

## VLA Utilization Report December 2002

Progm	Observer	Affiliation	Program Title	Bands cm	Observing Date	Sched Hours
AA267	Alexander, P. Riley, J. Pooley, G.G. Fabian, A.C. Hardcastle, M. Worrall, D. Cotter, G. Inskip, K. Allen, S. Crawford, C.	Cambridge MRAO Cambridge Cambridge Bristol Bristol Cambridge Cambridge Cambridge Cambridge	Formation of cold clouds by FR II radio sources	2, 3.6, 6	27	2.0
AB1031	Brogan, C.L. Kassim, N. Lazio, J.	NRAO-Socorro NRL NRL	Low frequency observations of the W51 Complex	90	13, 30	4.0
AB1038	Bolatto, A. Leroy, A. Simon, J. Blitz, L.	Calif.-Berkeley Calif.-Berkeley Calif.-Berkeley Calif.-Berkeley	Atomic hydrogen in dwarf galaxies	20	16, 19, 20	20.0
AB1056	Blomme, R. Prinja, R. Runacres, M.C.	Royal Obs Belgium University College Royal Obs Belgium	Structure in the stellar wind of the B0 Ia star Epsilon Ori	0.7, 3.6	18	4.0
AB1060	Butler, B. Stern, S.A.	NRAO-Socorro Southwest Research	7mm observations of Pluto/Charon and Triton	0.7	1, 5, 8	12.0
AB1061	Bolton, S. Levin, S. Klein, M. Bastian, T. Bourdarie, S. Santos-Costa, D. Sault, R. Gulkis, S.	JPL JPL JPL NRAO-CV ONERA ONERA ATNF JPL	Observations of Jupiter's Synchrotron Emission	6, 20	4, 11	4.5
AC624	Clemens, M. Alexander, P. Cotter, G. Longair, M.S. Nikolic, B.	Cambridge Cambridge Cambridge Cambridge Cambridge	Comparison of thermal continuum emission with mid-IR PAH features	2	28, 31	3.0
AC628	Castelletti, G. Kassim, N. Dubner, G.	IAFE NRL IAFE	Supernova remnant W44 at low frequency	90	14	4.0
AC654	Cannon, J.M. Kunth, D. Leitherer, C. Mas-Hesse, M. Ostlin, G. Petrosian, A. Skillman, E.D.	Minnesota IAP (Paris) STScI LAE (Madrid) Stockholm Byurakan Minnesota	VLA HI Imaging of HST Selected LyA Starburst Galaxies	20 line	8	4.0
AC662	Claussen, M.J. Wootten, H.A.	NRAO-Socorro NRAO-CV	Observations of Water and hydroxyl masers toward stars with planetary systems	1.3, 20	7, 14, 21	4.5
AD470	Dahlem, M. Ehle, M.	ESO-Chile ESA	HI observations of galaxies with radio halos	20 line	13	8.0
AD471	Di Francesco, J. Webster, Z. Welch, W.J.	NRC Calif., Berkeley Calif., Berkeley	High resolution continuum observations of the NGC 1333 IRAS 4A envelope	0.7 w/BP104	2	5.8
AD473	Dunn, D. dePater, I. Molnar, L.	Berkeley Calif-Berkeley Calvin College	Observations of Saturn's Rings at large opening angles	2 w/test	13	11.9
AG592	van Gorkom, J. Bravo-Alfaro, H. Dwarakanath, K. Guhathakurta, P. Poggianti, B. Schiminovich, D. Valluri, M. Verheijen, M. Wilcots, E. Zabludoff, A.	Columbia Guanajuato NRAO-Socorro Calif., Santa Cruz Padova Caltech Rutgers NRAO-Socorro Wisconsin Wisconsin	HI survey of clusters in the local universe	20 line	3, 4, 10, 11, 16, 23, 28	46.0
AG626	Gaensler, B. Brogan, C. Kassim, N. Lazio, J.	CfA NRAO-Socorro NRL NRL	90 cm survey of the inner galaxy	90	7	5.0
AH752	Hunter, D. Hunsberger, S. Wilcots, E. Simpson, C. Elmegreen, B.	Lowell Lowell Wisconsin Florida Int. IBM	Origin of dwarf galaxies	20 line	15	8.0

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AH795	Hunter, D. Tomita, A. Sunada, K. Elmegreen, B. Brinks, E.	Lowell Wakayma Nobeyama IBM Guanajuato	Galaxies with CO J=1-0 observations	20 line	29	6.0
AH801	van der Hulst, T. Sakai, S. Kennicutt, R.C.	Groningen Calif., Los Angeles Arizona	HI in star-forming dwarf galaxies in Abell 1367	20 line	8	6.0
AI102	Iono, D. Yun, M.S.	U. Mass Massachusetts	Galaxies in close collision	20 line	3, 16, 23, 30, 31	39.5
AI104	Ivion, R.J. Greve, T.R. Carilli, C.L. Papadopoulos, P. Lewis, G.F.	ROE Edinburgh NRAO-Socorro Leiden AAO	Mapping high-z gas-rich mergers via 12CO J=1-0	0.7, 1.3	19, 24	10.0
AK509	Kulkarni, S.K. Frail, D. Galama, T.J. Bloom, J.S. Berger, E. Harrison, F.A.	Caltech NRAO-Socorro Caltech Caltech Caltech Caltech	Radio afterglows from gamma ray bursts	w/BP104	5,7,8,11-15, 19-23,26-28	22.4
AK554	Koopmans, L.V.E. deBruyn, A.G. Fassnacht, C.D. Wambsganss, J. Blandford, R.D.	Caltech NFRA STScI Potsdam Caltech	Compact halo objects at z=0.41 via radio microlensing in B1600+434	2, 3.6, 6	1,3,5,8,10,1 3,14,16,23,2 6,28,30	12.5
AL563	Lu, F. Lang, C.C. Wang, D.	Massachusetts Massachusetts Massachusetts	The Crab-like SNR G54.1+.3	3.6, 6 w/BP104	2	8.0
AL581	Lara, L. Giovannini, G. Dallacasa, D. Stanghellini, C.	IAA Bologna Bologna Noto	Old emission from young radio sources	20	9, 14	8.0
AM702	Markovic, T. Owen, F. Eilek, J.	NMIMT NRAO-Socorro NMIMT	Radio halos in Abell Clusters of galaxies	20	5	5.0
AM721	McLaughlin, M. Lorimer, D. Cordes, J. Camilo, F. Hankins, T. Kern, J.	Jodrell Bank Jodrell Bank Cornell Columbia NMIMT NMIMT	Search for radio pulsations from the X-ray point source in Cas A	20	6	20.0
AM727	Monnier, J.D. Greenhill, L.J. Tuthill, P.G. Danchi, W.C.	CfA CfA Sydney NASA/GSFC	Colliding wind binary WR 112	3.6	8	1.5
AM734	Murgia, M. Parma, P. Mack, K-H. deRuiter, H.	Bologna Bologna ASTRON Bologna	Ultra steep spectrum radio galaxies	6, 20	15, 20, 21	23.0
AM735	Markovic, T. Owen, F. Eilek, J.	NMIMT NRAO-Socorro NMIMT	Central radio sources in cooling core clusters	20	3, 7, 8, 26	17.5
AM737	Mundell, C.G. Wilson, A.S. Schinnerer, E. Wilcots, E.M. Ulvestad, J.S. McKay, N.P.F.	John Moores Maryland Caltech Wisconsin NRAO-Socorro John Moores	HI imaging survey of Seyfert galaxies	20 line	20, 21, 27, 29	24.0
AM740	Morganti, R. Oosterloo, T. Emonts, B. van der Hulst, J.M. van Moorsel, G.	NFRA NFRA Kapteyn Institute Groningen NRAO-Socorro	Neutral hydrogen in radio galaxies	20 line	21, 22, 22	16.0
A0159	Owen, F. O'Dea, C. van der Marel, R. Laine, S. Postman, M. Lauer, T.	NRAO-Socorro STScI STScI STScI STScI NOAO	Radio sources and black holes in brightest cluster galaxies	20	24	7.0
AP448	Pihlstrom, Y. Conway, J. Rupen, M.	NRAO-Socorro Onsala NRAO-Socorro	Search for water absorption in Cygnus A	1.3 line	27	6.0

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Progm	Observer	Affiliation	Program Title	Bands cm	Observing Date	Sched Hours
AR476	Rupen, M.P. Mioduszewski, A.J. Dhawan, V.	NRAO-Socorro NRAO-Socorro NRAO-Socorro	Galactic X-ray binaries and transients	0.7, 1.3, 2, 3.6, 20, 90	7, 8, 20, 29, 29	5.5
AR477	Rawlings, S. Willott, C. McLure, R. Mitchell, E. Dunlop, J. Jarvis, M. Hill, G.	Oxford Oxford Oxford Oxford Edinburgh Leiden McDonald	Radio structures over a wide range of luminosities	3.6, 6	31	3.5
AR494	Ratay, D.L. Gottesman, S.T.	Florida Florida	HI Observations of barred, flocculent galaxies	20 line w/BG129	9, 12	30.0
AS738	Spekkens, K. Giovannelli, R. Haynes, M.	Cornell Cornell Cornell	The fastest rotator galaxies	20 line	1, 22, 29	24.5
AT279	Takakuwa, S. Lim, J. Choi, M.	Academia Sinica Academia Sinica Academia Sinica	Binary low-mass protostellar system L1551 IRS 5	0.7	7	2.0
AT282	Testi, L. Natta, A. Wilner, D. Shepherd, D.	Arcetri Arcetri CfA NRAO-Socorro	Herbig Ae stars	0.7, 3.6	28	5.5
AT286	Thornley, M. Kennicutt, R. Kewley, L. Helou, G.	NRAO Arizona CfA IPAC	Radio-FIR relation on kpc scales in SIRTIF Nearby Galaxy Survey	20	27	12.0
AU092	Udomprasert, P.S. Mason, B.S. Myers, S. Pearson, T.J. Readhead, A.C.S.	Caltech NRAO-GB NRAO-Socorro Caltech Caltech	Observations of central radio point sources in Sunyaev-Zeldovich effect clusters	0.7, 1.3, 3.5	22	9.0
AV260	Vogt, N.P. Adams, C.	NMSU NMSU	Spiral galaxies infalling into hot clusters	20 line w/BP104	1, 5	25.5
AW589	Wilcots, E.M. Westfall, K. Prescott, M.	Wisconsin Wisconsin Wisconsin	High resolution HI study of NGC 2537	20	30	8.5
AW593	Weiler, K.W. Stockdale, C. Sramek, R.A. Van Dyk, S.D. Panagia, N. Marcaide, J.M. Lewin, W.H.G. Pooley, D. Immler, S.	NRL NRL NRAO-Socorro IPAC STScI Valencia MIT MIT Massachusetts	ToO observations of Supernovae	1.3, 2, 3.6, 6, 20, 90	4, 8, 11	3.5
AY134	Young, L.M. van Gorkom, J. Lamb, S.A.	NMIMT Columbia Illinois	Interacting spiral NGC 4647	20 line	2, 7	10.0
AY135	Young, L.M. van Gorkom, J. Statler, T.S. Rundle, D.M. Dijkstra, M.	NMIMT Columbia Ohio U. NMIMT Columbia	HI Imaging of two elliptical galaxies and comparison with CO	20 line w/BG129	9, 14, 15, 20	24.0
AZ136	Zhao, J-H. McGary, R.S. Goss, M. Bower, G.	CfA CfA NRAO-Socorro Calif.-Berkeley	VLA monitoring the 106-day cycle of Sgr A	0.7, 1.3, 2	5, 13, 19, 28	4.5
AZ141	Zhang, X.Z. Jin, C.J. Reich, W. Tian, W.W. Wu, J.H.	NAO China NAO China MPIfR (Bonn) Beiging NAO China	Observations of four new superova remnant candidates	20, 90	29	6.0
BG129	Greenhill, L.J. Chandler, C.J. Reid, M.J. Moran, J.M. Diamond, P.J.	CfA NRAO-Socorro CfA CfA Jodrell Bank	SiO proper motions in Orion KL	0.7 Single antenna VLBI w/AY135, AR494	9	5.0
BP104	Peck, A. Taylor, G.	CfA NRAO-Socorro	Jet and hotspot velocities in compact symmetric objects	3.6 Single antenna VLBI w/AV260, AY135, AL563, AD471, AK509	2	24.0

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Progm	Observer	Affiliation	Program Title	Bands cm	Observing Date	Sched Hours
	Staff	NRAO	Baselines, Pointing, Delays			49.0
			Maintenance			47.4
			Move/Operations			9.9
			Software			23.0
			Standard field observation			8.9
			General tests			21.7
			Christmas Shutdown		24, 25	32.1

The average downtime was 4.6%.

The array was scheduled for 95.7% (714.0 hours)

554.0 hours (74.3% of time) for astronomical programs

89.6 hours (12.0% of time) for tests/calibration

70.4 hours (9.4% of time) for maintenance

Total 714.0 hours (95.7%) scheduled.

Array was in the C configuration from December 1 through December 31

The following independent proposals shared simultaneous observing time  
(34.7 hours total simultaneous observing):

Projects	Hours
AD471/BP104	5.8
AD473/MOVE/OP	9.9
AK509/BP104	0.6
AL563/BP104	8.0
AR494/BG129	1.2
AV260/BP104	0.4
AY134/BP104	5.0
AY135/BG129	3.8
TEST/MOVE/OP	0.0

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Progm	Observer	Affiliation	Program Title	Bands cm	Observing Date	Sched Hours
AB1031	Brogan, C.L. Kassim, N. Lazio, J.	NRAO-Socorro NRL NRL	Low frequency observations of the W51 Complex	90	2	2.0
AB1041	Bosma, A. Freeman, K.C. Bureau, M. Athanasoula, E. O'Brien, J.	Marseille Mt. Stromlo Columbia Marseille Mt. Stromlo	The edge-on barred spiral NGC 5746	20	8	12.0
AB1059	Bastian, T.S. Gary, D.E. Lee, J.W. Benz, A.O. Vilmer, N. Klein, K.-L.	NRAO-CV NJIT Arizona ETH Paris Paris	Joint microwave and hard x-ray imaging of impulsive solar flares	2, 3.6, 6	1	8.0
AB1060	Butler, B. Stern, S.A.	NRAO-Socorro Southwest Research	7mm observations of Pluto/Charon and Triton	0.7	22	4.0
AB1061	Bolton, S. Levin, S. Klein, M. Bastian, T. Bourdarie, S. Santos-Costa, D. Sault, R. Gulkis, S.	JPL JPL JPL NRAO-CV ONERA ONERA ATNF JPL	Observations of Jupiter's Synchrotron Emission	6, 20	1, 5, 8, 10, 11, 21	20.7
AB1078	Barcons, X. Gonzalez-Serrano, J. Warwick, R.S. Carballo, R. Carrera, F.J. Ceballos, M.T.	Cantabria Cantabria Leicester Santander Cantabria Cantabria	Morphology of radio- and X-ray-loud QSO RXJ1011.2+5545	3.6	13	1.0
AC642	Claussen, M.J. Sahai, R. Marvel, K.B. Boboltz, D.A.	NRAO-Socorro JPL AAS USNO	Search for OH and H2O maser emission from IRC+10 216	1.3, 20	22	6.0
AD459	Dolag, K. Govoni, F. Schindler, S. Feretti, L.	MPIA Bologna John Moores Bologna	Faraday rotation in nearby hot galaxy clusters	3.6	3	6.5
AG592	van Gorkom, J. Bravo-Alfaro, H. Dwarakanath, K. Guhathakurta, P. Poggianti, B. Schiminovich, D. Valluri, M. Verheijen, M. Wilcots, E. Zabludoff, A.	Columbia Guanajuato NRAO-Socorro Calif., Santa Cruz Padova Caltech Rutgers NRAO-Socorro Wisconsin Wisconsin	HI survey of clusters in the local universe	20 line w/BG129	6,12,13,15,2 0,25,26	53.1
AG626	Gaensler, B. Brogan, C. Kassim, N. Lazio, J.	CfA NRAO-Socorro NRL NRL	90 cm survey of the inner galaxy	90	23	5.0
AG633	Gentile, G. Salucci, P. Kalberla, P. Pizzella, A. Klein, U. Jozsa, G.	Bonn Trieste Bonn Padova Bonn Bonn	Dark matter in spiral galaxies	20 line	8, 9, 16	24.1
AH794	Henkel, C. Nagar, N. Blocker, T.	MPIfR Arcetri MPIfR	Sakurai's object: the ionized nebula at radio wavelengths	1.3, 6	29	4.0
AI104	Ivison, R.J. Greve, T.R. Carilli, C.L. Papadopoulos, P. Lewis, G.F.	ROE Edinburgh NRAO-Socorro Leiden AAO	Mapping high-z gas-rich mergers via 12CO J=1-0	0.7, 1.3	11,14	9.0
AJ291	Johnson, K. Kobulnicky, C. Goss, M.	NRAO-Socorro Wisconsin NRAO-Socorro	Candidate ultradense extragalactic HII regions	1.3	15	9.0
AJ293	Johnson, K. Kobulnicky, C.	NRAO-Socorro Wisconsin	Q-band observations of optically thick free-free sources in He2-10	0.7	21	4.0

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Prog#	Observer	Affiliation	Program Title	Bands cm	Observing Date	Sched Hours
AK509	Kulkarni, S.R. Berger, E. Bloom, J.S. Frail, D.A. Galama, T. Harrison, F.A.	Caltech Caltech Caltech NRAO-Socorro Caltech Caltech	Radio afterglows from gamma ray bursts	0.7, 1.3, 2, 3.5, 6, 20	2,6,8-10,12, 14,16,18,19, 21,29	13.2
AK550	Kulkarni, S.R. Berger, E. Chevalier, R.A. Soderberg, A.M.	Caltech Caltech Virginia Caltech	Supernovae with suspect central engines	1.3, 3.5, 6, 20	7, 26	0.8
AK553	Kenney, J. van Gorkom, J. Vollmer, B.	Yale Columbia MPIfR	HI in highly inclined ram pressure stripped spirals in Virgo Cluster	20 line	14	6.0
AK554	Koopmans, L.V.E. deBruyn, A.G. Fassnacht, C.D. Wambsganss, J. Blandford, R.D.	Caltech NFRA STScI Potsdam Caltech	Compact halo objects at z=0.41 via radio microlensing in B1600+434	2, 3.6, 6	3,5,7,10,14, 18,21,24,27, 29	11.6
AL575	Lee, J.C. Impey, C. van Zee, L.	Arizona Arizona Indiana	Kinematics of low surface brightness galaxies	20	18	6.5
AL579	Levinson, A. Ofek, E.O. Waxman, E. Gal-Yam, A. Frail, D.A.	Tel Aviv Tel Aviv Weizmann Institute Tel Aviv NRAO-Socorro	Orphan afterglows from Gamma-ray bursts: candidates from FIRST	3.6, 20	11	3.5
AL581	Lara, L. Giovannini, G. Dallacasa, D. Stanghellini, C.	IAA Bologna Bologna Noto	Old emission from young radio sources	20	25	4.0
AM727	Monnier, J.D. Greenhill, L.J. Tuthill, P.G. Danchi, W.C.	Cfa Cfa Sydney NASA/GSFC	Colliding wind binary WR 112	3.6	22	1.5
AM735	Markovic, T. Owen, F. Eilek, J.	NMIMT NRAO-Socorro NMIMT	Central radio sources in cooling core clusters II	20 w/BH106	5, 12, 29	14.5
AM737	Mundell, C.G. Wilson, A.S. Schinnerer, E. Wilcots, E.M. Ulvestad, J.S. McKay, N.P.F.	John Moores Maryland Caltech Wisconsin NRAO-Socorro John Moores	HI imaging survey of Seyfert galaxies	20 line	25	6.0
AM740	Morganti, R. Emonts, B. Oosterloo, T. van der Hulst, J.M. van Moorsel, G.	ASTRON Kapteyn ASTRON Kapteyn NRAO-Socorro	Neutral hydrogen and the origin of radio galaxies	21	2	9.0
A0170	O'Dea, C. Guerra, E. Daly, R. Donahue, M.	STScI Rowan Penn State STScI	Propagation of powerful radio galaxies	6, 20, 90	4	6.0
AP438	Pisano, D.J. Guzman, R. Kobulnicky, C. Gallego, J. Bershady, M.	ATNF Florida Wisconsin Complutense Wisconsin	Dynamics and star formation properties of blue compact galaxies	6, 20	1	3.0
AR476	Rupen, M.P. Mioduszewski, A.J. Dhawan, V.	NRAO-Socorro NRAO-Socorro NRAO-Socorro	Galactic X-ray binaries and transients	0.7, 1.3, 2, 3.6, 20, 90	5, 11, 23	5.7
AR477	Rawlings, S. Willott, C. McLure, R. Mitchell, E. Dunlop, J. Jarvis, M. Hill, G.	Oxford Oxford Oxford Oxford Edinburgh Leiden McDonald	Radio structures over a wide range of luminosities	3.6, 6	9	5.0
AR495	Rupen, M.P. Homan, J. Jonker, P. Fender, R. van der Klis, M. Migliari, S.	NRAO-Socorro Amsterdam Cambridge Amsterdam Amsterdam Amsterdam	Radio/x-ray connection in the Z source GX 17+2	0.7, 1.3, 2, 3.6, 6, 20	4, 9, 15	24.0

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Progrm	Observer	Affiliation	Program Title	Bands cm	Observing Date	Sched Hours
AR499	Reid, M.A. Wilson, C.D.	McMaster McMaster	Ammonia mapping of massive YSO envelopes	1.3 line	7	8.0
AR501	Roberts, M. Hessels, J. Ransom, S. Kaspi, V.	McGill McGill CfA McGill	Searching for a nebula around PSR J2021+3651	20	1	5.5
AS741	Saikia, D.J.	NCRA-Pune	Two candidate double-double radio galaxies	3.6, 20	27	2.5
AT278	Taylor, G. Chandler, C.	NRAO-Socorro NRAO-Socorro	Increasing the sky coverage of VLA calibrators	0.7	29	16.0
AT284	Thorsett, S. Fruchter, A. Rhoads, J. Kouveliotou, C. Tanvir, N. Hjorth, J. Pian, E. Wijers, R.	Calif., Santa Cruz STScI STScI NASA-MSFC Hertfordshire Copenhagen CNR SUNY	Panchromatic studies of gamma-ray bursts	2, 3.5, 6, 20	Time shared with AK509	0.0
AT285	Thornley, M. Kennicutt, R. Kewley, L. Regan, M. Walter, F.	NRAO Arizona CfA STScI Caltech	HI in galaxies in the SIRTIF Nearby Galaxies Survey	20 line	3,4,10,12,16,19,25,26	32.0
AT287	Trung, D.V. Lim, J.	Academia Sinica Academia Sinica	Equatorial disk and central torus of the Egg nebula	0.7, 1.3 line	3, 24	15.0
AT288	Tavarez, M. Mateo, M. Dalcanton, J.	Univ. of Michigan Univ. of Michigan Washington	Late-type galaxies as probes of dark matter halos and MoND	20 line	21, 23, 24	27.5
AU092	Udomprasert, P.S. Mason, B.S. Myers, S.T. Pearson, T.J. Readhead, A.C.S.	Caltech Caltech NRAO-Socorro Caltech Caltech	Radio point sources in Sunyaev-Zeldovich effect clusters	0.7, 1.3, 3.6	2, 2	9.0
AV259	Vergani, D. Aronica, G. Pohlen, M. Dettmar, R.-J. Klein, U.	Bonn Marseille Inst. de Canarias Bochum Bonn Univ.	HI in disk galaxies with merging bulges	20 line	17, 22, 23, 24	32.5
AV260	Vogt, N.P. Adams, C.	NMSU NMSU	Spiral galaxies infalling into hot clusters	20 line	1,30	14.5
AW588	Wilcots, E.M. Sanders, W. Doane, N.	Wisconsin Wisconsin Wisconsin	Searching for "local bubbles" in face-on spirals	20 line	27, 29	16.0
AW593	Weiler, K.W. Stockdale, C. Sramek, R.A. Van Dyk, S.D. Panagia, N. Marcaide, J.M. Lewin, W.H.G. Pooley, D. Immler, S.	NRL NRL NRAO-Socorro IPAC STScI Valencia MIT MIT Massachusetts	ToO observations of Supernovae	1.3, 2, 3.6, 6, 20, 90	8,14,26	3.1
AZ136	Zhao, J-H. McGary, R.S. Goss, M. Bower, G.	CfA CfA NRAO-Socorro Calif.-Berkeley	VLA monitoring the 106-day cycle of Sgr A	0.7, 1.3, 2	3,10,18,29	5.5
BG129	Greenhill, L.J. Chandler, C.J. Reid, M.J. Moran, J.M. Diamond, P.J.	CfA NRAO-Socorro CfA CfA Jodrell Bank	SiO proper motions in Orion KL	0.7 Single antenna VLBI w/AG592	5	7.2
BH104	Homan, D.C.	NRAO-CV	The 180d Misaligned jet in PKS 1510-089	20 Single antenna VLBI w/AM735, AK509, Test, AT278	29	10.5
GB045	Bartel, N. Bietenholz, M.F. Rupen, M.	York York NRAO-Socorro	SN 1986J - evolution of its shell and search for a pulsar nebula	6 Phased array VLBI	10	10.0
GL026	Lonsdale, C.J. Lonsdale, C.J. Smith, H.E. Diamond, P.J.	Haystack Haystack IPAC Jodrell Bank	High sensitivity imaging of supernovae and masers in Arp 220	20 Phased Array VLBI	16	11.0

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GM048	Marcaide, J.M. Guirado, J.C. Alberdi, A. Lara, L. Ros, E. Diamond, P.J. Shapiro, I.I. Preston, R.A. Schilizzi, R.T. Mantovani, F. Perez-Torres, M.A. Trigilio, C. Van Dyk, S. Weiler, K.W. Sramek, R.A. Whitney, A.R.	Valencia Valencia IAA IAA MPIFR Jodrell Bank CfA JPL JIVE Bologna Bologna Noto IPAC NRL NRAO-Socorro Haystack	Monitoring the expansion of SN 1993J at 6 and 18cm	6, 20 Phased Array VLBI	7, 17	25.1
GV016	Vermeulen, R.C. Ros, E. Kadler, M. Zensus, J.A. van Langevelde, H.J. Kellermann, K.I. Cohen, M.H.	NFRA MPIFR MPIFR MPIFR JIVE NRAO-CV Caltech	OH and HI in Seyfert galaxy NGC 1052	20 Phased Array VLBI	18	10.5
	Staff	NRAO	Baselines, Pointing, Delays Maintenance Software Standard Field Observation General tests Thanksgiving Shutdown		14 27	48.9 48.7 29.8 9.0 35.0 27.2

The average downtime was 3.4%.

The array was scheduled for 96.2% (694.8 hours)  
 533.6 hours (73.9% of time) for astronomical programs  
 82.6 hours (11.4% of time) for tests/calibration  
 78.6 hours (10.9% of time) for maintenance  
 Total 694.8 hours (96.2%) scheduled.

Array was in the C configuration from November 1 through November 30

The following independent proposals shared simultaneous observing time (17.7 hours total simultaneous observing):

Projects	Hours
AG592/BG129	7.2
AK509/BH106	1.5
AM735/BH106	6.3
AT278/BH106	0.2
Test/BH106	2.5

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Progm	Observer	Affiliation	Program Title	Bands cm	Observing Date	Sched Hours
AA274	Anderson, J.M. Ulvestad, J.S.	NRAO-Socorro NRAO-Socorro	Survey of low luminosity active galactic nuclei	0.7, 1.3, 2, 6 w/BH97, BC81	7, 14	10.5
AB1053	Brosius, J. White, S. Gary, D.	NASA-GSFC Maryland New Jersey Tech	Solar coronal magnetography using radio and EUV data	2, 3.6, 6, 20 w/BC81, BH97	6, 12, 14, 17, 19	22.0
AB1058	Benz, A.O. Bastian, T.S. Mann, G. Gary, D.	ETH NRAO-CV Potsdam New Jersey Tech	Imaging of electron beam emissions in the solar corona	20, 90	1, 3, 5, 7	15.5
AB1059	Bastian, T.S. Gary, D.E. Lee, J.W. Benz, A.O. Vilmer, N. Klein, K.-L.	NRAO-CV New Jersey Tech Arizona ETH Paris (France) Paris Obs.	Joint microwave and hard x-ray imaging of impulsive solar flares	2, 3.6, 6	18, 20, 24, 27	30.0
AB1061	Bolton, S. Levin, S. Klein, M. Bastian, T. Bourdarie, S. Santos-Costa, D. Sault, R. Gulkis, S.	JPL JPL JPL NRAO-CV ONERA ONERA ATNF JPL	Observations of Jupiter's Synchrotron Emission	6, 20	28	2.0
AC652	Carilli, C. Petric, A. Cox, P. Bertoldi, F. Omont, A.	NRAO-Socorro Columbia IAP-Paris MPIFR IAP-Paris	Imaging the CO emission from the z=4.12 QSO 2322+1944	0.7	20, 26, 27	21.0
AC655	Contreras, M.E. Rodriguez, L.F. Wilkin, F.P.	UNAM UNAM UNAM	Survey of T Tauri Stars with Infrared Companions	3.6	9	2.5
AC662	Claussen, M. Wootten, W.A. Butler, B. Chandler, C. Rupen, M. Greenhill, L.	NRAO-Socorro NRAO-CV NRAO-Socorro NRAO-Socorro NRAO-Socorro Cfa	Attempting to confirm water masers in extrasolar planets	1.3 line	8, 10, 11	18.0
AE134	Eyres, S. Bode, M. O'Brien, T. Davis, R. Iverson, R. Evans, A.	Central Lancashire John Moores Jodrell bank Jodrell Bank ROE Keele	Target of opportunity observations of classical novae	1.3, 2, 3.6, 6, 20	11	2.0
AE148	Edge, A.C. Frayer, D.	Durham Caltech	Atomic hydrogen in emission in cooling flows	20 line	12, 13	12.5
AG592	van Gorkom, J. Bravo-Alfaro, H. Dwarakanath, K. Guhathakurta, P. Poggianti, B. Schiminovich, D. Valluri, M. Verheijen, M. Wilcots, E. Zabludoff, A.	Columbia Guanajuato NRAO Calif., Santa Cruz Padova Caltech Rutgers Wisconsin Wisconsin Wisconsin	HI survey of clusters in the local universe	20 line	15, 17, 21, 24, 29, 30	61.0
AG618	Giroletti, M. Giovannini, G. Treves, A. Falomo, R. Dallacasa, D.	Bologna Bologna Como Padova Bologna	A sample of nearby BL lac objects	3.6, 20, 90	7	4.4
AG635	Gross, C. Cohen, A. Lazio, J. Lane, W. Perley, R. Condon, J. Cotton, B. Ensslin, T. Kronberg, P.	NRL NRL NRL NRL NRAO-Socorro NRAO-CV NRAO-CV MPIFR LANL	Ultra steep spectrum source survey	20	8	6.9
AH787	Harris, D.E. Kim, D.W. Fomalont, E.	Cfa Cfa NRAO-CV	X-ray - radio comparison in Fornax A	2, 6	5, 6	10.0

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Progm	Observer	Affiliation	Program Title	Bands cm	Observing Date	Sched Hours
AH793	Hogg, D.E.	NRAO-CV	Are there HI clouds outside the disks of spiral galaxies?	20 line	25, 26, 27	18.0
A1104	Iverson, R.J. Greve, T.R. Carilli, C.L. Papadopoulos, P. Lewis, G.F.	ROE Edinburgh NRAO-Socorro Leiden AAO	Mapping high-z gas-rich mergers via 12CO J=1-0	0.7, 1.3	26	5.0
AJ291	Johnson, K. Kobulnicky, C. Goss, M.	NRAO-Socorro Wisconsin NRAO-Socorro	Candidate ultradense extragalactic HII regions	1.3	21	9.0
AJ295	Junor, W Harris, D.E. Biretta, J.A. Perlman, E.	New Mexico CfA STScI Maryland	Monitoring M87 jet component HST-1	0.7	19	1.0
AK509	Kulkarni, S.K. Frail, D. Galama, T.J. Bloom, J.S. Berger, E. Harrison, F.A.	Caltech NRAO-Socorro Caltech Caltech Caltech Caltech	Radio afterglows from gamma ray bursts	w/BH97	1,2,5,6,8-11 ,15-19,21,24 ,25,27	23.0
AK549	Kukula, M. Dunlop, J. Floyd, D. McLure, R.	IfA IfA Royal Observatory Oxford	Radio emission from radio quiet quasars with good HST images	6	10, 17, 19, 25, 26	12.5
AK550	Kulkarni, S. Berger, E. Chevalier, R.A. Soderberg, A.M.	Caltech Caltech Univ. Virginia Caltech	Supernovae with suspect central engines	1.3, 3.5, 6, 20	28	1.5
AK553	Kennedy, J. van Gorkom, J. Vollmer, B.	Yale Columbia MPIFR	HI in highly inclined ram pressure stripped spirals in Virgo Cluster	20 line	28, 31	12.0
AK554	Koopmans, L.V.E. deBruyn, A.G. Fassnacht, C.D. Wambsganss, J. Blandford, R.D.	Caltech NFRA STScI Potsdam Caltech	Compact halo objects at z=0.41 via radio microlensing in B1600+434	2, 3.6, 6 w/BH97	1,4,7,11,17, 20,24,26,28	12.0
AL575	Lee, J.C. Impey, C. van Zee, L.	Arizona Arizona Indiana	Kinematics of low surface brightness galaxies	20	28	12.0
AL578	Landt, H. Perlman, E.S. Padovani, P.	STScI Maryland STScI	A faint sample of BL Lacertae objects	20	2,3,5,11,18	16.5
AL583	LaRosa, T.N. Nord, M. Lazio, J.	Kennesaw NRL NRL	Polarimetric study of six candidate nonthermal filaments in the GC	6	5, 6	12.0
AM702	Markovic, T. Owen, F. Eilek, J.	NMIMT NRAO-Socorro NMIMT	Radio halos in Abell Clusters of galaxies	20	23, 28, 29	10.5
AM727	Monnier, J.D. Greenhill, L.J. Tuthill, P.G. Danchi, W.C.	CfA CfA Sydney NASA/GSFC	Colliding wind binary WR 112	3.6 w/BH97	14	1.5
AM737	Mundell, C.G. Wilson, A.S. Schinnerer, E. Wilcots, E.M. Ulvestad, J.S. McKay, N.P.F.	John Moores Maryland Caltech Wisconsin NRAO-Socorro John Moores	HI imaging survey of Seyfert galaxies	20 line w/BH97	14, 19	12.0
AO159	Owen, F. O'Dea, C. van der Marel, R. Laine, S. Postman, M. Lauer, T.	NRAO-Socorro STScI STScI STScI STScI NOAO	Radio sources and black holes in brightest cluster galaxies	20 w/BG129	3, 6	20.5
AP438	Pisano, D.J. Guzman, R. Kobulnicky, C. Gallego, J. Bershady, M.	ATNF Florida Wisconsin Complutense Wisconsin	Dynamics and star formation properties of blue compact galaxies	6, 20 w/BC81	12, 13, 17, 18, 25, 31	57.0
AP444	Paredes, J.M. Ribo, M. Martí, J.	Barcelona Barcelona U. Jaen	Orbital modulation in the microquasar LS 5039	3.6, 6 w/BH97	1,4,7,11-15, 17-21	13.0

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Progm	Observer	Affiliation	Program Title	Bands cm	Observing Date	Sched Hours
AR476	Rupen, M.P. Mioduszewski, A.J. Dhawan, V.	NRAO-Socorro NRAO-Socorro NRAO-Socorro	Galactic X-ray binaries and transients	0.7, 1.3, 2, 3.6, 20, 90 w/BH97	4,7,15,17,21 ,27,28,31	11.5
AR491	Rodriguez-Rico, C.A. Goss, M. Zhao, J-H. Viallefond, F.	UNAM/NRAO NRAO-Socorro Cfa Paris Obs.	Recombination line H53 from ULIRG Arp 220	0.7	13, 25	13.0
AR499	Reid, M.A. Wilson, C.D.	McMaster McMaster	Ammonia mapping of massive YSO envelopes	1.3 line	28	8.0
AS738	Spekkens, K. Giovannelli, R. Haynes, M.	Cornell Cornell Cornell	The fastest rotator galaxies	20 line	6, 19	10.0
AT281	Trung, D.V. Liang, M.-C. Lo, K.Y. Wang, W.H.	Academia Sinica Academia Sinica NRAO-CV Hawaii	Three early merger systems	20 line	15	4.0
AT284	Thorsett, S. Fruchter, A. Hjorth, J. Kouveliotou, C. Pian, E. Rhoads, J. Tanvir, N. Wijers, R.	Calif., Santa Cruz STScI Copenhagen MSFC ITESRE-CNR STScI Hertfordshire Stony Brook	Panchromatic studies of gamma-ray bursts	2, 3.5, 6, 20	9, 12	2.4
AT285	Thornley, M. Kennicutt, R. Kewley, L. Regan, M. Walter, F.	NRAO Arizona Cfa STScI Caltech	HI in galaxies in the SIRTIF Nearby Galaxies Survey	20 line	1, 3	12.0
AT286	Thornley, M. Kennicutt, R. Kewley, L. Helou, G.	NRAO Arizona Cfa IPAC	Radio-FIR relation on kpc scales in SIRTIF Nearby Galaxy Survey	20	19,28,30	3.5
AU092	Udomprasert, P.S. Mason, B.S. Myers, S.T. Pearson, T.J. Readhead, A.C.S.	Caltech Caltech NRAO-Socorro Caltech Caltech	Radio point sources in Sunyaev-Zeldovich effect clusters	0.7, 1.3, 3.6	4, 5	5.5
AV259	Vergani, D. Aronica, G. Pohlen, M. Dettmar, R.-J. Klein, U.	Bonn Marseille Inst. de Canarias Bochum Bonn Univ.	HI in disk galaxies with merging bulges	20 line	4	8.0
AW593	Weiler, K.W. Stockdale, C. Sramek, R.A. Van Dyk, S.D. Panagia, N. Marcaide, J.M. Lewin, W.H.G. Pooley, D. Immler, S.	NRL NRL NRAO-Socorro IPAC STScI Valencia MIT MIT Massachusetts	ToO observations of Supernovae	1.3, 2, 3.6, 6, 20, 90	19, 30	2.5
AZ136	Zhao, J-H. McGary, R.S. Goss, M. Bower, G.	Cfa Cfa NRAO-Socorro Calif.-Berkeley	VLA monitoring the 106-day cycle of Sgr A	0.7, 1.3, 2	3, 12, 18, 24	6.6
BC081	Cotton, W.D. Fanti, C. Fanti, R. Dallacasa, D. Foley, A.R. Schilizzi, R.T. Spencer, R.E.	NRAO-CV Bologna Bologna Bologna NFRA JIVE Jodrell Bank	Faraday rotation in the core of 3C138	6 Single antenna VLBI w/AP438,AA274,AB1053	13	12.0
BG129	Greenhill, L.J. Chandler, C.J. Reid, M.J. Moran, J.M. Diamond, P.J.	Cfa NRAO-Socorro Cfa Cfa Jodrell Bank	SiO proper motions in Orion KL	0.7 Single antenna VLBI w/AO159	7	4.0
BH097	Hoffman, I. Goss, W.M. Brogan, C. Claussen, M.	NRAO-Socorro NRAO-Socorro NRAO-Socorro NRAO-Socorro	Full stokes observations of the 1720 MHz OH masers in W28	20 Single antenna VLBI w/AA274,AK554,AP444,AR476,AK509,AB1053,AM727,AM737	7, 14	11.1

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Progm	Observer	Affiliation	Program Title	Bands cm	Observing Date	Sched Hours
	Staff	NRAO	Baselines, Pointing, Delays			57.4
			Maintenance			57.4
			Move/Operations			5.0
			Software			39.0
			General tests			33.7

The average downtime was 3.5%.

The array was scheduled for 100.0% (747.1 hours)  
 554.9 hours (74.3% of time) for astronomical programs  
 95.7 hours (12.8% of time) for tests/calibration  
 96.5 hours (12.9% of time) for maintenance  
 Total 747.1 hours (100.0%) scheduled.

Array was in the CnB configuration from October 1 through October 8

Array was in the C configuration from October 8 through October 31

The following independent proposals shared simultaneous observing time  
 (29.1 hours total simultaneous observing):

Projects	Hours
AA274/BC81	5.5
AA274/BH97	0.6
AB1053/BC81	0.3
AB1053/BH91	1.6
AK509/BH97	0.5
AK554/BH97	1.0
AK554/BH97	2.0
AM727/BH97	1.5
AM737/BH97	0.9
AO159/BH129	4.9
AP438/BC81	6.2
AP444/BH97	1.0
AP444/BH97	1.0
AR476/BH97	2.0

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Progm	Observer	Affiliation	Program Title	Bands cm	Observing Date	Sched Hours
AA274	Anderson, J.M. Ulvestad, J.S.	NMIMT NRAO-Socorro	Survey of low luminosity active galactic nuclei	0.7, 1.3, 2, 6	29	1.5
AA276	Anderson, J.M. Ho, L.C. Ulvestad, J.S.	NMIMT Carnegie Obs. NRAO-Socorro	Globular cluster black hole in M31	3.6	11	2.0
AA277	Araya, E.	Puerto Rico	H2CO emission toward IRAS 18566+0408	20 line	18	2.0
AB0950	Becker, R.H. White, R.L. Helfand, D.J.	Calif.-Davis STScI Columbia	The FIRST survey	20	1, 7, 8	8.5
AB1035	Butler, B.	NRAO-Socorro	330 MHz observation of Venus	90	7, 8	16.5
AB1036	Best, P.	Edinburgh	SCUBA sources in z~1 clusters: confirmation of cluster membership	20	3	6.0
AB1041	Bosma, A. Freeman, K.C. Bureau, M. Athanassoula, E. O'Brien, J.	Marseille Mt. Stromlo Columbia Marseille Mt. Stromlo	The edge-on barred spiral NGC 5746	20	1	12.0
AB1052	Berger, E. Martin, E. Rutledge, R. Bildsten, L. Basri, G. Gizis, J. Hawley, S. Fleming, T. Liebert, J.	Caltech Hawaii Caltech Calif.-Santa Barbara Calif.-Berkeley Delaware Washington Arizona Arizona	L3.5 dwarf 2MASSW J0036159+182110	3.6	27	8.0
AB1057	Bagchi, J.	IUCAA	Diffuse sources in merging cluster Abell 3376	20, 90	28, 29	12.0
AB1065	Blomme, R.	Royal Obs Belgium	Early type stars with non-thermal emission: HD168112 and HD167971	3.6, 6, 20	10	1.5
AC624	Clemens, M. Alexander, P. Cotter, G. Longair, M.S. Nikolic, B.	Cambridge Cambridge Cambridge Cambridge Cambridge	Comparison of thermal continuum emission with mid-IR PAH features	3.6	2	0.9
AC645	Carilli, C. Bertoldi, F. Menten, K. Hasinger, G.	NRAO-Socorro MPIFR MPIFR MPIA	Going deeper in the Lockman Hole	20 w/BG129	5, 9, 10	18.0
AC654	Cannon, J.M. Kunth, D. Leitherer, C. Mas-Hesse, M. Ostlin, G. Petrosian, A. Skillman, E.D.	Minnesota IAP (Paris) STScI LAE (Madrid) Stockholm Byurakan Minnesota	VLA HI Imaging of HST Selected LyA Starburst Galaxies	20 line	29	4.0
AC656	Choi, M. Tatematsu, K.	Academia Sinica Ibaraki	Class 0/I protostar with hard X-ray flares in the R CrA Cloud	0.7	23	3.0
AC662	Claussen, M.J. H.A., Wootten	NRAO-Socorro NRAO-CV	Observations of water and hydroxyl masers toward stars with planetary systems	1.3, 20	29	1.0
AC663	Chandler, C.	NRAO-Socorro	H2O masers in planetary systems		4	2.0
AD458	Dickey, J. Heiles, C.	Minnesota Calif.-Berkeley	Variations in the HI optical depth toward compact continuum sources	20 line	2	24.0
AD470	Dahlem, M. Ehle, M.	ESO-Chile ESA	HI observations of galaxies with radio halos	20 line	26	6.0
AD473	Dunn, D. dePater, I. Molnar, L.	Berkeley Calif-Berkeley Calvin College	Observations of Saturn's Rings at large opening angles	3.6, 6	27, 30	24.0
AF390	Ferrari, C. Feretti, L. Giovannini, G. Maurogordato, S.	Cote d'Azur Bologna Bologna Cote d'Azur	Radio galaxies and diffuse emission in the merging cluster A521	20	22	6.5
AG627	Gaensler, B. Pooley, D. Lewin, W. D'Amico, N. Kaspi, V.	CfA MIT MIT Bologna McGill	Globular clusters NGC 6266 and 6366	20	3	5.0
AG629	Gibb, A.G.	Maryland	L379: a possible cluster of young massive stars	2, 3.6, 6	5	3.0
AH788	Holzappel, W. Carlstrom, J. Dawson, K.	Berkeley Chicago Calif.-Berkeley	Identification of point source contaminants to anisotropy fields	6	22	4.0

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Progm	Observer	Affiliation	Program Title	Bands cm	Observing Date	Sched Hours
AH800	Henkel, C. Tarchi, A. Peck, A. Nagar, N. Moscadelli, L.	MPIFR Bologna CFA Arcetri Cagliari	Water kilomasers in the FIR bright galaxies NGC 253 and NGC 3556	1.3 line	22, 28	6.0
AJ292	Jura, M. Reid, M. Lipsky, S.	UCLA CFA UCLA	Companion to VY CMA	1.3, 2 w/BA61	21, 23	12.5
AK509	Kulkarni, S.K. Frail, D. Galama, T.J. Bloom, J.S. Berger, E. Harrison, F.A.	Caltech NRAO-Socorro Caltech Caltech Caltech Caltech	Radio afterglows from gamma ray bursts		7-9,11-13,17 ,22,23,26,28	20.5
AK543	Koopmans, L.V.E. deBruyn, A.G. Fassnacht, C.D. Wambsganss, J. Blandford, R.D.	Caltech NFRA STScI Potsdam Caltech	Radio microlensing in B1600+434	2, 3.6, 6, 20	5,7,9,12,17, 23,28	8.0
AK546	Kempner, J. Condon, J.J.	Virginia NRAO-CV	Emission from the UGC 10853 group	20	6	4.0
AK555	Kondratko, P.T. Greenhill, L.J. Moran, J.M. Lovell, J.E. Jauncey, D.L. Kuiper, T.	Harvard CFA CFA ATNF ATNF JPL	Newly discovered water masers in AGNs	line	12	1.5
AL557	Lovell, J. Bignali, H. Jauncey, D. Tzioumis, A. Kedziora-Chudczer, L. Reynolds, J. Rickett, B. Marcquart, J.-P.	ATNF Adelaide ATNF ATNF ATNF Calif.-San Diego Groningen	Northern hemisphere intra-day variable survey	3.6, 6	13	96.0
AL577	Lim, J. Liang, M-C. Choi, M. Yu-Nung, S.	Academia Sinica Academia Sinica Academia Sinica NCU Taiwan	Imaging the circumstellar dust of intermediate mass stars	0.7, 1.3	22	2.5
AL578	Landt, H. Perlman, E.S. Padovani, P.	STScI Maryland-Baltimore STScI	A faint sample of BL Lacertae objects	20 w/BA61	20, 23, 29	7.0
AM681	Miller, N.A. Ledlow, M.J.	NASA-GSFC Gemini	Radio continuum survey of the Shapley supercluster	20	29	6.0
AM702	Markovic, T. Owen, F. Eilek, J.	NMIMT NRAO-Socorro NMIMT	Radio halos in Abell Clusters of galaxies	20	23, 28	8.0
AM714	Mack, K.-H. Prieto, A. Brunetti, G.	ASTRON ESO-Garching Bologna	Resolving radio hot spots	3.6, 6, 20	8	6.5
AM726	Martin, E.L. Berger, E. Rutledge, R.	Hawaii Caltech Caltech	Survey of radio-emission in ultracool dwarfs	3.6	1, 12, 13	6.5
AM727	Monnier, J.D. Greenhill, L.J. Tuthill, P.G. Danchi, W.C.	CFA CFA Sydney NASA-GSFC	Colliding wind binary WR 112	3.6	10	1.0
AN112	Neff, S. Rots, A. Fabbiano, G. Zezas, A.	NASA-GSFC CFA CFA CFA	Radio continuum in the Antennae merger system	20 w/BA61	21	4.0
AP434	Petric, A. Carilli, C. Rupen, M. Strauss, M. Fan, X. Omont, A. Cox, P. Bertoldi, F. Menten, K.	Columbia NRAO-Socorro NRAO-Socorro Princeton Princeton IAP-Paris IAP-Paris MPIFR MPIFR	Radio emission from the highest redshift QSOs	20	2	2.6

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Progrm	Observer	Affiliation	Program Title	Bands cm	Observing Date	Sched Hours
AP438	Pisano, D.J. Guzman, R. Kobulnicky, C. Gallego, J. Bershady, M.	ATNF Florida Wisconsin Complutense Wisconsin	Dynamics and star formation properties of blue compact galaxies	20 w/BG129	1, 4, 5, 6	38.5
AP442	Pihlstrom, Y. Conway, J.	NRAO-Socorro Onsala	Excited OH in 1323+321	6 line w/BA61	20	6.0
AP444	Paredes, J.M. Ribo, M. Martí, J.	Barcelona Barcelona U. Jaen	Orbital modulation in the microquasar LS 5039	3.6, 6	23, 27, 29	2.5
AR476	Rupen, M.P. Mioduszewski, A.J. Dhawan, V.	NRAO-Socorro NRAO-Socorro NRAO-Socorro	Galactic X-ray binaries and transients	0.7, 1.3, 2, 3.6, 20, 90	1,9,11,17,22 ,28	9.5
AR488	Reid, M.A. Wilson, C.	McMaster McMaster	Ammonia (1,1) and (2,2) in star forming cores	1.3 line	7	4.0
AR500	Roy, S. Rao, A.P.	NCRA NCRA	Magnetic field direction in Sgr-C	3.6, 6	21	7.0
AS729	Subrahmanyam, R. Saripalli, L.	ATNF ATNF	Restarting beams in the giant radio galaxy B11545-321	6	27	6.5
AS730	Simpson, C. Rawlings, S. Ivison, R. Sekiguchi, K.	Subaru Oxford ROE Subaru	Radio imaging of the Subaru/XMM Newton deep survey field	20	2, 8, 9, 12	18.5
AS735	Sridharan, T.K. Zhang, Q. Wyrowski, F. Hunter, T. Beuther, H. Schilke, P.	CfA CfA MPIfR CfA MPIfR MPIfR	Resolving disks around two high-mass (proto) stars	1.3 line w/BH97	26	7.5
AS739	Schmitt, H.R.	NRAO-Socorro	Search for HI absorption in the Seyfert galaxy IRAS 01475-0740	20 line	19	1.0
AS744	Sjouwerman, L. Dickel, J. Garcia, M. Primini, F.	NRAO-Socorro Illinois CfA CfA	Flare in M31*, nuclear source in M31	3.5, 6	13	2.0
AT278	Taylor, G. Chandler, C.	NRAO-Socorro NRAO-Socorro	Increasing the sky coverage of VLA calibrators	0.7	19	21.0
AT285	Thornley, M. Kennicutt, R. Kewley, L. Regan, M. Walter, F.	NRAO Arizona CfA STScI Caltech	HI in galaxies in the SIRTIF Nearby Galaxies Survey	20 line	22, 28, 30	10.5
AV257	Venturi, T. Bardelli, S. Dallacasa, D. Brunetti, G. Hunstead, R.W.	Bologna Bologna Bologna Bologna Sydney	Low frequency observations of the radio halo in A3562	90	30	2.0
AW563	Williams, P.M. Dougherty, S.M.	Edinburgh DRAO	Continuing monitoring of WR 125	3.6, 6, 20	10	1.5
AW576	Winn, J. Biggs, A. Fassnacht, C. Koopmans, L. Lovell, J. Rusin, D.	CfA Jodrell Bank STScI Caltech ATNF CfA	Time delays in gravitational lenses	3.6	3,7,9,12	5.5
AW588	Wilcots, E.M. Sanders, W. Doane, N.	Wisconsin Wisconsin Wisconsin	Searching for "local bubbles" in face-on spirals	20 line	6	8.0
AW593	Weiler, K.W. Stockdale, C. Sramek, R.A. Van Dyk, S.D. Panagia, N. Marcaide, J.M. Lewin, W.H.G. Pooley, D. Immler, S.	NRL NRL NRAO-Socorro IPAC STScI Valencia MIT MIT Massachusetts	ToO observations of Supernovae	1.3, 2, 3.6, 6, 20, 90	21	1.5
AY136	Yusef-Zadeh, F. Law, C. Cotton, W.	Northwestern Northwestern NRAO-CV	327 MHz mapping near l,b=-1d,-0.5d	90	30	8.0
AZ136	Zhao, J-H. McGary, R.S. Goss, W.M. Bower, G.	CfA CfA NRAO-Socorro Calif.-Berkeley	VLA monitoring the 106-day cycle of Sgr A	0.7, 1.3, 2	9, 17, 28	4.5

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BA061	Attridge, J.M. Homan, D.C. Pollack, L.K.	Haystack NRAO-CV Calif.-Berkeley	Polarimetric imaging of the blazar J1058+0133	2, 3.6, 6 Single antenna VLBI w/AL578/test/AP442/AJ292/AN112/AR500	20, 21	23.7
BG129	Greenhill, L.J. Chandler, C.J. Reid, M.J. Moran, J.M. Diamond, P.J.	CfA NRAO-Socorro CfA CfA Jodrell Bank	SiO proper motions in Orion KL	0.7 Single antenna VLBI w/AP438/test/AC645	5	8.0
BH097	Hoffman, I. Goss, M. Brogan, C. Claussen, M.	NRAO-Socorro NRAO-Socorro NRAO-Socorro NRAO-Socorro	Full stokes observations of the 1720 MHz OH masers in W28	20 Single antenna VLBI w/AS735	26	5.2
BM180	Marvel, K.B. Mannings, V.	AAS IPAC	Water maser kinematics near Herbig Ae/Be stars	1.3 line	9, 12	6.5
	Staff	NRAO	Baselines, Pointing, Delays			61.0
			Maintenance			47.9
			Move/Operations			18.5
			Software			28.9
			General tests			29.6

The average downtime was 4.6%.

The array was scheduled for 100.0% (722.0 hours)  
 539.6 hours (74.7% of time) for astronomical programs  
 105.6 hours (14.6% of time) for tests/calibration  
 76.8 hours (10.7% of time) for maintenance  
 Total 722.0 hours (100.0%) scheduled.

Array was in the B configuration from September 1 through September 29

Array was in the CnB configuration from September 29 through September 30

The following independent proposals shared simultaneous observing time (36.9 hours total simultaneous observing):

Projects	Hours
AC645/BG129	1.7
AJ292/BA61	5.8
AL578/BA61	1.8
AN112/BA61	4.0
AP438/BG129	3.8
AP442/BA61	5.5
AR500/BA61	2.1
AS735/BH97	5.2
Test/BA61	2.5
Test/BA61	2.0
Test/BG129	2.5

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Progm	Observer	Affiliation	Program Title	Bands cm	Observing Date	Sched Hours
AB0950	Becker, R.H. White, R.L. Helfand, D.J.	Calif.-Davis STScI Columbia	The FIRST survey	20	2-5,8,12,16	64.0
AB1019	Brunthaler, A. Falcke, H. Aller, M. Aller, H. Terasranta, H. Bower, G.	MPIfR MPIfR Michigan Michigan Metsahovi Calif.-Berkeley	Monitoring the radio-intermediate quasar PG2209+184	1.3, 2, 3.6, 6, 20, 90	16	1.5
AB1038	Bolatto, A. Leroy, A. Simon, J. Blitz, L.	Calif.-Berkeley Calif.-Berkeley Calif.-Berkeley Calif.-Berkeley	Atomic hydrogen in dwarf galaxies	20	18, 23, 24, 25, 30	60.0
AB1045	Bower, G.C. Baganoff, F.	Calif.-Berkeley MIT	Radio identification of Chandra sources in the Galactic Center	3.6	17	4.0
AB1058	Benz, A.O. Bastian, T.S. Mann, G. Gary, D.E.	ETH NRAO-CV API Postdam NJIT	Imaging of electron beam emissions in the solar corona	20, 90 w/BG129	2,9,29	13.5
AC624	Clemens, M. Alexander, P. Cotter, G. Longair, M.S. Nikolic, B.	Cambridge Cambridge Cambridge Cambridge Cambridge	Comparison of thermal continuum emission with mid-IR PAH features	3.6	9, 13	3.0
AC645	Carilli, C. Bertoldi, F. Menten, K. Hasinger, G.	NRAO-Socorro MPIfR MPIfR MPIA	Going deeper in the Lockman Hole	20	17	7.0
AD466	Darling, J. Carilli, C. Cox, P. Bertoldi, F. Omont, A. Djorgovski, S.G.	Cornell NRAO-Socorro IAP-Paris MPIfR IAP-Paris Caltech	Does the IR quasar PSS 2322+1944 produce an OH gigamaser?	90	12	6.0
AG623	Gizani, N. Cohen, A. Kassim, N.	Lisbon NRL NRL	Spectral aging in Hercules A	90	29	4.0
AG625	Gomez, Y. Rodriguez, L.F. Ramos-Larios, G.	UNAM UNAM Guadalajara	Low-mass pre-main sequence stars around HII regions	3.6	6	12.5
AG626	Gaensler, B. Brogan, C. Kassim, N. Lazio, J.	Cfa NRAO-Socorro NRL NRL	90 cm survey of the inner galaxy	90	13, 15, 20, 22, 26	40.1
AH752	Hunter, D. Hunsberger, S. Wilcots, E. Simpson, C. Elmegreen, B.	Lowell Lowell Wisconsin Florida Int. IBM	Origin of dwarf galaxies	20 line	1,9,19	9.0
AH766	Hardcastle, M. Worrall, D. Birkinshaw, M.	Bristol Bristol Bristol	Jets in a Chandra sample of B2 radio galaxies	6	1, 6	11.0
AH782	Hardcastle, M.J.	Bristol	Microquasar GRS 1758-258	20	10	3.0
AH803	Hardcastle, M. Sakelliou, I.	Bristol Birmingham	4C34.16 - a WAT with X-ray emission		23	1.5
AJ289	Johnson, K. Goss, M. Sjouwerman, L.	NRAO-Socorro NRAO-Socorro NRAO-Socorro	6cm imaging of M31 nuclear region		12	2.0
AK509	Kulkarni, S.K. Frail, D. Galama, T.J. Bloom, J.S. Berger, E. Harrison, F.A.	Caltech NRAO-Socorro Caltech Caltech Caltech Caltech	Radio afterglows from gamma ray bursts		1,6,8,13,14, 16,17,19-21, 23,25,29	25.0
AK543	Koopmans, L.V.E. deBruyn, A.G. Fassnacht, C.D. Wambsganss, J. Blandford, R.D.	Caltech NFRA STScI Potsdam Caltech	Radio microlensing in B1600+434	2, 3.6, 6, 20	1,3,5,7,11,1 4,17,19,24,2 6,28,31	12.5
AK545	Kishimoto, M. Antonucci, R. Whysong, D. O'Dea, C.	Calif.-Santa Barbara Calif.-Santa Barbara Calif.-Santa Barbara STScI	Radio quiet quasars in elliptical hosts	90	1, 2	8.0

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Progm	Observer	Affiliation	Program Title	Bands cm	Observing Date	Sched Hours
AK555	Kondratko, P.T. Greenhill, L.J. Moran, J.M. Lovell, J.E. Jauncey, D.L. Kuiper, T.	CfA CfA CfA ATNF ATNF JPL	Newly discovered water masers in AGNs	1.3 line	5, 21	2.0
AL576	Lee, S-W. Irwin, J.A. Dickey, J.M. Henriksen, R.N. Chavez, T. Seagquist, E.R.	Toronto NCRA/Queen's Minnesota Queens Queens Toronto	Probing the halo-dynamics of the edge-on galaxy NGC 3556	20 w/move/op	3, 4, 10, 11	52.0
AM723	Marscher, A.P. Jorstad, S. McHardy, I.	Boston Boston Southampton	VLA/Chandra imaging of quasar jets	2	19, 20	10.0
AM726	Martin, E.L. Berger, E. Rutledge, R.	Hawaii Caltech Caltech	Survey of radio-emission in ultracool dwarfs	3.6	2,6,12,26	11.5
AM727	Monnier, J.D. Greenhill, L.J. Tuthill, P.G. Danchi, W.C.	CfA CfA Sydney NASA/GSFC	Colliding wind binary WR 112	3.6	16	1.5
AP430	Pedlar, A. Muxlow, T. Wills, K.	Jodrell Bank Jodrell Bank Sheffield U.	327 MHz observations of Messier 82	90	8	4.0
AP438	Pisano, D.J. Guzman, R. Kobulnicky, C. Gallego, J. Bershady, M.	ATNF Florida Wisconsin Complutense Wisconsin	Dynamics and star formation properties of blue compact galaxies	20	16, 24, 25, 29, 30, 31	52.0
AP439	Perlman, E.S. Biretta, J. Baum, S. O'Dea, C. Harris, D. Martel, A.	Maryland-Baltimore STScI STScI STScI CfA Johns Hopkins	Structure and physics of extragalactic jets	1.3, 3.6	15	12.0
AR476	Rupen, M.P. Mioduszewski, A.J. Dhawan, V.	NRAO-Socorro NRAO-Socorro NRAO-Socorro	Galactic X-ray binaries and transients	0.7, 1.3, 2, 3.6, 20, 90	4,6,12,17,19 ,28,30	11.5
AR479	Rusin, D. Biggs, A.D. Fassnacht, C.D. Koopmans, L.V.E. Lovell, J. Winn, J.N.	CfA Jodrell Bank STScI Caltech ATNF CfA	Which new radio lenses are variable?	3.6	10, 17	2.0
AR482	Rodriguez, L.F. Reipurth, B.	UNAM Hawaii	Exciting source of HH 92	3.6	1	6.0
AR485	Rupen, M. Migliari, S. Jonker, P. Fender, R. van der Klis, M. Homan, J.	NRAO-Socorro Amsterdam Cambridge Amsterdam Amsterdam Milan	RXTE and VLA observations of 4U 1728-34, Ser X-1, 4U 1820-30 and GX17+2	1.3, 2, 3.6, 6, 20	2, 5, 7	3.0
AR502	Ribo, M. Paredes, J.M. Bloom, J.S. Marti, J.	Barcelona Barcelona Caltech U. Jaen	Microquasar candidates	6	5	1.5
AS687	Soifer, B.T. Helou, G. Werner, M. Shupe, D. Storrie-Lombardi, L. Condon, J.J. Cotton, W.D.	Caltech IPAC JPL Caltech Caltech NRAO-CV NRAO-CV	the SIRTf First-look survey	20	8, 9	16.0
AS730	Simpson, C. Rawlings, S. Iverson, R. Sekiguchi, K.	Subaru Oxford ROE Subaru	Radio imaging of the Subaru/XMM Newton deep survey field	20	10,13,16,18- 20,22-24,29	45.5
AT258	Thilker, D.A. Elmegreen, B.G. Efremov, Y.N. Larsen, S.	John Hopkins Univers IBM Sternberg Copenhagen	HI imaging of giant bubbles and arcs in NGC 6946	20 Line	21, 23	12.0

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Prog#	Observer	Affiliation	Program Title	Bands cm	Observing Date	Sched Hours
AW576	Winn, J. Biggs, A. Fassnacht, C. Koopmans, L. Lovell, J. Rusin, D.	CfA Jodrell Bank STScI Caltech ATNF CfA	Time delays in gravitational lenses	3.6	1,3,5,9,11,14,17,19,25,29,31	12.6
AW579	Weiler, K.W. Stockdale, C. Sramek, R. Van Dyk, S. Panagia, N. Marcaide, J.M. Lewin, W.H.G. Pooley, D. Inmler, S.	NRL NRL NRAO-Socorro IPAC STScI Valencia MIT MIT Massachusetts	Properties of radio supernovae	2, 3.6, 6, 20, 90	15	1.0
AW582	Webster, Z. DiFrancesco, J. Anglada, G. Welch, W.J. Wilner, D.J. Rodriguez, L.F.	Calif.-Berkeley Calif.-Berkeley IAA Calif.-Berkeley CfA UNAM	The embedded protostars in NGC 1333	0.7	27	5.0
AW585	Wang, W-H. Chen, J. Gao, Y. Lo, K.Y. Dinh, V-T. Liang, M-C.	Hawaii Chicago IPAC Academia Sinica Academia Sinica Academia Sinica	HI in early stage interacting galaxies: NGC 6670 and Arp 256	20	11	9.0
AW588	Wilcots, E.M. Sanders, W. Doane, N.	Wisconsin Wisconsin Wisconsin	Searching for "local bubbles" in face-on spirals	20 line	31	8.0
AW590	Willson, R.F. Holman, G. Sui, L.	Tufts NASA-GSFC Catholic U.	VLA-HESSI-SOHO observations of solar flares and microflares	2, 3.6, 6	18, 20, 22	15.5
AY132	Young, L. Rundle, D.	NMINT NMINT	Elliptical galaxies: radio continuum and star formation	20	14	3.0
AZ136	Zhao, J-H. McGary, R.S. Goss, M. Bower, G.	CfA CfA NRAO-Socorro Calif.-Berkeley	VLA monitoring the 106-day cycle of Sgr A	0.7, 1.3, 2	7, 14, 19, 31	6.1
BG129	Greenhill, L.J. Chandler, C.J. Reid, M.J. Moran, J.M. Diamond, P.J.	CfA NRAO-Socorro CfA CfA Jodrell Bank	SiO proper motions in Orion KL	0.7 Single antenna VLBI w/baselines/AB1058	9	5.5
	Staff	NRAO	Baselines, Pointing, Delays Maintenance Move Software General tests			36.2 43.8 2.5 35.8 39.9

The average downtime was 4.7%.

The array was scheduled for 100.0% (746.1 hours)  
 590.4 hours (79.1% of time) for astronomical programs  
 76.1 hours (10.2% of time) for tests/calibration  
 79.6 hours (10.7.0% of time) for maintenance  
 Total 746.1 hours (100.0%) scheduled.

Array was in the B configuration from August 1 through August 31

The following independent proposals shared simultaneous observing time (8.0 hours total simultaneous observing):

Projects	Hours
AB1058/BG129	0.5
AL576/move/op	2.5
BG129/baselines	5.0

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Progm	Observer	Affiliation	Program Title	Bands cm	Observing Date	Sched Hours
AA270	Anderson, J. Ulvestad, J.S. Ho, L.C.	NMIMT NRAO-Socorro Carnegie Obs.	Spectral energy distributions of low-luminosity AGNs	2, 3.6, 6	29, 29	6.5
AA271	Armstrong, E.K. Helfand, D.J.	Columbia Columbia	Stellar radio candidates from the FIRST survey	3.6, 20	18	3.0
AB0950	Becker, R.H. White, R.L. Helfand, D.J.	Calif.-Davis STScI Columbia	The FIRST survey	20	4,5,8,11,15, 19,21,22,26- 28	114.0
AB1017	Blomme, R. Prinja, R.K. Runacres, M.C.	Royal Obs Belgium University College Royal Obs Belgium	The distant stellar wind of hot stars	20	18	2.5
AB1019	Brunthaler, A. Falcke, H. Aller, M. Aller, H. Terasanta, H. Bower, G.	MPIfR MPIfR Michigan Michigan Metsahovi Calif.-Berkeley	Monitoring the radio-intermediate quasar of cluster membership PG2209+184	1.3, 2, 3.6, 6, 20, 90	25	1.0
AB1036	Best, P.	Edinburgh	SCUBA sources in z <sup>1</sup> clusters: confirmation of cluster membership	20	28	6.0
AB1042	Berger, E. Kulkarni, S.R. Frail, D.A.	Caltech Caltech NRAO-Socorro	Gamma ray burst host galaxies	20	4	4.5
AB1063	Berger, E. Kulkarni, S.R.	Caltech Caltech	Type Ib/c SN 2002dg and SN 2002dn		4, 9	3.5
AC626	Carraminana, A. Rodriguez, L.F. Grenier, I.	INAOE UNAM Saclay	Egret sources with Beppo-SAX identifications	3.6, 6	8,26	2.0
AC641	Cheung, C. Roberts, D.H. Wardle, J.F.C. Sambruna, R.M. Maraschi, L. Tavecchio, F. Urry, C.M. Scarpa, R.	Brandeis Brandeis Brandeis George Mason Brera Brera Yale ESO	Deep 22 GHz imaging of new x-ray/optical jets in AGN	1.3	21	24.0
AD459	Dolag, K. Govoni, F. Schindler, S. Feretti, L.	MPIA Bologna John Moores Bologna	Faraday rotation in nearby hot galaxy clusters	6	13	6.5
AE147	Edge, A.C. Ebeling, H.	Durham Hawaii	Evolution of radio galaxies in clusters of galaxies	20	14	14.0
AG636	Greenhill, L. Kondratko, P. Lovell, J. Moran, J. Kuiper, T. Jauncey, D.	CfA Harvard ATNF CfA JPL ATNF	Newly discovered water masers in AGNs	1.3 line	3, 25, 26	4.0
AH753	Hunter, D. Elmegreen, B. Brinks, E. Westpfahl, D. Nordgren, T. Wilcots, E.	Lowell IBM Guanajuato NMIMT Lowell Wisconsin	Clouds, Porosity, and star formation in normal irregular galaxies	20	9, 12	12.0
AH764	Hardcastle, M. Kraft, R. Worrall, D.	Bristol CfA Bristol	Searching for proper motion in the jet of Centaurus A	3.6 w/BH97	12	3.5
AH775	Hyman, S. Lazio, J. Denn, G. Kassim, N.	Sweet Briar NRL Sweet Briar NRL	Monitoring the galactic center for transient detection	90	20	1.5
AH785	Hofner, P. Araya, E. Linz, H. Olmi, L. Kurtz, S. Cesaroni, R.	Puerto Rico Puerto Rico Puerto Rico Puerto Rico UNAM Arcetri	Interior structure of the hot-molecular core G31.41+0.31	0.7, 1.3, 3.6 w/BH97	12	8.0
AH786	Hoare, M. Lumsden, S. King, T.	Leeds Leeds Leeds	Survey of red MSX sources in the outer galaxy	6	22, 25	22.5
AH788	Holzappel, W. Carlstrom, J. Dawson, K.	Berkeley Chicago Calif.-Berkeley	Identification of point source contaminants to anisotropy fields	6 w/BB138, BH97	7	20.0

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Progm	Observer	Affiliation	Program Title	Bands cm	Observing Date	Sched Hours
AJ289	Johnson, K. Sjouerman, L. Goss, M.	NRAO-Socorro NRAO-Socorro NRAO-Socorro	6cm imaging of the M31 nuclear region	6	5, 6, 29	24.0
AK509	Kulkarni, S.K. Frail, D. Galama, T.J. Bloom, J.S. Berger, E. Harrison, F.A.	Caltech NRAO-Socorro Caltech Caltech Caltech Caltech	Radio afterglows from gamma ray bursts		3,5,6,9,21,30	8.5
AK543	Koopmans, L.V.E. deBruyn, A.G. Fassnacht, C.D. Wambsganss, J. Blandford, R.D.	Caltech NFRA STScI Potsdam Caltech	Radio microlensing in B1600+434	2, 3.6, 6, 20 w/BB138	1,4,8,11,13,15,19,24,28,31	11.0
AK545	Kishimoto, M. Antonucci, R. Whysong, D. O'Dea, C.	Calif.-Santa Barbara Calif.-Santa Barbara Calif.-Santa Barbara STScI	Radio quiet quasars in elliptical hosts	90	27	3.0
AL563	Lu, F. Lang, C.C. Wang, D.	Massachusetts Massachusetts Massachusetts	The Crab-like SNR G54.1+.3	6, 20	10	8.0
AL566	Lonsdale, C.J. Kassim, N.E. Lane, W.	Haystack NRL NRL	Relic radio lobes in 3C249.1	90	12	6.0
AL575	Lee, J.C. Impey, C. van Zee, L.	Arizona Arizona Indiana	Kinematics of low surface brightness galaxies	20 w/BB138	6, 20	24.0
AM722	Marti, J. Paredes, J.M.	U. Jaen Barcelona	Search for microquasars outside the galactic plane	3.6, 6, 20	16	4.4
AM727	Monnier, J.D. Greenhill, L.J. Tuthill, P.G. Danchi, W.C.	CfA CfA Sydney NASA/GSFC	Colliding wind binary WR 112	3.6 w/BH97	8	1.0
AM729	Murgia, M. Parma, P. Mack, C.-H. de Ruiter, H.	Bologna Bologna ASTRON Bologna	Ultra steep spectrum radio galaxies	20	16	8.0
AM730	Morganti, R. Oosterloo, T.A. Pihlstrom, Y. van Moorsel, G. Tadhunter, C.N. Wills, K.A.	NFRA NFRA NRAO-Socorro NRAO-Socorro Sheffield Sheffield	Large scale distribution of neutral hydrogen in radio galaxies	20 line	17	12.0
AR476	Rupen, M.P. Mioduszewski, A.J. Dhawan, V.	NRAO-Socorro NRAO-Socorro NRAO-Socorro	Galactic X-ray binaries and transients	0.7, 1.3, 2, 3.6, 20, 90	1,5,11,15,16,17,19,20,27,28	18.6
AR477	Rawlings, S. Willott, C. McLure, R. Mitchell, E. Dunlop, J. Jarvis, M. Hill, G.	Oxford Oxford Oxford Oxford Edinburgh Leiden McDonald	Radio structures over a wide range of luminosities	3.6, 6, 20	4, 14	10.0
AR479	Rusin, D. Biggs, A.D. Fassnacht, C.D. Koopmans, L.V.E. Lovell, J. Winn, J.N.	CfA Jodrell Bank STScI Caltech ATNF CfA	Which new radio lenses are variable?	3.6	12	1.0
AR485	Rupen, M. Migliari, S. Jonker, P. Fender, R. van der Klis, M. Homan, J.	NRAO-Socorro Amsterdam Cambridge Amsterdam Amsterdam Milan	RXTE and VLA observations of 4U 1728-34, Ser X-1, 4U 1820-30 and GX17+2	1.3, 2, 3.6, 6, 20	24,26-28,31	5.0

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Progm	Observer	Affiliation	Program Title	Bands cm	Observing Date	Sched Hours
AR489	Rottgering, H. Cohen, A. Best, P. Kassim, N. Perley, R. Pierre, M. Refregier, A. Rengelink, R. Birkinshaw, M. Bremer, M. Liang, H. Zanichelli, A.	Leiden NRL Edinburgh NRL NRAO-Socorro Saclay Saclay Leiden Bristol Bristol Bristol Milano	Radio source population and XMM large scale structure survey	90	16	4.5
AS687	Soifer, B.T. Helou, G. Werner, M. Shupe, D. Storrie-Lombardi, L. Condon, J.J. Cotton, W.D.	Caltech IPAC JPL Caltech Caltech NRAO-CV NRAO-CV	the SIRTf First-look survey	20	3,9,18,23,25 ,27,29	56.0
AS720	Schindler, S. Feretti, L. Wambsganss, J. Schwope, A. DeFillippis, B. Castillo-Morales, A.	John Moores Bologna Potsdam Potsdam John Moores Granada	Distant galaxy cluster RBS797	20	27	5.5
AS734	Saikia, D.J. Hota, A.	NCRRA-Pune TIFR-Pune	Radio study of a sample of blue compact dwarf galaxies	3.6	26	9.0
AS744	Sjouwerman, L.	NRAO-Socorro	L2 Puppis		19	2.0
AT275	Tinti, S. Celotti, A. Dallacasa, D. Stanghellini, C.	SISSA-Trieste SISSA-Trieste Bologna Noto	Bright high frequency peakers	1.3, 2, 3.6, 6, 20	2	14.0
AT277	Torrelles, J.	IEEC-Barcelona	Possible water maser in a planetary nebula	1.3 line	9	2.0
AW576	Winn, J. Biggs, A. Fassnacht, C. Koopmans, L. Lovell, J. Rusin, D.	CfA Jodrell Bank STScI Caltech ATNF CfA	Time delays in gravitational lenses	3.6	1,5,9,12,16, 19,25	7.0
AW579	Weiler, K.W. Stockdale, C. Sramek, R. Van Dyk, S. Panagia, N. Marcaide, J.M. Lewin, W.H.G. Pooley, D. Innler, S.	NRL NRL NRAO-Socorro IPAC STScI Valencia MIT MIT Massachusetts	Properties of radio supernovae	2, 3.6, 6, 20, 90	16	1.5
AW584	Wilson, T.L. Gaume, R.A. Megeath, S.T.	MPIfR USNO CfA	Spectral indices of the W3-IRS5 source(s)	0.7, 1.3	11	8.0
AW585	Wang, W-H. Chen, J. Gao, Y. Lo, K.Y. Dinh, V-T. Liang, M-C.	Hawaii Chicago IPAC Academia Sinica Academia Sinica Academia Sinica	HI in early stage interacting galaxies: NGC 6670 and Arp 256	20	13	7.0
AW587	Wu, Y. Zhang, Q. Mao, R. Miller, M. Wang, J. Jarken, L.	Peking CfA Purple Mountain Koln University Peking Peking	Search for water masers and continuum emission in dense cores	3.6	16	1.0
AW588	Wilcots, E.M. Sanders, W. Doane, N.	Wisconsin Wisconsin Wisconsin	Searching for "local bubbles" in face-on spirals	20 line	13, 20	16.0
AW590	Willson, R.F. Holman, G. Sui, L.	Tufts NASA-GSFC Catholic U.	VLA-HESSI-SOHO observations of solar flares and microflares	2, 3.6, 6	8, 14, 21	14.0
AZ136	Zhao, J-H. McGary, R.S. Goss, M. Bower, G.	CfA CfA NRAO-Socorro Calif.-Berkeley	VLA monitoring the 106-day cycle of Sgr A	0.7, 1.3, 2	1, 6, 24, 31	5.6

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Progm	Observer	Affiliation	Program Title	Bands cm	Observing Date	Sched Hours
BB138	Bach, U. Krichbaum, T.P. Alef, W. Witzel, A. Zensus, J.A.	MPIfR MPIfR MPIfR MPIfR	Motion in the counter jet of Cygnus A	2, 6 Single antenna VLBI w/AL575,AL543,Pointing, AH788	6	16.0
BH097	Hoffman, I. Goss, M. Brogan, C. Claussen, M.	UNM/NRAO NRAO-Socorro NRAO-Socorro NRAO-Socorro	Full Stokes observations of the 1720 MHz OH masers in W28	20 Single antenna VLBI w/AH764, AH785, AH788, AM727	7, 12	15.1
BS102	Sahai, R. Claussen, M.J. Morris, M.	JPL NRAO-Socorro Calif.-Los Angeles	The water masers in the "water-fountain" protoplanetary IRAS 16342-3814	1.3	2	1.5
	Staff	NRAO	Baselines, Pointing, Delays Maintenance Software Student observation General tests		8	62.2 65.9 30.9 1.0 28.0

The average downtime was 6.2%.

The array was scheduled for 100.0% (746.1 hours)  
 560.4 hours (75.1% of time) for astronomical programs  
 88.9 hours (11.9% of time) for tests/calibration  
 96.8 hours (13.0% of time) for maintenance  
 Total 722.0 hours (100.0%) scheduled.

Array was in the B configuration from July 1 through July 31

The following independent proposals shared simultaneous observing time (25.1 hours total simultaneous observing):

Projects	Hours
AH764/BH97	0.8
AH785/BH97	4.3
AH788/BB138	4.8
AH788/BH97	4.1
AK543/BB138	1.0
AL575/BB138	4.7
AM727/BH97	0.9
POINTING/BB138	4.5

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Progm	Observer	Affiliation	Program Title	Bands cm	Observing Date	Sched Hours
AA270	Anderson, J. Ulvestad, J.S. Ho, L.C.	NMIMT NRAO-Socorro Carnegie Obs.	Spectral energy distributions of low-luminosity AGNs	2, 3.6, 6	21	6.5
AB0950	Becker, R.H. White, R.L. Helfand, D.J.	Calif.-Davis STScI Columbia	The FIRST survey	20	13, 21, 30	30.0
AB1019	Brunthaler, A. Falcke, H. Aller, M. Aller, H. Terasranta, H. Bower, G.	MPiFR MPiFR Michigan Michigan Metsahovi Calif.-Berkeley	Monitoring the radio-intermediate quasar PG2209+184	1.3, 2, 3.6, 6, 20, 90	7	1.0
AB1031	Brogan, C.L. Kassim, N. Lazio, J.	NRAO-Socorro NRL NRL	Low frequency observations of the W51 Complex	90, 400	6, 22	6.5
AB1036	Best, P.	Edinburgh	SCUBA sources in $z \sim 1$ clusters: confirmation of cluster membership	20	9	4.0
AB1043	Blundell, K. Cruz, M.J. Peck, A.	Oxford Oxford CfA	Search for HI absorption in radio galaxies at $z \sim 3.5$	90 line	16	4.5
AB1051	Berger, E. Kulkarni, S.R. Frail, D.	Caltech Caltech NRAO-Socorro	Type Ib/c SN2002cj and SN2002cp	3.6	1, 2, 10, 14	6.5
AC618	Chandler, C. Low, F.	NRAO-Socorro Arizona	The flat spectrum dust disk around HD 98800	0.7	1, 2	6.9
AC628	Castelletti, G. Kassim, N. Dubner, G.	IAFE NRL IAFE	Supernova remnant W44 at low frequency	90, 400	15	6.0
AC640	Cilieggi, P. Comastri, A. Brusa, M. Baldi, A. Perola, C. Severgnini, P. Vignali, C.	Bologna Bologna Bologna Bologna Rome Florence Penn State	Radio nature of XMM X-ray sources	20	22	2.0
AC641	Cheung, C. Roberts, D.H. Wardle, J.F.C. Sambruna, R.M. Maraschi, L. Tavecchio, F. Urry, C.M. Scarpa, R.	Brandeis Brandeis Brandeis George Mason Brera Brera Yale ESO	Deep 22 GHz imaging of new x-ray/optical jets in AGN	1.3	6	5.0
AC647	Clarke, T. Neumann, D. Kassim, N.	NRAO-Socorro Saclay NRL	Low frequency observations of cooling flow clusters	90	9, 10	12.0
AC648	Cohen, A. Israel, F. Kassim, N.	NRL Leiden NRL	Searching for free-free absorption in normal spiral galaxies	90, 400	22	4.0
AD467	Drake, S.A. Linsky, J. Wade, G.	USRA-GFSC Colorado RMCC	Magnetic CP stars: radio vs. x-ray properties	3.6, 6, 20	2	5.0
AF387	Feretti, L. Kassim, N. Perley, R. Giovannini, G.	Bologna NRL NRAO-Socorro Bologna	FRI Radio galaxy 3C 449 at 74 MHz	400	21	5.0
AF391	Feretti, L. Brunetti, G. Giovannini, G. Govoni, F. Kassim, N. Cotton, W.	Bologna Bologna Bologna Bologna NRL NRAO-CV	74 MHz observations of the radio halo in A2163	400 w/BH97	24, 26	10.8
AH775	Hyman, S. Lazio, J. Denn, G. Kassim, N.	Sweet Briar NRL Sweet Briar NRL	Monitoring the galactic center for transient detection	90	24	1.0
AH780	Hagiwara, Y. Diamond, P.J. Miyoshi, M.	MPiFR Jodrell Bank NAO-Mizusawa	Water emission in NGC 6240	1.3	15	3.0
AH786	Hoare, M. Lumsden, S. King, T.	Leeds Leeds Leeds	Survey of red MSX sources in the outer galaxy	6	1	2.0

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Prog#	Observer	Affiliation	Program Title	Bands cm	Observing Date	Sched Hours
AH787	Harris, D.E. Kim, D.W. Fomalont, E.	CfA CfA NRAO-CV	X-ray - radio comparison in Fornax A	6, 20	1	5.0
AK509	Kulkarni, S.K. Frail, D. Galama, T.J. Bloom, J.S. Berger, E. Harrison, F.A.	Caltech NRAO-Socorro Caltech Caltech Caltech Caltech	Radio afterglows from gamma ray bursts		2,3,11,15,17 ,20,25	16.1
AK543	Koopmans, L.V.E. deBruyn, A.G. Fassnacht, C.D. Wambsganss, J. Blandford, R.D.	Caltech NFRA STScI Potsdam Caltech	Radio microlensing in B1600+434	2, 3.6, 6, 20 w/BH97	3,6,7,10,11, 14,17,22,24, 26	11.5
AL570	Lang, C.C. Johnson, K. Goss, M. Rodriguez, L.F.	Massachusetts NRAO-Socorro NRAO-Socorro UNAM	Stellar winds in the galactic center quintuplet cluster	3.6, 6	1	6.1
AL574	Linz, H. Hofner, P. Araya, E. Stecklum, B. Kurtz, S. Rodriguez, L.F. Marti, J. Henning, T.	Puerto Rico Puerto Rico Puerto Rico Thuringian UNAM UNAM U. Jaen MPIA	Structure of the driving source of HH80/81	0.7	14	4.0
AL575	Lee, J.C. Impey, C. van Zee, L.	Arizona Arizona Indiana	Kinematics of low surface brightness galaxies	20 w/BH97	22, 29	24.5
AM726	Martin, E.L. Berger, E. Rutledge, R.	Hawaii Caltech Caltech	Survey of radio emission	3.6	17, 27	5.0
AM729	Murgia, M. Parma, P. Mack, C.-H. de Ruiter, H.	Bologna Bologna ASTRON Bologna	Ultra steep spectrum radio galaxies	20	6	1.5
AM733	Marscher, A. Krawczynski, H. Falcone, A.	Boston Yale New Hampshire	TEV selected BL Lacs		6	2.1
AN109	Nakanishi, K. Takata, T. Kashikawa, N.	NAO NAO NAO	An extended SCUBA source in a cluster of galaxies	6, 20	9, 10	9.0
AP429	Pedlar, A. Wills, K. Muxlow, T. Booth, R. Aalto, S. Conway, J.	Jodrell Bank Sheffield U. Jodrell Bank Onsala Onsala Onsala	OH absorption study of the M82 starburst	20	10	4.0
AP437	Punsly, B. Tingay, S. Rodriguez, L.F.	Hughes ATNF UNAM	High quality images of the EGRET source PKS 1622-253	3.6, 6	3	2.0
AP439	Perlman, E.S. Biretta, J. Baum, S. O'Dea, C. Harris, D. Martel, A.	Maryland STScI STScI STScI CfA Johns Hopkins	Structure and physics of extragalactic jets	1.3, 3.6 w/BH97	23, 24	24.0
AP441	Perley, R.A. Condon, J.J. Cotton, W.D. Cohen, A.S. Lane, W.M. Kassim, N.E. Lazio, T.J.W. Erickson, W.C. Wall, J.V.	NRAO-Socorro NRAO-CV NRAO-CV NRL NRL NRL NRL Maryland Oxford	4 Meter All-Sky Survey (4MASS); mini-survey	400	8,9,12,14-16 ,19,20	64.0
AR463	Roberts, M. Kaspi, V.	McGill McGill	Expansion of the Shell and pulsar wind nebula of SNR G11.2-0.3	20, 6, 2	20	1.0
AR464	Reynoso, E. Hughes, J. Moffett, D.	IAFE (Buenos Aires) Rutgers Fuhrman	Expansion of Tycho's supernova remnant, 3C10	20	11	4.0

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Progm	Observer	Affiliation	Program Title	Bands cm	Observing Date	Sched Hours
AR476	Rupen, M.P. Mioduszewski, A.J. Dhawan, V.	NRAO-Socorro NRAO-Socorro NRAO-Socorro	Galactic X-ray binaries and transients	0.7, 1.3, 2, 3.6, 20, 90 w/BH97	4,5,7,13,16, 17	14.0
AR481	Rawlings, S. Dalton, G. MacDonald, E. Wegner, G.	Oxford Oxford Oxford Dartmouth	Radio imaging of the Oxford-Dartmouth thirty degree survey	20	25, 27	20.0
AR486	Romano, R. Mayya, D. Garcia-Barreto, J.A. Vorobyov, E.	INAOE INAOE UNAM Rostov	Star formation history of the Cartwheel galaxy	20	2, 3	7.5
AR488	Reid, M.A. Wilson, C.D.	McMaster McMaster	Ammonia (1,1) and (2,2) in star-forming cloud cores	1.3	13, 14	16.0
AR489	Rottgering, H. Cohen, A. Best, P. Kassim, N. Perley, R. Pierre, M. Refregier, A. Rengelink, R. Birkinshaw, M. Bremer, M. Liang, H. Zanichelli, A.	Leiden NRL Edinburgh NRL NRAO-Socorro Saclay Saclay Leiden Bristol Bristol Bristol Milano	Radio source population and XMM large scale structure survey	90, 400	7, 15, 16, 17, 20	39.0
AS687	Soifer, B.T. Helou, G. Werner, M. Shupe, D. Storrie-Lombardi, L. Condon, J.J. Cotton, W.D.	Caltech IPAC JPL Caltech Caltech NRAO-CV NRAO-CV	The SIRTIF First-look survey	20	10, 11, 17, 18, 25, 27	48.0
AS729	Subrahmanyan, R. Saripalli, L.	ATNF ATNF	Restarting beams in the giant radio galaxy B11545-321	6, 20	1	6.0
AW563	Williams, P.M. Dougherty, S.M.	Edinburgh DRAO	Continuing monitoring of WR 125	3.6, 6, 20	4	2.5
AW576	Winn, J. Biggs, A. Fassnacht, C. Koopmans, L. Lovell, J. Rusin, D.	CfA Jodrell Bank STScI Caltech ATNF CfA	Time delays in gravitational lenses	3.6	3,6,7,10,11, 14,17,18,23, 25	11.5
AW579	Weiler, K.W. Stockdale, C. Sramek, R. Van Dyk, S. Panagia, N. Marcaide, J.M. Lewin, W.H.G. Pooley, D. Immler, S.	NRL NRL NRAO-Socorro IPAC STSci Valencia MIT MIT Massachusetts	Properties of radio supernovae	2, 3.6, 6, 20, 90	11	2.0
AY132	Young, L. Rundle, D.	NMIMT NMIMT	Elliptical galaxies: radio continuum and star formation	20	24	2.0
AZ134	van Zee, L. Salzer, J.J. Skillman, E.D.	Indiana Wesleyan Minnesota	Kinematics of gas rich blue compact dwarf galaxies	20 line w/BG118, BH97	23, 28, 29	49.5
AZ136	Zhao, J-H. McGary, R.S. Goss, M. Bower, G.	CfA CfA NRAO-Socorro Calif.-Berkeley	VLA monitoring the 106-day cycle of Sgr A	0.7, 1.3, 2 w/BH97	2, 7, 16, 23, 30	7.4
BG118	Greenhill, L. Chandler, C.J. Diamond, P. Moran, J.M. Reid, M.J.	CfA NRAO-Socorro Jodrell Bank CfA CfA	SiO maser motions in Orion BN/KL	0.7 Single antenna VLBI w/AZ134	28	3.9
BH097	Hoffman, I. Goss, M. Brogan, C. Claussen, M.	UNM/NRAO NRAO-Socorro NRAO-Socorro NRAO-Socorro	Full stokes observations of the 1720 MHz OH masers in W28	20 Single antenna VLBI w/AL575,AZ136,AP439,AR476,AK543,AF391	22, 23, 24, 29	19.4
BS102	Sahai, R. Claussen, M.J. Morris, M.	JPL NRAO-Socorro Calif.-Los Angeles	The water masers in the "water-fountain" protoplanetary IRAS 16342-3814	1.3	4	1.0

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Progrm	Observer	Affiliation	Program Title	Bands cm	Observing Date	Sched Hours
	Staff	NRAO	Baselines, Pointing, Delays			53.9
			Maintenance			48.6
			Move/Operations			10.7
			Software			32.0
			Student observation		30	2.5
			General tests			42.2

The average downtime was 4.5%.

The array was scheduled for 100.0% (722.0 hours)  
 532.0 hours (73.7% of time) for astronomical programs  
 109.3 hours (15.1% of time) for tests/calibration  
 80.7 hours (11.2% of time) for maintenance  
 Total 722.0 hours (100.0%) scheduled.

Array was in the BnA configuration from June 1 through June 3

Array was in the B configuration from June 3 through June 30

The following independent proposals shared simultaneous observing time  
 (23.3 hours total simultaneous observing):

Projects	Hours
AF391/BH97	3.7
AK543/BH97	0.5
AL575/BH97	4.1
AL575/BH97	2.6
AP439/BH97	4.2
AR476/BH97	1.0
AZ134/BG118	3.9
AZ134/BH97	2.4
AZ136/BH97	0.9

## VLA Utilization Report May 2002

Progm	Observer	Affiliation	Program Title	Bands cm	Observing Date	Sched Hours
AA270	Anderson, J. Ulvestad, J.S. Ho, L.C.	NMINT NRAO-Socorro Carnegie Obs.	Spectral energy distributions of low-luminosity AGNs	0.7, 1.3, 2, 3.6, 6	25	5.0
AA271	Armstrong, E.K. Helfand, D.J.	Columbia Columbia	Stellar radio candidates from the FIRST survey	3.6, 20 w/BG118	17, 26, 27	10.5
AB1018	Black, G. Campbell, D. Nicholson, P.	NRAO-GB Cornell Cornell	Radio source occultation by the Saturnian ring system	20, 90	2	7.0
AB1019	Brunthaler, A. Falcke, H. Aller, M. Aller, H. Terasanta, H. Bower, G.	MPIfR MPIfR Michigan Michigan Metsahovi Calif.-Berkeley	Monitoring the radio-intermediate quasar PG2209+184	1.3, 2, 3.6, 6, 20, 90	3, 12	2.5
AB1026	Blundell, K. Fabian, A. Perley, R.	Oxford Cambridge NRAO-Socorro	Low frequency probe of Chandra cavities	400, 90	1	1.6
AB1029	Brisken, W. Thorsett, S. Goss, M.	NRAO-Socorro UC-Santa Cruz NRAO-Socorro	Proper motion of the Duck pulsar: B1757-24	20 HTRP w/PT	2	3.0
AB1039	Bignall, H. Jauncey, D. Lovell, J. Kedziora-Chudczer, L. Tzioumis, T. Macquart, J-P.	Adelaide ATNF ATNF ATNF ATNF Groningen	ISM properties towards the Intraday variable PKS 1257-326	3.6	12, 13	10.0
AB1043	Blundell, K. Cruz, M.J. Peck, A.	Oxford Oxford CfA	Search for HI absorption in radiogalaxies at z <sup>~</sup> 3.5	90 line	13, 18	13.5
AB1049	Berger, E. Martin, E. Rutledge, R. Bildsten, L. Gizis, J. Basri, G.	Caltech Hawaii Caltech Calif.-Santa Barbara IPAC Calif.-Berkeley	VLA, Chandra, UH 2.3m observations of brown dwarf 2MASSW1507-16	3.6	5	1.0
AB1050	Bartel, N. Bietenholz, M.	York York	Flux of SNN 1986J	90, 18, 6, 3.6, 2, 1.3, 0.7	24	2.0
AC605	Claussen, M.J. Wilner, D.J.	NRAO-Socorro CfA	Monitoring continuum emission from TW Hya	2, 3.6, 6, 20	3, 18	2.0
AC614	Cotter, G. Bolton, R. Jones, M. Grainge, K. Pooley, G. Waldran, E. Taylor, A. Saunders, R.	Cambridge Cambridge Cambridge Cambridge Cambridge Cambridge Cambridge Cambridge	Followup of the Cambridge 15 GHz survey	0.7, 1.3, 6, 20	19	3.5
AC618	Chandler, C. Low, F.	NRAO-Socorro Arizona	The flat spectrum dust disk around HD 98800	0.7	28	8.0
AC624	Clemens, M. Alexander, P. Cotter, G. Longair, M.S. Nikolic, B.	Cambridge Cambridge Cambridge Cambridge Cambridge	Comparison of thermal continuum emission with mid-IR PAH features	6, 20	2, 5, 6	9.0
AC640	Ciliegi, P. Comastri, A. Brusa, M. Baldi, A. Perola, C. Severgnini, P. Vignali, C.	Bologna Bologna Bologna Bologna Rome Florence Penn State	Radio nature of XMM X-ray sources	20	24	2.0
AC641	Cheung, C. Roberts, D.H. Wardle, J.F.C. Samburana, R.M. Maraschi, L. Tavecchio, F. Urry, C.M. Scarpa, R.	Brandeis Brandeis Brandeis George Mason Brera Brera Yale ESO	Deep 22 GHz imaging of new x-ray/optical jets in AGN	1.3 w/BG118	27	24.1
AC650	Chandler, A. Kaplan, D. Jacoby, B.	Caltech Caltech Caltech	Pulsar positions in M62	20 w/AG627	6	6.5

## VLA Utilization Report May 2002

Progm	Observer	Affiliation	Program Title	Bands cm	Observing Date	Sched Hours
AC651	Cheung, T. Schwartz, D. Wardle, J.	Brandeis CfA Brandeis	Jet in z=5.99 quasar SDSS J1306+0356		4	2.0
AD467	Drake, S.A. Linsky, J. Wade, G.	USRA-GFSC Colorado RMCC	Magnetic CP stars: radio vs. x-ray properties	3.6, 6, 20	14	2.5
AE146	Exter, K. Davis, R. Barlow, M. Watson, S.	Queens Belfast Jodrell Bank University-London Jodrell Bank	P Cygni's variable wind	0.7, 1.3, 6	2	3.0
AF388	Farrell, B. Lazio, J. Desch, M. Bastian, T. Zarka, P.	NASA-GSFC NRL NASA-GSFC NRAO-CV Paris Obs	Search for low frequency radio emission from the planet orbiting Tau Boo	400	1	6.1
AF390	Ferrari, C. Feretti, L. Giovannini, G. Maurogordato, S.	Cote d'Azur Bologna Bologna Cote d'Azur	Radio galaxies and diffuse emission in the merging cluster A521	20 w/BD80	25, 26	12.0
AG618	Giroletti, M. Giovannini, G. Treves, A. Falomo, R. Dallacasa, D.	Bologna Bologna Como Padova Bologna	A sample of nearby BL lac objects	3.6, 20	3	2.5
AG627	Gaensler, B. Pooley, D. Lewin, W. D'Amico, N. Kaspi, V.	CfA MIT MIT Bologna McGill	Globular clusters NGC 6266 and 6366	20 w/AC650	6	6.5
AH775	Hyman, S. Lazio, J. Denn, G. Kassim, N.	Sweet Briar NRL Sweet Briar NRL	Monitoring the galactic center for transient detection	90	17	2.0
AH781	Hota, A. Saikia, D.J.	TIFR-Pune NCRA-Pune	Ultraluminous infrared galaxies with galactic-scale outflows	3.6, 20	20	6.0
AH784	Harris, D.E. Vrtilek, J. Ponman, T. Kassim, N. Lane, W.	CfA CfA Birmingham NRL NRL	The X-ray cavities in HCG 62	90	25	9.0
AH787	Harris, D.E. Kim, D.W. Fomalont, E.	CfA CfA NRAO-CV	X-ray - radio comparison in Fornax A	6, 20	31	5.0
AH791	Hofner, P.	Puerto Rico	A variable source in a star formation region	18, 6, 3.6, 2	3	2.0
AK509	Kulkarni, S.K. Frail, D. Galama, T.J. Bloom, J.S. Berger, E. Harrison, F.A.	Caltech NRAO-Socorro Caltech Caltech Caltech Caltech	Radio afterglows from gamma ray bursts		4,6,14,17,18 ,20,22,23,26 ,29,31	22.1
AK543	Koopmans, L.V.E. deBruyn, A.G. Fassnacht, C.D. Wambsganss, J. Blandford, R.D.	Caltech NFRA STScI Potsdam Caltech	Radio microlensing in B1600+434	2, 3.6, 6, 20	3,5,7,13,16, 19,23,26,30	9.1
AL557	Lovell, J. Bignall, H. Jauncey, D. Tzioumis, A. Kedziora-Chudczer, L. Reynolds, J. Rickett, B. Marcquart, J.-P.	ATNF Adelaid ATNF ATNF ATNF ATNF Calif.-San Diego Groningen	Northern hemisphere intra-day variable survey	3.6, 6 w/move/op	9,12	76.9
AL568	Leto, P. Trigilio, C. Buemi, C. Umana, G.V. Leone, F.	Noto Noto Noto Noto Catania	High frequencies search for coherent emission from HD 37479	2, 3.6	19, 22	18.0
AL569	Loinard, L. Rodriguez, L.F.	UNAM UNAM	Proper motions in the protostellar system IRAS 16293-2422	0.7, 3.6	29	4.0

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Progm	Observer	Affiliation	Program Title	Bands cm	Observing Date	Sched Hours
AL570	Lang, C.C. Johnson, K. Goss, M. Rodriguez, L.F.	Massachusetts NRAO-Socorro NRAO-Socorro UNAM	Stellar winds in the galactic center quintuplet cluster	3.6, 6	31	1.4
AL573	Lazio, J. Lang, C. Gottself, E. Cordes, J. Wang, D.	NRL Massachusetts Columbia Cornell Massachusetts	Radio counterparts to Chandra sources toward the galactic center	3.6	19	3.0
AM684	Maccorone, T.J. Nowak, M.A. Bailyn, C.D. Briskin, W.F. Jain, R.K.	Yale Yale Yale NRAO-Socorro Yale	Searching for outflows in Aql X-1	1.3, 3.6	5, 19	3.0
AM710	Markovic, T. Owen, F. Eilek, J.	NMIMT NRAO-Socorro NMIMT	Central radio sources in cooling core clusters	400, 90	2, 3	18.0
AM726	Martin, E.L. Berger, E. Rutledge, R.	Hawaii Caltech Caltech	Survey of radio-emission in ultracool dwarfs	3.6	6, 13, 14, 16, 30	21.0
AM727	Monnier, J.D. Greenhill, L.J. Tuthill, P.G. Danchi, W.C.	CfA CfA Sydney NASA/GSFC	Colliding wind binary WR 112	3.6	7	1.0
AM728	Massimiliano, B. Feretti, L. Giovannini, G. Govoni, F.	Bologna Bologna Bologna Bologna	Relics of a possible giant radio galaxy in A548	3.6, 6, 20	18	2.0
AM732	Morganti, R.	NFRA	Radiogalaxy B2 0648+27	3.6	3	1.0
AM733	Marscher, A. Krawczynski, H. Falcone, A.	Boston Yale	TEV detected BL Lacs	6, 3.6, 2, 1.3, 0.7	7	1.0
AO168	O'Brien, J. Bosma, A. Freeman, K.C. Staveley-Smith, L.	Mt. Stromlo Marseille Mt. Stromlo ATNF	Thin edge-on galaxies	20 line	30, 31	13.0
AP429	Pedlar, A. Wills, K. Muxlow, T. Booth, R. Aalto, S. Conway, J.	Jodrell Bank Sheffield U. Jodrell Bank Onsala Onsala Onsala	OH absorption study of the M82 starburst	20	5	7.5
AR463	Roberts, M. Kaspi, V.	McGill McGill	Expansion of the shell and pulsar wind nebula of SNR G11.2-0.3	6, 20, 90	23	8.0
AR474	Rodriguez, L.F. Canto, J. Carral, P. Kurtz, S.	UNAM UNAM Guanajuato UNAM	Exciting sources of the Shell HII regions NGC 6334A and NGC 6334E	0.7, 2, 3.5	1	4.0
AR476	Rupen, M.P. Mioduszewski, A.J. Dhawan, V.	NRAO-Socorro NRAO-Socorro NRAO-Socorro	Galactic X-ray binaries and transients	0.7, 1.3, 2, 3.6, 20, 90	1,3,4,13,14, 17,23,26,27, 29,31	22.4
AR477	Rawlings, S. Willott, C. McLure, R. Mitchell, E. Dunlop, J. Jarvis, M. Hill, G.	Oxford Oxford Oxford Oxford Edinburgh Leiden McDonald	Radio structures over a wide range of luminosities	3.6, 6, 20	4	2.0
AR478	Roberts, D.A. Yusef-Zadeh, F.	Northwestern Northwestern	Measurement of radial acceleration of ionized gas in Sag A	3.6	20, 21	18.0
AR479	Rusin, D. Biggs, A.D. Fassnacht, C.D. Koopmans, L.V.E. Lovell, J. Winn, J.N.	CfA Jodrell Bank STScI Caltech ATNF CfA	Which new radio lenses are variable?	3.6 w/BG118	18, 27	2.5
AR483	Roy, A.L. Slee, O.B. Feretti, L. Andernach, H. Ehle, M. Murgia, M.	MPIFR ATNF Bologna Guanajuato ESA Bologna	Structure in the cluster radio relic in Abell 1664	20	18, 19	28.2

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Progm	Observer	Affiliation	Program Title	Bands cm	Observing Date	Sched Hours
AR486	Romano, R. Mayya, D. Garcia-Barreto, J.A. Vorobyov, E.	INAOE INAOE UNAM Rostov	Star formation history of the Cartwheel galaxy	2, 6, 20	16, 17, 20, 26, 31	28.0
AR490	Roberts, M. Tam, C. Gaensler, B.	McGill McGill CfA	Pulsar wind nebula of gamma-ray source GeV J1809-2327	20, 90	24	7.0
AR493	Rusin, D. Winn, J. Wythe, S.	CfA CfA CfA	SDSS J083643.85+005453.3, a radio loud quasar at z=5.8	6	4	1.0
AS729	Subrahmanyan, R. Saripalli, L.	ATNF ATNF	Restarting beams in the giant radio galaxy B11545-321	6, 20	30	6.5
AS732	Sjouerman, L.	NRAO-Socorro	OH masers in GMC M-0.13-0.08	20	20	3.5
AT274	Torrelles, J.M. Gomez, Y. Miranda, L.F. Anglada, G.	IEEC-Barcelona UNAM IAA IAA	Search for water maser emission in planetary nebulae	1.3 line	5	6.0
AV256	Venturi, T. Bardelli, S. Dallacasa, D.	Bologna Bologna Bologna	Radio galaxies in A3562, a duster with a halo	20, 90	21	2.5
AW574	Wrobel, J.M. Taylor, G. Myers, S. Gregory, P.C.	NRAO-Socorro NRAO-Socorro NRAO-Socorro UBC	Phase calibration sources at low galactic latitudes	3.6	4	2.5
AW576	Winn, J. Biggs, A. Fassnacht, C. Koopmans, L. Lovell, J. Rusin, D.	CfA Jodrell Bank STScI Caltech ATNF CfA	Time delays in gravitational lenses	3.6	3,5,7,12,14, 16,18,26,30	10.5
AW579	Weiler, K.W. Stockdale, C. Sramek, R. Van Dyk, S. Panagia, N. Marcaide, J.M. Lewin, W.H.G. Pooley, D. Immler, S.	NRL NRL NRAO-Socorro IPAC STScI Valencia MIT MIT Massachusetts	Properties of radio supernovae	2, 3.6, 6, 20, 90	4, 14, 20, 21	7.0
AZ136	Zhao, J-H. McGary, R.S. Goss, M. Bower, G.	CfA CfA NRAO-Socorro Calif.-Berkeley	VLA monitoring the 106-day cycle of Sgr A	0.7, 1.3, 2	5,20,26	4.5
BD080	Diamond, P.J. Kemball, A.J.	Jodrell Bank NRAO-Socorro	TX CAM	0.7 Single antenna VLBI w/test/AF390	26	4.2
BG118	Greenhill, L. Chandler, C.J. Diamond, P. Moran, J.M. Reid, M.J.	CfA NRAO-Socorro Jodrell Bank CfA CfA	SiO maser motions in Orion BN/KL	0.7 Single antenna VLBI w/AA271/AR479/AC641	27	4.1
BL106	Lazio, J. Goss, M. Brogan, C. Faison, M. Zauderer, A. DePree, C.	NRL NRAO-Socorro NRAO-Socorro Northwestern Agnes Scott Agnes Scott	AU Scale HI Opacity Variations	20 Phased array VLBI	12	12.0
BS102	Sahai, R. Claussen, M.J. Morris, M.	JPL NRAO-Socorro Calif.-Los Angeles	The water masers in the "water-fountain" protoplanetary IRAS 16342-3814	1.3	5	2.0
BS113	Stairs, I. Brisken, W. Manchester, D. Lyne, A.	NRAO-GB NRAO-Socorro ATNF Jodrell Bank	Precise position for a massive binary pulsar	20 Phased array VLBI	14	4.0
BU022	Ulvestad, J.S. Wong, D.S. Taylor, G.B. Mundell, C.G.	NRAO-Socorro Cornell NRAO-Socorro John Moores	NGC 4151: where is the nucleus, and how fast is the jet?	2, 3.6, 6 Phased array VLBI	16	10.0

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Progm	Observer	Affiliation	Program Title	Bands cm	Observing Date	Sched Hours
GB042	Bartel, N. Rupen, M. Bietenholz, M. Beasley, A.J. Graham, D.A. Altunin, V.I. Venturi, T. Umana, G. Cannon, W.H. Conway, J.E.	York NRAO-Socorro York Caltech-OVRO MPIfR JPL Bologna Noto York Onsala	SN 1993J and the core jet counterjet in M81	6 Phased array VLBI	24	12.5
	Staff	NRAO	Baselines, Pointing, Delays Maintenance Move/Operations Software General tests			48.3 52.4 19.9 29.3 43.3

The average downtime was 4.5%.

The array was scheduled for 100.0% (746.0 hours)  
 556.3 hours (74.6% of time) for astronomical programs  
 108.0 hours (14.5% of time) for tests/calibration  
 81.7 hours (10.9% of time) for maintenance  
 Total 746.0 hours (100.0%) scheduled.

Array was in the A configuration from May 1 through May 31

The following independent proposals shared simultaneous observing time (19.8 hours total simultaneous observing):

Projects	Hours
AA271/BG118	1.8
AC641/BG118	0.9
AF390/BD80	2.3
AG627/AC650	6.5
AR479/BG118	1.5
Move/Op/AL557	5.0
Test/BD80	1.9

## VLA Utilization Report April 2002

Progm	Observer	Affiliation	Program Title	Bands cm	Observing Date	Sched Hours
AA269	Anglada, G. Rodriguez, L.F. Torrelles, J.M. Ho, P.T.P.	IAA UNAM IEEC-Barcelona Cfa	Young close binary SVS 13	1.3 line	15	11.0
AB1014	Bains, I. Thomasson, P. Bryce, M.	Herfordshire Jodrell Bank Manchester	Angular expansion measurement of NGC 7027	6	19	2.0
AB1016	van Breugel, W. Reuland, M. deVries, W. DeBreuck, C. Rottgering, H. Carilli, C. Rottgering, H.	Lawrence Livermore Lawrence Livermore Lawrence Livermore IAP-Paris Leiden NRAO-Socorro Leiden	High resolution imaging of Z>3 radio galaxies	3.6, 6	21	3.0
AB1018	Black, G. Campbell, D. Nicholson, P.	NRAO-GB Cornell Cornell	Radio source occultation by the Saturnian ring system	20, 90	5	7.0
AB1024	Blundell, K. Perley, R. Greisen, E.	Oxford NRAO-Socorro NRAO-Socorro	Brightest low-frequency sources - a calibration resource	90, 400	18, 19	28.0
AB1026	Blundell, K. Fabian, A. Perley, R.	Oxford Cambridge NRAO-Socorro	Low frequency probe of Chandra cavities	90, 400	17, 22, 30	15.5
AB1033	Blundell, K. Rawlings, S.	Oxford Oxford	E1821+643 - is the jet axis precessing?	20	4, 28	8.5
AC583	Clarke, T. Enslin, T. Kassim, N. Neumann, D.N.	NRAO-Socorro MPIA NRL Saclay	Low frequency observations of diffuse emission in Abell 2256	90, 400	29	12.0
AC599	Clarke, T. Owen, F.	NRAO-Socorro NRAO-Socorro	Search for halo or relics in Butcher-Oemler Cluster Abell 2125	90	24	10.0
AC605	Claussen, M.J. Wilner, D.J.	NRAO-Socorro Cfa	Monitoring continuum emission from TW Hya	2, 3.6, 6, 20	11, 25	2.0
AC622	Carilli, C. Petric, A. Omont, A. Cox, P. Beelen, A. McMahon, R. Isaak, K. Priddey, R. Bertoldi, F. Menten, K.	NRAO-Socorro Columbia IAP-Paris IAP-Paris IAP-Paris Cambridge Cambridge Cambridge MPIFR MPIFR	Radio continuum properties of far-IR luminous QSOs at z~2	20 w/BG118	1	10.0
AC624	Clemens, M. Alexander, P. Cotter, G. Longair, M.S. Nikolic, B.	Cambridge Cambridge Cambridge Cambridge Cambridge	Comparison of thermal continuum emission with mid-IR PAH features	6, 20	26	1.0
AC629	Chatterjee, S. Cordes, J.M. Wong, D. Briskin, W. Goss, M. Fomalont, E. Benson, J. McKinnon, M. Thorsett, S.E. Kramer, M. Lyne, A. Lazio, T.J.W. Backer, D.C. Golden, A.	Cornell Cornell Cornell NRAO-Socorro NRAO-Socorro NRAO-CV NRAO-Socorro NRAO-Socorro Calif., Santa Cruz Jodrell Bank Jodrell Bank NRL Calif.-Berkeley Ireland	VLA Survey for pulsar astrometry with the VLBA	3.6, 20 w/BP91	6, 6	15.5
AC630	Curriel, S. Trinidad, M.A. Canto, J. Hernandez, L. Torrelles, J.M. Gomez, J.F. Anglada, G. Ho, P.T.P. Patel, N. Greenhill, L. Rodriguez, L.F. Garay, G.	UNAM UNAM UNAM UNAM IEEC-Barcelona IAA IAA Cfa Cfa Cfa UNAM Chile	Powering source of the water maser bubble in Cepheus A	3.6	8, 12, 23	11.0

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Progm	Observer	Affiliation	Program Title	Bands cm	Observing Date	Sched Hours
AC633	Cohen, A. Rottgering, H. Kassim, N. Jarvis, M.	NRL Leiden NRL Leiden	Search for ultrasteep spectrum objects	20	3, 5	6.0
AD458	Dickey, J. Heiles, C.	Minnesota Calif.-Berkeley	Variations in the HI optical depth toward compact continuum sources	20 line	20	2.0
AD462	Darling, J. Giovannelli, R.	Cornell Cornell	Locations of OH Megamasers in their host galaxy	20	27	20.0
AD463	DeBreuck, C. Carilli, C. Rottgering, H. Miley, G. Kurk, J. Pentericci, L.	IAP-Paris NRAO-Socorro Leiden Leiden Leiden MPIA	High redshift radio galaxies in protoclusters	20 w/BP91	1, 6, 8, 10	20.6
AD468	Diamond, P. Hagiwara, Y. Miyoshi, M.	Jodrell Bank MPIFR NAO-Mizusawa	Flaring water maser in NGC 4051	1.3 line	26	2.0
AF387	Feretti, L. Kassim, N. Perley, R. Giovannini, G.	Bologna NRL NRAO-Socorro Bologna	FRI Radio galaxy 3C 449 at 74 MHz	400	25, 26	11.0
AG623	Gizani, N. Cohen, A. Kassim, N.	Lisbon NRL NRL	Spectral aging in Hercules A	90, 400 with PT	28	8.0
AH763	Hagiwara, Y. Diamond, P.J.	MPIFR Jodrell Bank	The water maser region/IXO in M82	1.3	13	9.0
AH766	Hardcastle, M. Worrall, D. Birkinshaw, M.	Bristol Bristol Bristol	Jets in a Chandra sample of B2 radio galaxies	6 w/BG118	1, 3	10.5
AH769	Hardcastle, M.	Bristol	X-ray cavities in HCG 62	90 w/BP91	5	1.5
AH775	Hyman, S. Lazio, J. Denn, G. Kassim, N.	Sweet Briar NRL Sweet Briar NRL	Monitoring the galactic center for transient detection	90	27	2.0
AH777	Hofstadter, M. Butler, B.	JPL NRAO-Socorro	Seasonal variations in the atmosphere of Uranus	2, 6	2, 5	16.0
AH778	Harper, G. Brown, A. Guinan, E.	Colorado Colorado Villanova	Extended atmosphere of Alpha Orionis	1.3, 2, 3.6, 6, 20 with PT	12	12.0
AI096	Iverson, R.J. Townsend, R.H.D. Blain, A.W. Smail, I. Frayer, D.T.	ROE University College Caltech Durham Caltech	Search for water and OH masers in BAL quasar APM 08279+5255	90	30	5.6
AK509	Kulkarni, S.K. Frail, D. Galama, T.J. Bloom, J.S. Berger, E. Harrison, F.A.	Caltech NRAO-Socorro Caltech Caltech Caltech Caltech	Radio afterglows from gamma ray bursts	w/BP91	4,5,8-13,16, 20-22,30	24.0
AK543	Koopmans, L.V.E. deBruyn, A.G. Fassnacht, C.D. Wambsganss, J. Blandford, R.D.	Caltech NFRA STScI Potsdam Caltech	Radio microlensing in B1600+434	2, 3.6, 6, 20	4,7,11,14,17, 21,23,27,30	9.7
AK544	Kassim, N. Lazio, J. Cohen, A. Perley, R. Cotton, B. Owen, F. Carilli, C. Harris, D. Dwarakanath, K. Erickson, W.	NRL NRL NRL NRAO-Socorro NRAO-CV NRAO-Socorro NRAO-Socorro Cfa Raman Maryland	Highest resolution, low frequency imaging of Cygnus A and Virgo A	400 with PT	13	12.0
AL550	Lestrade, J.-F. Taylor, G.	Meudon NRAO-Socorro	Detection of the photosphere of Sirius and Procyon at 43 GHz	0.7	8, 11, 21, 22	22.6
AL564	Landt, H. Perlman, E.S. Padovani, P.	STScI Maryland-Baltimore STScI	Faint sample of BL lacertae objects	20	7, 20, 21	11.5
AL566	Lonsdale, C.J. Kassim, N.E. Lane, W.	Haystack NRL NRL	Relic radio lobes in 3C249.1	90, 400	23	11.0

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Progm	Observer	Affiliation	Program Title	Bands cm	Observing Date	Sched Hours
AM684	Maccorone, T.J. Nowak, M.A. Bailyn, C.D. Briskin, W.F. Jain, R.K.	Yale Yale Yale NRAO-Socorro Yale	Searching for outflows in Aql X-1	1.3, 3.6	15	1.5
AM708	Murgia, M. Parma, P. Mack, K.-H. deRuiter, H.	Bologna Bologna ASTRON Bologna	Dying radio galaxy candidates	20	11, 21	10.5
AM710	Markovic, T. Owen, F. Eilek, J.	NMIMT NRAO-Socorro NMIMT	Central radio sources in cooling core clusters	90, 400	14, 15	18.0
AM714	Mack, K.-H. Prieto, A. Brunetti, G.	ASTRON ESO-Garching Bologna	Resolving radio hot spots	3.6, 6, 20	18	8.0
AN103	Neff, S.G. Ulvestad, J.S. Champion, S.D.	NASA-GSFC NRAO-Socorro Maryland	High resolution imaging of NGC 3256	3.6, 6 w/BG118	20, 28	8.5
AP429	Pedlar, A. Wills, K. Muxlow, T. Booth, R. Aalto, S. Conway, J.	Jodrell Bank Sheffield U. Jodrell Bank Onsala Onsala Onsala	OH absorption study of the M82 starburst	20	16, 26	17.9
AP432	Palmer, P. Goss, M. Devine, K.E.	Chicago NRAO-Socorro Carleton	The 6cm OH lines in W49	6	1	8.0
AP434	Petric, A. Bertoldi, F. Carilli, C. Cox, P. Fan, X. Menten, K. Omont, A. Rupen, M. Strauss, M.	Columbia MPIfR NRAO-Socorro IAP Princeton MPIfR IAP NRAO-Socorro Princeton	Sensitive search for radio emission from the highest redshift QSOs	20	29	1.1
AP435	Polatidis, A.G. Marcha, M.J. Caccianiga, A. Bondi, M. Pihlstrom, Y. Marr, J.	MPIfR Lisbon Brera Bologna NRAO-Socorro Union	HI absorption in nearby compact symmetric objects	20	2	4.0
AR464	Reynoso, E. Hughes, J. Moffett, D.	IAFE (Buenos Aires) Rutgers Fuhrman	Expansion of Tycho's supernova remnant, 3C10	20	29	4.0
AR476	Rupen, M.P. Mioduszewski, A.J. Dhawan, V.	NRAO-Socorro NRAO-Socorro NRAO-Socorro	Galactic X-ray binaries and transients	0.7, 1.3, 2, 3.6, 20, 90 w/BG118	2,7,15,17,18 ,20,23,28	12.5
AR477	Rawlings, S. Willott, C. McLure, R. Mitchell, E. Dunlop, J. Jarvis, M. Hill, G.	Oxford Oxford Oxford Oxford Edinburgh Leiden McDonald	Radio structures over a wide range of luminosities	3.6, 6, 20	26, 30	6.5
AR479	Rusin, D. Biggs, A.D. Fassnacht, C.D. Koopmans, L.V.E. Lovell, J. Winn, J.N.	CfA Jodrell Bank STScI Caltech ATNF CfA	Which new radio lenses are variable?	3.6	14, 25	2.1
AS719	Snellen, I. Best, P.	Edinburgh Edinburgh	Distant FR I radiogalaxies	20	21	10.9
AS721	Schmitt, H.R. Calzetti, D. Armus, L.	NRAO-Socorro STScI Caltech	Star formation of local starbursts	20 w/BG118	28	7.0
AS722	Sarma, A.P. Crutcher, R.M. Troland, T.H. Momjian, E.	Illinois Illinois Kentucky Kentucky/NRAO	HI Zeeman observations of NGC 1275 (Perseus A)	20	7	12.0

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Progm	Observer	Affiliation	Program Title	Bands cm	Observing Date	Sched Hours
AS723	Stockdale, C. Cowan, J.J. Maddox, L. Prestwich, A. Primmi, F. Zezas, A.	NRL Oklahoma Oklahoma CfA CfA CfA	SNRs in nearby sprial galaxies	20	4	10.0
AU091	Umana, G. Trigilio, C. Leone, F.	Noto Noto Catania	The inner core of the bipolar nebula M2-9	1.3, 2, 3.6, 6, 20	8	5.5
AW575	Wiedner, M.C. Reid, M.J. Menten, K.	CfA CfA MPIFR	Extended emission around the double nuclei of Arp 200	2, 3.6	11	11.0
AW576	Winn, J. Biggs, A. Fassnacht, C. Koopmans, L. Lovell, J. Rusin, D.	CfA Jodrell Bank STSci Caltech ATNF CfA	Time delays in gravitational lenses	3.6	4,7,11,14,16 ,21,23,27	10.0
AW579	Weiler, K.W. Stockdale, C. Sramek, R. Van Dyk, S. Panagia, N. Marcaide, J.M. Lewin, W.H.G. Pooley, D. Immler, S.	NRL NRL NRAO-Socorro IPAC STSci Valencia MIT MIT Massachusetts	Properties of radio supernovae	2, 3.6, 6, 20, 90	5, 11, 13, 19, 20	6.0
AW582	Webster, Z. DiFrancesco, J. Anglada, G. Welch, W.J. Wilner, D.J. Rodriguez, L.F.	Calif.-Berkeley Calif.-Berkeley IAA Calif.-Berkeley CfA UNAM	The embedded protostars in NGC 1333	0.7 With PT	19	7.0
AZ136	Zhao, J-H. McGary, R.S. Goss, M. Bower, G.	CfA CfA NRAO-Socorro Calif.-Berkeley	VLA monitoring the 106-day cycle of Sgr A	0.7, 1.3, 2	4, 11, 17, 24	6.0
BG118	Greenhill, L. Chandler, C.J. Diamond, P. Moran, J.M. Reid, M.J.	CfA NRAO-Socorro Jodrell Bank CfA CfA	SiO maser motions in Orion BN/KL	0.7 Single antenna VLBI w/test,AH776,AC622,AS721,AR47 6,AN103	1, 28	16.9
BP091	Peck, A. Taylor, G.	MPIFR NRAO-Socorro	Spare change-collecting the last few COINS from the bottom of the VCS	2,6	5	24.1
BR080	Ratner, M.I. Bartel, N. Bietenholz, M.F. Lebach, D.E. Lestrade, J.-F. Ranson, R.R. Shapiro, I.I.	CfA York York CfA Meudon York CfA	Astrometry of HR 8703 in 2002 for gravity Probe-B mission	3.6 Phased array VLBI	14	12.0
BS102	Sahai, R. Claussen, M.J. Morris, M.	JPL NRAO-Socorro Calif.-Los Angeles	The water masers in the "water-fountain" protoplanetary IRAS 16342-3814	1.3	4	1.0
	Staff	NRAO	Baselines, Pointing, Delays Maintenance Software General tests			37.9 42.1 20.9 60.7

The average downtime was 5.5%.

The array was scheduled for 100.0% (722.0 hours)  
562.9 hours (78.0% of time) for astronomical programs  
96.1 hours (13.3% of time) for tests/calibration  
63.0 hours ( 8.7% of time) for maintenance  
Total 722.0 hours (100.0%) scheduled.

Array was in the A configuration from April 1 through April 30

The following independent proposals shared simultaneous observing time  
(41.1 hours total simultaneous observing):

Projects	Hours
AC622/BG118	2.5
AC629/BP91	11.5
AC629/BP91	4.0
AD463/BP91	2.5
AH769/BP91	1.5
AH776/BG118	5.0
AK509/BP91	1.1
AN103/BG118	1.8
AR476/BG118	1.5
AS721/BG118	4.7
Test/BG118	1.5
Test/BP91	3.5

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Progm	Observer	Affiliation	Program Title	Bands cm	Observing Date	Sched Hours
AA268	Avila, R. Rodriguez, L.F.	UNAM UNAM	Monitoring the exciting sources of HH 212 and B335 outflows	3.6	3, 7, 11, 17	8.5
AB0994	Berger, E.	Caltech	Multi-frequency monitoring of the Brown Dwarf LP944-20	1.3, 3.6, 6, 20	15	2.4
AB1016	van Breugel, W. Reuland, M. deVries, W. DeBreuck, C. Rottgering, H. Carilli, C. Rottgering, H.	Lawrence Livermore Lawrence Livermore Lawrence Livermore IAP-Paris Leiden NRAO-Socorro Leiden	High resolution imaging of Z>3 radio galaxies	3.6, 6	30	7.0
AB1017	Blomme, R. Prinja, R.K. Runacres, M.C.	Royal Obs Belgium University College Royal Obs Belgium	The distant stellar wind of hot stars	20	26	1.5
AB1022	Birkinshaw, M. Worrall, D.M. Wilkes, B. Green, P.	Bristol Bristol CfA CfA	Radio counterparts of Chandra serendipitous sources	3.6, 20	16	12.0
AB1023	Beck, S.C. Turner, J.L.	Tel Aviv UCLA	Starburst in VII Zw 19	2, 6, 20	25	3.5
AB1028	Boboltz, D.A. Diamond, P.J. Hollis, J.M. Johnston, K.J. Fey, A.L.	USNO Jodrell Bank NASA-GSFC USNO USNO	Statistical study of SiO maser emission toward late-type stars	0.7 line w/BF66	18	20.0
AB1048	Blomme, R.	Royal Obs Belgium	Observations of HD16112 & HD 17971 with XMM Newton	3.6,6,20	24	1.5
AC605	Claussen, M.J. Wilner, D.J.	NRAO-Socorro CfA	Monitoring continuum emission from TW Hya	2, 3.6, 6, 20 w/BP89	8, 22	2.5
AC622	Carilli, C. Petric, A. Omont, A. Cox, P. Beelen, A. McMahon, R. Isaak, K. Priddey, R. Bertoldi, F. Menten, K.	NRAO-Socorro Columbia IAP-Paris IAP-Paris IAP-Paris Cambridge Cambridge Cambridge MPIFR MPIFR	Radio continuum properties of far-IR luminous QSOs at z~2	20	23	10.0
AD463	DeBreuck, C. Carilli, C. Rottgering, H. Miley, G. Kurk, J. Pentericci, L.	IAP-Paris NRAO-Socorro Leiden Leiden Leiden MPIA	High redshift radio galaxies in protoclusters	20	31	2.4
AF389	Forman, W. Carilli, C. Birkinshaw, M. Jones, C. David, L.	CfA NRAO-Socorro Bristol CfA CfA	Radio structures and X-ray emitting gas in early-type galaxies	20	11	9.0
AG619	Giovannini, G. Taylor, G.B. Feretti, L. Venturi, T. Cotton, W.D. Lara, L.	Bologna NRAO-Socorro Bologna Bologna NRAO-CV IAA	The core of the superluminal giant radiosource 1144+35	0.7, 1.3, 2, 3.6, 20, 90	2	2.0
AG621	Gomez, Y. Anglada, G. Torrelles, J.M. Miranda, L.F.	UNAM IAA ICE IAA	OH Zeeman observations of planetary nebula K 3-35	20	31	8.0
AG622	Greenhill, L.J. Chandler, C.J. Reid, M. Moran, J.M.	CfA NRAO-Socorro CfA CfA	Outflows from Orion BN/KL source I	0.7 With PT	31	8.0
AH761	Haarsma, D. Buchalter, A. Falco, E. Kochanek, C. Lehar, J. McMahon, R. Winn, J.	Calvin College Caltech CfA CfA CfA Cambridge CfA	Search for gravitationally lensed radio lobes	6	9, 10, 14, 17	32.5

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Progm	Observer	Affiliation	Program Title	Bands cm	Observing Date	Sched Hours
AH764	Hardcastle, M. Kraft, R. Worrall, D.	Bristol Cfa Bristol	Searching for proper motion in the jet of Centaurus A	3.6	3	3.5
AH767	Hofner, P. Cesaroni, R. Rodriguez, L.F. Marti, J.	Puerto Rico Arcetri UNAM U. Jaen	The accretion disk around the high mass proto-star 20126+4104	0.7	2	8.0
AH771	Humphreys, E. Pihlstrom, Y. Sjouerman, L.O.	Onsala NRAO-Socorro NRAO-Socorro	Stellar SiO masers: where is the resolved out VLBA flux?	0.7 w/BW60	14	1.5
AH774	Healy, K.R. Claussen, M. Hester, J.	Arizona State NRAO-Socorro Arizona State	Monitoring water maser emission from low-mass stars in HII regions	1.3 w/BW60	14	1.5
AH775	Hyman, S. Lazio, J. Denn, G. Kassim, N.	Sweet Briar NRL Sweet Briar NRL	Monitoring the galactic center for transient detection	90	26	1.5
AI098	Ivion, R.J. Dunlop, J.S. Hughes, D.H. Blain, A.W. Smail, I.	ROE Edinburgh INAOE Caltech Durham	Deep survey in the Lockman-E field	20 wBF66	21, 24, 25, 28, 29, 30	60.5
AI099	Ivezic, Z. Knapp, G.R. Rupen, M.	Princeton Princeton NRAO-Socorro	Radio properties of the SDSS bright quasar survey	3.6, 20	5, 18, 22, 24	12.0
AK509	Kulkarni, S.K. Frail, D. Galama, T.J. Bloom, J.S. Berger, E. Harrison, F.A.	Caltech NRAO-Socorro Caltech Caltech Caltech Caltech	Radio afterglows from gamma ray bursts	w/BW60	1, 4, 7, 11, 13, 14, 17-19, 22, 23, 26, 28	27.1
AK543	Koopmans, L.V.E. deBruyn, A.G. Fassnacht, C.D. Wambsganss, J. Blandford, R.D.	Caltech NFRA STScI Potsdam Caltech	Radio microlensing in B1600+434	2, 3.6, 6, 20 w/BW60	2, 4, 7, 11, 14, 16, 22, 25, 27, 30	10.5
AL559	Lacy, M. Gregg, M. Becker, R.	Calif.-Davis Calif.-Davis Calif.-Davis	A lensed, FeLoBAL quasar from FIRST-2Mass matching	2, 3.6, 6, 20	13	4.0
AL561	Lim, J. Tung-Hui, L. Van-Trung, D. Kwok, S.	Academia Sinica Calgary Academia Sinica Calgary	Search for ionized jets in narrow-waist bipolar nebulae	0.7, 1.3 w/BP92	9, 10	10.4
AL564	Landt, H. Perlman, E.S. Padovani, P.	STScI Maryland STScI	Faint sample of BL lacertae objects	20	24	5.5
AM684	Maccorone, T.J. Nowak, M.A. Bailyn, C.D. Briskin, W.F. Jain, R.K.	Yale Yale Yale NRAO-Socorro Yale	Searching for outflows in Aql X-1	1.3, 3.6	1, 22	3.0
AM708	Murgia, M. Parma, P. Mack, K.-H. deRuiter, H.	Bologna Bologna ASTRON Bolgna	Dying radio galaxy candidates	20	26	4.0
AO163	Owen, F. Lonsdale, C. Morrison, G. Smith, G. Xu, C.	NRAO-Socorro Caltech-IPAC IPAC Calif., SanDiego IPAC	Very deep radio/SIRTF survey: faint source, radio FIR correlation	20	1	5.1
AO164	Ogley, R. Eyes, S. Stirling, A. Kenworthy, M.	Keele Central Lancashire Central Lancashire Arizona	Nebulosity around AG Dra	6	3	1.0
AP433	Pedelty, J.A. Hollis, J.M.	NASA-GSFC NASA-GSFC	Q Band monitoring of the R Aquarii Binary system	0.7	15	6.1

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Progm	Observer	Affiliation	Program Title	Bands cm	Observing Date	Sched Hours
AP434	Petric, A. Carilli, C. Rupen, M. Strauss, M. Fan, X. Omont, A. Cox, P. Bertoldi, F. Menten, K.	Columbia NRAO-Socorro NRAO-Socorro Princeton Princeton IAP-Paris IAP-Paris MPIFR MPIFR	Radio emission from the highest redshift QSOs	20	5	11.5
AR464	Reynoso, E. Hughes, J. Moffett, D.	IAFE (Buenos Aires) Rutgers Furman	Expansion of Tycho's supernova remnant, 3C10	20	1	4.0
AR465	Reipurth, B. Rodríguez, L.F. Anglada, G. Bally, J. Zapata, L.A.	Colorado UNAM IAA Colorado UNAM	Large survey of outflow regions	3.6 w/BG118	1-5,8,9	80.5
AR473	Rodríguez, L.F. Wilner, D. Ho, P. Loiuard, L.	UNAM CfA CfA UNAM	The young source IRAS 04368+2557	0.7, 3.6, 6	2	10.0
AR476	Rupen, M.P. Mioduszewski, A.J. Dhawan, V.	NRAO-Socorro NRAO-Socorro NRAO-Socorro	Galactic X-ray binaries and transients	0.7, 1.3, 2, 3.6, 20, 90	1,9,16,17,22 ,30	12.0
AR477	Rawlings, S. Willott, C. McLure, R. Mitchell, E. Dunlop, J. Jarvis, M. Hill, G.	Oxford Oxford Oxford Oxford Edinburgh Leiden McDonald	Radio structures over a wide range of luminosities	3.6, 6, 20 w/BF66	16, 17, 19, 20	40.0
AR479	Rusin, D. Biggs, A.D. Fassnacht, C.D. Koopmans, L.V.E. Lovell, J. Winn, J.N.	CfA Jodrell Bank STScI Caltech ATNF CfA	Which new radio lenses are variable?	3.6	7, 17	2.0
AS720	Schindler, S. Feretti, L. Wambsganss, J. Schwope, A. DeFillippis, B. Castillo-Morales, A.	John Moores Bologna Potsdam Potsdam John Moores Granada	Distant galaxy cluster RBS797	20	26	5.0
AS721	Schmitt, H.R. Calzetti, D. Armus, L.	NRAO-Socorro STScI Caltech	Star formation of local starbursts	20	2,23	7.5
AS723	Stockdale, C. Cowan, J.J. Maddox, L. Prestwich, A. Primmi, F. Zeas, A.	NRL Oklahoma Oklahoma CfA CfA CfA	SNRs in nearby spiral galaxies	20	6	8.0
AS724	Sollins, P.K. Ho, P.T.P. Zhang, Q. Keto, E.	CfA CfA CfA CfA	Detecting structure around massive young stars	1.3	7	4.5
AS727	Schmitt, H.R.	NRAO-Socorro	A complete sample of Seyfert galaxies	3.6 w/BG118	2, 27	4.1
AT270	Tarchi, A. Peck, A. Greve, A.	MPIFR MPIFR IRAM	Neutral hydrogen absorption in NGC 2146	20	15, 16	12.0
AT272	Turner, J.L. Beck, S.C.	UCLA Tel Aviv	Supernebulae in NGC 5253 and II ZW 40	1.3, 2 with PT	9	5.6
AT273	van der Tak, F. Menten, K.	MPIFR.-Berkeley MPIFR	Small scale distribution of dust around high-mass protostars	0.7 w/BP89	23, 25	15.0
AU090	Umana, G. Trigilio, C. Leone, F.	Noto Noto Catania	Probing the inner regions of the B Lyrae radio nebula	0.7, 1.3	28	7.9
AW563	Williams, P.M. Dougherty, S.M.	Edinburgh DRAO	Continuing monitoring of WR 125	3.6, 6, 20	3	1.5
AW574	Wrobel, J.M. Taylor, G. Myers, S. Gregory, P.C.	NRAO-Socorro NRAO-Socorro NRAO-Socorro UBC	Phase calibration sources at low galactic latitudes	3.6	23, 29	16.5

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Progm	Observer	Affiliation	Program Title	Bands cm	Observing Date	Sched Hours
AW576	Winn, J. Biggs, A. Fassnacht, C. Koopmans, L. Lovell, J. Rusin, D.	CfA Jodrell Bank STScI Caltech ATNF CfA	Time delays in gravitational lenses	3.6  w/BW60	1,4,7,11,14, 21,24,26,27	10.5
AW578	Wilner, D. Ho, P. Rodriguez, L. Mathieu, R.D.	CfA CfA UNAM Wisconsin	Inner regions of disks around nearby T Tauri stars	0.7, 3.6 With PT w/BP89	22	9.5
AW579	Weiler, K.W. Stockdale, C. Sramek, R. Van Dyk, S. Panagia, N. Marcaide, J.M. Lewin, W.H.G. Pooley, D. Immler, S.	NRL NRL NRAO-Socorro IPAC STScI Valencia MIT MIT Massachusetts	Properties of radio supernovae	2, 3.6, 6, 20, 90 w/BW60, BP89	2,3,7,14,21, 22,31	11.0
AZ136	Zhao, J-H. McGary, R.S. Goss, M. Bower, G.	CfA CfA NRAO-Socorro Calif.-Berkeley	VLA monitoring the 106-day cycle of Sgr A	0.7, 1.3, 2	3, 11, 18, 25	6.5
BF066	Fomalont, E. Kellermann, K. Richards, E. Garrett, M. Baan, W. Muxlow, T. Garrington, S. Alberdi, A.	NRAO-CV NRAO-CV Alabama JIVE NFRA Jodrell Bank Jodrell Bank IAA	VLBI Observations of SA 13 deep field	20 Single antenna VLBI w/AB1028, Startup, AR477, AI98	18, 20, 21	21.6
BG118	Greenhill, L. Chandler, C.J. Diamond, P. Moran, J.M. Reid, M.J.	CfA NRAO-Socorro Jodrell Bank CfA CfA	SiO maser motions in Orion BN/KL	0.7 Single antenna VLBI w/AR465, AS727	2	8.1
BP089	Piner, B.G. Edwards, P.G. Jones, D.	Whittier College ISAS JPL	Monitoring of Ultra-fast blazars	1.3, 7 w/AW578, Test, AW579, AC605, AT27 3	22	18.0
BP092	Polatidis, A. Anton, S. Bondi, M. Caccianiga, A. Marcha, M.	MPIfR Portugal Bologna Brera Portugal	VLBA observations of flat spectrum weak line radio galaxies	6 w/AL561	9	12.0
BS102	Sahai, R. Claussen, M.J. Morris, M.	JPL NRAO-Socorro Calif.-Los Angeles	The water masers in the "water-fountain" protoplanetary IRAS 16342-3814	1.3	3	1.0
BW060	Winn, J. Kochanek, C. Rusin, D.	CfA CfA CfA	A possible third image in gravitational lens J1632-0033	18, 3.6 w/AK509, Test, AW579, AK543, AW57 6, AH744, AH771	14	8.1
	Staff	NRAO	Baselines, Pointing, Delays			45.9
			Maintenance			45.5
			Software			30.9
			General tests			41.4

The average downtime was 8.8%.

The array was scheduled for 100.0% (746.1 hours)  
584.7 hours (78.4% of time) for astronomical programs  
85.0 hours (11.4% of time) for tests/calibration  
76.4 hours (10.2% of time) for maintenance  
Total 746.1 hours (100.0%) scheduled.

Array was in the A configuration from March 1 through March 31

The following independent proposals shared simultaneous observing time  
(67.7 hours total simultaneous observing):

Projects	Hours
AB1028/BF66	5.4
AC605/BP89	1.0
AH744/BW60	1.5
AH771/BW60	1.1
AI098/BF66	8.1
AK509/BW60	1.0
AK543/BW60	1.0
AL561/BP92	2.4
AL561/BP92	3.5
AR465/BG118	8.0
AR476/BP92	1.0
AR477/BF66	6.3
AS727/BG118	0.0
AT272/BP92	5.0
AT273/BP89	3.5
AW576/BW60	1.0
AW578/BP89	8.0
AW578/BP89	1.4
AW579/BP89	1.0
AW579/BW60	1.0
Test/BF66	1.8
Test/BP89	3.0
Test/BW60	1.5

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Progm	Observer	Affiliation	Program Title	Bands cm	Observing Date	Sched Hours
AA267	Alexander, P. Riley, J. Pooley, G.G. Fabian, A.C. Hardcastle, M. Worrall, D. Cotter, G. Inskip, K. Allen, S. Crawford, C.	Cambridge MRAO Cambridge Cambridge Bristol Bristol Cambridge Cambridge Cambridge Cambridge	Formation of cold clouds by FR II radio sources	6, 20	25, 26	10.0
AA268	Avila, R. Rodriguez, L.F.	UNAM UNAM	Monitoring the exciting sources of HH 212 and B335 outflows	3.6	3, 4	4.5
AB1017	Blomme, R. Prinja, R.K. Runacres, M.C.	Royal Obs Belgium University College Royal Obs Belgium	The distant stellar wind of hot stars	20 w/BG124	17	4.0
AB1022	Birkinshaw, M. Worrall, D.M. Wilkes, B. Green, P.	Bristol Bristol CfA CfA	Radio counterparts of Chandra serendipitous sources	3.6, 20	25	3.0
AB1029	Briskin, W. Thorsett, S. Goss, M.	NRAO-Socorro Calif., Santa Cruz NRAO-Socorro	Proper motion of the Duck pulsar: B1757-24	20 HTRP with PT	21	2.0
AC605	Claussen, M.J. Wilner, D.J.	NRAO-Socorro CfA	Monitoring continuum emission from TW Hya	2, 3.6, 6, 20	1, 20, 24	3.5
AC616	Colina, L. Alberdi, A. Torrelles, J.M. Panagia, N. Wilson, A.	IFCA IAA ICE STScI Maryland	Search for new radio supernovae in NGC 7469	3.6	8	4.0
AC617	Chengalur, J. Nanekar, N. Clarke, T.E. Wrobel, J.M.	TIFR TIFR NRAO-Socorro NRAO-Socorro	Rotation measure of an intervening spiral at $z=0.437$	20 With PT w/BG123	18	12.0
AC629	Chatterjee, S. Cordes, J.M. Wong, D. Briskin, W. Goss, M. Fomalont, E. Benson, J. McKinnon, M. Thorsett, S.E. Kramer, M. Lyne, A. Lazio, T.J.W. Backer, D.C. Golden, A.	Cornell Cornell Cornell NRAO-Socorro NRAO-Socorro NRAO-CV NRAO-Socorro NRAO-Socorro Calif., Santa Cruz Jodrell Bank Jodrell Bank NRL Calif.-Berkeley Ireland	VLA Survey for pulsar astrometry with the VLBA	3.6, 20	7, 9	17.0
AC630	Curiel, S. Trinidad, M.A. Canto, J. Hernandez, L. Torrelles, J.M. Gomez, J.F. Anglada, G. Ho, P.T.P. Patel, N. Greenhill, L. Rodriguez, L.F. Garay, G.	UNAM UNAM UNAM UNAM ICE IAA IAA CfA CfA CfA UNAM Chile	Powering source of the water maser bubble in Cepheus A	3.6 With PT w/BK76	4, 10	24.0
AC631	Sanchez Contreras, C Sahai, R. Claussen, M.J.	JPL JPL NRAO-Socorro	The 1667 MHz OH Masers in the protoplanetary nebula He 3-1475	20 line w/BW56	2	5.0
AC635	Cohen, A. Kassim, N. Lazio, J. Lane, W. Gross, C. Condon, J. Perley, R. Cotton, B.	NRL NRL NRL NRL NRL NRAO-CV NRAO-Socorro NRAO-CV	Ultra-steep spectrum sources	20	26	8.0
AD458	Dickey, J. Heiles, C.	Minnesota Calif.-Berkeley	Variations in the HI optical depth toward compact continuum sources	20 line	1	2.0

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Progm	Observer	Affiliation	Program Title	Bands cm	Observing Date	Sched Hours
AD460	DePree, C.G. Davis, L.E. Wilner, D. Goss, M.	Agnes Scott Agnes Scott CfA NRAO-Socorro	Young massive star formation region G20.08	0.7 line	15	8.5
AG618	Giroletti, M. Giovannini, G. Treves, A. Falomo, R. Dallacasa, D.	Bologna Bologna Como Padova Bologna	A sample of nearby BL lac objects	3.6, 20	21	5.0
AH767	Hofner, P. Cesaroni, R. Rodriguez, L.F. Marti, J.	Puerto Rico Arcetri UNAM U. Jaen	The accretion disk around the high mass proto-star 20126+4104	0.7	28	8.0
AH771	Humphreys, E. Pihlstrom, Y. Sjouwerman, L.O.	Onsala NRAO-Socorro NRAO-Socorro	Stellar SiO masers: where is the resolved out VLBA flux?	0.7	5	3.5
AH778	Harper, G. Brown, A. Guinan, E.	Colorado Colorado Villanova	Extended atmosphere of Alpha Orionis	1.3, 2, 3.6, 6, 20 With PT w/BG123	17	11.8
AJ286	Johnson, K. Kobulnicky, H. Goss, M.	NRAO-Socorro Wisconsin NRAO-Socorro	Search for ultradense extragalactic HII regions	3.6, 6	15	20.5
AK509	Kulkarni, S.K. Frail, D. Galama, T.J. Bloom, J.S. Berger, E. Harrison, F.A.	Caltech NRAO-Socorro Caltech Caltech Caltech Caltech	Radio afterglows from gamma ray bursts	w/BW56, BG123	1-3,5,7,9,11 ,13,18,19,25 ,27	21.3
AK541	Keto, E. Ho, P.	CfA CfA	Ammonia observations of hot core G10.6-04	3.6 line	23	8.5
AK543	Koopmans, L.V.E. deBruyn, A.G. Fassnacht, C.D. Wambsganss, J. Blandford, R.D.	Caltech NFRA STScI Potsdam Caltech	Radio microlensing in B1600+434	2, 3.6, 6, 20 w/BG124	2,5,8,11,14, 17,20,28	8.0
AK545	Kishimoto, M. Antonucci, R. Whysong, D. O'Dea, C.	Calif.-Santa Barbara Calif.-Santa Barbara Calif.-Santa Barbara STScI	Radio quiet quasars in elliptical hosts	90	18	3.2
AL556	Lazio, T.J.W. Cordes, J.M.	NRL Cornell	Steep-spectrum sources toward the galactic center	6	7	8.0
AL564	Landt, H. Perlman, E.S. Padovani, P.	STScI Maryland STScI	Faint sample of BL lacertae objects	20	4, 5, 9, 26,	13.5
AM713	Mohan, N.R. Ulvestad, J.S.	Raman NRAO-Socorro	Resolving the nucleus of NGC 253	0.7 With PT w/BW56	2	6.0
AN104	Nagar, N.N. Falcke, H. Wilson, A.	Arcetri MPIfR Maryland	Search for AGN in ultraluminous infra-red galaxies	2	22	24.0
A0163	Owen, F. Lonsdale, C. Morrison, G. Smith, G. Xu, C.	NRAO-Socorro Caltech-IPAC IPAC Calif-San Diego IPAC	Very deep radio/SIRTF survey: faint source, radio FIR correlation	20	1,2,4-6,9-11 ,13,27,28	73.4
AP430	Pedlar, A. Muxlow, T. Wills, K.	Jodrell Bank Jodrell Bank Sheffield U.	327 MHz observations of Messier 82 using the PT link	90 With PT w/BG124	16	12.0
AR465	Reipurth, B. Rodriguez, L.F. Anglada, G. Bally, J. Zapata, L.A.	Colorado UNAM IAA Colorado UNAM	Large survey of outflow regions		8	10.0
AR475	Rodriguez, L.F. Wilner, D. Ho, P.T.P. Claussen, M. Curiel, S. Porras, A.	UNAM CfA CfA NRAO-Socorro UNAM UNAM	The possibly binary jet in L1551	3.6 With PT	24	10.0
AR476	Rupen, M.P. Mioduszewski, A.J. Dhawan, V.	NRAO-Socorro NRAO-Socorro NRAO-Socorro	Galactic X-ray binaries and transients	0.7, 1.3, 2, 3.6, 20, 90	3,6,11,13,18 ,20,27,28	14.7

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Progm	Observer	Affiliation	Program Title	Bands cm	Observing Date	Sched Hours
AR479	Rusin, D. Biggs, A.D. Fassnacht, C.D. Koopmans, L.V.E. Lovell, J. Winn, J.N.	CfA Jodrell Bank STScI Caltech ATNF CfA	Which new radio lenses are variable?	3.6	7, 25	2.0
AS719	Snellen, I. Best, P.	Edinburgh Edinburgh	Distant FR I radiogalaxies	20	14	11.6
AS724	Sollins, P.K. Ho, P.T.P. Zhang, Q. Keto, E.	CfA CfA CfA CfA	Detecting structure around massive young stars	1.3	1, 14	16.0
AS727	Schmitt, H.R.	NRAO-Socorro	A complete sample of Seyfert galaxies	3.6	16, 21	10.5
AS728	Schmitt, H.R.	NRAO-Socorro	Understanding the jet structure of MCG+8-11-11 and Mrk 6	1.3 With PT	2	4.0
AT269	Takakuwa, S. Lim, J. Choi, M.	Academia Sinica Academia Sinica Academia Sinica	Binary protostellar system L1551 IRS 5	0.7 With PT	1	6.0
AT271	Tsujiimoto, M. Koyama, K. Kobayashi, N. Goto, M. Tsuboi, Y. Saito, M.	Kyoto Kyoto NAO NAO Penn State CfA	A cluster of hard X-ray sources in a class 0 protostar core	3.6	11	4.0
AW576	Winn, J. Biggs, A. Fassnacht, C. Koopmans, L. Lovell, J. Rusin, D.	CfA Jodrell Bank STScI Caltech ATNF CfA	Time delays in gravitational lenses	3.6	4,8,11,16,18,21,26	7.0
AW579	Weiler, K.W. Stockdale, C. Sramek, R. Van Dyk, S. Panagia, N. Marcaide, J.M. Lewin, W.H.G. Pooley, D. Immler, S.	NRL NRL NRAO-Socorro IPAC STScI Valencia MIT MIT Massachusetts	Properties of radio supernovae	2, 3.6, 6, 20, 90 w/BG123	3, 8, 17, 24	7.5
AW580	Wilner, D. DePree, C. Zauderer, A.	CfA Agnes Scott Agnes Scott	Hypercompact HII regions in W51	0.7 w/BG123	19	8.0
AW582	Webster, Z. DiFrancesco, J. Anglada, G. Welch, W.J. Wilner, D.J. Rodriguez, L.F.	Calif.-Berkeley Calif.-Berkeley IAA Calif.-Berkeley CfA UNAM	The embedded protostars in NGC 1333	0.7 With PT	23	10.0
AZ136	Zhao, J-H. McGary, R.S. Goss, W.M. Bower, G.	CfA CfA NRAO-Socorro Calif.-Berkeley	VLA monitoring the 106-day cycle of Sgr A	0.7, 1.3, 2	3,10,11,18,26	7.5
AZ138	Zebker, H.A. Harcke, L.J. Butler, B.J. Slade, M.A. Jurgens, R.F.	Stanford Stanford NRAO-Socorro JPL JPL	Goldstone/VLA radar observation of Callisto	3.6	3, 19	22.5
BG123	Giroletti, M. Dallacasa, D. Falomo, R. Giovannini, G. Treves, A.	Bologna CNR Padova CNR Como	VLBA observations of a sample of nearby BL-Lacs	6 w/AW579,AH778,AC617,AK509,AW580	17,18	15.1
BG124	Giovannini, G. Cotton, W.D. Feretti, L. Lara, L. Taylor, G. Venturi, T.	CNR NRAO-CV CNR IAA NRAO-Socorro CNR	VLBI observations of the giant superluminal source 1144+35	C w/AP430,AK543,Test,AB1017	16	11.9
BK076	Kurayama, T. Sasao, T.	NAO NAO	Parallax measurement of Miras for period-luminosity relation	1.3 w/AC630	4	5.0
BS102	Sahai, R. Claussen, M.J. Morris, M.	JPL NRAO-Socorro Calif.-Los Angeles	The water masers in the "water-fountain" protoplanetary IRAS 16342-3814	1.3	3	1.5

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Progm	Observer	Affiliation	Program Title	Bands cm	Observing Date	Sched Hours
BW056	Winn, J. Lovell, J.	MIT ATNF	An unusual gravitationally lensed quasar	3.6 w/AC631,AK509,AM713	2	5.2
GL026	Lonsdale, C.J. Lonsdale, C.J. Smith, H.E. Diamond, P.J.	Haystack IPAC Calif.-San Diego Jodrell Bank	High sensitivity imaging of supernovae and masers in Arp 220	20 Phased array VLBI	23	12.2
GP030	Porcas, R.W. Patnaik, A.R. Garrett, M.A. Nair, S.	MPIfR MPIfR JIVE Raman	Global VLBI study of gravitational lens 2016+112	20 Phased array VLBI	25	10.2
	Staff	NRAO	Baselines, Pointing, Delays Maintenance Software Student observation General tests			47.2 45.9 30.8 5.1 35.5

The average downtime was 6.05%.

The array was scheduled for 100.0% (673.9 hours)  
 510.2 hours (75.7% of time) for astronomical programs  
 87.1 hours (12.9% of time) for tests/calibration  
 76.6 hours (11.4% of time) for maintenance  
 Total 673.9 hours (100.0%) scheduled.

Array was in the D configuration from February 1 through February 28

The following independent proposals shared simultaneous observing time  
 (37.3 hours total simultaneous observing):

Projects	Hours
AC617/BG123	5.0
AC630/BK75	5.0
AC631/BW56	0.6
AH778/BG123	4.5
AK509/BG123	1.0
AK509/BW56	1.0
AK543/BG124	1.0
AM713/BW56	3.7
AP430/BG124	9.4
AW579/BG123	0.5
AW580/BG124	0.1
BG123/BG123	4.0
Test/BG124	1.5

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Progrm	Observer	Affiliation	Program Title	Bands cm	Observing Date	Sched Hours
AB0994	Berger, E.	Caltech	Multi-frequency monitoring of the Brown Dwarf LP944-20	1.3, 3.6, 6, 20	17	3.0
AB1006	Berger, E. Rutledge, R. Bildsten, L. Martin, E. Gizis, J. Basri, G.	Caltech Caltech Calif.-Santa Barbara Hawaii IPAC Calif.-Berkeley	Search for emission from L and late M stars	3.6	11,14,27	6.0
AB1008	Bruns, C. Kerp, J.	Bonn Univ. Bonn Univ.	HI small scale structure in the northern Magellanic Stream	20 line	8	4.0
AB1009	Beltran, M.T. Estalella, R. Ho, P.T.P. Anglada, G.	CfA Barcelona CfA IAA	7mm continuum survey of very young thermal radio jets	0.7	5	6.5
AB1017	Blomme, R. Prinja, R.K. Runacres, M.C.	Royal Obs Belgium University College Royal Obs Belgium	The distant stellar wind of hot stars	20	26	2.0
AB1019	Brunthaler, A. Falcke, H. Aller, M. Aller, H. Terasranta, H. Bower, G.	MPIfR MPIfR Michigan Michigan Metsahovi Calif.-Berkeley	Monitoring the radio-intermediate quasar PG2209+184	1.3, 2, 3.6, 6, 20, 90 w/BB138	10	1.0
AB1020	Beck, S.C. Turner, J.L. Gorjian, V.	Tel Aviv UCLA JPL	Supernebulae in NGC 1808	1.3, 2	27	5.0
AC600	Clarke, T.	NRAO-Socorro	Faraday study of galaxy cluster core sources	3.6, 6	7	5.5
AC604	Claussen, M.J. Beasley, A.J.	NRAO-Socorro Caltech-OVRO	Survey for water masers in the star-forming ring of NGC224 = M31	1.3 line	12,13,27	24.0
AC605	Claussen, M.J. Wilner, D.J.	NRAO-Socorro CfA	Monitoring continuum emission from TW Hya	2, 3.6, 6, 20	17	1.5
AC609	Choi, M. Ho, P.T.P.	Academia Sinica CfA	Photochemistry around the HH 270 protostellar outflow	1.3 line	1	4.0
AC612	Carilli, C. Petric, A. Bertoldi, F. Menten, K. Omont, A. Cox, P. Djorgovski, G. McMahon, R. Isaak, K.	NRAO-Socorro Columbia MPIfR MPIfR IAP-Paris IAP-Paris Caltech Cambridge Cambridge	CO emission from two infrared luminous high redshift QSOs	0.7	2	5.0
AC622	Carilli, C. Petric, A. Omont, A. Cox, P. Beelen, A. McMahon, R. Isaak, K. Priddey, R. Bertoldi, F. Menten, K.	NRAO-Socorro Columbia IAP-Paris IAP-Paris IAP-Paris Cambridge Cambridge Cambridge MPIfR MPIfR	Radio continuum properties of far-IR luminous QSOs at z~2	20 w/BG118	26	4.5
AC627	Cotter, G. Readhead, A. Pearson, T. Mason, B. Wilkinson, P. Browne, I. Bolton, R. Jones, M. Saunders, R. Taylor, A. Pooley, G. Waldram, E. Grainge, K.	Cambridge Caltech Caltech Caltech Jodrell Bank Jodrell Bank Cambridge Cambridge Cambridge Cambridge Cambridge Cambridge Cambridge	Radio sources selected at high frequency	0.7, 1.3, 6, 20	11, 12	14.0
AD458	Dickey, J. Heiles, C.	Minnesota Calif.-Berkeley	Variations in the HI optical depth toward compact continuum sources	20 line	28	2.0
AD461	Darling, J. Giovannelli, R.	Cornell Cornell	Continuum snapshot survey of OH megamaser hosts	6	24, 26	7.1

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Progm	Observer	Affiliation	Program Title	Bands cm	Observing Date	Sched Hours
AE145	Eyres, S.P.S. Zijlstra, A. Kurtz, D.W. Tyne, V.H. Evans, A. Smalley, B.	Central Lancashire UMIST Central Lancashire Keele Keele Keele	Planetary nebula around V4334 Sgr	2, 6	3	2.0
AF386	Fish, V.L. Reid, M.J.	CfA CfA	Ammonia absorption in HII regions	1.3 line	6,7	8.0
AH768	Hoare, M. Pattison, I. Hartquist, T. Blitz, L. Pedlar, A. Garrington, S.	Leeds Leeds Leeds Calif.-Berkeley Jodrell Bank Jodrell Bank	The dense HII regions in M33 and IC 10	6	28	2.5
AK509	Kulkarni, S.K. Frail, D. Galama, T.J. Bloom, J.S. Berger, E. Harrison, F.A.	Caltech NRAO-Socorro Caltech Caltech Caltech Caltech	Radio afterglows from gamma ray bursts	w/BD79	1-3,6,8-11,1 4,17,18,22,2 4,26,29,31	38.5
AK532	Kobulnicky, C. Martin, C.	Wisconsin Caltech	NGC 1569, the nearest starburst with a galactic wind	20, 90	26, 31	8.0
AK542	Kharb, P. Gabuzda, D. Shastri, P.	IIA JIVE IIA	Rotation measures for a sample of X-ray BL lac objects	20 w/BB138	10, 23	19.0
AK543	Koopmans, L.V.E. deBruyn, A.G. Fassnacht, C.D. Wambsganss, J. Blandford, R.D.	Caltech NFRA STScI Potsdam Caltech	Radio microlensing in B1600+434	2, 3.6, 6, 20	17, 22, 25, 28, 31	4.9
AL554	Li, D. Dickey, J.M. Goldsmith, P.	Cornell Minnesota Cornell	Deep imaging of HI narrow line absorption in dark clouds	20	3	10.0
AL557	Lovell, J. Bignall, H. Jauncey, D. Tzioumis, A. Kedziora-Chudczer, L. Reynolds, J. Rickett, B. Marcquart, J.-P.	ATNF Adelaide ATNF ATNF ATNF ATNF Calif.-San Diego Groningen	Northern hemisphere intra-day variable survey	3.6, 6	19	72.1
AL558	Lang, C. Goss, M. Rodriguez, L.F.	Massachusetts NRAO-Socorro UNAM	New observations of the arches cluster: search for variability and low mass stars	3.5	29	4.0
AL563	Lu, F. Lang, C.C. Wang, D.	Massachusetts Massachusetts Massachusetts	The Crab-like SNR G54.1+.3	20	31	4.0
AL564	Landt, H. Perlman, E.S. Padovani, P.	STScI Maryland STScI	Faint sample of BL lacertae objects	20	22	4.1
AM687	Monnier, J.D. Greenhill, L. Tuthill, P.G. Danchi, W.C.	CfA CfA Sydney NASA/GSFC	Monitoring the WR 112 binary system	0.7, 1.3, 2, 3.6, 6, 20	18	6.0
AM702	Markovic, T. Owen, F. Eilek, J.	NMIMT NRAO-Socorro NMIMT	Radio halos in Abell Clusters of galaxies	20	3, 7	8.0
AO163	Owen, F. Lonsdale, C. Morrison, G. Smith, G. Xu, C.	NRAO-Socorro Caltech-IPAC IPAC Calif-San Diego IPAC	Very deep radio/SIRTF survey: faint source, radio FIR correlation	20	27-31	35.0
AP427	Prouton, O.R. Bressan, A. Franceschini, A. Gruppioni, C. Granato, G.L. Silva, L. Pratap, P.	Padova Padova Padova Padova Padova Trieste Haystack	Evolutionary properties of compact dusty starbursts	1.3	3, 5	4.0

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Prog#	Observer	Affiliation	Program Title	Bands cm	Observing Date	Sched Hours
AP434	Petric, A. Bertoldi, F. Carilli, C. Cox, P. Fan, X. Menten, K. Omont, A. Rupen, M. Strauss, M.	Columbia MPIfR NRAO-Socorro IAP Princeton MPIfR IAP NRAO-Socorro Princeton	Sensitive search for radio emission from the highest redshift QSOs	20	30	2.0
AR458	Rupen, M.P. Mioduszewski, A.J. Dhawan, V.	NRAO-Socorro NRAO-Socorro NRAO-Socorro	Radio and X-ray activity in Galactic black hole X-ray transients	0.7, 1.3, 2, 3.6, 6, 20 w/BB138	5, 8, 10, 11, 13, 23, 25	14.2
AR466	Ratay, D.L. Gottesman, S.T.	Florida Florida	Global properties of barred and flocculent disk galaxies	20 line	5	8.0
AR480	Rupen, M.P. Mioduszewski, A.J. Dhawan, V.	NRAO-Socorro NRAO-Socorro NRAO-Socorro	High frequency observations of the black hole binary Cygnus X-3	0.7, 1.3, 2, 3.6, 6 w/BD79	25	8.5
AS717	Sjouerman, L. Messineo, M. Habing, H.	NRAO-Socorro Leiden Leiden	43 GHz SiO maser emission in Late-type Bulge stars with 86 GHz SiO	0.7 line	8	4.0
AS718	Su, Y-N. Lim, J. Ho, P.T.P.	NCU (Taiwan) Academia Sinica Cfa	Molecular envelopes of high-mass protostars	1.3 line	7	8.0
AS727	Schmitt, H.R.	NRAO-Socorro	A complete sample of Seyfert galaxies	3.6	18	5.0
AT263	Thuan, T.X. Ulvestad, J.S.	Virginia NRAO-Socorro	Deeply embedded starburst in the BCD galaxy SBS 0335-052	3.6	8	5.5
AT269	Takakuwa, S. Lim, J. Choi, M.	Academia Sinica Academia Sinica Academia Sinica	Binary protostellar system L1551 IRS 5	0.7	28	6.0
AT272	Turner, J.L. Beck, S.C.	UCLA Tel Aviv	Supernebulae in NGC 5253 and II Zw 40	1.3, 2	29	5.5
AV253	Trung, V.D. Lim, J.	Academia Sinica Academia Sinica	Dust disks in IRC+10216 and the Egg Nebula	0.7	9	1.5
AW568	Wilcots, E. van Gorkom, J. Zabludoff, A. Mulchaey, J. Williams, B.	Wisconsin Columbia Wisconsin Carnegie Obs. Delaware	Evolution of HI content of poor groups of galaxies	20 line	5, 6	12.0
AW576	Winn, J. Biggs, A. Fassnacht, C. Koopmans, L. Lovell, J. Rusin, D.	Cfa Jodrell Bank STScI Caltech ATNF Cfa	Time delays in gravitational lenses	3.6	24, 27, 31	3.0
AW579	Weiler, K.W. Stockdale, C. Sramek, R. Van Dyk, S. Panagia, N. Marcaide, J.M. Lewin, W.H.G. Pooley, D. Immler, S.	NRL NRL NRAO-Socorro IPAC STScI Valencia MIT MIT Massachusetts	Properties of radio supernovae	2, 3.6, 6, 20, 90 w/BB138	6, 13, 19, 27	30.0
AY128	Young, L. van Gorkom, J.	NMIMT Columbia	Interacting HI in two elliptical galaxies	20 line	4, 5	10.0
AZ136	Zhao, J-H. McGary, R.S. Goss, M. Bower, G.	Cfa Cfa NRAO-Socorro Calif.-Berkeley	VLA monitoring the 106-day cycle of Sgr A	0.7, 1.3, 2	12, 19	2.0
BB138	Bach, U. Alef, W. Krichbaum, T.P. Witzel, A. Zensus, J.A.	MPIfR MPIfR MPIfR MPIfR MPIfR	Subluminal motion in the counter-jet of Cygnus A?	6, 2 w/Test, AR458, AK542, AB1019, AW579	10	10.2
BD079	Diamond, P.J. Kemball, A.J.	Jodrell Bank NRAO-Socorro	TX Cam returns	0.7 Single antenna VLBI w/AR480, Baselines, AK509, Pointing	25	8.0
BF063	Fix, J.D. Mutel, R.L. Gayley, K. Ignace, R.	Huntsville Iowa Iowa Iowa	Hydroxyl masers in late type stars	20 Phased array VLBI	4	17.0

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Progm	Observer	Affiliation	Program Title	Bands cm	Observing Date	Sched Hours
BG118	Greenhill, L. Chandler, C.J. Diamond, P. Moran, J.M. Reid, M.J.	CfA NRAO-Socorro Jodrell Bank CfA CfA	SiO maser motions in Orion BN/KL	0.7 Single antenna VLBI w/AC622	26	4.8
NEWYEA			New Years Shutdown		1	19.0
	Staff	NRAO	Baselines, Pointing, Delays Maintenance Move/Operations Software General tests		7, 9, 12, 16	44.9 95.2 39.6 37.8 52.0

The average downtime was 5.1%.

The array was scheduled for 97.4% (727.1 hours)  
 467.2 hours (62.6% of time) for astronomical programs  
 127.0 hours (17.0% of time) for tests/calibration  
 133.0 hours (17.8% of time) for maintenance  
 Total 727.2 hours ( 97.4%) scheduled.

Array was in the D configuration from January 1 through January 7  
 Array was in the A configuration from January 7 through January 31  
 The following independent proposals shared simultaneous observing time  
 (34.4 hours total simultaneous observing):

Projects	Hours
AB1019/BB138	1.0
AC622/BG118	0.3
AK509/BD79	1.3
AK509/BG118	0.6
AK532/BG118	4.0
AK542/BB138	4.0
AK542/Move/Op	8.7
AR458/BB138	2.0
AR480/BD79	1.3
AS727/Move/Op	2.5
AW579/BB138	0.6
Baselines/BD79	5.0
Pointing/BD79	0.4
Test/BB138	2.7