Aug-87
222 MHz			
Aurora	2,094	WB5LUA (EM13qc) - WC2K (FM29pt)	13-Mar-89
Meteors	2,260	ND0B (EN07gn) - K1OR (FN42ir)	10-Aug-16
Meteors	2,203	ND0B (EN07gn) - N1RJX (FN32vo)	14-Dec-13
Meteors	2,179	K5QE (EM31cj) - NY2NY (FN30rx)	13-Aug-16
Meteors	2,178	W5UWB (EL17ax) - ND0B (EN07gn)	10-Dec-12
Meteors	2,153	K5VH (EM00xe) - VE3AX (FN02cw)	19-Nov-02
Meteors	2,107	K7ULS (DN41di) - KU8Y (EN61uw)	09-Aug-20
Meteors	2,102	K1WHS (FN43mj) - W7XU (EN13lm)	13-Dec-98
Meteors	2,095	AC0RA (EM26px) - K1OR (FN42ir)	19-Dec-19
Meteors	2,089	K5LLL (EM10kf) - VE3AX (FN02cw)	18-Nov-01
Meteors	2,089	W7XU (EN13lm) - K1OR (FN42ir)	13-Aug-17
Meteors	2,077	K1OR (FN42ir) - N0LWF (EN10wm)	13-Dec-15
Meteors	2,060	K0ALL (EN16ou) - W1JR (FN42hn)	13-Aug-88
Meteors	2,043	AF6O (DM14ej) - W7XU (EN13lm)	12-Aug-07
Meteors	1,978	W7JF (DN55tt) - VE3EMS (EN86qj)	12-Aug-83
Meteors	1,944	K7ULS (DN41cj) - K5QE (EM31cj)	02-Aug-20
Sporadic E	2,195	W6QIW (DM04ck) - W5UWB (EL17ax)	14-Feb-00
Sporadic E	2,184	N6HKF (DM04fu) - W5UWB (EL17ax)	14-Feb-00
Sporadic E	2,099	K5LLL (EM10kf) - VE3AX (FN02cw)	08-Jul-01
Sporadic E	2,051	K5SW (EM25hr) - WZ1V (FN31mp)	06-Jul-04
Sporadic E	2,008	W4VC (EM81tg) - K0AWU (EN37ed)	06-Jul-04
TE	5,918	KP4EOR (FK78aj) - LU7DJZ (GF05rj)	09-Mar-83
Tropo (A)	1,950	KQ4PI (EL99hk) - KP4EIT (FK68si)	03-Apr-10
Tropo (A)	1,854	WA4LOX (EL87sk) - WP4O (FK68km)	26-Feb-98
Tropo (A)	1,707	KF4FWU (EL97st) - WP4O (FK68km)	26-Feb-98
Tropo (C)	2,421	WB5AFY (EM04id) - K1TEO (FN31jg)	07-Sep-03
Tropo (C)	2,279	K5VH (EM00xe) - K2AXX (FN12cs)	06-Sep-03
Tropo (C)	2,259	W5LUA (EM13qc) - K1TEO (FN31jg)	07-Sep-03
Tropo (C)	2,213	K5LLL (EM10kf) - K2AXX (FN12cs)	06-Sep-03
Tropo (C)	2,095	AC0RA (EM26px) - K1OR (FN42IR)	19-Dec-19
Tropo (P)	4,150	KH6HME (BK29go) - XE2/N6XQ (DL29cx)	15-Jul-89
Tropo (P)	4,095	KH6/N6NB (BK29hq) - W6IT (DM14kf)	30-Jun-16
Tropo (P)	4,087	KH6UK - W6NLZ	22-Jun-59
Tropo (P)	4,035	KH6HME (BK29go) - N6PEQ (DM13cr)	13-Jul-03

432 MHz			
Aurora	1,909	WB5LUA (EM13qc) - W3IP (FM19pd)	08-Feb-86
Meteors	2,208	K5DOG (EM00wh) - VA3ELE (FN03eq)	03-Aug-21
Meteors	2,040	N6RMJ (DM14cp) - W7XU (EN13lm)	17-Nov-98
Meteors	1,999	WB5LUA (EM13qc) - KD5RO (FN13fb)	13-Dec-88
Meteors	1,641	W0LER - W2AZL	12-Aug-72
Tropo (A)	4,442	NP4BM (FK68lm) - D4VHF (HK78mj)	11-Apr-20
Tropo (A)	2,273	W1RIL (FN42ah) - VP5D (FL31ut)	10-May-88
Tropo (A)	1,954	NN5DX(DM80nv) - W4VC (EM81tg)	21-May-06
Tropo (A)	1,707	KF4FWU (ELO97st) - WP4O (FK68km)	01-Oct-98
Tropo (A)	1,662	W4MOS (EL97te) - WP4O (FK68km)	01-Oct-98
Tropo (C)	2,201	KM1H (FN42hr) - WB4MJE (EL94hq)	16-Dec-92
Tropo (C)	2,166	W5UWB (EL17ax) - K2YAZ (EN74ax)	11-Oct-98
Tropo (C)	2,161	K0VXM (EL98pj) - NN5DX (DM80nv)	21-May-06
Tropo (C)	2,126	WA5VJB (EM12lq) - WB3CZG (FN21ax)	29-Nov-86
Tropo (C)	2,068	W5UWB (EL17ax) - K8MD (EN82bq)	11-Oct-98
Tropo (C)	2,063	W8CM (DM91rl) - K1FJM/4 (EL95rm)	22-Apr-88
Tropo (C)	2,053	WS5C (DM91sj) - K1FJM/4 (EL95rm)	22-Apr-88
Tropo (P)	4,150	KH6HME (BK29go) - XE2/N6XQ (DL29cx)	15-Jul-89
Tropo (P)	4,109	KH6IAA (BK29go) - KD6R (DM13ni)	28-Jul-80
Tropo (P)	4,095	KH6/N6NB (BK29hq) - W6IT (DM14kf)	30-Jun-16
Tropo (P)	4,035	KH6HME (BK29go) - N6PEQ (DM13cr)	13-Jul-03
Tropo (P)	4,013	KH6HME (BK29go) - K7JA (DM03xs)	11-Jul-99
903 MHz			
Aurora	86	K3HZO (FM18qp) - WA3NZL (FM19jg)	08-Nov-91
Rain Scatter	328	KM0T (EN13vc) - W0GHZ (EN34lx)	13-Sep-05
Tropo (C)	1,741	N5WS (EL09ru) - K0VXM (EL98pj)	22-May-98
Tropo (C)	1,730	WB5LUA (EM13qc) - W4WSR (EL96ww)	14-Mar-89
Tropo (C)	1,674	K5AND (EM00xh) - K8TQK (EM89je)	07-May-14
Tropo (C)	1,596	AA5C (EM13se) - K0VXM (EL98pj)	23-May-98
Tropo (C)	1,350	W4VC (EM81sh) - WW2R (EM13QD)	21-May-06
Tropo (P)	4,095	KH6/N6NB (BK29hq) - W6IT (DM14kf)	30-Jun-16
Tropo (P)	4,064	KH6HME (BK29go) - N6XQ (DM12jr)	13-Jul-94
Tropo (P)	3,982	KH6HME (BK29go) - N6CA (DM03tr)	23-Aug-93
1296 MHz			
Rain Scatter	580	W0ZQ (EN34it) - K2YAZ (EN74av)	17-Jun-07
Rain Scatter	328	KM0T (EN13vc) - W0GHZ (EN34lx)	13-Sep-05
Tropo (C)	2,079	KD5RO (EM13pa) - WB3CZG (FN21ax)	29-Nov-86
Tropo (C)	2,067	WB5LUA (EM13qc) - WB3CZG (FN21ax)	29-Nov-86
Tropo (C)	1,906	W3XO (EM00kb) - K2RTH (EL95tq1)	22-May-98

Tropo (C)	1,856	W1RIL (FN42ah) - WA4CHA (EL88qa)	16-Dec-92
Tropo (C)	1,854	N5WS (EM12pw) - W2DRZ (FN02lb)	29-Nov-86
Tropo (C)	1,680	W4VC (EM81sh) - K1WHS 9FN43mj)	23-Oct-07
Tropo (P)	4,150	KH6HME (BK29go) - XE2/N6XQ (DL29cx)	15-Jul-89
Tropo (P)	4,024	KH6/N6NB (BK29hq) - W6IT (DM13cs)	19-Jun-15
2304 MHz			
Rain Scatter	654	KM0T (EN13vc) - K3SIW (EN52ta)	19-Jul-06
Rain Scatter	580	W0ZQ (EN34it) - K2YAZ (EN74av)	17-Jun-07
Rain Scatter	328	KM0T (EN13vc) - W0GHZ (EN34lx)	13-Sep-05
Tropo (C)	1,716	W3XO (EM00kd) - KQ4PI (EL99hk)	21-May-06
Tropo (C)	1,609	W5LUA (EM13qc) - K0VXM (EL98pj)	01-May-02
Tropo (C)	1,596	AA5C (EM13se) - K0VXM (EL98pj)	01-May-02
Tropo (C)	1,553	K5VH (EM00xe) - KB4DFO (EL89xc)	12-Jan-00
Tropo (C)	1,553	K5VH (EM00xe) - K1YV (EL89xc)	17-Jul-00
Tropo (P)	4,024	KH6/N6NB (BK29hq) - W6IT (DM13cs)	19-Jun-15
Tropo (P)	3,982	KH6HME (BK29go) - N6CA (DM03tr)	14-Jul-94
3456 MHz			
Rain Scatter	654	KM0T (EN13vc) - K3SIW (EN52ta)	17-Jul-06
Rain Scatter	580	K2YAZ (EN74av) - W0ZQ (EN34it)	08-Jul-07
Rain Scatter	481	W0GHZ(EN34lx) - W9ZIH(EN51lv)	24-Jun-05
Rain Scatter	435	KM0T (EN13vc) - N0DQS (EN42nx)	28-Jun-03
Rain Scatter	328	KM0T (EN13vc) - W0GHZ (EN34lx)	13-Sep-05
Tropo (C)	1,798	W3XO (EM00kd) - K0VXM (EL98pj)	21-May-06
Tropo (C)	1,609	W5LUA (EM13qc) - K0VXM (EL98pj)	01-May-02
Tropo (C)	1,606	K5LLL (EM10kf) - K0VXM (EL98pj)	20-May-06
Tropo (C)	1,539	K5VH (EM00xe) - WA8TTM (EL98dp)	15-Apr-03
Tropo (C)	1,509	WW2R (EM13qd) - WA8TTM (EL98dp)	03-Feb-03
Tropo (C)	1,508	W5LUA (EM13qc) - WA8TTM (EL98dp)	03-Feb-03
Tropo (C)	1,507	W5LUA (EM13qc) - KQ4PI (EL99hk)	02-May-02
Tropo (P)	4,024	KH6/N6NB (BK29hq) - W6IT (DM13cs)	19-Jun-15
Tropo (P)	3,982	KH6HME (BK29go) - N6CA (DM03tr)	28-Jul-91
5760 MHz			
Rain Scatter	848	KM0T (EN13vc) - K8EB (EN73cb)	22-Jun-07
Rain Scatter	654	KM0T (EN13vc) - K3SIW (EN52ta)	19-Jul-06
Rain Scatter	635	KC0IYT/O (EN34js) - VE4MA (EN19lu)	05-Jul-11
Rain Scatter	627	W0ZQ/O (EN34ju) - VE4MA (EN19lu)	17-Jun-10
Rain Scatter	617	KM0T (EN13vc) - W9ZIH (EN51nv)	24-May-04
Rain Scatter	517	W5ZN (EM45dh) - WW2R (EM13qd)	03-Aug-03
Rain Scatter	516	W5ZN (EM45dh) - W5LUA (EM13qc)	03-Aug-03
Rain Scatter	481	W0GHZ(EN34lx) - W9ZIH(EN51lv)	24-Jun-05

Tropo (C)	1,609	W5LUA (EM13qc) - KOVXM (EL98pj)	04-Jun-12
Tropo (C)	1,212	W4DEX (EM95tg) - K1WHS (FN43mj)	25-Sep-04
Tropo (C)	1,187	WB5LUA(EM13qc) - W9ZIH (EN51nv)	12-Nov-94
Tropo (C)	1,175	AA5C (EM13se) - W9ZIH (EN51nv)	12-Nov-94
Tropo (C)	1,005	AA5C (EN13se) - WB9OJR (EN50ej)	12-Nov-94
Tropo (C)	990	XE2/N6XQ (DL37ck) - N6CA (CM94xn)	23-Jul-89
Tropo (C)	915	W5LUA (EM13qc) - K4XR (EM64nl)	09-Aug-07
Tropo (P)	3,982	KH6HME (BK29go) - N6CA (DM03tr)	29-Jul-91
10 GHz Zero			
Rain Scatter	848	KM0T (EN13vc) - K8EB (EN73cb)	22-Jun-07
Rain Scatter	825	N0OY (EM18ct) - W9ZIH (EN51nv)	13-Apr-22
Rain Scatter	804	N0UK (EN34hw) - W8BYA (EN70jt)	19-Sep-22
Rain Scatter	791	N0OY (EM18ct) - W0GHZ (EN34lx)	26-Aug-21
Rain Scatter	791	KM0T (EN13vc) - VE3KRP (EN58gk)	14-Aug-07
Rain Scatter	791	N0OY (EM18ct) - W0GHZ (EN34ix)	22-Aug-21
Rain Scatter	778.5	N0OY (EM18ct) - N0UK (EN34lw)	26-Aug-21
Rain Scatter	776	N0OY (EM18ct) - N0UK (EN34iw)	26-Aug-21
Rain Scatter	753	KM0T (EN13vc) - VE4MA (EN19lu)	25-Aug-05
Rain Scatter	711.6	WQ0P (EM19wf) - KM5PO (EM12jt)	15-May-22
Rain Scatter	704	W7XU (EN13lm) - VE4MA (EN19lu)	17-Jun-10
Rain Scatter	695	K0AWU (EN37ed) - W9ZIH (EN51nv)	23-Jul-05
Rain Scatter	676	KC0IYT (EN34nl) - VE4MA (EN91lu)	24-Jun-05
Rain Scatter	676	W0ZQ (EN34it) - VE4MA (EN19lu)	24-Jun-05
Rain Scatter	654	K0AWU (EN37ed) - N4PZ (EN52gb)	19-Jul-06
Rain Scatter	644	K0AWU (EN37ed) - K2YAZ (EN74av)	26-Jun-07
Rain Scatter	641	W7XU (EN13lm) - N4PZ (EN52gb)	17-Jun-10
Rain Scatter	627	N0OY (EM18ct) - AA5AM (EM13sg)	21-Aug-21
Rain Scatter	617	KM0T (EN13vc) - W9ZIH (EN51nv)	24-May-04
Rain Scatter	590	NT0V (EN08oc) - KM0T (EN13vc)	18-Aug-05
Tropo (C)	1226	N0OY (EM18ct) - VE4MA (EN19lu)	14-Aug-22
Tropo (C)	1098	N0OY (EM18ct) - W8BYA (EN70jt)	11-Jul-22
Tropo (C)	765	W7XU (EN15lj) - W9ZIH (EN51nv)	22-Aug-10
Tropo (C)	714	W7XU (EN15lj) - N4PZ (EN52gb)	22-Aug-10
10 GHz 9th			
Rain Scatter	889	W8BYA (EN70jt) - W0LGQ (EN21ci)	22-Jun-22
Rain Scatter	772	W8BYA (EN70jt) - K3TUF (FN10we)	16-Jun-22
Rain Scatter	738	WB9SNR (EN62ac) - W2DRZ (FN02la)	16-Aug-97
Rain Scatter	727	W9ZIH (EN51nv) - VE3KRP (EN58jk)	08-Jul-07
Rain Scatter	709	N4PZ (EN52gb) - VE3KRP (EN58jk)	08-Jul-07
Rain Scatter	701	W8BYA (EN70jt) - K1RZ (FM19jh)	16-Jul-20
Rain Scatter	695	W9ZIH (EN51nv) - K0AWU (EN37ed)	23-Jul-05

Rain Scatter	662	N8PUM (EN66dl) - W8BYA (EN70jt)	11-Aug-21
Rain Scatter	654	N4PZ (EN52gb) - K0AWU (EN37ed)	19-Jul-06
Rain Scatter	641	N4PZ (EN52gb) - W7XU (EN13lm)	17-Jun-10
Rain Scatter	617	W9ZIH (EN51nv) - KM0T (EN13vc)	24-May-04
Tropo (C)	1098	W8BYA (EN70jt) - N0OY (EM18ct)	11-Jul-22
Tropo (C)	1,086	W9ZIH (EN51nv) - WA2FGK (FN21bf)	25-Aug-09
Tropo (C)	1,046	N4PZ (EN52gb) - VE4MA (EN19lu)	22-Aug-10
Tropo (C)	765	W9ZIH (EN51nv) - W7XU (EN15lj)	22-Aug-10
Tropo (C)	714	N4PZ (EN52gb) - W7XU (EN15lj)	22-Aug-10
Tropo (C)	701	W8BYA (EN70jt) - K1RZ (FM19jh)	26-Aug-20
Tropo (C)	465	N4PZ (EN52gb) - K8MD (EN82bq)	21-Sep-08

10 GHz 8th

Rain Scatter	848	K8EB (EN73cb) - KM0T (EN13vc)	22-Jun-07
Rain Scatter	764	KB8VAO (EN91kt) _ VE2UG (FN35gs)	23-Jul-22
Rain Scatter	763	WA8TTM (EL98cl) - W4DEX (EM95tg)	22-Aug-05
Rain Scatter	644	K2YAZ (EN74av) - K0AWU (EN37ed)	26-Jun-07
Rain Scatter	573	K2YAZ (EN74av) - N0UK/0 (EN34jv)	26-Jun-07
Rain Scatter	558	N8PUM (EN66dl) - KB8U (EN82em)	04-Sep-11
Rain Scatter	547	N8PUM (EN66dl) - WA8VPD (EN82em)	04-Sep-11
Tropo (C)	1,039	WA8WZG (EN81om) - W5ZN (EM45dh)	17-Aug-99
Tropo (C)	937	KB8U (EN71sw) - K1TEO (FN31jh)	16-Sep-20
Tropo (C)	919	KB8U (EN71sw) - W4ZRZ (EM63st)	13-Nov-06
Tropo (C)	465	K8MD (EN82bq) - N4PZ (EN52gb)	21-Sep-08

10 GHz 7th

Rain Scatter	79	W7GLF (CN87vr) - W7LHL (CN87ua)	17-Feb-03
Tropo (C)	315	W7PUA (CN84io) - KD7TS (CN87ui)	30-Jan-03

10 GHz 6th

Rain Scatter	660	W6OYJ (DM12mq) - WB6CWN (DM08pk)	06-Sep-96
Tropo (C)	1,460	AD6FP (CM96wa) - 4C2WH (DL34wt)	19-Aug-07
Tropo (C)	1,448	KH6WZ (DM05ax) - 4C2WH (DL34wt)	19-Aug-07
Tropo (C)	1,448	N6CA (DM05ax) - 4C2WH (DL34wt)	19-Aug-07
Tropo (C)	1,315	KN6VR (DM04am) - 4C2WH (DL34wt)	18-Aug-07
Tropo (C)	1,315	W6QIW (DM04am) - 4C2WH (DL34wt)	18-Aug-07
Tropo (C)	1,303	WA6QYR (DM04bk) - 4C2WH (DL34wt)	18-Aug-07
Tropo (C)	1,290	AA6IW (DM04ek) - 4C2WH (DL34wt)	18-Aug-07
Tropo (C)	1,290	KE6HPZ (DM04ek) - 4C2WH (DL34wt)	18-Aug-07
Tropo (C)	1,286	KB8VAO (DM04ms) - 4C2WH (DL34wt)	18-Aug-07
Tropo (C)	1,286	N6DN (DM04ms) - 4C2WH (DL34wt)	18-Aug-07
Tropo (C)	1,286	WT6K (DM04ms) - 4C2WH (DL34wt)	18-Aug-07
Tropo (P)	1,282	W1LP/mm (DL34ja) - WB6CWN (DM04eg)	20-Sep-01

10 GHz 5th			
Rain Scatter	682	W5LUA (EM13qc) - WQ0P (EM19wf)	15-May-22
Rain Scatter	643	W5LUA (EM13qc) - N0OY (EM18ct)	13-May-22
Rain Scatter	627	AA5AM (EM13sg) - N0OY (EM18ct)	21-Aug-21
Rain Scatter	515	W5LUA (EM13qc) - W5ZN (EM45dh)	17-Jun-00
Tropo (C)	1,609	W5LUA (EM13qc) - K0VXM (EL98pj)	04-Jun-12
Tropo (C)	1,039	W5ZN (EM45dh) - WA8WZG (EN81om)	17-Aug-99
Tropo (C)	915	W5LUA (EM13qc) - K4XR (EM64nl)	09-Aug-07
Tropo (C)	335	AA5AM (EM13sg) - WA5YWC (DM93xn)	16-Sep-18
10 GHz 4th			
Rain Scatter	1,008	W4DEX (EM95tg) - AF1T (FN41ee)	21-Aug-05
Rain Scatter	763	W4DEX (EM95tg) - WA8TTM (EL98cl)	22-Aug-05
Rain Scatter	710	W4DEX (EM95tg) - K2TXB (FM29pt)	21-Aug-04
Tropo (C)	1,609	K0VXM (EL98pj) - W5LUA (EM13qc)	04-Jun-12
Tropo (C)	1,212	W4DEX (EM95tg) - K1WHS (FN43mj)	25-Sep-04
Tropo (C)	1,041	K1MAP/4 (FM14ux) - K1WHS (FN43mj)	22-Sep-09
Tropo (C)	919	W4ZRZ (EM63st) - KB8U (EN71sw)	13-Nov-06
Tropo (C)	917	W4DEX (EM95tg) - K1TEO (FN31jh)	03-Oct-05
Tropo (C)	915	K4XR (EM64nl) - W5LUA (EM13qc)	09-Aug-07
Tropo (C)	845	NA4M (FM08us) - N1JEZ/1 (FN44ig)	18-Sep-10
Tropo (C)	802	K1MAP/4 (FM14ux) - W1AIM/1 (FN41ee)	21-Sep-09
Tropo (C)	802	K1MAP/4 (FM14ux) - W1GHZ/1 (FN41ee)	21-Sep-09
Tropo (C)	797	K1MAP/4 (FM15ua) - W1AIM/1 (FN41ee)	21-Sep-09
Tropo (C)	797	K1MAP/4 (FM15ua) - W1GHZ/1 (FN41ee)	21-Sep-09
Tropo (C)	704	K1MAP/4 (FM26aq) - K2TXB/1 (FN41ql)	20-Sep-09
Tropo (C)	704	K1MAP/4 (FM26aq) - W1MKY/1 (FN41ql)	20-Sep-09
Tropo (C)	704	K1MAP/4 (FM26qa) - AF1T/1 (FN41ql)	20-Sep-09
Tropo (C)	537	ND3F (FM26aw) - K1TEO (FN31jg)	
10 GHz 3rd			
Rain Scatter	593	KB8VAO/3 (FN00rg) - AF1T/1 (FN41ee)	17-Aug-03
Tropo (C)	1,086	WA2FGK (FN21bf) - W9ZIH (EN51nv)	25-Aug-09
10 GHz 2nd			
Rain Scatter	738	W2DRZ (FN02la) - WB9SNR (EN62ac)	16-Aug-97
Rain Scatter	710	K2TXB (FM29pt) - W4DEX (EM95tg)	21-Aug-04
10 GHz 1st			
Rain Scatter	1,008	AF1T/1 (FN41ee) - W4DEX (EM95tg)	21-Aug-05
Rain Scatter	721.5	AF1T (FN41ee) - VE3SMA (FN03bi)	18-Aug-19
Rain Scatter	721.5	K1RZ (FN41ee) - VE3SMA (FN03bi)	18-Aug-19

Rain Scatter	721.5	K3WHC (FN41ee) - VE3SMA (FN03bi)	18-Aug-19
Rain Scatter	721.5	W1MKY (FN41ee) - VE3SMA (FN03bi)	18-Aug-19
Rain Scatter	593	AF1T/1 (FN41ee) - KB8VAO/3 (FN00rg)	17-Aug-03
Tropo (C)	1,212	K1WHS (FN43mj) - W4DEX (EM95tg)	25-Sep-04
Tropo (C)	937	K1TEO (FN31jh) - KB8U (EN71sw)	16-Sep-20
Tropo (C)	917	K1TEO (FN31jh) - W4DEX (EM95tg)	03-Oct-05
Tropo (C)	845	N1JEZ/1 (FN44ig) - NA4N (FM08us)	18-Sep-10
Tropo (C)	537	K1TEO (FN31jg) - ND3F (FM26aw)	
10 GHz XE			
Tropo (C)	1,460	4C2WH (DL34wt) - AD6FP (CM96wa)	19-Aug-07
Tropo (C)	1,448	4C2WH (DL34wt) - KH6WZ (DM05ax)	19-Aug-07
Tropo (C)	1,448	4C2WH (DL34wt) - N6CA (DM05ax)	19-Aug-07
Tropo (C)	1,315	4C2WH (DL34wt) - W6QIW (DM04am)	18-Aug-07
Tropo (C)	1,303	4C2WH (DL34wt) - WA6QYR (DM04bk)	18-Aug-07
Tropo (C)	1,290	4C2WH (DL34wt) - AA6IW (DM04ek)	18-Aug-07
Tropo (C)	1,290	4C2WH (DL34wt) - KE6HPZ (DM04ek)	18-Aug-07
Tropo (C)	1,286	4C2WH (DL34wt) - KB8VAO (DM04ms)	18-Aug-07
Tropo (C)	1,286	4C2WH (DL34wt) - N6DN (DM04ms)	18-Aug-07
Tropo (C)	1,286	4C2WH (DL34wt) - WT6K (DM04ms)	18-Aug-07
10 GHz VE			
Rain Scatter	791	VE3KRP (EN58gk) - KM0T (EN13vc)	14-Aug-07
Rain Scatter	753	VE4MA (EN19lu) - KM0T (EN13vc)	25-Aug-05
Rain Scatter	727	VE3KRP (EN58jk) - W9ZIH (EN51nv)	08-Jul-07
Rain Scatter	726	VA3TO (FN03cn) - K1RZ (FN41ee)	20-Aug-22
Rain Scatter	726	VA3TO (FN03cn) - AF1T (FN41ee)	20-Aug-22
Rain Scatter	726	VA3TO (FN03cn) - K3WHC (FN41ee)	20-Aug-22
Rain Scatter	726	VA3TO (FN03cn) - W1MKY (FN41ee)	20-Aug-22
Rain Scatter	721.5	VE3SMA (FN03c) - AF1T (FN41ee)	18-Aug-19
Rain Scatter	721.5	VE3SMA (FN03c) - K1RZ (FN41ee)	18-Aug-19
Rain Scatter	721.5	VE3SMA (FN03c) - K3WHC (FN41ee)	18-Aug-19
Rain Scatter	721.5	VE3SMA (FN03c) - W1MKY (FN41ee)	18-Aug-19
Rain Scatter	709	VE3KRP (EN58jk) - N4PZ (EN52gb)	08-Jul-07
Rain Scatter	704	VE4MA (EN19lu) - W7XU (EN13lm)	17-Jun-10
Rain Scatter	676	VE4MA (EN19lu) - KC0IYT/0 (EN34nl)	24-Jun-05
Rain Scatter	676	VE4MA (EN19lu) - W0ZQ/0 (EN34nl)	24-Jun-05
Tropo (C)	1223	VE4MA (EN19lu) - N0OY (EM18ct)	14-Aug-22
Tropo (C)	1,046	VE4MA (EN19lu) - N4PZ (EN52gb)	22-Aug-10
24 GHz			
Snow Scatter	259	VA3TO (EN93qj) - K2UA (FN12fs)	04-Feb-23
Snow Scatter	259	VA3ELE (EN93qj) - K2UA (FN12fs)	04-Feb-23

Rain Scatter	285	W6QIW (DM04MS) - N9JIM (CM97TB)	15-Aug-20
Rain Scatter	283	KM0T (EN13vc) - W0ZQ/0 (EN35ab)	31-Dec-05
Rain Scatter	220	VA3ELE (FN13ku) - VA3TO (FN03df)	30-Apr-22
Rain Scatter	218	KM0T (EN13vc) - W0ZQ/0 (EN15wb)	02-Apr-06
Rain Scatter	206	VA3ELE (EN95xk) - VA3TO/VE3GHZ (FN03an)	17-May-22
Rain Scatter	195	KD7TS (CN87ui) - W7SZ (CN85uo)	28-Sep-07
Rain Scatter	119	KM0T (EN13vc) - N0DQS (EN22ge)	26-Aug-03
Tropo (C)	543	W5LUA (EM13qc) - WW2R/5 (EM41hc)	07-Sep-02
Tropo (C)	526	WB6CWN/6 (DM04ms) - AD6FP/6 (CM88ws)	21-Aug-10
Tropo (C)	412	KC6QHP/6 (DM04ms) - AD6FP/6 (CM98qf)	22-Aug-10
Tropo (C)	375	K6GZA/6 (CM97hm) - AD6FP/6 (DM04ms)	16-Sep-00
Tropo (C)	375	AD6FP/6 (CM97hm) - W6QI/6 (DM04ms)	20-Aug-05
Tropo (C)	313	W6QI/6 (DM04ms) - AD6FP/6 (DM07dm)	21-Aug-05
Tropo (C)	311	N1JEZ/1 (FN44ig) - KA1OJ/1 (FN41ll)	19-Aug-12
Tropo (C)	290	KB8VAO/6 (DM04ms) - W6QI/6 (DM07gi)	20-Sep-04
Tropo (C)	285	N1JEZ/1 (FN44ig) - KA1OJ/1 (FN51av)	17-Sep-06
Tropo (C)	266	WA6EXV (DM06wl) - K6OW (DM14kf)	05-Jul-97
Tropo (C)	257	KK6TG (CM98mr) - WB7ABP (CN80on)	12-Sep-92
Tropo (C)	253	VA3ELE (EN94wc) - K2UA (FN12fs)	13-Aug-22
Tropo (C)	222	VA3ELE (FN13ku) - VA3TO (FN03df)	07-Sep-19

47 GHz

Snow Scatter	125	VA3TO (EN92mv) - VA3ELE (FN03dm)	13-Nov-22
Snow Scatter	117	VA3ELE (FN03qv) - VA3TO (FN03df)	02-Jan-22
Rain scatter	132	VA3TO (FN03cf) - VE3ELE (FN03rx)	16-Dec-22
Rain scatter	88	VA3ELE (FN03ab) - VE3KH (FN03cg)	05-Apr-22
Rain scatter	75	VA3ELE (FN03dm) - VA3TO	26-Mar-22
Tropo (C)	344.8	AD6FP /6 (DM07as) - W6QIW/6 (DM04ms)	19-Sep-15
Tropo (C)	343	W6QI/6 (DM04ms) - AD6FP/6 (DM07bs)	30-Oct-05
Tropo (C)	246	W0EOM/6 (CM97ei) - KF6KVG/6 (DM06ms)	09-Feb-03
Tropo (C)	244	VA3ELE (EN93wv) - K2UA (FN12fs)	13-Aug-22
Tropo (C)	232	KB8VAO/6 (CM96qi) - AD6FP/6 (DM04ms)	18-Sep-04
Tropo (C)	222	VA3ELE (FN13ku) - VA3TO (FN03df)	30-Apr-22
Tropo (C)	215	KT1J/N1JEZ (FN34bi) - VE2UG/VE3FN (FN26rf)	30-Jun-16
Tropo (C)	207.5	W5LUA/7 (DM42ok56ig) - N0IO/7 (DM33rn26sp)	09-Mar-19
Tropo (C)	207.5	W5LUA/7 (DM42ok56ig) - W7QQ/7 (DM33rn26sp)	09-Mar-19
Tropo (C)	205	N1JEZ/1 (FN44ig) - WA1MBA/1 (FN42bl)	03-Jul-05
Tropo (C)	174	W3IY/4 (FN10ff) - W4SW/4 (FM08us)	14-Nov-01
Tropo (C)	120	NU7Z (CN87ms) - KD7TS (CN96aw)	04-Oct-03

75 GHz

LOS	289	AD6IW (CN90fl) - KF6KVG (CM97av)	23-Jun-14
LOS	289	AD6IW (CN90fl) - K6GZA (CM97av)	23-Jun-14

LOS	207.5	W5LUA/7 (DM42ok56ig) - N0IO/7 (DM33rn26sp)	09-Mar-19
LOS	207.5	W5LUA/7 (DM42ok56ig) - W7QQ/7 (DM33rn26sp)	09-Mar-19
LOS	207.5	VE4MA/W7 (DM42ok56ig) - W7QQ/7 (DM33rn26sp)	09-Mar-19
LOS	207.5	VE4MA/W7 (DM42ok56ig) - N0IO/7 (DM33rn26sp)	09-Mar-19
LOS	207.5	K8ZR/7 (DM42ok56ig) - W7QQ/7 (DM33rn26sp)	09-Mar-19
LOS	207.5	K8ZR/7 (DM42ok56ig) - N0IO/7 (DM33rn26sp)	09-Mar-19
LOS	205	N1JEZ/1 (FN44ig) - WA1MBA/1 (FN42bl)	19-Sep-14
LOS	177	AD6FP/6 (CM88qp) - KF6KVG/6 (CM97ad)	01-Mar-02
LOS	177	W0EOM/6 (CM88qp) - KF6KVG/6 (CM97ad)	01-Mar-02
LOS	132.3	KB8VAO (EN81pm46lk) - K8ZR (EN91ktooix)	22-Feb-20
LOS	118	KB8VAO (EN81pm46lk) - K8ZR (EN91hq17pi)	22-Feb-20
LOS	110	K2AD (EM96ur) - W2SZ (FM07fm)	20-May-99
LOS	98	KB8VAO (EN81pm46lk) - K8ZR (EN91fo33rf)	22-Feb-20
LOS	86.6	KB8VAO (EN81pm46lk) - K8ZR (EN91em28co)	22-Dec-19
LOS	60	W2SZ (FM07fm) - WA4RTS (FM08ia)	01-May-99
122 GHz			
LOS	139	K6ML (CM88wj75on) - KB6BA (CM97bd18vj)	17-Feb-20
LOS	139	K6ML (CM88wj75on) - N9JIM (CM97bd18vj)	17-Feb-20
LOS	114	WA1ZMS/4 (EM96ur) - W4WWQ/4 (FM07fm)	18-Jan-05
LOS	80.2	K6ML (CM97av91) - KB6BA (CM97bd18vj)	16-Dec-19
LOS	32	K9PW/W8 (EN74ax92cf) - KB8U (EN75ee40al)	25-Oct-21
LOS	30	WA1ZMS/4 (FM07fm) - W4WWQ/4 (FM07ji)	02-Apr-03
LOS	24.8	W0EOM/6 (CM97cj) - KF6KVG/6 (CM87xh)	27-Aug-04
LOS	20.7	W4WWQ/4 (FM07hj) - WA1ZMS/4 (FM07fl)	11-Mar-03
LOS	3.5	AA5AM (EM13sg) - W5LUA (EM13sb)	17-Sep-20
LOS	1.1	WA1MBA (FN32ri) - WB2BYW (FN32rj)	11-Jul-94
LOS	1	N1JEZ/1 (FN34ha) - KT1J (FN34ha)	23-Aug-08
134 GHz			
LOS	114.4	WA1ZMS/4 (EM96ur) - W4WWQ/4 (FM07fm)	26-Feb-06
LOS	1.3	N1JEZ/4 (FM18gx) - WA1ZMS/4 (FM18gx)	25-Apr-19
LOS	1.3	N1JEZ/4 (FM18gx) - WA1MBA/4 (FM18gx)	25-Apr-19
142 GHz			
LOS	79.7	W2SZ/4 (FM07fm) - WA1ZMS/4 (EM96wx)	12-Jan-03
LOS	61.6	W2SZ/4 (FM07fm) - WA4RTS/4 (FM08ib)	01-Jan-01
LOS	34	WA1ZMS (FM05fm) - WA4RTS (FM05ji)	06-Nov-00
LOS	11.7	KF6KVG (CM87uk) - W0EOM (CM87wj)	19-Oct-99
241 GHz			
LOS	114	WA1ZMS/4 (FM07fm) - W4WWQ/4 (EM96ur)	21-Jan-08
LOS	79.7	WA1ZMS/4 (EM96wx) - W2SZ/4 (FM07fm)	17-Feb-04

LOS	61.8	W2SZ/4 (FM07fm) - W4WWQ/4 (EM97xe)	03-Dec-03
LOS	11.4	WA1ZMS/4 (FM07ln) - W4WWQ/4 (FM07jn)	11-Mar-02
LOS	7.3	WA1ZMS (FM07jj) - W4WWQ (FM07ji)	23-Feb-02
LOS	1.12	N1JEZ (FN34ha) - W1GHZ (FN34ha)	01-Mar-23
Micrometer Radio			
322 GHz	1.4	WA1ZMS/4 (FM07ji) - W4WWQ/4 (FM07ji)	04-Mar-03
322 GHz	1.12	N1JEZ (FN34ha) - W1GHZ (FN34ha)	01-Mar-23
322 GHz	0.5	WA1ZMS/4 (FM07ji) - W4WWQ/4 (FM07ji)	01-Mar-02
322 GHz	0.05	W2SZ (FM07ji) - WA4RTS (FM07ji)	15-Dec-01
403 GHz	1.42	WA1ZMS/4 (FM07ji) - W4WWQ/4 (FM07ji)	21-Dec-04
403 GHz	0.52	WA1ZMS/4 (FM07ji) - W4WWQ/4 (FM07ji)	11-Apr-03
Light			
474 THz	192.6	WB7VVD (DM34hb) - KC7AED (DM43iq)	21-Sep-97
474 THz	92.8	K6KWQ (CM94) - W2ODH (DM04)	08-Jun-90
474 THz	81.6	XE2AT (DL81vq) - XE2ZB (DL80vx)	25-Aug-05
475 THz	1.15	N1JEZ/1 (FN35pa) - VE2JWH (FN35pa)	03-Oct-14
678 THz	248	WA7LYI (DM34tf) - KY7B (DM42ok)	08-Jun-91