VLA UTILIZATION December 1985

Program	Observer	Affiliation	Program title	Bands (cm)	Obsv date	Sched hrs
AA-45	Antonucci, R. Perley, R. Ritter, B.	NRAO/CV NRAO/VLA NMIMT	3C273.	20	4	12
AB-324	Blaha, C. Pedelty, J. Dickey, J. Kennicutt Jr, R.	Minnesota Minnesota Minnesota Minnesota	"Hot spot" nuclei.	6	2	6
AB-325	Bieging, J.H. Cohen, Martin	UC Berkeley NASA-Ames	Flux density and spectral index monitoring of V410 Tau.	2,6	20	1
AB-333	Becker, R.H. Helfand, D.J.	UC Davis Columbia	Galactic supernova remnants.	6	13	7
AB-342	Burstein, D. Yin, Q.F. Condon, J.J.	Arizona State Beijing U, CHINA NRAO/CV	The relationship of stellar populations to radio continuum emission in normal spiral galaxies.	20	19	8
AB-346	Bridle, A.H. Perley, R.A.	NRAO/CV NRAO/VLA	Low brightness features of NGC6251.	6,20	1	16.5
AB-351	Birkinshaw, M. Moffet, A.T.	Harvard College Obs Caltech	A search for weak radio sources contaminating measurements of the Sunyaev-Zeldovich effect.	2,6,20	30	23.5
AB-352	Baum, S. Bridle, A. Heckman, T. Miley, G. van Breugel, W.	NRAO/Maryland NRAO/CV Maryland STScI UC Berkeley	1717-00 = 3C353.	1.3,2	3	10
AB-355	Bridle, A. Perley, R.A.	NRAO/CV NRAO/VLA	Low resolution mapping of three very large B3 sources.	6,20	15	20
AB-357	Becker, R. White, Richard L.	UC Davis STScI	Monitoring the radio flux of the radio star HD193793.	6	22	1
AB-365	Briggs, F.H.	Pittsburgh	NGC3344: a galaxy with extended HI emission and anomalous metal abundances.	20 line	6	12
AB-366	Barvainis, R. Wootten, H.A.	NRAO/CV NRAO/CV	Linear polarization of ammonia and magnetic field mapping.	1.3	13,16	16
AC-144	Comins, N.F.	Maine	Large scale structures in 3C442.	6,20	6	6
AD-167	de Pater, I. Ip, W-H. Snyder, L. Palmer, P. Bolton, S.	UC Berkeley MPI Lindau, FRG Illinois Chicago UC Berkeley	Radio source occultations by Halley's comet.	18,21 line	3,4	18
AD-173	Dickey, J.M. Salpeter, E.E.	Minnesota Cornell	HI in galaxies in the cluster A400.	21 line	12,20	24
AD-174	Dressel, L.L.	Rice	Neutral hydrogen in a normal giant elliptical galaxy : NGC807.	21 line	18,22	23.8
AD-175	Dreher, J.W. Welch, W.J.	MIT UC Berkeley	W43, W49A, W51.	6	6	2
AE-42	Ekers, R.D. Fanti, R. Fanti, C. Parma, P.	NRAO/VLA Bologna, ITALY Bologna, ITALY Bologna, ITALY	B2 1637+28.	6	26	10.5
AF-107	Furst, E. Reich, W. Hummel, E.	MPIfR, FRG MPIfR, FRG MPIfR, FRG	G18.95-1.1, an extended galactic source with a possible binary system.	6,20	27	4
AG-116	Gibson, D.M. Priedhorsky, W.C.	NMIMT LANL	Search for a 300 day periodicity in Cyg X-1.	2,6,20	2	1

VLA UTILIZATION December 1985 (Cont.)

Program	Observer	Affiliation	Program title	Bands (cm)	Obsv date	Sched hrs
AG-145	Geldzahler, B.J. Schwartz, P.R. Gear, W.K. Ade. P.A.R. Robson, E.I. Nolte, I.G. Smith, M.G.	NRL NRL Queen Mary Coll, UK Queen Mary Coll, UK UKIRT Oregon ROE, UK	Monitoring blazars.	1.3,2,6 20,90	2,3	5.5
AG-198	Gee, G. Schwartz, P.R.	Queen Mary Coll, UK NRL	IRAS selected CO Broad-winged sources.	6,20	1,4	4
AG-200	Giovannini, G. Feretti, L.	Bologna, ITALY Bologna, ITALY	NGC4869.	2,6,20	24	5
AH-191	Ho, P.T.P Lo, K.Y.	CFA Caltech	Linear continuum structures in the Galactic plane.	6	24	4.5
AH-195	Hjellming, R.M. Davis, R.	NRAO/VLA/Tucson Jodrell Bank, UK	Recurrent nova RS Oph.	1.3,2,6 20	18	2
AH-206	Helfand, D.J. Becker, R. Zoonermatkermani, S.	Columbia UC Davis Columbia	The field surrounding G12.0-0.1: A cluster of supernova remnants?	21 line	15 w/Move/Ops	7.5
AH-213	Hills, R.E. Russell, A.P.G.	Cambridge, UK Cambridge, UK	Search for high velocity HI in molecular outflow sources.	21 line	14	14
AJ-127	Johnston, K. Wilson, T. Simon, R. Spencer, J.	NRL MPIfR, FRG NRL NRL	The Orion nebula.	6	9	9.5
AK-110	Kim, K. Kronberg, P.P. Dewdney, P.E. Landecker, T.L.	Toronto, CANADA Toronto, CANADA DRAO, CANADA DRAO, CANADA	Polarization observation of radio halos in Abell clusters.	20	12 w/Move/Ops	12
AK-128	Kwok, S. Arquilla, R.A. Ying, F.	Calgary, CANADA Calgary, CANADA Beijing NU, CHINA	NH3 observations of the circumstellar envelope of IRC+10216.	1.3 line	28	9
AK-129	Kronberg, P.P.	Toronto, CANADA	M82.	1.3	8	4
AK-131	Kundu, M.R. Jackson, P.D. Pallavicini, R.	Maryland Maryland Arcetri Obs, ITALY	Simultaneous VLA and EXOSAT observations of selected flare stars: AD Leo.	6,20	14	11
AK-133	Keto, E. Ho, P.T.P. Haschick, A.	Harvard CFA Haystack Obs	Spin-up and accretion in molecular cloud cores around OB clusters.	1.3 line	19	8
AK-134	Kundu, M.R. Schmahl, E.J. Szabo, A.	Maryland Maryland Maryland	Simultaneous VLA microwave and Clark Lake Meter-decameter solar burst observations.	6,20,90	8,9	19.7
AK-137	Kutner, M.L. Evans, N.J., II Mundy, L.	RPI Texas Caltech	H2CO emission as a probe of high density clumping in molecular clouds.	6 line	29	12
AK-139	Kapahi, V.K. Kulkarni, V.K.	TIFR, INDIA TIFR, INDIA	Epoch dependence of the sizes and spectra of radio galaxies.	6	21	18
AL-100	Liszt, H.	NRAO/CV	Survey of recombination-line emission from Galactic Center continuum sources outside Sgr A.	6 line	21	7.9
AM-164	Mundy, L.G. Masson, C.R.	Caltech Caltech	Search for dust continuum emission in Orion.	1.3,2	2,6	13.5
AO-62	O'Donoghue, A. Owen, F.N. Eilek, J.	NMIMT NRAO/VLA NMIMT	Wide angle tail sources.	6	7,8	7.5
AO-63	O'Dea, C.P. Owen, F.N.	NRAO/CV NRAO/VLA	Tail of NGC1265.	20	1	1.5
AP-105	Perley, R.A. Crane, P.	NRAO/VLA NRAO/VLA	Accurate flux density measurements of s calibrators.	1.3,2,6 20	27	24

VLA UTILIZATION December 1985 (Cont.)

Program	Observer	Affiliation	Program title	Bands (cm)	Obsv date	Sched hrs
AR-132	Reich, W. Furst, E.	MPIfR, FRG MPIfR, FRG	A complex structure in the center of G179.0+2.7.	6,20	23	6.5
AS-80	Sramek, R.A. van der Hulst, J.M. Weiler, K.W.	NRAO/VLA NFRA, NETH NRL	Supernovae SN1980 in NGC6946 and SN1979c in M100.	6,20	14,22	4.5
AS-211	Sramek, R.A. Weiler, K.W. van der Hulst, J.M. Panagia, N.	NRAO/VLA NRL NFRA, NETH STScI	Statistical properties of radio supernovae.	2,6,20	28	3.5
AS-220	Slee, O.B. Perley, R.A.	CSIRO, AUST NRAO/VLA	Two complete samples of steep spectrum sources.	6	17	13
AS-224	Smith, A. Peacock, A.	ESA/ESTEC, NETH ESA/ESTEC, NETH	SNR W49B.	6	7	6
AT-64	Taylor, A.R. Pottasch, S.R. Seaquist, E.R.	Groningen, NETH Groningen, NETH Toronto, CANADA	Radio monitoring of nova vulpeculae 1984 no 2.	2,6,20	18	3
AT-66	Turner, J.L. Ho, P.T.P.	CFA CFA	HI mapping of Maffei 2.	21 line	26	8
AV-96	van der Hulst, J.M. Sramek, R.A. Weiler, K.W.	NFRA, NETH NRAO/VLA NRL	Radio supernova in NGC 4258.	6,20	14	2
AV-125	van Gorkom, J. Ekers, R.D. Wrobel, J. Schweizer, F.	Princeton/NRAO NRAO/VLA NMIMT DTM	Search for neutral hydrogen in two nearby radio galaxies: M84.	21 line	20	10
AV-131	Vilhu, O. Caillault, J.P.	Colorado Colorado	Radio and X-ray emission in contact binaries: XY Leo.	6	26	10.5
AW-117	Wilson, T.L. Walmsley, C.M. Johnston, K.J. Henkel, C.	MPIfR, FRG MPIfR, FRG NRL MPIfR, FRG	2 cm formaldehyde in Orion.	2 line	8	9
AW-142	Wills, B.J.	Texas	Radio beaming and quasar emission lines.	6,20	9	5.3
AW-144	Wilking, B.A. Mundy, L.G. Schwartz, R.D.	Missouri Caltech Missouri	The circumstellar environment of the young star LKHalpha 234.	1.3	7	4
AZ-29	Zensus, A. Cohen, M.H. Readhead, A.C.S.	Caltech Caltech Caltech	Radio galaxies 3C123 and 3C303.	1.3	5,7	5
	NRAO staff		Electronics			59.1
			Software			21.6
			Pointing, baselines, startup			53.3
			General tests			64.1
			Christmas			31.5
			Shutdown			4.5
			JPL tests			6.0

The average downtime for the month of December, 1985 was approximately 4.31 percent.

$$\text{Average downtime of operational antennas} = \frac{\text{Total number of antenna-hours of operational antennas lost due to hardware and software failures during scheduled observing}}{\text{Total number of antenna-hours of operational antennas scheduled}} \times 100$$

where "antenna-hours" definition is: An array consisting of N antennas operating for Y hours is defined to have YN antenna-hours operation.

The array was scheduled 95.8 percent (712.5 hours) of the time: 68.3 percent (508.3 hours) to astronomical programs, 16.7 percent (123.5 hours) to scheduled test/calibration, and the remaining 10.8 percent (80.7 hours) went to scheduled maintenance.

The total number of programs run for the month of December, 1985 was 55.

The following independent proposals shared simultaneous observing time (8.8 hours Total Simultaneous Observing):

AK-110/Move/Operations	5.8
AH-206/Move/Operations	3.0
Total	8.8

860106/PDH/ap

VLA UTILIZATION NOVEMBER 1985

Program	Observer	Affiliation	Program title	Bands (cm)	Obsv date	Sched hrs
AA-49	Armstrong, J.T. Ho, P.T.P.	NRAO/CV CFA	NH3(1,1) emission within 3 pc of the Galactic Center.	1.3 line	1	9.5
AB-325	Bieging, J.H. Cohen, Martin	Calif. Berkeley NASA-Ames	Flux density and spectral index monitoring of V410 Tau.	2,6	23	1
AB-336	Bieging, J.H. Goss, W.M.	Calif. Berkeley Groningen, NETH	HI absorption in Cas A.	21 line	30	4
AB-339	Becker, R. Helfand, D.	Calif. Davis Columbia	G5.3-1.0 and G357.7-0.1.	6,20	12	7
AB-342	Burstein, D. Yin, Q.F. Condon, J.J.	Arizona State Beijing U, CHINA NRAO/CV	The relationship of stellar populations to radio continuum emission in normal spiral galaxies.	20	2	6
AB-353	Bhattacharya, D. Srinivasan, G. van Gorkom, J.H.	Raman Inst, INDIA Raman Inst, INDIA Princeton/NRAO	H110-alpha recombination line toward compact sources in the Galactic Plane.	6	30	2.5
AB-357	Becker, R. White, R.L.	Calif. Davis STScI	Monitoring the radio flux of the radio star HD193793.	6	5,20	3
AB-358	Becker, R. Helfand, D.	Calif. Davis Columbia	Neutral hydrogen absorption measurements to SNR.	21 line	4	6
AC-101	Condon, J.J.	NRAO/CV	Continuum survey of bright spiral galaxies.	20	2	7
AC-118	Clark, F.O. Bridle, A.H. van Gorkom, J.H.	NRAO/CV NRAO/CV Princeton/NRAO	OH emission/absorption in bipolar flows associated with young stars.	18 line	29	10
AC-137	Carignan, C. Freeman, K.	Montreal, CAN ANU, AUST	Mass distribution in the dwarf irregular DDO 154.	21 line	22,23	24
AC-143	Chanmugam, G. Dulk, G.A. Bastian, T.S.	Louisiana State Colorado Colorado	Radio emission from magnetized cataclysmic variable stars.	2,6,20	7,22	9
AD-145	Duric, N. Seaquist, E.R. Crane, P.C. Davis, L.E.	British Columbia Toronto, CAN NRAO/VLA NOAO	Spiral galaxy NGC 4736.	2,6	29	12
AD-167	de Pater, I. Ip, W-H, Snyder, L. Palmer, P. Bolton, S.	Calif. Berkeley MPI Lindau, FRG Illinois Chicago Calif. Berkeley	OH emission by Halley's comet.	18,21 line	12,15	24
AG-191	Gavazzi, G. Jaffe, W.	FC Milan, ITALY STScI	Coma/A1367 supercluster survey.	20	12	2
AG-192	Gathier, R. Garay, G.	ESO, FRG ESO, FRG	Kinematics of the planetary nebulae NGC6543 and NGC7009.	2 line	24	10
AG-194	Giovannini, G. Feretti, L. Andernach, H.	Bologna, ITALY Bologna, ITALY MPI, Bonn	Extended source near Coma A.	6	12	2
AG-199	Gottesman, S.T. Hunter, J.H. Jr Erickson. L.K.	Florida Florida Florida	HI observations of NGC4258 and NGC4303.	21 line	14,15,16	23.5
AG-205	Garay, G. Andersson, M.	ESO, FRG Onsala	Ammonia observations of the hot molecular gas associated with the ultracompact HII region G34.3+0.2.	1.3 line	20	8
AH-195	Hjellming, R.M. Davis, R.	NRAO/VLA Jodrell Bank	Recurrent nova RS Oph.	1.3,2,6 and 20	15	2.5
AH-206	Helfand, D. Becker, R. Zoonermatkermani, S.	Columbia Calif. Davis Columbia	Field surrounding G12.0-0.1: a cluster of supernova remnants?	6	3	7
AH-208	Hoban-Magnani, S. Baum, S.	Maryland NRAO/Maryland	Icy grain halo of comet P/Halley.	2	16	9
AH-211	Ho, P.T.P. Turner, J.L.	CFA CFA	HI synthesis mapping of NGC253.	21 line	3	8

VLA UTILIZATION NOVEMBER 1985 (Cont.)

Program	Observer	Affiliation	Program title	Bands (cm)	Obsv date	Sched hrs
AH-212	Haynes, M.P. Giovanelli, R.	Cornell U/NAIC NAIC	HI near extragalactic HII regions.	21 line	9	6
AK-131	Kundu, M.R. Jackson, P.D. Pallavicini, R.	Maryland Maryland Arcetri	Simultaneous VLA and EXOSAT observations of selected flare stars: YZ CMi.	6,20	18	9.5
AK-135	Killeen, N. Bicknell, G. Ekers, R.D.	NRAO/CV ANU, AUST NRAO/VLA	NGC612 (PKS0131-36).	2,6,20	1	8
AK-136	Killeen, N. Bicknell, G. Ekers, R.D.	NRAO/CV ANU, AUST NRAO/VLA	IC4296 (PKS1333-33).	2,6,20	3	3.5
AK-138	Keto, E. Ho, P.T.P. Haschick, A.	Harvard CFA Haystack	Accreting molecular cloud core around the OB cluster G10.6-0.4.	1.3 line	9,10,11	24
AL-101	Lang, K.R. Willson, R.F. Pallavicini, R.	Tufts Tufts Arcetri	Simultaneous VLA, EXOSAT and IUE observations of the RS CVn star lambda AND.	2,6,20	10,12	8.6
AL-106	Leahy, J.B. Morison, I. Muxlow, T.W.B. Stephens, P.	Manchester Manchester Manchester Manchester	Spectral mapping over 2 decades of frequency.	2	23	13
AM-124	McHardy, I.M. Warwick, R.S. Smith, A.	Leicester Leicester ESTEC, NETH	Coordinated radio, optical and X-ray observations of OVVs and BL Lacertae objects.	2,6,20	6,8	6
AM-157	Mirabel, I.F. Rodriguez, L.F. Canto, J. Ruiz, A.	Puerto Rico UNAM, MEXICO UNAM, MEXICO Puerto Rico	High velocity OH in absorption toward selected sources.	18 line	13,19	23.3
AM-159	Mebold, U. Kalberla, P.W.M.	Bonn U, FRG MPI, Bonn	High velocity clouds and their interaction with the Draco nebula.	21 line	21,25	20.5
AM-161	Magri, C. Haynes, M.P.	Cornell U Cornell U	Neutral hydrogen as a tracer of interaction in the NGC3169 group.	21 line	10,11	17
AO-63	O'Dea, C.P. Owen, F.N.	NRAO/CV NRAO/VLA	The tail of NGC1265.	20	30	4.5
AP104	Pedlar, A. Unger S.W. Axon, D.J.	NRAO/Jodrell Bank Jodrell Bank Jodrell Bank	HI studies of pairs of galaxies with active nuclei: NGC 4151/4145.	21 line	24	8
AR-131	Rodriguez, L.F. Torrelles, J.M. Canto, J. Curiel, S. Ho, P.T.P. Pravdo, S.	UNAM, MEXICO UNAM, MEXICO UNAM, MEXICO UNAM, MEXICO CFA JPL	Herbig-Haro 1 and 2 region.	2,6	20,24	19
AR-133	Retallack, D.S.	NRAO/VLA	HII region M 16.	2,6,20	2	3
AR-134	Rickard, L.J. Turner, B.E.	Sachs-Freeman/NRL NRAO/CV	Position of the 1667 MHz "megamaser" in M31.	18 line	27	3
AR-135	Rickard, L.J. Turner, B.E.	Sachs-Freeman/NRL NRAO/CV	The 1667 MHz "megamaser" in UGC8696.	18 line	27	6
AS-211	Sramek, R.A. Weiler, K.W. van der Hulst, J.M. Panagia, N.	NRAO/VLA NSF NFRA, NETH STScI	Statistical properties of radio supernovae.	2,6,20	19	1.5
AS-231	Sievers, A. Wielebinski, R.	MPI, Bonn MPI, Bonn	Spectrum and morphology of radio halos in Abell clusters A1367, A1656, A2319.	20	27	2
AS-233	Simon, M. Vader, P.	SUNY Stony Brook Yale	HI observations of selected IRAS galaxies.	21 line	21,25	17.5
AS-245	Singal, A.	TIFR	Giant radio galaxy 1331-09.	2,6,20	8	5

VLA UTILIZATION NOVEMBER 1985 (Cont.)

Program	Observer	Affiliation	Program title	Bands (cm)	Obsv date	Sched hrs
AT-60	Taylor, A.R. Seaquist, E.R. Kenyon, S.J.	Groningen, NETH Toronto, CAN CFA	Radio-optical-UV monitoring of symbiotic stars.	1.3,2,6 20	7	12
AT-64	Taylor, A.R. Pottasch, S.R Seaquist, E.R.	Groningen, NETH Groningen, NETH Toronto, CAN	Radio monitoring of nova Vulpeculae 1984 no 2.	2,6,20	2,27	6
AT-68	Torrelles, J.M. Rodriguez, L.F. Canto, J. Ho, P.T.P.	UNAM, MEXICO UNAM, MEXICO UNAM, MEXICO CFA	Broad ammonia emission from L1551 and Cep A.	1.3 line	14	9.5
AU-22	Uson, J.M.	NRAO/CV	Background sources contaminating measurements of the Sunyaev-Zeldovich effect.	2,6	4,8,18	34.8 w/move,Op
AV-123	van Breugel, W. van Gorkom, J.H. Heckman, T. Miley, G.	Calif. Berkeley Princeton/NRAO Johns Hopkins STScI	HI observations of Minkowski's Object in the cluster of galaxies A194.	21 line	9,10,11, 22	19.4
AZ-24	Zheng, X.W. Ho, P.T.P. Moran, J.M.	SAO/Nanking U CFA CFA	Clumping and rotation in the molecular cloud OMC2.	1.3 line	26	9.5
	NRAO staff		Electronics			40.5
			Software			28.2
			Pointing, baselines, startup, move/operations			61.4
			Standard field observation			12
			General tests			44
			Shutdown			2.5
			JPL tests			8
			Thanksgiving			24
			Planned power outage			8

The average downtime for the month of November, 1985 was approximately 6.67 percent.

$$\text{Average downtime of operational antennas} = \frac{\text{Total number of antenna-hours of operational antennas lost due to hardware and software failures during scheduled observing}}{\text{Total number of antenna-hours of operational antennas scheduled}} \times 100$$

where "antenna-hours" definition is: An array consisting of N antennas operating for Y hours is defined to have YN antenna-hours operation.

The array was scheduled 96.7 percent (696.00 hours) of the time: 69.0 percent (497.1 hours) to astronomical programs, 17.0 percent (122.2 hours) to scheduled test/calibration, and the remaining 10.7 percent (76.7 hours) went to scheduled maintenance.

The total number of programs run for the month of November, 1985 was 50.

The following independent proposals shared simultaneous observing time (5.7 hours Total Simultaneous Observing):

AU22/Move/Op 5.7

851218/PDH/ap

VLA UTILIZATION OCTOBER 1985

Program	Observer	Affiliation	Program title	Bands (cm)	Obsv date	Sched hrs
AA-49	Armstrong, J.T. Ho, P.T.P.	NRAO/CV CFA	NH3(1,1) emission within 3 parsec of the Galactic Center.	1.3 line	31	9.5
AB-318	Brown, A. Drake, S.A. Walter, F.M.	Colorado U Colorado U Colorado U	Southern PMS stars.	6	3 w/VU15,VP70,	6.5 Move/Op
AB-325	Bieging, J.H. Cohen, Martin	UC Berkeley NASA-Ames	Flux density and spectral index monitoring of V410 Tau.	2,6	24,25,27	3
AB-344	Briggs, F.H.	Pittsburgh U	Extensive HI disks around galaxies.	21 line	20,21	15
AB-353	Bhattacharya, D. Srinivasan, G. van Gorkom, J.H.	Raman Inst., INDIA Raman Inst., INDIA Princeton	H110alpha recombination line toward compact sources in the Galactic Plane.	6 line	18,24	6
AB-357	Becker, R. White, R.L.	UC Davis STScI	Monitoring the radio star HD193793.	6	4,14,18, 22,24-30	12.5 w/VG46
AB-361	Brown, R.L. Gordon, M.A.	NRAO/CV NRAO/Tucson	CII region in the Rho Ophiuchius Dark Cloud.	6 line	27	9
AB-363	Bookbinder, J.A. Lamb, D.Q.	Harvard U CFA	Further search for radio emission from Magnetic Cataclysmic Variables.	2,6,20	4	6 w/VU15
AB-364	Bookbinder, J.A. Lamb, D.Q.	Harvard U CFA	Search for radio emission from the AM Her Star 4U0541+60.	1.3,2,6 20	7,8 w/VS50,VZ10,	14 VP58
AC-142	Coles, W.A. Rickett, B.J. Armstrong, J.W. Kojima, M.	UC San Diego UC San Diego JPL Nagoya U, JAPAN	Solar wind observations very near the Sun.	1.3,2,6 w/Elec,Startup,VM71, VP58,VU15,AJ118,VS50,	4-10	51.4 VB65, VM66, VZ10
AC-143	Chanmugam, G. Dulk, G.A. Bastian, T.S.	Louisiana SU Colorado U Colorado U	Radio emission from Magnetized Cataclysmic Variable stars.	2,6,20	2,12,13 w/VW39,	30 VG46, VW23,VP58
AC-145	Carignan, C.	Montreal U, CAN	HI observations of NGC7793.	21 line	23,24,26	18
AF-108	Fomalont, E.B. Ekers, R.D. van Breugel, W.	NRAO/VLA NRAO/VLA UC Berkeley	Fornax A.	6,20	21,22,25 27,29,30	36 w/Move/Op
AG-116	Gibson, D.M. Priedhorsky, W.C.	NMIMT LANL	A search for 300 day periodicity in Cyg X-1.	2,6,20	24	1
AG-145	Geldzahler, B. Schwartz, P. Gear, W.K. Ade, P.A.R. Robson, E.I. Nolt, I.G. Smith, M.G.	NRL NRL Queen Mary Coll, UK Queen Mary Coll, UK UKIRT Oregon ROE, UK	Monitoring Blazars.	1.3,2,6, 20,90	25,28	7
AG-201	Geldzahler, B.	NRL	Snapshot observations of M32.	6	10,30	2.5 w/test
AH-195	Hjellming, R.M. Davis, R.	NRAO/VLA Jodrell Bank, UK	Recurrent nova RS Oph.	1.3,2,6 20	4,8, 9,19 VM66,	13 w/VZ10, Move/Op
AH-209	Helou, G. Kotanyi, C.	JPL ESO, FRG	Normal galaxies.	20	31	6.5
AI-20	Inoue, M. Tabara, H. Kato, T. Tsuboi, M. Fomalont, E.	Nobeyama R O, JAPAN Utsunomiya U, JAPAN Utsunomiya U, JAPAN Tokyo U, JAPAN NRAO/VLA	Magnetic field on the radio arc at the Galactic Center.	2,6	26	5
AJ-118	Johnston, K.J. Spencer, J.H. Hjellming, R.M Angerhoffer, P.E. Florkowski, D. Reid, M.J.	NRL NRL NRAO/VLA USNO USNO CFA	Structure of Cyg X-3 in outburst.	1.3,2,6 and 20	4,7-14, 16,20,22 w/AO61,AC142,VP58,	12.5 VP70,AT64, VZ10,VM66

VLA UTILIZATION OCTOBER 1985 (Cont.)

Program	Observer	Affiliation	Program title	Bands (cm)	Obsv date	Sched hrs
AK-135	Killeen, N. Bicknell, G. Ekers, R.D.	NRAO/CV Mt Stromlo, AUST NRAO/VLA	NGC612 (PKS0131-36).	2,6,20	28,31	10
AK-136	Killeen, N. Bicknell, G. Ekers, R.D.	NRAO/CV Mt Stromlo, AUST NRAO/VLA	IC4296 (PKS1333-33).	2,6,20	19,22,24 25,26,29	24.5
AL-102	Lasenby, A.N. Lewtas, J. Yusef-Zadeh, F.	Cambridge U, UK Cambridge U, UK Columbia U	HI absorption study of the Radio Arc region of the Galactic Center.	21 line	28	8
AM-158	Massi, M. Felli, M. Tofani, G. Falchi, A.	Arcetri, ITALY Arcetri, ITALY Arcetri, ITALY Arcetri, ITALY	Kinematics of the blister type HII region Mon R2.	6 line	19,21,22	12.5
AM-160	MacLeod, J.M. Vallee, J.P. Broten, N.W.	Herzberg Inst, CAN Herzberg Inst, CAN Herzberg Inst, CAN	Faraday rotation through and near the Eridanus Cavity.	6,18,20	13	12.8 w/VP58
AO-61	Oznovich, I. Gibson, D.M.	NMIMT NMIMT	Magnetic activity in five late-type giants and supergiants.	6	3,18 w/VP70,AJ118	9
AR-129	Rodriguez, L.F. Garcia-Barreto, J.A. Gomez, Y.	UNAM, MEXICO UNAM, MEXICO UNAM, MEXICO	Twice ionized helium in NGC6302.	2 line	18,19	8
AS-211	Sramek, R.A. Weiler, K.W. van der Hulst, J.M. Panagia, N.	NRAO/VLA NSF NFRA, NETH STScI	Statistical properties of radio supernovae.	2,6,20	28	2.5
AS-243	Simon, R. Spencer, J. Johnston, K.	NRL NRL NRL	Radio emission from alpha 2 CVn stars.	6	27	4
AT-64	Taylor, A.R. Pottasch, S.R. Seaquist, E.R.	Groningen U, NETH Groningen U, NETH Toronto U, CAN	Monitoring of nova vulpeculae 1984 no 2.	2,6,20	7	6 w/AJ118, VP58,VS50
AU-22	Uson, J.M.	NRAO/CV	Background sources contaminating measurements of the Sunyaev-Zeldovich effect.	2,6	1,15 w/VB67,VU15, VD9,VW39,VW38	66.2
AV-119	van Breugel, W. Heckman, T. Miley, G.	UC Berkeley Maryland U STScI	Radio and optical shells in PKS 0634-206	20	29	6
AV-125	van Gorkom, J. Ekers, R.D. Wrobel, J. Schweizer, F.	Princeton NRAO/VLA NMIMT DTM	Search for neutral hydrogen in 2 nearby radiogalaxies: Fornax A.	21 line	19,21	10
AW-140	Wootten, A.	NRAO/CV	Ammonia synthesis of a dense core with outflow in the Rho Ophiuchus cloud.	1.3 line	24,25	10
AY-8	Yusef-Zadah, F. Morris, M.	Columbia U UC Los Angeles	The Galactic Center "arc".	2,6,20	20,21	16 w/AY11
AY-11	Yusef-Zadah, F. Morris, M. Senadakas, J. Klein, U. Wielebinsky, R. Lasenby, A.	Columbia U UC Los Angeles MPIfR, FRG MPIfR, FRG MPIfR, FRG Cambridge U, UK	The negative latitude extension of the arc near the Galactic Center.	6,20	20,21	16 w/AY8
VAH-37	Ho, P.T.P. Turner, J. Bartel, N.	CFA CFA CFA	NGC253.	6 phased array MK III VLB	10	2
VB-54	Backer, D. Sramek, R.	UC Berkeley NRAO/VLA	Phase referencing to Sgr A.	6 phased array MK III VLB	12	3 w/VP58

VLA UTILIZATION OCTOBER 1985 (Cont.)

Program	Observer	Affiliation	Program title	Bands (cm)	Obsv date	Sched hrs
VB-65	Bartel, N.	CFA	SN 1979c.	6 phased array MK III VLB	10	9.6 w/AC142
VB-67	Backer, D.C. Wright, M. Plambeck, R.L. van Breugel, W. Readhead, A.C.S.	UC Berkeley UC Berkeley UC Berkeley UC Berkeley Caltech	Structure of compact components in NGC1275 (3C84).	1.3cm three antenna VLB	1	8 w/AU22, Move/Op
VD-9	Diamond, P.J. Johnston, K.J. Chapman, J.S.	MPIfR, FRG NRL Jodrell Bank, UK	H2O masers around the supergiant S Per.	1.3cm three antenna VLB	1	11 w/AU22
VG-46	Matveyenko, L.I. Diamond, P.J. Graham, D.A.	Space Res Inst, USSR MPIfR, FRG MPIfR, FRG	Orion H2O maser.	1.3cm three antenna VLA	3,5,6	11.4 w/AC143,AB357 move/op,VM71,test
VH-17	Hooimeyer, J. Schilizzi, R.T. Miley, G.K. van der Hulst, J.M.	Leiden U, NETH NFRA, NETH STScI NFRA, NETH	Compact structure in LINER galaxies.	6cm phased array MK III VLB	14	5.4
VM-66	Marcaide, J.M. Eckart, A.	MPIfR, FRG MPIfR, FRG	1928+738 phase referenced to 2007+777.	6cm single antenna MK III VLB	9	14.1 w/AC142,AJ118, Elec,AH195, Move/Op,Startup
VM-71	Molnar, L.A. Reid, M.J. Grindlay, J.E. Preston, R.A.	CFA CFA CFA JPL	Modeling the expansion of Cygnus X-3.	1.3cm phased array MK III VLB	5,6	31 w/AC142,VG46
VP-58	Pearson, T.J. Readhead, A.C.S.	Caltech Caltech	A complete sample of 20 sources.	6cm single antenna VLB	7,8,12-13	39.5 w/AC142 AT64,AB364 AJ118,tests,Elec,AC143,AM160
VP-63	Preuss, E. Alef, W.	MPIfR, FRG MPIfR, FRG	NGC4151.	6cm phased array MK III VLB	11	9.5
VP-70	Pauliny-Toth, I. Porcas, R. Kellermann, K. Zensus, A.	MPIfR,FRG MPIfRFRG NRAO/CV Caltech	3C454.3.	1.3cm three antenna VLB	3	8.8 w/AB318, AJ118,A061 Move-OP
VS-50	Simon, R.S. Scheuer, P.A.G. Cawthorne, T.V. Hough, D.H.	NRL Cambridge U, UK Cambridge U, UK Caltech	3C454 and 3C43.	6cm phased array VLB	7,10	21.5 w/AB364,AT64, Move/Op,AC142
VS-52	Schilizzi, R. Barthel, P. Miley, G. Hooimeyer, J.	NFRA, NETH Caltech STScI Leiden, NETH	Compact cores in extended quasars.	6cm phased array VLB	11,12	8.2
VU-15	Unwin, S.C. Biretta, J.A. Cohen, M.H. Readhead, A.C.S. Zensus, A. Baath, L.B.	Caltech Caltech Caltech Caltech Caltech Onsala, SWEDEN	Superluminal sources.	1.3cm three antenna VLB	1,3,4	40.1 w/Move-Op, AB318,AU22, AC142,tests AB363
VW-23	Walker, R.C. Benson, J.M. Unwin, S.C.	NRAO/VLA NRAO/CV Caltech	Monitoring 3C120.	6cm single antenna VLB	11	11.4 w/AC143, Move/Op

VLA UTILIZATION OCTOBER 1985 (Cont.)

Program	Observer	Affiliation	Program title	Bands (cm)	Obsv date	Sched hrs
VW-38	Witzel, A. Eckart, A. Schalinski, C. Biermann, P. Johnston, K.J. Simon, R.	MPIfR, FRG MPIfR, FRG MPIfR, FRG MPIfR, FRG NRL NRL	Complete sample of extragalactic radio sources.	6cm single antenna VLB	15	31 w/AU22, Move/Op,Elec
VW-39	Witzel, A. Eckart, A. Schalinski, C. Biermann, P. Johnston, K.J. Simon, R.	MPIfR, FRG MPIfR, FRG MPIfR, FRG MPIfR, FRG NRL NRL	Submilliarcsecond structures of a complete sample of extragalactic radio sources.	1.3cm three antenna Mk III VLB	2	12.5 w/AU22, AC143
VZ-10	Zensus, A. Cohen, M.H. Lind, K.R. Unwin, S.C. Baath, L.B.	Caltech Caltech Caltech Caltech Onsala, SWEDEN	3C345.	6cm single antenna VLB	8	13.2 w/AC142, AH195,AJ118, AB364
	NRAO staff		Electronics			48.5
			Software			26.5
			Pointing, baselines, startup, move/operations			99.4
			General tests			54.2
			JPL tests			6

The average downtime for the month of October, 1985 was approximately 7.91 percent.

$$\text{Average downtime of operational antennas} = \frac{\text{Total number of antenna-hours of operational antennas lost due to hardware and software failures during scheduled observing}}{\text{Total number of antenna-hours of operational antennas scheduled}} \times 100$$

where "antenna-hours" definition is: An array consisting of N antennas operating for Y hours is defined to have YN antenna-hours operation.

The array was scheduled 100 percent (745.00 hours) of the time: 78.8 percent (586.9 hours) to astronomical programs, 13.9 percent (103.5 hours) to scheduled test/calibration, and the remaining 7.3 percent (54.6 hours) went to scheduled maintenance.

The total number of programs run for the month of October, 1985 was 55.

The following independent proposals shared simultaneous observing time (266.7 hours Total Simultaneous Observing):

AU22/VB67	7.5
VB67/Move/Op	0.5
VU15/Move/Op	4.0
AU22/VU15	11.1
AU22/VD9	11.0
AU22/VW39	10.4
AC143/VW39	2.1
AC143/VG46	0.4
VG46/Move/Op	2.1
VU15/Move/Op	1.4
VU15/Test/Perley	6.0
VU15/Test/JPL	3.0
AB318/VU15	0.6
AB318/Move/Op	3.1
AB318/VP70	2.8
AO61/VP70	3.9

AC[illegible]/VP70/AJ118	0.6
VP70/Move/Op	1.5
VU15/Move/Op	2.3
VU15/Test/Sramek	2.0
VU15/Test/JPL	2.0
AC142/VU15	2.0
AB363/VU15	5.7
AB357/VG46	0.3
VG46/Move/Op	4.2
AC142/VM71	4.5
AC142/VM71	4.5
VM71/VG46	4.2
VG46/Test/Bignell	0.2
AC142/VP58	2.1
AT64/VP58	3.3
AT64/VP58/AJ118	0.6
AT64/VS50	2.1
AB364/VS50	7.0
VS50/Move/Op	0.9
AC142/VZ10	7.1
AH195/VZ10	5.0
AJ118/VZ10	0.5
AB364/VZ10	0.6
AB364/VP58	6.4
VP58/Test/Electronics	3.0
AC142/VP58/Electronics	1.6
AC142/VM66/Electronics	4.9
AC142/VM66/Startup	3.0
VM66/Startup	2.0
AH195/VM66	2.5
AJ118/VM66	0.5
VM66/Move/Op	1.2
AC142/VB65	6.0
AC142/AJ118	0.5
AC142/VS50	1.4
VW23/Move/Op	4.3
AC143/VW23	7.1
AC143/VP58	2.8
VP58/VB54	0.2
AC143/VP58	7.7
AJ118/VP58	3.0
AM160/VP58	8.8
VW38/Move/Op	0.4
AU22/VW38	26.2
VW38/Electronics	4.4
AH195/Move/Op	2.0
AY8/AY11	16.0
AJ118/Test/Perley	3.5
AF108/Move/Op	2.5
AG201/Test/Clark	1.0

851118/PDH/ap

file

VLA UTILIZATION SEPTEMBER 1985

Program	Observer	Affiliation	Program Title	Bands (cm)	Obsv date	Sched hrs
AA-47	Abbott, D. Bieging, J. Churchwell, E.	Colorado U UC Berkeley UW Madison	Stellar wind emission from OB and Wolf-Rayet stars.	6,2	1,18	10
AA-50	Antonucci, R. Ulvestad, J.	NRAO/CV JPL	Blazars with arcminute halos.	20	23	2
AB-318	Brown, A. Drake, S.A. Walter, F.M.	Colorado U Colorado U Colorado U	Southern PMS stars.	6	23	3
AB-324	Blaha, C. Pedelty, J. Dickey, J. Kennicutt, R. Jr	Minnesota U Minnesota U Minnesota U Minnesota U	Hot spot nuclei.	2,20	18	8
AB-325	Bieging, J.H. Cohen, Martin	UC Berkeley NASA-Ames	Flux density and spectral index monitoring of V410 Tau.	2,6	21	1.5
AB-336	Bieging, J.H. Goss, W.M.	UC Berkeley Groningen U, NETH	HI absorption in Cas A.	21 line	17	4
AB-341	Borne, K.D. Jaffe, W. Hoessel, J.	DTM STScI STScI	Interacting elliptical galaxies.	6,20	21,24,27	6
AB-347	Brown, A. Mundt, R. Drake, S.	Colorado MPI, Heidelberg Colorado	Extended microwave-emitting regions around HL and XZ Tau.	1.3,2,6	5	1
AB-350	Birkinshaw, M. Davies, R.L.	Harvard U NOAO	Bright radio galaxies with unusual optical features.	6,20	29	12
AB-352	Baum, S. Bridle, A. Heckman, T. Miley, G. van Breugel, W.	NRAO/Maryland U NRAO/CV Maryland U STScI UC Berkeley	1717-00 = 3C353.	2,6,18 20	16	10
AB-354	Baum, S. Bridle, A. Heckman, T. Miley, G. van Breugel, W.	NRAO/Maryland U NRAO/CV Maryland U STScI UC Berkeley	A complete sample of Equatorial radio sources.	2,6	20	10.5
AC-141	Campbell, B.	Arizona U	Wide field survey of star forming regions.	6	6	11
AD-145	Duric, N. Seaquist, E.R. Crane, P.C. Davis, L.E.	British Columbia U, CAN Toronto U, CANADA NRAO/VLA NOAO	Spiral galaxy NGC4736.	2,6	12	12
AD-163	Dickel, H.R. Goss, W.M.	Illinois U Groningen U, NETH	H2CO toward W 49A south.	2 line	1	11
AD-164	Drake, S.A. Florkowski, D. Walter, F. Linsky, J.L.	NASA/GSFC USNO Colorado U Colorado U	Radio survey of a complete sample of X-ray-bright stars.	6	26	16
AD-165	Dulk, G.A. Bastian, T.S. Slee, O.B. Stewart, R.T. Nelson, G. Robinson, R.D.	Colorado U Colorado U CSIRO, AUST CSIRO, AUST CSIRO, AUST AAT, AUST	Active, late type southern stars.	6,20	13	16
AD-167	de Pater, I. Ip, W-H. Snyder, L. Palmer, P. Bolton, S.	UC Berkeley MPI Lindau, FRG UI Urbana Chicago U UC Berkeley	Radio source occultations by comets.	18,21 line	7,15,18	27
AD-169	Duric, N. Gregory, P.C.	British Columbia U, CAN British Columbia U, CAN	Survey of M33.	6	2,8,12	21.5

VLA UTILIZATION SEPTEMBER 1985 (Cont.)

Program	Observer	Affiliation	Program Title	Bands (cm)	Obsv date	Sched hrs
AE-41	Eilek, J. Owen, F.	NMIMT NRAO/VLA	Radio sources behind Abell clusters.	20	19,20	8.5
AF-110	Florkowski, D.R. Drake, S.A. Walter, F. Linsky, J.L.	USNO NASA/GSFC Colorado U Colorado U	Search for radio emission in two young stellar groups: a clue to the solar-stellar connection?	6	20	13
AG-116	Gibson, D.M. Priedhorsky, W.C.	NMIMT LANL	Search for a 300 day periodicity in Cyg X-1.	2,6,20	11	1.5
AG-182	Garcia-Barreto, J.A. Pismis, P.	UNAM, MEXICO UNAM, MEXICO	Nuclear emission from the barred galaxy NGC4314.	6,20	12	2
AG-189	Glendenning, B. Kronberg, P.	Toronto U, CANADA Toronto U, CANADA	Peculiar spiral NGC2146.	2,21 line	16	14
AG-191	Gavazzi, G. Jaffe, W.	F.C. Milan, ITALY STScI	Coma/A1367 supercluster survey.	20	27	5
AG-196	Gary, D.E. Hurford, G.J.	Caltech Caltech	Spectroscopy of solar active regions.	2,6,20	21,24	20
AH-178	Haynes, M.P. Giovanelli, R.	Cornell U NAIC	HI in NGC5434.	21 line	2,3	24
AH-186	Hacking, P. Houck, J. Beichman, C. Neugebauer, G. Soifer, B.T.	Cornell U Cornell U JPL Caltech Caltech	IRAS deep field galaxies.	6,20	7	13
AH-191	Ho, P.T.P. Lo, K.Y.	Harvard U Caltech	Linear continuum structures in the Galactic Plane.	6,20	15	7
AH-192	Habbal, S.R. Withbroe, G.L. Kundu, M.R. Melozzi, M. Harvey, K.L.	CFA CFA Maryland U Maryland U Solar Phys. Res. Corp.	Spatial and temporal variations in solar coronal bright point emission.	6,20	8,9	14
AH-195	Hjellming, R.M. Davis, R.	NRAO/VLA Jodrell Bank, UK	Recurrent nova RS Oph.	2,6,20	11,27	4.5
AH-196	Hertz, P. Feigelson, E.D. Wood, K.S.	NRL Penn State U NRL	Search for unidentified HEAO A-1 X-ray sources.	20	29	11.5
AH-198	Ho, P.T.P. Turner, J.L. Martin, R.N.	CFA CFA IRAM, FRANCE	HI synthesis mapping of IC342.	21 line	11	8
AK-123	Knapp, G.R. Bowers, P.F.	Princeton U NRL	Search for HI in Betelgeuse and IRC + 10216.	21 line	22	15
AK-129	Kronberg, P.P.	Toronto U, CANADA	M82.	1.3	1	8
AL-94	Liszt, H. Burton, W.B.	NRAO/CV Leiden U, NETH	Structure of Sgr C.	6	9	4
AL-95	Lane, A.P. Reynolds, S.P. White, N.E.	NRAO/CV NRAO/CV ESOC, Darmstadt FRG	Simultaneous radio, X-ray, and UV observations of RS CVn stars: HR1099.	2,6,20	23	9
AL-101	Lang, K.R. Willson, R.F. Pallavacini, R.	Tufts U Tufts U Arcetri Obs, ITALY	Simultaneous VLA, EXOSAT and IUE observations of RS CVn stars: UX Ari.	2,6,20	25	10
AL-104	Langston, G.I. Burke, B.F.	MIT MIT	2 small radio clusters and extended structure sources from the MG study.	2,6,20	22,25, 26	8.5
AM-154	Morganti, R. Fanti, C. Fanti, R. Parma, P. de Ruiter, H.	Bologna, ITALY Bologna, ITALY Bologna, ITALY Bologna, ITALY Bologna, ITALY	Jets in low luminosity radio galaxies.	6	24	3.5

VLA UTILIZATION SEPTEMBER 1985 (Cont.)

Program	Observer	Affiliation	Program Title	Bands (cm)	Obsv date	Sched hrs
AN-35	Neff, S.G. Rickard, L.J. Johnston, K.J. Joseph, R.D.	NAS/NRC at NRL Howard U/ NRL NRL Imperial College, London, UK	Merging galaxies.	2,20	1	1.5
AO-61	Oznovich, I. Gibson, D.M.	NMIMT NMIMT	Magnetic activity in five late-type giants and supergiants. Monitoring.	6	21	7
AO-62	O'Donoghue, A. Owen, F. Eilek, J.	NMIMT/VLA NRAO/VLA NMIMT	Wide angle tail sources.	20	14	6
AO-63	O'Dea, C.P. Owen, F.	NRAO/CV NRAO/VLA	Tail of NGC1265.	20	9	10
AP-90	Parma, P. Fanti, R. Lari, C. Fomalont, E. Ekers, R.D.	Bologna, ITALY Bologna, ITALY Bologna, ITALY NRAO/VLA NRAO/VLA	Unusual morphology of NGC326.	2,6,18	27	12
AP-103	Pettengill, G.H. Chapman, B.D.	MIT MIT	Polarization of thermal radiation from the surface of the moon.	2,6,20,90	4	5
AP-104	Pedlar, A. Unger, S.W. Axon, D.J.	Jodrell Bank, UK Jodrell Bank, UK Jodrell Bank, UK	HI studies of pairs of galaxies with active nuclei.	21 line	12,14	18
AP-106	Partridge, R.B. Mandolesi, N. Basani, L. Coe, M.	Haverford College Bologna, ITALY Bologna, ITALY Southampton U, UK	"Deep" IRAS fields.	6,20	10	12.5
AP-107	Pottasch, S. Bignell, C. Zijlstra, A.	Groningen U, NETH NRAO/VLA Groningen U, NETH	Survey of planetary nebulae.	6	24	4
AS-80	Sramek, R.A. van der Hulst, J.M. Weiler, K.W.	NRAO/VLA NFRA, NETH NSF	Supernovae SN1980 in NGC6946 and SN1979c in M100.	6,20	22	2
AS-211	Sramek, R.A. Weiler, K.W. van der Hulst, J.M. Panagia, N.	NRAO/VLA NSF NFRA, NETH STScI	Statistical properties of radio supernovae.	2,6,20	15	1.5
AS-220	Slee, O.B. Perley, R.A.	CSIRO, AUST NRAO/VLA	Two complete samples of steep spectrum sources.	20	23	4.5
AS-222	Savage, A. Smith, M. Condon, J.J.	ROE, UK ROE, UK NRAO/CV	Surveys of QSO fields.	20	6	2
AS-224	Smith, A. Peacock, A.	ESA/ESTEC, NETH ESA/ESTEC, NETH	SNR W49B.	6,20	8	8
AS-228	Seaquist, E.R. Taylor, A.R.	Toronto U, CANADA Groningen U, NETH	Survey of symbiotic stars.	2,6	10	5.5
AS-239	Smith, A. Jones, L.R.	ESA/ESTEC, NETH Leicester U, UK	SNR W44.	20	6	8
AT-64	Taylor, A.R. Pottasch, S.R. Seaquist, E.R.	Groningen U, NETH Groningen U, NETH Toronto U, CANADA	Radio monitoring of novae Vulpeculae 1984 no 2 and RS Oph.	2,6,20	17	2.5
AT-66	Turner, J.L. Ho, P.T.P.	CFA CFA	HI mapping of Maffei 2.	21 line	3	8
AU-22	Uson, J.	NRAO/CV	Background sources contaminating measurments of the Sunyaev-Zeldovich effect.	2,6	30	3.5 w/VB67
AW-48	Wade, C.M. Johnston, K.J. Seidelmann, P.K. Kaplan, G.H.	NRAO/VLA NRL USNO USNO	Astrometric observations of minor planets.	2,6	1,8,12 15	12
AW-137	Wrobel, J.M. Heeschen, D.S.	CALTECH NRAO/ MPIfR, FRG	Survey of a volume limited sample of bright E/SO galaxies.	6	2,18,22 23,28	24

VLA UTILIZATION SEPTEMBER 1985 (Cont.)

Program	Observer	Affiliation	Program Title	Bands (cm)	Obsv date	Sched hrs
AZ-28	Zukowski, E. Kronberg, P.P.	Toronto U, CANADA Toronto U, CANADA	Differential Faraday mapping of strong extended radio sources with peculiar integrated polarization properties.	18-22	16	13.5
VB-67	Backer, D. Wright, M. Plambeck, R. van Breugel, W. Readhead, A.	Calif. Berkeley Calif. Berkeley Calif. Berkeley Calif. Berkeley Caltech	Structures of compact components in NGC 1275 (3C84).	1.3 cm three antenna VLB	30	4 w/startup, AU22
	JPL staff		Voyager tests.	4	5,6	6
	NRAO staff		Electronics			58.0
			Software			29.3
			Startup			32.2
			General tests			37.0

The average downtime for the month of September, 1985 was approximately 6.87 percent.

$$\text{Average downtime of operational antennas} = \frac{\text{Total number of antenna-hours of operational antennas lost due to hardware and software failures during scheduled observing}}{\text{Total number of antenna-hours of operational antennas scheduled}} \times 100$$

where "antenna-hours" definition is: An array consisting of N antennas operating for Y hours is defined to have YN antenna-hours operation.

The array was scheduled 100 percent (720.00 hours) of the time: 78.3 percent (564.0 hours) to astronomical programs, 9.6 percent (68.7 hours) to scheduled test/calibration, and the remaining 12.1 percent (87.3 hours) went to scheduled maintenance.

The total number of programs run for the month of September, 1985 was 63.

The following independent proposals shared simultaneous observing time (4.0 hours Total Simultaneous Observing):

VB67/Startup	0.5 hours
AU22/VB67	3.5 hours
Total	4.0 hours

851008/PDH/ap

VLA UTILIZATION AUGUST 1985

Program	Observer	Affiliation	Program title	Bands (cm)	Obsv date	Sched hrs
AA-45	Antonucci, R. Perley, R. Ritter, B.	NRAO/CV NRAO/VLA NMIMT	3C273.	20	25	12
AA-47	Abbott, D. Bieging, J. Churchwell, E.	Colorado U UC Berkeley UW Madison	Stellar wind emission from OB and Wolf-Rayet stars.	2,6	5,31	5
AB-129	Burke, B.F. Hewitt, J.N. Roberts, D.H.	MIT MIT Brandeis	Time variations in 0957+561.	6	17	2
AB-325	Bieging, J. Cohen, Martin	UC Berkeley NASA-Ames	Flux density and spectral index monitoring of V410 Tau.	2,6	25	2
AB-340	Becker, R. White, R.	UC Davis STScI	Lick H-alpha 101.	6	5	2
AB-345	Branch, D. Cowan, J.J.	Oklahoma U Oklahoma U	Search for 20cm emission from extragalactic supernovae 1959D and 1954J.	20	19	20
AB-348	Baum, S. Bridle, A. Heckman, T. Miley, G. van breugel, W.	NRAO/Maryland U NRAO/CV Maryland U STScI UC Berkeley	Polarimetry of 3C277.3.	2	26	12 w/baselines
AB-354	Baum, S. Bridle, A. Heckman, T. Miley, G. van breugel, W.	NRAO/Maryland U NRAO/CV Maryland U STScI UC Berkeley	A complete sample of equatorial radio sources.	2,6	22	32
AB-355	Bridle, A. Perley, R.	NRAO/CV NRAO/VLA	Three very large B3 sources.	6,20	14	20
AB-356	Bothun, G. Skillman, E. Warmels, R.	Caltech NFRA, NETH Groningen U, NETH	Dwarf iregular galaxies in Virgo.	21 line	1,4	24
AC-138	Christiansen, W.A. Stocke, J.J.	North Carolina U Steward Obs	Helical jet in 3C436.	2,6	28	8
AC-139	Claussen, M.J. Young, J.S.	Massachusetts U Massachusetts U	Interacting and peculiar galaxies.	20	18,21	13
AD-167	de Pater, I. Ip, W-H. Snyder, L. Palmer, P. Bolton, S.	UC Berkeley MPI Lindau, FRG UI Urbana Chicago U UC Berkeley	Radio source occultations by comets: Giacobini-Zinner.	21 line	31	9
AD-170	Dickey, J.M. Salpeter, E.E.	Minnesota U Cornell U	Absorption in Hercules cluster galaxies.	21 line	5,8	16
AD-171	Dewey, R.J. Cordes, J.M. Hankins, T.H. Stokes, G.H.	Cornell U Cornell U Dartmouth College Princeton U	Accurate positions of two interesting pulsars.	20	1	5
AD-172	Drake, S.A. Elitzur, M. Linsky, J.L.	NASA/GSFC Kentucky U Colorado U	SiO maser stars and carbon stars.	2,6	17	21
AE-41	Eilek, J. Owen, F.	NMIMT NRAO/VLA	Radio sources behind Abell clusters.	20	15,30	10.5
AF-107	Furst, E. Reich, W. Hummel, E.	MPIfR Bonn, FRG MPIfR Bonn, FRG MPIfR Bonn, FRG	G18.95-1.1, an extended galactic source with a possible binary system.	6,20	31	4
AG-90	Gopal-Krishna Swarup, G. Sramek, R.	TIFR, INDIA TIFR, INDIA NRAO/VLA	Sample of 44 low flux density sources.	6,20	9	0.5

VLA UTILIZATION AUGUST 1985 (Cont.)

Program	Observer	Affiliation	Program title	Bands (cm)	Obsv date	Sched hrs
AG-170	Greenberg, J.M. Roland, J. Brosch, N.	Leiden U, NETH Leiden U, NETH Wise Obs, ISRAEL	Radio sources near NGC 2264.	2	4	1
AG-193	Gioia, I.M. Maccacaro, T. Stocke, J.	CFA CFA Steward Obs	A large and statistically complete sample of faint extragalactic X-ray sources.	6	23	20
AH-193	Hummel, E. Krause, M. Bech, R.	MPIfR Bonn, FRG MPIfR Bonn, FRG MPIfK Heidelberg, FRG	Linearly polarised radio emission from NGC4258.	20	9	6
AH-194	Henkel, C. Johnston, K.J. Wilson, T.L. Mauersberger, R. Walmsley, C.M.	MPIfR Bonn, FRG NRL MPIfR Bonn, FRG MPIfR Bonn, FRG MPIfR Bonn, FRG	NH3 absorption in NGC7538-IRS1.	1.3 line	27	10.5
AH-195	Hjellming, R.M. Davis, R.	NRAO/VLA Jodrell Bank, UK	Recurrent nova RS Oph.	1.3,2,6,20	9,25	4
AH-199	Hummel, E. van der Hulst, J.M.	MPIfR Bonn, FRG NFRA, NETH	Linearly polarised radio emission from interesting galaxies.	6	16	12
AH-200	Herter, T. Houck, J.R. Neugebauer, G. Soifer, B.T. Gregorich, D.	Cornell U Cornell U Caltech Caltech JPL-Caltech	Survey of an IRAS deep survey field.	20	24	15
AH-201	Hintzen, P. Owen, F.	NASA-GSFC NRAO/VLA	Survey of radio QSOs to identify distorted sources.	6	26	4.5
AJ-125	Jackson, J.M. Ho, P.T.P. Barrett, A.H. Dynes, S.B.C.	MIT CFA MIT MIT	HI synthesis of NGC2903.	21 line	19	10
AK-125 AK-126	Kundu, M.R. Alissandrakis, C.E. Shevgaonkar, R.K. Melozzi, M.	Maryland U Athens U, GREECE Maryland U Maryland U	The Sun during Spacelab solar experiments.	2,6,20	1-3	25
AK-131	Kundu, M.R. Jackson, P.D. Pallavicini, R.	Maryland U Maryland U Arcetri Obs, ITALY	Simultaneous VLA and EXOSAT observations of flare stars: UV Cet, EQ Peg.	6,20	4,6	17
AM-124	McHardy, I.M. Warwick, R.S. Smith, A.	Leicester U, UK Leicester U, UK ESTEC, NETH	Coordinated radio, optical and X-ray observations of OVVs and BL Lacertae objects.	2,6,20	5	3
AM-142	Montmerle, T. Feigelson, E.	CEN Saclay, FRANCE Penn S U	Pre-main sequence stars in the rho Ophuichi cloud.	2,6,20	3,13	8.5
AM-151	Mereghetti, S. Bookbinder, J. Gioia, I.M. Maccacaro, T.	CFA CFA CFA CFA	X-ray selected RS CVn candidates.	6	25	3
AM-156	Margulis, M. Lada, C. Sofue, Y. Nakai, N. Handa, T.	Arizona U Arizona U Tokyo U, JAPAN Tokyo U, JAPAN Tokyo U, JAPAN	Individual star forming complexes in M31 and M33.	21 line	9,11	24
AN-34	Norris, R.P. Allen, D.A. Roche, P.F.	CSIRO, AUST AAT, AUST AAT, AUST	Obscured active galaxies.	6,18	27,29	12
AN-35	Neff, S.G. Rickard, L.J. Johnston, K.J. Joseph, R.D.	NRL Howard U / NRL NRL Imperial College, UK	Merging galaxies.	2,20	30	4

VLA UTILIZATION AUGUST 1985 (Cont.)

Program	Observer	Affiliation	Program title	Bands (cm)	Obsv date	Sched hrs
AO-61	Oznovich, I. Gibson, D.M.	NMIMT NMIMT	Magnetic activity in five late-type giants and supergiants.	6	9,11	5.5
AP-92	Perryman, M.A.C. di Serego Alighieri, S. Macchetto, F.	ESA ESTEC, NETH Padua U, ITALY STScI	Interaction between the quasar MR 2251-178 and an active cluster galaxy.	20	18	5
AP-107	Pottasch, S. Bignell, C. Zijlstra, A.	Groningen U, NETH NRAO/VLA Groningen U, NETH	Survey of planetary nebulae.	6	29,30	21
AS-80	Sramek, R.A. van der Hulst, J.M. Weiler, K.W.	NRAO/VLA NFRA, NETH NSF	Supernovae SN1980 in NGC6946 and SN1979c in M100.	6,20	22	2
AS-205	Seaquist, E.R. Bode, M.F. Frail, D.	Toronto U, CANADA LANL/Manchester U, UK Toronto U, CANADA	Radio shell of GK Per.	20	8	10
AS-208	Schmahl, E.J. Kundu, M.R. Shevgaonkar, R.K.	Maryland U Maryland U Maryland U	Sunspots.	1.3,2.6	1-3	25
AS-211	Sramek, R.A. Weiler, K.W. van der Hulst, J.M. Panagia, N.	NRAO/VLA NSF NFRA, NETH STScI	Statistical properties of radio supernovae.	2,6,20	9,27	4
AS-220	Slee, O.B. Perley, R.A.	CSIRO, AUST NRAO/VLA	Two complete samples of steep spectrum sources.	20	2	13.5
AS-227	Stocke, J. Keane, M. McGraw, J. Condon, J.	Steward Obs Steward Obs Steward Obs NRAO/CV	Survey of the CTI observation strip.	20	12,16 w/baselines	32.5
AS-236	Spangler, S.R. Mutel, R.L. Cordes, J.	Iowa U Iowa U Cornell U	Survey of compact radio sources in the direction of the galactic radio source 2013+370.	6,20	8	2
AS-237	Sullivan, W.T.	Washington U	Sizes and offsets of the HI distribution in the central spiral galaxies of the Coma cluster.	21 line	10,11	24
AS-238	Simonetti, J.H. Cordes, J.M. Spangler, S.R.	NRAO/CV Cornell U Iowa U	Faraday rotation measures through the turbulent l = 90, b = 0 region.	6,20	7	7
AS-243	Simon, R. Spencer, J. Johnston, K.J.	NRL NRL NRL	Radio emission from CVn stars.	6	1	11
AT-60	Taylor, A.R. Seaquist, E.R. Kenyon, S.J.	Groningen U, NETH Toronto U, CANADA CFA	Radio-optical-UV monitoring of symbiotic stars.	1.3,2,6,20	20,21	12
AT-64	Taylor, A.R. Pottasch, S.R. Seaquist, E.R.	Groningen U, NETH Groningen U, NETH Toronto U, CANADA	Radio monitoring of nova Vulpeculae 1984 no. 2.	2,6,20	18	2
AV-96	van der Hulst, J.M. Sramek, R.A. Weiler, K.W.	NFRA, NETH NRAO/VLA NSF	Radio supernova in NGC 4258.	6,20	22	2
AV-120	Viallefond, F. Comte, G. Lequeux, J. Kunth, D. Vigroux, L.	Meudon Obs, FRANCE Marseille Obs, FRANCE Marseille Obs, FRANCE I d'A Paris, FRANCE CEA Saclay, FRANCE	HI and continuum observations of blue compact galaxies.	20,21 line	29	8
AW-48	Wade, C.M. Johnston, K.J. Seidelmann, P.K. Kaplan, G.H.	NRAO/VLA NRL USNO USNO	Astrometric observations of minor planets.	2,6	14,19	7

VLA UTILIZATION AUGUST 1985 (Cont.)

Program	Observer	Affiliation	Program title	Bands (cm)	Obsv date	Sched hrs
AW-136	Wall, J.V.	RGO, UK	Survey of bright elliptical galaxies.	6	11,12,17	18.5
	Sansom, A.	Sussex U, UK				
	Sparks, W.B.	Sussex U, UK				
	Disney, M.J.	UC Cardiff, WALES				
	Terlevich, R.J.	RGO, UK				
	Laing, R.A.	RGO, UK				
	Jenkins, C.R.	RGO, UK				
AW-137	Wrobel, J.	NMIMT	Survey of a volume limited sample of bright E/SO galaxies.	6	31	9
	Heeschen, D.	MPIR, FRG				
AY-9	Yin, Q.	Peking U, CHINA	Two peculiar spirals.	6	5	3
	He, X.	Peking Normal U, CHINA				
	JPL staff		X-Band tests		4	4
	NRAO staff	Electronics				51.5
		Software				25.8
		Startup.				31.4
		General tests				45.2

The average downtime for the month of August, 1985 was approximately 5.26 percent.

$$\text{Average downtime of operational antennas} = \frac{\text{Total number of antenna-hours of operational antennas lost due to hardware and software failures during scheduled observing}}{\text{Total number of antenna-hours of operational antennas scheduled}} \times 100$$

where "antenna-hours" definition is: An array consisting of N antennas operating for Y hours is defined to have YN antenna-hours operation.

The array was scheduled 100 percent (744.0 hours) of the time: 80.7 percent (600.5 hours) to astronomical programs, 08.9 percent (66.2 hours) to scheduled test/calibration, and the remaining 10.4 percent (77.3 hours) went to scheduled maintenance.

The total number of programs run for the month of August, 1985 was 59.

The following independent proposals shared simultaneous observing time (35.4 hours Total Simultaneous Observing):

AK125-126/AS208	25.0
AW136/Baselines	2.1
AS227/Baselines	3.0
AB348/Baselines	5.3
Total	35.4 hours

PDH/ap

VLA UTILIZATION JULY 1985

Program	Observer	Affiliation	Program title	Bands (cm)	Obsv date	Sched hrs
AA-48	Antonucci, R. Barvainis, R.	NRAO/CV NRAO/CV	Spectra of radio quiet quasars.	1.3,2	27	16
AB-293	Basart, J.P. Daub, C.T.	Iowa S U San Diego S U	Planetary nebula NGC 7027.	2	24	8
AB-325	Bieging, J.H. Cohen, Martin	U C, Berkeley NASA-Ames	Flux density and spectral index monitoring of V410 Tau.	2,6	17-20	4
AB-347	Brown, A. Mundt, R. Drake, S.A.	Colorado U MPI Heidelberg NASA/GSFC	Extended microwave-emitting regions around HL and XZ Tau.	1.3,2,6	31	8
AB-349	Bookbinder, J.A. Lamb, D.Q.	Harvard U CFA	Radio emission from DQ Her stars.	1.3,2,6,20	7,9	13
AC-131	Comins, N.F. Hayes, J.J.E.	U Maine, Orono U Maine, Orono	3C442.	6,20	18	8
AC-140	Chanmugam, G. Dulk, G.A. Bastian, T.S.	Louisiana S U Colorado U Colorado U	Radio emission from AM Herculis.	2,6	16	9
AD-142	Dickel, J. Long, K. Matsui, Y. Greisen, E.	Illinois U Johns Hopkins Johns Hopkins NRAO/CV	Second epoch observations of Kepler's SNR.	6,20	14	7.5
AD-162	Doiron, D.J. Genet, R.	Clemson U Fairborn Obs	Radio survey of suspected binary stars.	2,6,18	6	6
AD-164	Drake, S.A. Florkowski, D. Walter, F. Linsky, J.L.	NASA/GSFC USNO Colorado U Colorado U	Radio survey of a complete sample of X-ray-bright stars.	6	10	4.5
AD-166	Dulk, G.A. Bastian, T.S. Lang, K.R. Willson, R.F.	Colorado U Colorado U Tufts U Tufts U	Solar transition region and Corona.	6,20	14,16	23.2
AD-168	Dreher, J.W. Jackson, J.M. Welch, W.J.	MIT MIT U C, Berkeley	Recombination line observations of W49.	2 line	25	9
AD-171	Dewey, R.J. Cordes, J.M. Hankins, T.H. Stokes, G.H.	Cornell U Cornell U Dartmouth Princeton U	Accurate positions of two interesting pulsars.	20	31	1.5
AF-102	Fich, M. Taylor, A.R.	Washington U Groningen U, NETHERLANDS	A complete survey in the Galactic Plane.	6,20	29	18
AG-116	Gibson, D.M. Priedhorsky, W.C.	NMIMT LANL	Search for 300 day periodicity in Cyg X-1.	2,6,20	28	1.5
AG-185	Gottesman, S.T. England, M.N. Hunter, J.H. Huntley, J.M.	Florida U Florida U Florida U Bell Labs	HI observations of the barred spiral galaxy NGC1300.	21 line	1	7.5
AG-194	Giovannini, G. Feretti, L. Andernach, H.	Bologna, ITALY Bologna, ITALY MPIR, Bonn, FRG	The extended source near Coma A.	20	19	2
AH-195	Hjellming, R.M. Davis, R.	NRAO/VLA Jodrell Bank, UK	Recurrent nova RS Ophiuchi.	1.3,2,6 20	1,18,31	7
AH-200	Herter, T. Houck, J.R. Neugebauer, G. Soifer, B.T. Gregorich, D.	Cornell U Cornell U Caltech Caltech JPL-Caltech	Survey of an IRAS deep survey field.	20	14	1
AH-201	Hintzen, P. Owen, F.	NASA-Goddard S F C NRAO/VLA	Survey of distant QSOs to identify distorted sources.	6	22	16

VLA UTILIZATION JULY 1985 (Cont.)

Program	Observer	Affiliation	Program title	Bands (cm)	Obsv date	Sched hrs
AI-20	Inoue, M. Tabara, H. Kato, T. Tsuboi, M. Fomalont, E.	Nobeyama R Obs, JAPAN Utsunomiya U, JAPAN Utsunomiya U, JAPAN Tokyo U, NRO, JAPAN NRAO/VLA	Magnetic field on the radio arc at the Galactic Center.	6	3	5
AI-22	Israel, F.P. Skillman, E.	Leiden U, THE NETHERLANDS NFRA, THE NETHERLANDS	NGC6822, IC1613, Leo I.	20	30	9
AI-23	Irwin, J. Seaquist, E.R. Duric, N.	Toronto U, CANADA Toronto U, CANADA British Columbia U, CANADA	Survey of edge-on spiral galaxies.	20	25,26	25
AJ-124	Jorsater, S. Bergvall, N.	ESO, FRG Uppsala, SWEDEN	Blue compact galaxies ESO 350-IG38 and ESO 400-G43.	6 line	1,2	12
AK-125 AK-126	Kundu, M.R. Alissandrakis, C.E. Shevgaonkar, R.K. Melozzi, M.	Maryland U Athens U, GREECE Maryland U Maryland U	The Sun during Spacelab solar experiments.	2,6,20	15,19,30, 31 w/AK126,AS208	30.5
AL-95	Lane, A.P. Reynolds, S.P. White, N.E.	NRAO/CV NRAO/CV ESOC,Darmstadt, FRG	Simultaneous radio, X-ray, and UV observations of flares from RS CVn stars.	2,6,20	19	11.5
AM-124	McHardy, I.M. Warwick, R.S. Smith A.	Leicester U, UK Leicester U, UK ESTEC, THE NETHERLANDS	Coordinated radio, optical and X-ray observations of OVVs and BL Lacertae objects.	2,6,20	24	3
AM-142	Montmerle, T. Feigelson, E.	C.E.N. Saclay, FRANCE Pennsylvania S U	Pre-main sequence stars in the rho Ophuichi cloud.	6,20	17	4
AM-148	Miller, L. Peacock, J.A. Smith, M.G.	Edinburgh U, U.K. ROE, UK ROE, UK	The radio luminosity function of QSOs at z = 2.	6	5,7	15
AM-151	Mereghetti, S. Bookbinder, J. Gioia, I.M. Maccacaro, T.	CFA CFA CFA CFA	X-ray selected RS CVn candidates.	6	19	2
AM-152	McHardy, I.M. Pye, J.P. Brinkman, A.C.	Leicester U, UK Leicester U, UK Utrecht U, NETHERLANDS	Simultaneous radio and X-ray observations of the RS CVn system Sigma Cor Bor.	6,20	10	12.6
AM-154	Morganti, R. Fanti, C. Fanti, R. Parma, P. de Ruiter, H.	Bologna, ITALY Bologna, ITALY Bologna, ITALY Bologna, ITALY Bologna, ITALY	Jets in low luminosity radio galaxies.	6	15	1
AM-155	Murphy, D. Browne, I. Perley, R.	NRAL, UK NRAL, UK NRAO/VLA	Extended structure around flat spectrum sources.	20	26	24.5
AN-30	Neff, S.G.	NAS/NRC at NRL	Search for short-term variability in two Seyfert galaxies.	1.3,2,6 20	1,3-6	28
AO-61	Oznovich, I. Gibson, D.M.	NMIMT NMIMT	Magnetic activity in five late-type giants and supergiants.	6	12	5
AO-62	O'Donoghue, A. Owen, F. Eilek, J.	NMIMT NRAO/VLA NMIMT	Wide angle tail sources.	20	17	6.5
AR-126	Rao, N.K. Venugopal, V.R.	I.I. Astr., INDIA T.I.F.R., INDIA	Nebulae around hydrogen deficient stars - Abell 58, V348 SGR.	1.3,2,6	5	6
AR-127	Reid, M.J. Moran, J.M.	CFA Smithsonian Astr. Obs.	Do compact HII regions expand? II.	1.3,2 line	21,23	16
AR-128	Reid, M. Ho, P.T.P. Bloemhof, E.	CFA CFA CFA	Cometary HII regions.	18	20	3
AS-80	Sramek, R.A. van der Hulst, J.M. Weiler, K.W.	NRAO/VLA NFRA, THE NETHERLANDS NRL	Monitoring supernovae SN1980 in NGC6946 and SN1979c in M100.	6,20	4	3

VLA UTILIZATION JULY 1985 (Cont.)

Program	Observer	Affiliation	Program title	Bands (cm)	Obsv date	Sched hrs
AS-208	Schmahl, E.J. Kundu, M.R. Shevgaonkar, R.K.	Maryland U Maryland U Maryland U	Sunspots.	1.3,2,6	15,19,30, 31 w/AK125,AK126	30.5
AS-211	Sramek, R.A. Weiler, K.W. van der Hulst, J.M. Panagia, N.	NRAO/VLA NSF NFRA, THE NETHERLANDS STScI	Statistical properties of radio supernovae.	2,6,20	9,19,30	5.5
AS-225	Smith, R.M.	Sussex U, UK	Southern radio galaxies.	6,18,20	7	5
AS-226	Sumi, D. Smarr, L. Owen, F.	Illinois U Illinois U NRAO/VLA	cD galaxy in Abell 2029.	6	13	6
AS-228	Seaquist, E.R. Taylor, A.R.	Toronto U, CANADA Groningen U, NETHERLANDS	Radio survey of symbiotic stars. III.	2,6	11	4.5
AS-229	Schechter, P. van Gorkom, J. Cameron, T.S.	Mt. Wilson & Las Campanas NRAO/VLA Mt. Wilson & Las Campanas	HI in SO galaxies with polar rings.	21 line	3,4,6	23
AS-231	Sievers, A. Wielebinski, R.	MPIfR, FRG MPIfR, FRG	Radio halos in Abell clusters A1367, A1656 , A2319.	6	3,15	6
AS-232	Schneider, S.E. Salpeter, E.E. Terzian, Y.	Cornell U Cornell U Cornell U	Intergalactic cloud in Leo.	21 line	20,21	20
AS-234	Simonetti, J. Cordes, J. Spangler, S.	NRAO/CV Cornell U Iowa U	Faraday rotation through the SNR CTA1.	6,20	7,8	10
AS-235	Spangler, S.R. Fey, A.	Iowa U Iowa U	Radio source 0503+467 and its relation to the SNR HB9.	1.3,2,6 20	23	8
AS-236	Spangler, S.R. Mutel, R. Cordes, J.	Iowa U Iowa U Cornell U	Survey of compact radio sources in the direction of the radio source 2013+370.	6,20	23	3
AS-238	Simonetti, J. Cordes, J. Spangler, S.	NRAO/CV Cornell U Iowa U	Faraday rotation measures through the turbulent region l = 90, b = 0.	6,20	14	4.5
AS-240	Sanders, D. Helou, G. Soifer, T.	CIT JPL CIT	Bright IRAS galaxies.	6,20	28	10
AS-241	Sams, B. Moran, J. Reid, M.	Harvard U CFA CFA	H109 alpha observations of W3(OH).	6 line	21	10.5
AT-64	Taylor, A.R. Pottasch, S.R. Seaquist, E.R.	Groningen U, NETHERLANDS Groningen U, NETHERLANDS Toronto U, CANADA	Monitoring Novae Vulpeculae 1984 no. 2.	2,6,20	16	2
AT-65	Turner, B.E. Rickard, L.J. Bania, T.M.	NRAO/CV NRL/Howard U Boston U	Satellite lines of OH in galaxies M82, NGC3628, NGC3079.	18 line	29	11
AW-48	Wade, C.M. Johnston, K.J. Seidelmann, P.K. Kaplan, G.H.	NRAO/VLA NRL USNO USNO	Astrometric observations of minor planets.	2,6	17,22	6
AW-95	Winnberg, A. Baud, B. Habing, H.J. Olnon, F.M. Matthews, H.E.	Onsala, SWEDEN Groningen U, NETHERALNDS Leiden U, THE NETHERLANDS Leiden U, THE NETHERLANDS H.I.A., CANADA	Survey for OH/IR stars close to the Galactic Center.	18 line	2,6	14
AZ-27	Zirin, H, Gary, D.E.	Caltech Caltech	The quiet sun.	6,20	13	11

VLA UTILIZATION JULY 1985 (Cont.)

Program	Observer	Affiliation	Program title	Bands (cm)	Obsv date	Sched hrs
	Students					
	JPL staff		Voyager tests.		16	4
	NRAO staff		Electronics	4	9	5
			Software			49.4
			Pointing, baselines, startup, move/operations			22.8
			General tests			73.6
						44.3

The average downtime for the month of July, 1985 was approximately 5.02 percent.

$$\text{Average downtime of operational antennas} = \frac{\text{Total number of antenna-hours of operational antennas lost due to hardware and software failures during scheduled observing}}{\text{Total number of antenna-hours of operational antennas scheduled}} \times 100$$

where "antenna-hours" definition is: An array consisting of N antennas operating for Y hours is defined to have YN antenna-hours operation.

The array was scheduled 100 percent (744.0 hours) of the time: 76.0 percent (565.3 hours) to astronomical programs, 14.3 percent (106.5 hours) to scheduled test/calibration, and the remaining 9.7 percent (72.2 hours) went to scheduled maintenance.

The total number of programs run for the month of July, 1985 was 62.

The following independent proposals shared simultaneous observing (41.9 hours Total Simultaneous Observing):

AB-349/Move/Op	5.0
AM-152/Move/Op	6.4
AK-125/AK-126/AS-208	30.5
	41.9

Total Time Array Operating		744.0	Hrs. (100.0%)
Observing Time (Obs Time minus Simultaneous Obs Time)		565.3	" (76.0%)
Sch. Test/Calibrations	(minus Simultaneous Time)	106.5	" (14.3%)
Sch. Maintenance	(minus Simultaneous Time)	72.2	" (9.7%)

850822
PDH/ap

VLA UTILIZATION JU[illegible]5

Program	Observer	Affiliation	Program title	Bands (cm)	Obsv date	Sched hrs
AA-40	Abbott, D. Bieging, J. Churchwell, E.	Colorado U UC, Berkeley Wisconsin, U of	Nonthermal emission from OB stars.	6	20	17
AA-45	Antonucci, R. Perley, R. Ritter, B.	NRAO/CV NRAO/VLA NMIMT	Definitive mapping of 3C273.	20	6	12
AA-47	Abbott,D. Bieging, J. Churchwell, E.	Colorado U UC, Berkeley Wisconsin, U of	Stellar wind emission from OB and Wolf Rayert stars.	2,6	12 w/Move Op.	8.5
AB-129	Burke, B.F. Hewit, J.N. Roberts, D.H.	Caltech/MIT MIT Brandeis	Monitoring time variations in 0957+561.	6	2	2.5
AB-182	Burns, J.O. Balonek, T.J. Hummel, E.	New Mexico, U of Williams College MPIR, FRG	Monitoring the cores of extended radio sources and spiral galaxies.	2,6,21	20	6
AB-325	Bieging, J.H. Cohen, M.	UC, Berkeley NASA-Ames	Flux density and spectral index monitoring of V410 Tau.	2,6	20	1.5
AB-333	Becker, R.H. Helfand, D.J.	UC, Davis Columbia U	Galactic supernova remnants.	20	25	8
AB-335	Brown, R.L.	NRAO/CV	Radio recombination lines toward 0235+164.	21 line	15,16	22
AC-110	Campbell, B.	Mt. Wilson	Continuum sources in regions of high velocity molecular gas.	1.3,2,6	2	12
AC-134	Claussen, M.J. Sahai, R.	Mass, U of Texas, U of	Carbon star IRC+10216.	2	8	2.5
AD-145	Duric, N. Seaquist, E.R. Crane, P.C. Davis, L.E.	Toronto U, CAN Toronto U, CAN NRAO/VLA NOAO	Spiral galaxy NGC 4736.	6,20	3	12
AD-161	Drake, S.A. Linsky, J.L. Simon, T.	Colorado, U of Colorado, U of Hawaii, U of	Short period RS CVn binaries.	6	14	21
AE-28	Escalante, V. Ho, P.T.P. Haschick. A. Rodriguez, L.F.	CFA CFA Haystack Obs UNAM, MEXICO	Accurate positions of H20 masers associated with young objects.	1.3 line	3	3.5
AG-116	Gibson, D.M. Priedhorsky, W.C.	NMIMT LANL	Search for a 300 day periodicity in Cyg X-1.	2,6,20	4,19	3
AG-180	Gardner, F.F. Whiteoak, J.B.	CSIRO, AUST CSIRO, AUST	HI and OH in the galaxy NGC5793.	21 line	7	10
AG-185	Gottesman, S.T. England, M.N. Hunter, J.H. Huntley, J.M.	Florida, U of Florida, U of Florida, U of Bell Labs	HI observations of the barred spiral galaxy NGC1300.	21 line	28	6
AG-187	Garwood, R. Dickey, J.M.	Minnesota, U of Minnesota, U of	Galactic 21cm absorption survey at low latitudes near the Galactic Center.	21 line	11,12	16.5
AH-188	Hughes, V.A. McLean, B.J.	Queen's U, CAN STScI	W UMa stars.	6,20	10,17 w/Move Op.	24
AH-195	Hjellming, R.M. Davis, R.	NRAO/VLA MRAO, UK	Nova RS Ophiuchi.	1.3,2,6 20	6,22	4.5
AH-203	Hjellming, R.M. van Gorkom,	NRAO/VLA NRAO/VLA	HI shell around RS Oph	21 line	8	7.5
AJ-124	Jorsater, S. Bergvall, N.	ESO, FRG Uppsala, SWE	The blue compact galaxies ESO 350-IG38 and ESO 400-G43.	6,20 line	29,30	14
AK-119	Kailey, W.F. Elston, R.	Arizona, U of Arizona, U of	Search for supernova remnants near the nucleus of M33.	6	6,8	17

VLA UTILIZATION JUNE 1985 (Cont.)

Program	Observer	Affiliation	Program title	Bands (cm)	Obsv date	Sched hrs
AK-127	Karoji, H. Dennefeld, M. Merat, P. Ukita, N.	I.A.P., FRA I.A.P., FRA I.A.P., FRA I.A.P., FRA/NRO, JAP	High reddening galaxies in the IRAS catalogue.	20	27	4
AL-95	Lane, A.P. Reynolds, S.P. White, N.E.	NRAO/CV NRAO/CV ESOC, FRG	Simultaneous radio, X-ray and UV observations of flares from RS CVn stars and Algol.	2,6,20	16	10.5
AL-97	Lang, K.R. Willson, R.F.	Tufts U Tufts U	M dwarf flare stars and RSCVn stars.	2,6,20	9	24
AL-99	Lang, K.R. Willson, R.F.	Tufts U Tufts U	Coordinated VLA and Solar Maximum Mission observations of solar maser emission and cyclotron line emission.	20	7,8	17
AM-135	Mutel, R.L. Lestrade, J.F.	Iowa, U of B.d'Longitudes, FRA	Radio activity in RS CVn binaries - correlation with period.	2,6,20	11,17,20	15
AN-30	Neff, S.G.	NAS/NRC at NRL	Search for short-term variability in 2 seyfert galaxies.	1.3,2,6, 20	27,29	4
AO-61	Oznovich, I. Gibson, D.M.	NMIMT NMIMT	Magnetic activity in five late-type giants and supergiants.	20	17,28	7.5
AP-100	Payne, H. Terzian, Y.	NRAO/GB NAIC	OH line observations of planetary nebulae.	21 line	23	2
AR-122	Rudnick, L. Dickey, J. Benford, G.	Minnesota, U of Minnesota, U of UC, Irvine	Search for coherent radiation from non-thermal sources.	6,20	28,30	10
AR-123	Rudnick, L. Pedelty, J. Spinrad, H.	Minnesota, U of Minnesota, U of UC, Berkeley	Extended emission line systems in distant galaxies.	6	1 w/VS47	8.5
AS-80	Sramek, R.A. van der Hulst, J.M. Weiler, K.W.	NRAO/VLA NFRA, NETH NSF	Monitoring supernovae SN1980 in NGC6946 and SN1979c in M100.	6,20	28	2
AS-211	Sramek, R.A. Weiler, K.W. van der Hulst, J.M. Panagia, N.	NRAO/VLA NSF NFRA, NETH STScI	Statistical properties of radio supernovae.	2,6,20	8	2
AS-221	Schaefer, B.E. Cline, T.L. Laros, J.G.	NASA/GSFC NASA/GSFC LANL	High precision gamma-ray burst source fields.	6,20	23	24
AS-222	Savage, A. Smith, M. Condon, J.J.	RO Edinburgh, UK RO Edinburgh, UK NRAO/CV	Surveys of QSO fields.	20	27	6
AS-225	Smith, R.M.	Sussex, U of, UK	Southern radio galaxies: 0625-35.	6,20	23	4
AS-228	Seaquist, E.R. Taylor, A.R.	Toronto, U of CAN Groningen U, NETH	Radio survey of symbiotic stars, III.	2,6	11,20,26 30	7.5
AS-229	Schechter, P. van Gorkom, J. Steiman-Cameron, T.	Mt Wilson & Las Campanas NRAO/VLA Mt Wilson & Las Campanas	HI in SO galaxies with polar rings.	21 line	30	5
AT-59	Turner, K.C.	Arecibo Obs	24 detected radio stars.	6,20	13	12
AV-96	van der Hulst, J.M. Sramek, R.A. Weiler, K.W.	NFRA, NETH NRAO/VLA NSF	Radio supernova in NGC4258.	6,20	28	2
AV-119	van Breugel, W. Heckman, T. Miley, G.K.	UC Berkeley Maryland, U of STScI	Shells in PKS 0634-206.	20	29	6
AV-121	Viallefond, F. Comte, G. Lequeux, J.	Meudon, FRA Marseille, FRA Marseille, FRA	HI observations of the dwarf irregular galaxy SDIG.	21 line	22,25	12

VLA UTILIZATION JUNE (Cont.)

Program	Observer	Affiliation	Program title	Bands (cm)	Obsv date	Sched hrs
AW-95	Winnberg, A. Baud, B. Habing, H.J. Olnon, F,M. Matthews, H.E.	Onsala, SWE Groningen U, NETH Leiden U, NETH Leiden U, NETH HIA, CAN	Survey for OH/IR stars close to the Galactic Center.	18 line	15,18,19 24,26,27	42.0
AW-122	Wehrle, A. Morris, M.	UCLA UCLA	Vertical radio structure in the nuclei of normal spiral galaxies.	6	7	1
AW-136	Wall, J.V. Sansom, A. Sparks, W.B. Disney, M.J. Terlevich, R.J. Laing, R.A. Jenkins, C.R.	RGO, UK Sussex, U of, UK Sussex, U of, UK U C Cardiff, UK RGO, UK RGO, UK RGO, UK	Survey of bright elliptical galaxies.	6	22,23	15.3
AY-8	Yusef-Zadeh, F. Morris, M.	Columbia U UCLA	Completion of a long-term study of the Galactic Center "Arc".	2,6,20	28,29	14
AZ-25	Zukowski, E. Kronberg, P.P.	Toronto, U of CAN Toronto, U of CAN	Strong extended radio sources which exhibit peculiar integrated polarization curves.	20	1,2 w/VS47	5
VM-62	Mutel, R.L. Lestrade, J-F. Preston, R.A.	Iowa, U of B.d'Longitudes, FRA JPL	RS CVn binaries.	6 phased array MK III VLB	2	12
VR-36	Roberts, D.H. Wardle, J.F.C. Brown, L.F. Gabuzda, D.C. Rogers, A.E.E.	Brandeis Brandeis Brandeis Brandeis Haystack	Monitoring polarization in 3C120, 3C273, 3C345.	6 phased array MK III VLB	1	19.5
VS-47	Spencer, J.H. Johnston, K.J. Simon, R.S. Waak, J.A. Witzel, A. Eckart, A. Hirabayashi, H. Inoue, M.	NRL NRL NRL NRL MPIR, FRG MPIR, FRG Tokyo, U of, JAP Tokyo, U of, JAP	3C395: Superluminal resupply of a radio lobe?	6 single antenna VLB	1	10 w/AR123, AZ25
	NRAO staff		Electronics			48.5
			Software			18.7
			Pointing, baselines, startup, move/operations			76.5
			Calibration			12
			General tests			51.7

The average downtime for the month of June, 1985 was approximately 6.33 percent.

$$\text{Average downtime of operational antennas} = \frac{\text{Total number of antenna-hours of operational antennas lost due to hardware and software failures during scheduled observing}}{\text{Total number of antenna-hours of operational antennas scheduled}} \times 100$$

where "antenna-hours" definition is: An array consisting of N antennas operating for Y hours is defined to have YN antenna-hours operation.

The array was scheduled 100 percent (720.0 hours) of the time: 72.9 percent (524.8 hours) to astronomical programs, 17.8 percent (128.0 hours) to scheduled test/calibration, and the remaining 9.3 percent (67.2 hours) went to scheduled maintenance.

The total number of programs run for the month of June, 1985 was 51.

The following independent proposals shared simultaneous observing: (22.2 hrs Total Simultaneous Observing)

AR123/VS47	8.5
AZ25 /VS47	1.5
AH188/Move/Op	5.2
AA47 /Move/OP	7.0

850711PDH/tm

VLA UTILIZATION MAY 1985

Program	Observer	Affiliation	Program title	Bands (cm)	Obsv date	Sched hrs
AA-38	Axon,D.J. Unger, S.W. Pedlar, A.	Jodrell Bank, UK Jodrell Bank, UK Jodrell Bank, UK	The double radio source in the Seyfert galaxy NGC5252.	6,20	29	1
AA-43	Antonucci, A.	NRAO/CV	Search for the halo around 3C 446.	20	11	3
AA-44	Antonucci, A.	NRAO/CV	The radio halo of BL Lacertae.	20	11	3
AA-46	Antonucci, A. Olszewski, E.	NRAO/CV Steward Obs.	IRAS extreme infrared galaxies.	6,20	11,12	18
AB-167	Bignell, R.C. Seaquist, E.R.	NRAO/VLA Toronto U, CANADA	Monitoring the SNR in the galaxy NGC4449	6,20	1	1.5
AB-306	Basart, J.P. Burns, J.O. DeYoung, D.S.	Iowa State U New Mexico, U of NOAO	Jets in classical doubles.	6	23,24 w/VA9	16
AB-316	Brown, A. Mundt, R. Drake, S.A. Simon, T.	Colorado, U of MPIA, FRG Colorado, U of Hawaii, U of	HL Tau, XZ Tau, FS Tau, and related structures.	2,6,18	16,17	22
AB-325	Bieging, J.H. Cohen, M.	UC Berkeley NASA-Ames	Flux density and spectral index monitoring of V410 Tau.	2,6	21 w/VW38	2
AB-328	Bieging, J.H. Cohen, M.	UC Berkeley NASA-Ames	Jets in T Tauri stars.	2,6	4	6
AB-337	Brinks, E. Klein, U. Dettmar, R-J.	ESO, FRG Bonn U, FRG MPIR, FRG	HI observations of blue compact dwarf galaxies.	21 line	2	12
AC-104	Cornwell, T. van Breugel, W. Ekers, R.D. Smarr, L.	NRAO/VLA UC Berkeley NRAO/VLA Illinois, U of	The db system NGC4782/NGC4783.	6,20	12 w/VA9	8
AC-117	Coleman, P. Condon, J.J. Mitchell, K.J.	NRAO-CV/Pittsburgh, U of NRAO/CV VPI & SU	Angular-size distribution of faint sources.	20	19,23	28
AC-121	Crane, P.C. Price, R.M.	NRAO/VLA New Mexico, U of	The radio nucleus of M81.	2	3	12
AC-131	Comins, N.F. Hayes, J.J.E.	Maine, U of, Orono Maine, U of, Orono	3C 442.	6,20	13	8
AC-135	Cameron, R. Parma, P. de Ruiter, H.	NRAO-VLA/Mt Stromlo AUST Bologna, ITALY Bologna, ITALY	A statistical study of the structure of dumbell galaxy radio sources.	20	9	8
AD-129	Dreher, J.W. Johnston, K.J. Welch, W.J.	MIT NRL UC Berkeley	W 49.	6	16 w/VA9	9
AD-140	Downes, A.J.B. Gull, S.F. Tan, S.	Cambridge U, UK Cambridge U, UK Cambridge U, UK	First epoch observations of the young SNR G11.2-0.3.	6,20	19,25	11
AD-142	Dickel, J. Long, K. Matsui, Y. Greisen, E.	Illinois, U of Johns Hopkins U Johns Hopkins U NRAO/CV	Second epoch observations of Kepler's SNR.	6,20	4	8
AD-153	Dickel, H.R. Goss, W.M. Rots, A.H.	Illinois, U of Groningen U, NETH NRAO/VLA	Recombination line observations of NGC7538 IRS 1.	2 line	18	6
AD-159	Dickey, J.M. Brinks, E.	Minnesota, U of ESO, FRG	HI absorption through the disk of M31.	21 line	6	12
AF-102	Fich, M. Taylor, A.R.	Washington, U of Leiden, NETH	A complete survey in the Galactic Plane.	6,20	9	18
AF-106	Fanti, C. Fanti, R. Parma, P. de Ruiter, H.	Bologna, ITALY Bologna, ITALY Bologna, ITALY Bologna, ITALY	Low luminosity B2 radio galaxies.	20	5	13

VLA UTILIZATION MAY 1985 (Cont.)

Program	Observer	Affiliation	Program title	Bands (cm)	Obsv date	Sched hrs
AG-116	Gibson, D.M. Priedhorsky, W.C.	NMIMT LANL	Search for 300 day periodicity in Cyg X-1.	2,6,20	8,15,27	3.5
AG-181	Giovannini, G. Feretti, L.	Bologna, ITALY Bologna, ITALY	NGC 4869.	6	14	3
AG-183	Gilmore, G. Gregorini, L. Padrielli, L. Parma, P.	Cambridge U, UK Bologna, ITALY Bologna, ITALY Bologna, ITALY	A complete sample of radio galaxies of intermediate strength.	20	11	15
AG-188	Grindlay, J.E. Garcia, M.R. Seaquist, E.R.	CFA CFA Toronto U, CANADA	Spectra and variability study of GX13+1	6,20	1,2	12
AH-164	Hintzen, P. Owen, F.	NASA-Goddard NRAO/VLA	Physically large QSO radio sources.	6	21,25	10
AH-173	Hogg, D.E.	NRAO/CV	Radio emission from two emission-line galaxies.	2,6,20	4	6.5
AH-180	Hanisch, R.J. Burns, J.O.	STScI New Mexico, U of	Compact radio sources associated with interacting galaxies in poor clusters	2,6	30,31 w/VZ10&VW23	14
AH-187	Henkel, C. Wilson, T.L. Gusten, R. Johnston, K.J.	MPIR, FRG MPIR, FRG MPIR, FRG NRL	Water masers in the Galaxy M82.	1.3 line	24 w/VA9	12
AH-191	Ho, P.T.P. Lo, K-Y.	Harvard Caltech	Linear continuum structures in the Galactic Plane.	20	15	4
AH-195	Hjellming, R.M. Davis, R.	NRAO/VLA Jodrell Bank, UK	Nova RS Ophiuchi.	1.3,2,6 20	3,8,23 w/Test/Perley	5.3
AI-21	Israel, F. Skillman, E.	Leiden U, NETH NFRA, NETH	NGC 2403.	20	10	8
AI22	Israel, F. Skillman, E.	Leiden U, NETH NFRA, NETH	NGC6822, IC1613 and Leo I.	6	6,10	18
AL-94	Liszt, H. Burton, W.B.	NRAO/CV Leiden U, NETH	Structure of Sgr C.	20	4	3
AL-95	Lane, A.P. Reynolds, S.P. White, N.E.	NRAO/CV NRAO/CV ESOC, FRG	Simultaneous radio, X-ray and UV observations of flares from RS CVn stars and Algol.	2,6,20	25	12
AM-147	Masson, C.R.	Caltech	Expansion motions in CGC7027.	2,6	7,21 w/VW38	24
AO-60	Odenwald, S. Schwartz, P.	NRL NRL	Compact IR sources in DR-20.	6,20	22	2
AO-61	Oznovich I. Gibson, D.M.	NMIMT NMIMT	Magnetic activity in five late-type giants and supergiants.	20	28	3.5
AP-90	Parma, P. Fanti, R. Lari, C. Fomalont, E. Ekers, R.D.	Bologna, ITALY Bologna, ITALY Bologna, ITALY Nobeyama, JAPAN/NRAO-VLA NRAO/VLA	NGC 326.	6	22	6
AP-94	Parma, P. de Ruiter, H. Fanti, C. Fanti, R. Ekers, R.D.	Bologna, ITALY Bologna, ITALY Bologna, ITALY Bologna, ITALY NRAO/VLA	B2 0755+37.	6	26 w/VP62	9.5
AP-97	Pedelty, J. Rudnick, L.	Minnesota, U of Minnesota, U of	Relic pre-hotspot emission in 3C295?	6	22	6.3
AR-116	Rusk, R. Seaquist, E. Yen, A.	Toronto U, CANADA Toronto U, CANADA Toronto U, CANADA	Brightness and polarization structure of sources with published VLBI structural position angles.	2,6,18	13,22,25	20.9
AR-123	Rudnick, L. Pedelty, J. Spinrad, H.	Minnesota, U of Minnesota, U of UC Berkeley	Extended emission line systems in distant galaxies.	6	31 w/VS47	3.9

VLA UTILIZATION MAY 1985 (Cont.)

Program	Observer	Affiliation	Program title	Bands (cm)	Obsv date	Sched hrs
AS-206	Snell, R.L. Bally, J. Schwartz, P.	Massachusetts, U of Bell Labs NRL	Radio jets associated with L1551 IRS-5.	2,6	13,18	16
AS-211	Sramek, R.A. Weiler, K.W. van der Hulst, J.M. Panagia, N.	NRAO/VLA NSF NFRA, NETH STScI	Monitoring statistical properties of radio supernovae.	2,6,20	6,14,29	4.5
AS-218	Shone, D. Browne, I. Walsh, D. Rudnick, L. Pedelty, J.	Jodrell Bank, UK Jodrell Bank, UK Jodrell Bank, UK Minnesota, U of Minnesota, U of	The remarkable jet in 0800+608.	2,6	31 w/VW23	8
AS-223	Seaquist, E.R. Bode, M.F.	Toronto U, CANADA Jodrell Bank, UK	Compact structures in the nova remnant GK Per.	6,20	5	6
AS-226	Sumi, D. Smarr, L. Owen F.	Illinois, U of Illinois, U of NRAO/VLA	The cD galaxy in Abell 2029.	6,20	15	8
AT-57	Taylor, A.R. Leahy, D.A. Seaquist, E.R.	Leiden U, NETH Calgary U, CANADA Toronto U, CANADA	Circumstellar HI absorption in slow novae: HM Sge	21 line	30	8
AT-60	Taylor, A.R. Seaquist, E.R. Kenyon, S.J.	Leiden U, NETH Toronto U, CANADA CFA	Radio-optical-UV monitoring of symbiotic stars.	1.3,2,6 20	3	12
AT-62	Taylor, A.R.	Leiden U, NETH	New stellar radio sources.	6	4	7
AW-122	Wehrle, A.E. Morris, M.	UCLA UCLA	Vertical radio structure in the nuclei of normal spiral galaxies.	6	7	6
AW-125	Willner, S.P. Turner, J.L. Ho, P.T.P.	CFA CFA CFA	Survey of spiral galaxy nuclei.	6	16-19,21	34
AW-126	Wilson, A.S. Ulvestad, J.S.	Hawaii, U of/UMD JPL	A distance limited sample of Seyfert galaxies.	2	1	3
AW-132	Wehrle, A. Ekers, R.D.	UCLA NRAO/VLA	Nuclear region of NGC 4631.	2	8	4
AW-134	Wilson, A.S. Ward, M.J.	Hawaii, U of/UMD Cambridge U of, UK	Relation between optical line and radio continuum emissions in two Seyfert galaxies.	6,20	2,16 w/Baselines	9.5
VAH-35	Langston, G.	MIT	Search for gravitational lenses.	6 cm phased array VLB	30	4
VA-9	Alef, W. Pauliny-Toth, I.I.K. Preuss, E. Kellermann, K.I.	MPIR, FRG MPIR, FRG MPIR, FRG NRAO/GB	Variability of 3C390.3 and 3C311.	6 cm single antenna VLB	23,24	38.7 w/AB306, AD140,AH187 AC/117,Test/Bignell
VH-17	Hooimeyer, T. Schilizzi, R.T. Miley, G.K. van der Hulst, J.M.	Leiden U, NETH Dwingeloo, NETH STScI Dwingeloo, NETH	LINERS: a pilot survey.	6 cm phased array MK III VLB	25,27	21.2
VL-37	Lind, K.R.	Caltech	Jet in 3C371.	6 cm phased array VLB	28	24.5
VP-62	Pilbratt, G. Booth, R.S. Porcas, R. Nicolson, G.D.	Onsala, SWE Onsala, SWE MPIR, FRG Hartebeesthoek, SA	Variations in 3C279.	6 cm single antenna VLB	26	11.5 w/Pointing, AP94
VP-64	Preuss, E. Alef, W. Pedlar, A.	MPIR, FRG MPIR, FRG Jodrell Bank, UK	Nucleus of NGC 4151.	6 cm phased array MK III VLB	22 w/AR116&AP97	6.1

VLA ASTRONOMICAL OBSERVING MAY 1985 (Cont.)

Program	Observer	Affiliation	Program title	Bands (cm)	Obsv date	Sched hrs
VS-47	Spencer, J.H.	NRL	3C395: Superluminal resupply of a radio lobe?	6 single antenna VLB	31	3.0
	Johnston, K.J.	NRL				
	Simon, R.S.	NRL				
	Waak, J.A.	NRL				
	Witzel, A.	MPIR, FRG				
	Eckart, A.	MPIR, FRG				
	Hirabayashi, H.	Tokyo, U of JAP				
	Inoue, M.	Tokyo, U of JAP				
VW-23	Walker, R.C.	NRAO/VLA	Monitoring 3C120.	6 cm single antenna VLB	31	12 w/AH180,AS218 Test/Perley Test/Sramek
	Benson, J.	NRAO/CV				
	Seielstad, G.	NRAO/GB				
	Unwin, S.C.	Caltech				
VW-38	Witzel, A.	MPIR, FRG	A complete sample.	6 cm single antenna VLB	21	12 w/AM147, AB325 & Software
	Eckart, A.	MPIR, FRG				
	Schalinski, C.	MPIR, FRG				
	Biermann, P.	MPIR, FRG				
	Johnston, K.J.	NRL				
	Simon, R.	NRL				
VZ-10	Zensus, A.	Caltech	3C273	6 cm single antenna VLB	30	8.8 w/AH180, Test/Sramek
	Cohen, M.H.	Caltech				
	Lind, K.R.	Caltech				
	Unwin, S.C.	Caltech				
	Baath, L.B.	Onsala, SWE				
	NRAO staff	Electronics				48.0
		Software				21.8
		Pointing, baselines, startup				46.7
		General tests				24.6

The average downtime for the month of May, 1985 was approximately 5.71 percent.

$$\text{Average downtime of operational antennas} = \frac{\text{Total number of antenna-hours of operational antennas lost due to hardware and software failures during scheduled observing}}{\text{Total number of antenna-hours of operational antennas scheduled}} \times 100$$

where "antenna-hours" definition is: An array consisting of N antennas operating for Y hours is defined to have YN antenna-hours operation.

The array was scheduled 100 percent (744.0 hours) of the time: 83.3 percent (619.6 hours) to astronomical programs, 7.4 percent (54.9 hours) to scheduled test/calibration, and the remaining 9.3 percent (69.5 hours) went to scheduled maintenance.

The total number of programs run for the month of May, 1985 was 67.

The following independent proposals shared simultaneous observing: (92.8 hrs Total Simultaneous Observing)

AW134/Baselines	5.0	AP94 /VP62	7.4
AM147/VW38	9.7	VP62 /Pointing	4.1
AB325/VW38	2.0	VZ10 /Test/Sramek	0.4
VW38 /Software	0.3	AH180/VZ10	8.4
AH195/Test/Perley	1.8	VW23 /Test/Perley	0.6
AB306/VA9	15.3	AH180/VW23	2.0
VA9 /Test/Bignell	2.0	VW23 /Test/Sramek	2.5
VC117/VA9	5.4	AS218/VW23	6.9
AH187/VA9	12.0	AR123/VS47	3.0
AD140/VA9	4.0		

850612PDH/tm

VLA UTILIZATION APRIL 1985

Program	Observer	Affiliation	Program title	Bands (cm)	Obsv date	Sched hrs
AB-129	Burke, B.F. Hewitt, J.N. Roberts, D.H.	Caltech/MIT MIT Brandeis	Monitoring double quasar 0957+561.	6	19	2
AB-310	Browne, I. Murphy, D. Perley, R.	Jodrell Bank, UK Jodrell Bank, UK NRAO/VLA	Extended structure around core-dominated quasars.	20	29	24
AB-311	Burns, J.O. Eilek, J.A. Christiansen, W.A.	New Mexico, U of NMIMT North Carolina, U of	A quantitative investigation of turbulence in the radio galaxy 0816+526.	2	28	12
AB-314	Baldwin, J.E. Cordey, R.A.	MRAO, UK MRAO, UK	A search for core and jets in IC2476.	6	30	3.5
AB-324	Blaha, C. Pedelty, J. Dickey, J. Kennicutt, R. Jr.	Minnesota, U of Minnesota, U of Minnesota, U of Minnesota, U of	'Hot spot' nuclei.	6	25	7
AB-325	Bieging, J.H. Cohen, M.	U.C. Berkeley NASA-Ames	Flux density and spectral index monitoring of V410 tau.	2,6	21	1.5
AB-331	Barthel, P.D.	Caltech	Asymmetric quasars with steep spectrum radio cores.	6	18,19	2
AB-336	Bieging, J. Goss, W.M.	U.C. Berkeley Groningen U, NETH	HI absorption in Cas A.	21 line	14	10
AB-337	Brinks, E. Klein, U. Dettmar, R-J.	ESO, FRG Bonn U, FRG MPIR, FRG	HI observations of blue compact dwarf galaxies.	21 line	26	12
AC-128	Cameron, R.A. Bicknell, G.V. Ekers, R.D.	VLA/Mt Stromlo, AUST Mt Stromlo Obs, AUST NRAO/VLA	Jet radio sources in southern clusters.	6,18,20	1,2	16
AC-132	Cecil, G.	Hawaii U of	Four active galaxies with spatially-extended forbidden-line regions.	6	14	10
AC-135	Cameron, R.A. Parma, P. de Ruiter, H.	VLA/Mt Stromlo, AUST Bologna, ITA Bologna, ITA	A statistical study of the structure of dumbell galaxy radio sources.	20	6,8,13 w/VB64	8
AC-136	Cameron, R.A. Bicknell, G.V. Ekers, R.D.	VLA/Mt Stromlo AUST Mt Stromlo Obs, AUST NRAO/VLA	HI observations of NGC7017, for modelling of a jet radio source.	20 line	3,6 w/VB64	10
AD-61	Dressel, L.L.	Rice U	High frequency spectrum of UGC 09114.	1.3,2,6	5	1
AD-160	de Pater, I.	U.C. Berkeley	Jupiter Patrol.	6,20	21,22	12
AD-162	Doiron, D.J. Genet, R.	Clemson U Fairborn Obs	Radio survey of suspected radio binary stars.	2,6,18	5,13	11.2
AF-63	Faber, S.M. Raimond, E. Knapp, G.R. Gallagher, J.S. van Gorkom, J.H.	U.C. Santa Cruz NFRA, NETH Princeton U Illinois U of NRAO/VLA	HI distribution in the elliptical galaxy NGC1052: high velocity absorption.	21 line	6 w/VB64	4
AF-74	Feretti, L. Giovannini, G. Gregorini, L.	Bologna, ITA Bologna, ITA Bologna, ITA	New wide angle tail galaxy in A115.	20	21	2
AG-116	Gibson, D.M. Priedhorsky, W.C.	NMIMT LANL	Search for 300 day periodicity in Cyg X-1.	2,6,20	5,16,28	3.5
AG-163	Goss, W.M. Ekers, R.D. Sramek, R.A. Branch, D. Cowan, J.	Groningen U, NETH NRAO/VLA NRAO/VLA Oklahoma, U of Oklahoma, U of	Search for very young supernova remnants in our galaxy.	6	17,18	4

VLA UTILIZATION APRIL 1985 (Cont.)

Program	Observer	Affiliation	Program title	Bands (cm)	Obsv date	Sched hrs
AG-173	Gower, A.C. Hutchings, J.B. Condon, J.J.	Victoria U, CAN DAO, CAN NRAO/CV	Disk continuum emission from spiral galaxies with quasars.	20	22	18
AG-176	Garay, G. Moran, J. Reid, M. Rodriguez, L.	ESO, FRG CFA CFA UNAM, MEX	Continuum emission associated with hot ammonia peaks.	1.3,2,6	21	6
AG-177	Garay, G. Moran, J. Reid, M. Rodriguez, L.	ESO, FRG CFA CFA UNAM, MEX	Variability of Theta Orionis	2,6,20	1	2.5
AG-178	Garay, G. Reid, M. Moran, J.	ESO, FRG CFA CFA	Search for compact radio sources in the Lagoon and Triffid nebulae.	6	8	6
AG-182	Garcia-Barreto, J.A. Pismis, P.	UNAM, MEX UNAM, MEX	Nuclear emission form the barred galaxy NGC-4314.	6,20	17	4
AG-184	Green, D.A. Gull, S.F.	Cambridge U, UK Cambridge U, UK	New young SNRs.	6,20	16,18	2
AG-186	Gorenstein, M.V. Perley, R.A. Huchra, J.P.	CFA NRAO/VLA CFA	Detection of gravitational lens 2237+03.	20	18	3
AG-189	Glendenning, B. Kronberg, P.	Toronto U, CAN Toronto U, CAN	The peculiar spiral NGC2146.	2,6,20 line	27	8
AH-190	Harris, D.E. McHardy, I. Dewdney, P.E.	CFA Leicester U, UK DAO, CAN	Morphologies of steep spectrum radio sources in X-ray emitting clusters of galaxies.	6,20	24	18
AH-195	Hjellming, R.M. Davis, R.	NRAO/VLA Jodrell Bank, UK	Nova RS Ophiuchi.	1.3,2, 6,20	1,4,6,13, 18,23,24	11.3
AJ-115	Jackson, J.M. Barrett, A.H. Ho, P.T.P.	MIT MIT Harvard U	Continuum survey of starburst galaxies detected in CO.	2	15,16	18
AK-127	Karoji, H. Dennefeld, M. Merat, P. Ukita, N.	I d'A Paris, FRA I d'A Paris, FRA I d'A Paris, FRA "/Nobeyama, JAP	High reddening galaxies in the IRAS Catalogue.	20	4	4
AL-95	Lane, A.P. Reynolds, S.P. White, N.F.	NRAO/CV NRAO/CV ESOC, NETH	Flares from RS CVn stars and Algol.	2,6	2	8.5
AM-124	McHardy, I.M. Warwick, R.S. Smith A.	Leicester U, UK Leicester U, UK ESTEC, NETH	Coordinated radio, optical and X-ray observations of OVVs and BL Lac objects.	2,6,20	6,12	6
AM-150	Muhleman, D.O. Berge, G.L. Linfield, R.	Caltech Caltech JPL	Astrometric observations of Uranus.	1.3,2	27,30	16
AO-49	Owen, F. O'Dea, C. Burns, J. Smarr, L.	NRAO/VLA NRAO/VLA New Mexico, U of Illinois, U of	Wide angle tail sources.	6	28	4
AO-61	Oznovich, I. Gibson, D.M.	NMIMT NMIMT	Magnetic activity in five late-type giants and supergiants.	20	30	4
AP-98	Pettengill, G.H. Chapman, B.D.	MIT MIT	Radio emissivity of the surface of Mercury.	2,6	4,5	22
AP-102	Peacock, A. Smith, A.	ESOC, NETH ESOC, NETH	SNR G127.1+0.5.	2,6,20	15	6
AS-211	Sramek, R.A. Weiler, K.W. van der Hulst, J.M. Panagia, N.	NRAO/VLA NSF NFRA, NETH STScI	Monitoring statistical properties of radio supernovae.	2,6,20	4,9 w/VB62	3

VLA UTILIZATION APRIL 1985 (Cont.)

Program	Observer	Affiliation	Program title	Bands (cm)	Obsv date	Sched hrs
AS-217	Schmahl, E.J. Kundu, M.R. Shevgaonkar, R.K.	Maryland, U of Maryland, U of Maryland, U of	Hot and cold components of solar prominences.	2,6,20	19,20	22.5
AS-224	Smith, A. Peacock, A.	ESA/ESTEC, NETH ESA/ESTEC, NETH	SNR W49B.	20	15	6
AS-228	Seaquist, E.R. Taylor, A.R.	Toronto U, CAN Groningen U, NETH	Radio survey of symbiotic stars, III.	2,6	2,6 w/VB64	7.5
AS-230	Sramek, R. Skillman, E.	NRAO/VLA NFRA, NETH	The SNR in NGC 5471.	2	26	12
AT-57	Taylor, A.R. Leahy, D.A. Seaquist, E.R.	Groningen U, NETH Calgary U, CAN Toronto U, CAN	Circumstellar HI absorption in slow novae: Hm Sge.	21 line	10,11 w/VB62 & VB64	16
AT-58	Tuffs, R.J. Angerhofer, P.E. Brown, M.T. Gull, S.F. Perley, R.A.	MPIR, FRG USNO Cambridge U, UK Cambridge U, UK NRAO/VLA	Structure and secular change within Cassiopeia A.	6	16	9
AT-61	Taylor, A.R. Seaquist, E.R.	Groningen, NETH Toronto U, CAN	A rotating(?) "jet" from the symbiotic star SS96.	2	4,5	8
AV-119	van Breugel, W. Heckman, T. Miley, G.	U.C. Berkeley Maryland, U of STScI/Leiden U, NETH	Radio and optical shells in PKS0634-206.	20	1	6
AV-120	Viallefond, F. Comte, G. Lequeux, J. Kunth, D. Vigroux, L.	Meudon, FRA Marseille, FRA Marseille, FRA I d'A Paris, FRA CEA Saclay, FRA	HI and continuum observations of blue compact galaxies.	6,20 line	20,21	16.5
AW-95	Winnberg, A. Baud, B. Habing, H.J. Olnon, F.M. Matthews, H.E.	Onsala Space Obs, SWE Groningen U, NETH Leiden U, NETH Leiden U, NETH HIA, CAN	Survey for OH/IR stars close to the Galactic Center.	18 line	18-20,25	28
AW-126	Wilson, A. Ulvestad, J.S.	Hawaii, U of/MD, U of JPL	A distance limited sample of Seyfert galaxies.	6,20	1	2
AW-135	Wills, D. Wills, B.J.	Texas, U of Texas, U of	Close pairs of QSOs.	6	27	6
AZ-25	Zukowski, E. Kronberg, P.P.	Toronto U, CAN Toronto U, CAN	Strong extended radio sources which exhibit peculiar integrated polarization curves.	18-22	18,19	6.5
VAH-34	Mutel, R.L. Spangler, S.R.	Iowa, U of Iowa, U of	2013+370: The scattering size.	18 phased array VLB	12,13	10.1
VB-62	Baath, L.B. Pilbratt, G. Matveyenko, L.I. Cohen, M.H. Unwin, S.C. Pauliny-Toth, I.I.K.	Onsala, SWE Onsala, SWE Moscow, USSR Caltech Caltech MPIR, FRG	3C345 - a second epoch four years later.	1 single antenna VLB	9	12.7 w/startup, move/op, AT57, AS211
VB-63	Bartel, N.	CFA	SN 1979c Expansion	18 phased array MK III VLB	13	10.7
VB-64	van Breugel, W. Fanti, C. Fanti, R. Parma, P. Schilizzi, R.T.	U.C. Berkeley Bologna, ITA Bologna, ITA Bologna, ITA NFRA, NETH	Compact steep spectrum quasars: 3C287.	18 phased array VLB	10	10

VLA UTILIZATION APRIL 1985 (Cont.)

Program	Observer	Affiliation	Program title	Bands (cm)	Obsv date	Sched hrs
VB-64	van Breugel, W. Fanti, C. Fanti, R. Parma, P. Schilizzi, R.T.	U.C. Berkeley Bologan, ITA Bologna, ITA Bologna, ITA NFRA, NETH	Compact steep spectrum quasars: 3C119, 3C287, 3C343.	18 single antenna VLB	6,11	16 w/AC136, AF63,AC135, AS228,AT57, Move/Op.
VG-42	Geldzahler, B. Fomalont, E.	NRL Nobeyama, JAP/NRAO-VLA	Lobe confinement in Sco X-1.	18 phased array MK III VLB	11	7.7
VJ-38	Jones, D.L. Unwin, S.C. Readhead, A.C.S. Preston, R.A.	JPL Caltech Caltech JPL	Second epoch observation of NGC 6251.	18 phased array VLB	8	18 with Move/Op.
VL-36	Linfield, R.	JPL	The jet in 3C 111.	18 phased array VLB	7	16.5
VS-42	Simon, R.S.	NRL	Polarization mapping of 3C 138.	18 phased array MK III VLB	8,11	13.8 with Move/Op.
	NRAO staff		Electronics			48.5
			Software			29.2
			Pointing, baselines, startup, move/operations			64.7
			General tests			32.9

The average downtime for the month of April, 1985 was approximately 8.64 percent.

$$\text{Average downtime of operational antennas} = \frac{\text{Total number of antenna-hours of operational antennas lost due to hardware and software failures during scheduled observing}}{\text{Total number of antenna-hours of operational antennas scheduled}} \times 100$$

where "antenna-hours" definition is: An array consisting of N antennas operating for Y hours is defined to have YN antenna-hours operation.

The array was scheduled 100 percent (720.0 hours) of the time: 78.2 percent (563.4 hours) to astronomical programs, 11.0 percent (78.9 hours) to scheduled test/calibration, and the remaining 10.8 percent (77.7 hours) went to scheduled maintenance.

The total number of programs run for the month of April, 1985 was 61.

The following independent proposals shared simultaneous observing: (42.8 hrs Total Simultaneous Observing)

AC136/VB64	3.7
AF63 /VB64	4.0
AC135/VB64	2.0
AS228/VB64	3.3
VJ38 /Move/Operations	1.7
VB62 /Startup	0.7
AS211/VB62	1.0
VB62 /Move/Operations	5.0
AT57 /VB62	6.0
VB64 /Move/Operations	5.0
AT57 /VB64	4.1
VS42 /Move/Operations	5.0
VG42 /Move/Operations	1.3

850508PDH/tm

VLA UTILIZATION MARCH 1985

Program	Observer	Affiliation	Program title	Bands (cm)	Obsv date	Sched hrs
AB-182	Burns, J.O Balonek, T.J. Hummel, E.	New Mexico, U of Williams College MPIR, FRG	Monitoring the cores of extended radio sources and spiral galaxies.	2,6,21	23,25	6
AB-306	Basart, J.P. Burns, J.O. DeYoung, D.S.	Iowa State U New Mexico, U of NOAO	Jets in classical doubles.	6,20	7	8
AB-313	Becker, R. Helfand, D.	UC, Davis Columbia U	Fine structure within 2 Galactic SNR.	20	28	6
AB-315	Biretta, J. Owen, F. Cornwell, T. Hardee, P.	Caltech NRAO/VLA NRAO/VLA Alabama, U of	Proper motion and structure of M87 jet.	2,18/20	1	8.1
AB-317	Bastian, T.S. Dulk, G.A. Slee, O.B.	Colorado, U of Colorado, U of CSIRO, AUST	Flare stars in stellar associations.	6,20	17	11
AB-319	Bowers, P.F. Knapp, G.R.	NRL Princeton U	Search for protoplanetary nebulae associated with OH/IR stars (Part I).	18 line	26	10
AB-322	Barthel, P.D. Lonsdale, C.J. Miley, G.K. Schilizzi, R.T.	Caltech Penn State STScI/Leiden U, NETH NFRA, NETH	High redshift quasars.	2,6	10	5
AB-323	Browne, I. Boroson, T.	Jodrell Bank, UK Michigan U of	An optical/radio test of relativistic beaming models.	6	7	0.5
AB-325	Bieging, J.H. Cohen, M.	UC, Berkeley NASA-Ames	Flux density and spectral index monitoring of V410 Tau.	2,6	18	1
AB-326	Bieging, J.H.	UC, Berkeley	Rapid rotators in the Pleiades.	6	30	9
AB-328	Bieging, J.H. Cohen, M.	UC, Berkeley NASA-Ames	Jets in T Tauri stars.	6	1	2
AC-91	Cordes, J. Weisberg, J. Hankins, T.	Cornell Princeton Dartmouth	Pulsar dynamic spectra and waveforms and neutron star velocities.	20 line	11,12,15	24.5
AC-114	Clark, B.G. Perley, R.A.	NRAO/VLA NRAO/VLA	High resolution source structure survey.	2,6	9,11	6.5
AC-115	Catalano, S. Gibson, D.M. Rodono, M.	Catania, ITALY NMIMT Catania, ITALY	Flux and luminosity limited surveys of Algol binaries.	6	20,31	11
AC-119	Chanmugam, G. Dulk, G.A. Bastian, T.S.	Louisiana State Colorado, U of Colorado, U of	Magnetized cataclysmic variables.	2,6,20	13 w/Move Ops.	24
AC-125	Christiansen, W. Stocke, J. Foltz, C.	North Carolina, U of Steward Obs Steward Obs	Search for environmental effects on luminous radio galaxies.	6,20	3,8	13
AC-128	Cameron, R.A. Bicknell, G.V. Ekers, R.D.	Mt Stromlo, AUST Mt Stromlo, AUST NRAO/VLA	Jet radio sources in southern clusters.	6,18,21	24,25	24
AC-129	Cox, J.J. Gibson, D.M.	NMIMT NMIMT	Stellar analog of the Solar slowly-varying component.	2,6,20	15,17,18 21,24	18.5
AD-154	Drake, S.A. Florkowski, D.R. Walter, F.M. Linsky, J.L.	Colorado, U of USNO Colorado, U of Colorado, U of	FK Comae stars.	2,6,18	3,18 w/Move Ops.	21
AD-156	Drake, S.A. Churchwell, E. Linsky, J.L.	Colorado, U of Wisconsin, U of Colorado, U of	Bp stars.	2,6,18	11,16 w/Move Ops.	20
AD-157	Dressel, L.L.	Rice U	Extended nuclear radio sources in SO galaxies.	6,20	3,4	18.5
AF-84	Felli, M Simon, M	Arcetri Obs, ITALY SUNY, Stonybrook	Resolution of radio emission of circumstellar ionized regions.	1.3	8	9
AF-95	Fix, J.D. Cobb, M.L.	Iowa, U of Iowa, U of	Spectral line maps of OH1.1-0.8.	18 line	2	2

VLA UTILIZATION MARCH 1985 (Cont.)

Program	Observer	Affiliation	Program title	Bands (cm)	Obsv date	Sched hrs
AF-97	Fomalont, E.B. Geldzahler, B.J.	Nobeyama, JAPAN/NRAO NRL	Sco X-1.	6,20	7	9
AG-116	Gibson, D.M. Priedhorsky, W.C.	NMIMT LANL	Search for 300 day periodicity in Cyg X-1.	2,6,20	2,15,28	3
AG-164	Gower, A.C. Hutchings, J.B.	Victoria, U of CANADA DAO, CANADA	Low redshift quasars.	2,1.3	7	3
AG-177	Garay, G. Moran, J. Reid, M. Rodriguez, L.	ESO, FRG CFA CFA UNAM, MEXICO	Search for temporal variability of the radio emission from theta Orionis.	2,6,20	5,7,14 18,22	10.5
AH-172	Hjellming, R.M. Johnston, K.J.	NRAO/VLA NRL	SS433.	2,6	5,8	5.6
AH-174	Hollis, J.M. Michalitsianos, A.G. Kafatos, M.	NASA-GSFC NASA-GSFC George Mason U	Flux variations and structure in RX Puppis.	2	28,29,30	13.5
AH-195	Hjellming, R.M. Davis, R.	NRAO/VLA Jodrell Bank, UK	Nova RS Ophiuchi.	1.3,2, 6,20	13,15, 20,27	6.2
AJ-120	Johnston, K. Wade, C.M. Seidelman, P.K. Kaplan, G. Nolt, I. Robson, I. Veeder, G. Webster, W.	NRL NRAO/VLA USNO USNO Oregon, U of UKIRT, UK JPL NASA-GSFC	Multispectral observations of the minor planet Vesta.	2,6	4	11
AK-113	Kwok, S.	Calgary, U of, CANADA	Survey of compact planetary nebulae.	2,6	4	8
AK-119	Kailey, W.F. Elston, R.	Arizona, U of Arizona, U of	Search for supernova remnants near the nucleus of M33.	20	9	12
AK-120	Keel, W.C.	NOAO	PKS 0521-36 jet.	2	31	5
AK-122	Kundu, M.R. Shevgaonkar, P.K. Jackson, P.D.	Maryland, U of Maryland, U of Maryland, U of	Selected late-type stars.	2,6,20	21	24.5
AK-124	Kronberg, P. Sramek, R.	Toronto, U of, CANADA NRAO/VLA	Monitoring M82.	2,6	2	10
AM-135	Mutel, R.L. Lestrade, J.F.	Iowa, U of B. de Longitudes, FR	RS CVn binaries: Correlation with period.	2,6,20	15,21,28	16
AM-142	Montmerle, T. Feigelson, E.	CEN Saclay, FRANCE Penn State U	Pre-main Sequence stars in the rho Ophuichi Cloud.	2,6,20	24	8
AM-145	Mitchell, K.	VPI	Accurate radio morphologies of a sample of faint radio selected quasars.	2,20	10	11
AO-59	O'Dea, C.P. Barvainis, R. Balonek, T.J.	NRAO/CV NRAO/CV Williams College	Subarcsecond structure and polarization of core dominated radio sources.	1.3,2,6	8	17
AP-92	Perryman, M.A.C. Di Serego Alighieri, S. Macchetto, F.	ESA, NETH Padova U, ITALY STScI	Gravitational interaction between the quasar MR 2251-178 and an active cluster galaxy.	20	23	6
AP-93	Pettengill, G.H. Chapman, B.D.	MIT MIT	Radio emissivity of the surface of Venus.	20	10	12
AR-117	Rodriguez, L. Garcia-Barreto, J.A. Gomez, Y.	UNAM, MEXICO UNAM, MEXICO UNAM, MEXICO	HI absorption features in NGC6302 and NGC2440.	20 line	23	10.5
AR-119	Rao, A.P. Subrahmanyan, R.	TIFR, INDIA TIFR, INDIA	Double source showing peaked spectrum.	1.3,2,6	10	2
AR-125	Rodriguez, L. Garcia-Barreto, J.A. Gomez, Y.	UNAM, MEXICO UNAM, MEXICO UNAM, MEXICO	Search for continuum emission from possible protoplanetary nebulae.	2,6	12	11.5
AS-80	Sramek, R.A. van der Hulst, J.M. Weiler, K.W.	NRAO/VLA NFRA, NETH NSF	Monitoring supernovae SN1980 in NGC6946 and SN1979c in M100.	6,20	18,21	5.5

VLA UTILIZATION MARCH 1985 (Cont.)

Program	Observer	Affiliation	Program title	Bands (cm)	Obsv date	Sched hrs
AS-211	Sramek, R.A. Weiler, K.W. van der Hulst, J.M. Panagia, N.	NRAO/VLA NSF NFRA, NETH STScI	Statistical properties of radio supernovae.	2,6,20	18,25,29	4
AT-58	Tuffs, R.J. Angerhofer, P.E. Brown, M.T. Gull, S.F. Perley, R.A.	MPIR, FRG USNO Cambridge, UK Cambridge, UK NRAO/VLA	Structure and secular change within Cassiopeia A.	6,20	1,2	18.5
AV-96	van der Hulst, J.M. Sramek, R.A. Weiler, K.W.	NFRA, NETH NRAO/VLA NSF	Radio supernova in NGC 4258.	6,20	17,29	4
AW-78	Wardle, J.F.C. Laing, R.A.	Brandeis U RGO, UK	Variability of the central components of extended radio sources.	2,6	12,17	8
AW-95	Winnberg, A. Baud, B. Habing, H.J. Olnin, F.M. Matthews, H.E.	Onsala, SWEDEN Groningen U, NETH Leiden, NETH Leiden, NETH NRC, CANADA	Survey for OH/IR stars close to the galactic center.	18 line	29,30,31	21
AW-123	Walmsley, M. Batria, W. Engels, D.	MPIR, FRG NRAO/GB MPIR, FRG	Peculiar water masers associated with IRAS sources.	1.3 line	11	4
AW-126	Wilson, A.S. Ulvestad, J.S.	Maryland, U of JPL	A distance limited sample of Seyfert galaxies.	6,20	23,31	3.4
AW-128	Walsh, D. Tomasi, P.	NRAL, UK Bologna, ITALY	Optically faint steep spectrum sources.	6,20	1	8
AW-132	Wehrle, A.E. Ekers, R.D.	UCLA NRAO/VLA	Nuclear region of NGC 4631.	6	7	4
AZ-25	Zukowski, E. Kronberg, P.P.	Toronto U, CANADA Toronto U, CANADA	Radio sources with peculiar integrated polarization curves.	18-22	5	8
	NRAO staff		Electronics Software Pointing, baselines, startup, move/operations General tests			48.5 20.1 79.7 54.3

The average downtime for the month of March, 1985 was approximately 8.33 percent.

$$\text{Average downtime of operational antennas} = \frac{\text{Total number of antenna-hours of operational antennas lost due to hardware and software failures during scheduled observing}}{\text{Total number of antenna-hours of operational antennas scheduled}} \times 100$$

where "antenna-hours" definition is: An array consisting of N antennas operating for Y hours is defined to have YN antenna-hours operation.

The array was scheduled 100 percent (744.0 hours) of the time: 75.6 percent (562.3 hours) to astronomical programs, 15.2 percent (113.1 hours) to scheduled test/calibration, and the remaining 9.2 percent (68.6 hours) went to scheduled maintenance.

The total number of programs run for the month of February, 1985 was 56.

The following independent proposals shared simultaneous observing: (20.9 hrs Total Simultaneous Observing)

AD156/Move/Operations	5.0
AC119/Move/Operations	10.9
AD154/Move/Operations	5.0

850404PDH/tm

VLA UTILIZATION FEBRUARY 1985

Program	Observer	Affiliation	Program title	Bands (cm)	Obsv date	Sched hrs
AA-41	Antonucci, R.R.J. Olszewski, E.W. Hickson, P. Miller, J.S.	NRAO/CV DAO, CANADA U of B.C., CANADA Lick Obs.	A new sample of BL Lac objects.	20	2	3.5
AB-129	Burke, B.F. Hewitt, J.N. Roberts, D.H.	Caltech/MIT MIT Brandeis U	Monitoring 0957+561.	6	12 w/VD9	2
AB-306	Basart, J.P. Burns, J.O. DeYoung, D.S.	Iowa U of UNM NOAO	Jets in classical doubles: 3C47 and 0110+297.	20	25	8
AB-307	Benn, C.R. Wall, J.V. Grueff, G. Vigotti, M.	MRAO, UK RGO, UK Bologna, ITALY Bologna, ITALY	5C12 sources.	6	16	4
AB-315	Biretta, J. Owen, F. Cornwell, T. Hardee, P.	Caltech NRAO/VLA NRAO/VLA Alabama U of	Proper motion and structure of M87 jet.	2,18,20	25,27,28	27.9
AB-323	Browne, I. Boroson, T.	Jodrell Bank, UK Michigan U of	An optical/radio test of relativistic beaming models.	6	22	14
AB-325	Bieging, J.H. Cohen, M.	UC Berkeley NASA-Ames	Flux density and spectral index monitoring of V410 Tau.	2, 6	15	1
AC-108	Coleman, P. Condon, J.J.	Pittsburgh U of NRAO/CV	Angular-size distribution of a new population of faint extragalactic sources.	20 line	23,24	24
AC-116	Churchwell, E. Abbott, D. Bieging, J.H.	UW Madison UC Boulder UC Berkeley	Monitoring stellar nonthermal emitters.	2,6,20	16	7
AC-121	Crane, P.C. Price, R.M.	NRAO/VLA UNM	The radio nucleus of M81.	2,6,20	8 w/VW39	6
AC-126	Cordes, J.M. Dewey, R.J.	Cornell U Cornell U	Proper motion study of pulsars showing high scintillation speeds.	20	17	12
AC-127	Cohen, M. Bieging, J.	NASA-Ames UC Berkeley	Search for extended structure associated with active pre-main-sequence stars.	6	16	12
AC-129	Cox, J.J. Gibson, D.M.	NMIMT NMIMT	Chi 1 Orionis.	2,6,20	5 w/VH14	2
AD-140	Downes, A.J.B. Gull, S.F. Tan, S.	Cambridge U, UK Cambridge U, UK Cambridge U, UK	First epoch observations of the young SNR G11.2-0.3.	6,20	22,25	11.5
AD-142	Dickel, J. Long, K. Matsui, Y. Greisen, E.	Illinois, U of Johns Hopkins Johns Hopkins NRAO/CV	Second epoch observations of Kepler's SNR.	6,20	4,7	10
AD-147	Diamond, P.J. Nyman, L-A.	MPIR, FRG Onsala Space Obs, SWEDEN	OH and H2O maser emission in W43(OH).	1.3,6,18 line	10 w/VW39	7
AD-155	Diamond, P.J. Johnston, K.J. Chapman, J.S.	MPIR, FRG NRL Jodrell Bank, UK	Global array monitoring of the H2O masers around the supergiant S Per.	1.3 line	8 w/VL32 & VW39	7
AE-28	Escalante, V. Ho, P.T. Haschick, A. Rodriguez, L.F.	CFA CFA Haystack Mexico, U of	Accurate positions of water masers associated with HH objects.	1.3 line	17	2
AG-116	Gibson, D.M. Priedhorsky, W.C.	NMIMT LANL	Monitoring Cyg X-1.	2,6,20	3	1.5
AG-164	Gower, A.C. Hutchings, J.B.	Victoria U, CANADA DAO, CANADA	Low redshift quasars.	1.3,2	6	3
AG-170	Greenberg, J.M. Roland, J. Brosch, N.	Leiden U, NETH Leiden U, NETH Wise Observatory	Radio sources near NGC 2264.	20	28	1

VLA UTILIZATION FEBRUARY 1985 (Cont.)

Program	Observer	Affiliation	Program title	Bands (cm)	Obsv date	Sched hrs
AG-174	Guilloteau, S. Goss, W.M. Baudry, A. Matthews, H.E. Forveille, T.	Grenoble, FRANCE Groningen U, NETH Obs. Bordeaux, FRANCE Herzberg Inst., CANADA Grenoble, FRANCE	6cm formaldehyde in G10.6-0.4.	6 line	11 w/VL32 & VJ37	8
AG-177	Garay, G. Moran, J. Reid, M. Rodriguez, L.	ESO, FRG CFA CFA UNAM, MEXICO	Temporal variability of the radio emission from theta Orionis.	2,6,20	1,15,28	5.5
AH-167	Hewitt, J.N. Bennett, C.L. Burke, B.F. Lawrence, C.R. Turner, E.L.	MIT MIT MIT Caltech Princeton	Search for gravitational lenses.	6	6,7,13 w/VB59,VL32, VJ37, VW23	43.1
AH-170	Hintzen, P. Owen, F.	NASA-GSFC NRAO/VLA	Distorted Radio QSOs.	6,20	1	11
AH-171	Hintzen, P. Owen, F.	NASA-GSFC NRAO/VLA	Survey of radio quiet QSOs to identify distorted sources.	20	8,18 w/VL32	6
AH-172	Hjellming, R.M. Johnston, K.J.	NRAO/VLA NRL	Mapping of SS433.	2,6	24	9.5
AH-182	Hogg, D.E.	NRAO/CV	Search for the stellar winds from the nuclei of planetary nebulae.	6	23	12
AJ-104	Johnston, K.J. Florkowski, D. Wade, C. Gatewood, G. de Vegt, C. Shao, M.	NRL USNO NRAO/VLA Pittsburgh U of Hamburger Sternwarte, FRG NRL	Precise optical/radio positions of the stars Algol, HR1099 and UX Ari.	6	9 w/VR34	12
AJ-122	Johnston, K.J. Bowers, P. Spencer, J. Diamond, P. de Vegt, C. Lane, A.	NRL NRL NRL MPIR, FRG Hamburger Sternwarte, FRG NRAO/CV	Optical/radio positions of OH maser stars.	18 line	9 w/VW39 & VR34	8
AK-117	Kundu, M.R. Shevgaonkar, R.K. Hurford, G.J. Gary, D.E. Dulk, G.A. Bastian, T. Lang, K.R. Willson, R.F.	Maryland U of Maryland U of Caltech Caltech Colorado U of Colorado U of Tufts U Tufts U	Solar hard X-ray microbursts.	20	5,6 w/VJ37 & VB59	12
AL-93	Lonsdale, C.J. Barthel, P.D.	Penn State Leiden U, NETH	High redshift quasars.	2	26	10
AM-141	Miley, G.K. Bridle, A. Heckman, T. Laing, R. Macchetto, F. van Breugel, W.	STScI/Leiden, NETH NRAO/CV Maryland U of RGO, UK STScI UC Berkeley	Jets and hot spots for Space Telescope.	2,6	18	24
AN-33	Noreau, L. Kronberg, P.P.	Toronto U, CANADA Toronto U, CANADA	Mapping of the nuclear region of NGC 3448.	2,6	5 w/VH14	8
AP-96	Pedelty, J. Rudnick, L.	Minnesota U of Minnesota U of	The properties of nuclear cores.	6,20	1	9.9
AP-97	Pedelty, J. Rudnick, L.	Minnesota U of Minnesota U of	Relic pre-hotspot emission in 3C295?	20	3	6.5
AR-123	Rudnick, L. Pedelty, J. Spinrad, H.	Minnesota U of Minnesota U of UC Berkeley	Extended emission line systems in distant galaxies.	20	21	12

VLA UTILIZATION FEBRUARY 1985 (Cont.)

Program	Observer	Affiliation	Program title	Bands (cm)	Obsv date	Sched hrs
AR-124	Rudy, D.J. Muhleman, D.O. Berge, G.L.	Caltech Caltech Caltech	Mars: Latitude distribution of subsurface temperatures and radial distribution of linear polarization of the Southern Hemisphere.	2,6	1,2	22
AS-189	Strom, R.G.	Dwingeloo, NETH	Flat spectrum component in CTB80.	20	3	5
AS-211	Sramek, R.A. Weiler, K.W. van der Hulst, J.M. Panagia, N.	NRAO/VLA NSF NFRA, NETH STScI	Statistical properties of radio supernovae.	2,6,20	17,22,24	5.2
AS-212	Saikia, D.J. Shastri, P. Cornwell, T. Salter, C.J.	TIFR, INDIA TIFR, INDIA NRAO/VLA NRAO/Tucson	Linear polarizartion observations of cores in quasars.	2,6,20	10	16 w/AS213, VW39,VJ37, VL32
AS-213	Saikia, D.J. Kapahi, V.K. Cornwell, T.	TIFR, INDIA TIFR, INDIA NRAO/VLA	Steep-spectrum cores - a study of cosmological implications and statistical properties.	6,20	10	16 w/AS212 VW39,VJ37,VL32
AT-58	Tuffs, R.J. Angerhofer, P.E. Brown, M.T. Gull, S.F. Perley, R.A.	MPIR, FRG USNO Cambridge, UK Cambridge, UK NRAO/VLA	Structure and secular change within Cassiopeia A at high spatial and temporal resolutions - second epoch.	6,20	28	9.5
AV-88	van Breugel, W. Foley, T Miley, G. Heckman, T. Ulrich, M-H.	UC Berkeley Leiden U, NETH STScI/Leiden U, NETH Maryland U of ESO, FRG	Equatorial survey of radio galaxies.	20	21	15.8
AV-116	Veron, P. Roland, J.	ESO, FRG IAP, FRANCE	The reacceleration of particles in the turbulent wake of galaxies.	6,20	20	2
AV-117	Veron, P. Roland, J.	ESO, FRG IAP, FRANCE	Compact radio sources with very steep radio spectra. (alpha =1.4)	6,20	20,22	6
AW-48	Wade, C.M. Johnston, K.J. Seidelmann, P.K. Kaplan, G.H.	NRAO/VLA NRL USNO USNO	Astrometric observations of minor planets.	6	7 w/VL32	6
AW-126	Wilson, A.S. Ulvestad, J.S.	Maryland U of JPL	A distance limited sample of Seyfert galaxies.	6,20	3,4,5 w/VJ37,VH14	27.5
AW-131	Wynn-Williams, G. Beichman, C. Miley, G.K.	Hawaii U of JPL STScI/Leiden U, NETH	The double-lobed spiral galaxy IRAS 0421+040P06.	6,20	3,11 w/VD9	14
VB-59	Backer, D.C. Wright, M. Plambeck, R. Moffet, A. Masson, C. Readhead, A. Pearson, T. Rogers, A. Predmore, R. Moran, J.	UC, Berkeley UC, Berkeley UC, Berkeley Caltech Caltech Caltech Caltech Haystack Mass, U of CFA	Core of 3C84.	1.3 3 antenna VLB	6 w/AH167,AK117	15
VB-63	Bartel, N. "	CFA "	SN1979c.	6 phased array MK III VLB	12	11.0
VD-9	Diamond, P. Johnston, K. Chapman, J.S.	MPIR, FRG NRL Jodrell Bank, UK	Water masers around S Per.	1.3 3 antenna VLB	11	12 w/AW131 AB129
VH-14	Hough, D.H. Readhead, A.C.S.	Caltech Caltech	Central components of 3C207, 3C212, 3C245.	1.3 3 antenna MK III VLB	5	7.8 w/AN33, AC126,AC129

VLA UTILIZATION FEBRUARY 1985 (Cont.)

Program	Observer	Affiliation	Program title	Bands (cm)	Obsv date	Sched hrs
VJ-37	Johnston, K.J.	NRL	Water masers in late type stars.	1.3	5,8,10,	18.8
	Spencer, J.	NRL		3 antenna	11	w/AG174
	Bowers, P.	NRL		VLB	AH167,AK117	
	Lane, A.	NRAO/CV			AS212,AS213	
	Booth, R.	Onsala, SWEDEN			AW126,VM60	
	Diamond, P.	MPIR, FRG				
	Cohen, R.	Manchester, U of, UK				
VL-32	Lawrence, C.R.	Caltech	Sources from a 1.3 cm VLBI survey.	1.3	7,8,11	24.2
	Readhead, A.C.S.	Caltech		3 antenna		w/AD155
	Linfield, R.P.	Dwingeloo, NETH		VLB	AG174,AH167	
	Schilizzi, R.T.	Dwingeloo, NETH			AS212,AS213	
					AW48,AH171	
VM-60	Molnar, L.	CFA	Cyg X-3 pulsation.	1.3	5,8	13
	Reid, M.J.	CFA		phased array	w/VJ37	
	Grindlay, J.E.	CFA		MK III VLB		
VR-33	Roberts, D.	Brandeis	Monitoring superluminal polarizations.	6	14	26.4
	Wardle, J.	Brandeis		phased array	w/VW23	
	Brown, L.F.	Brandeis		MK III VLB		
	Gabuzda, D.	Brandeis				
	Burke, B.F.	Caltech/MIT				
	Rogers, A.E.E.	Haystack				
	Potash, R.I.	NASA/GSFC				
VR-34	Rusk, R.	Toronto, U of, CANADA	Sources with known optical polarization properties.	1.3	9	18
	Seaquist, E.R.	Toronto, U of, CANADA		3 antenna		w/AJ122
	Yen, J.L.	Toronto, U of, CANADA		VLB	AJ104,Pointing	
VS-45	Spangler,S.	Iowa, U of	Scattering sizes through SNR.	6	12,13	11.0
	Morris, D.	Iowa, U of		phased array		
	Mutel, R.	Iowa, U of		VLB		
	Benson, J.	NRAO/CV				
	Cordes, J.	Cornell				
VW-23	Walker, R.C.	NRAO/VLA	Monitoring 3C120.	6	13	12.0
	Benson, J.	NRAO/CV		single antenna		w/AH167,
	Seielstad, G.	NRAO/GB		VLB		VR33
	Unwin, S.C.	Caltech				
VW-39	Witzel, A.	MPIR, FRG	Structures of a complete sample.	1.3	8,10	20.5
	Eckart, A.	MPIR, FRG		3 antenna		w/AC121
	Schalinski, C.	MPIR, FRG		VLB	AD147,AD155	
	Biermann, P.	MPIR, FRG			AS212,AS213	
	Johnston, K.J.	NRL			AJ122,Pointing	
	Simon, R.	NRL				
	NRAO staff	Electronics				43.2
		Software				17.0
		Pointing, baselines, startup				28.3
		General tests				27.8

The average downtime for the month of February, 1985 was approximately 7.17 percent.

$$\text{Average downtime of operational antennas} = \frac{\text{Total number of antenna-hours of operational antennas lost due to hardware and software failures during scheduled observing}}{\text{Total number of antenna-hours of operational antennas scheduled}} \times 100$$

where "antenna-hours" definition is: An array consisting of N antennas operating for Y hours is defined to have YN antenna-hours operation.

The array was scheduled 100 percent (672.0 hours) of the time: 83.5 percent (561.1 hours) to astronomical programs, 7.5 percent (50.7 hours) to scheduled test/calibration, and the remaining 9.0 percent (60.2 hours) went to scheduled maintenance.

The total number of programs run for the month of February, 1985 was 61.

The following independent proposals shared simultaneous observing: (128.3 hrs Total Simultaneous Observing)

AK117/VJ37	4.6	AJ122/VW39	0.4
AW126/VJ37	1.4	AJ122/VR34	1.4
AW126/VH14	1.6	AJ104/VR34	12.0
AC129/VH14	2.0	VR34 /Pointing	4.6
AN33 /VH14	4.2	VW39 /Pointing	0.8
AD117/VB59	5.0	AD147/VW39	7.0
AH167/VB59	10.0	AS212/AS213/VW39	3.9
AW48 /VL32	1.0	AS212/AS213/VJ37	6.8
AH167/VL32	7.0	AS212/AS213/VL32	3.9
AH167/VJ37	4.0	AG174/VL32	4.3
VM60 /VJ37	0.5	AG174/VJ37	1.5
AH171/VL32	3.5	AW131/VD9	11.7
AD155/VL32	4.5	AB129/VD9	0.3
AD155/VW39	2.4	AH167/VW23	11.6
AC121/VW39	6.0	VR33 /VW23	0.4

850312PDH/tm

VLA UTILIZATION JANUARY 1985

Program	Observer	Affiliation	Program title	Bands (cm)	Obsv date	Sched hrs
AA-41	Antonucci, R.R.J. Olszewski, E.W. Hickson, P. Miller, J.S.	 DAO, CANADA U of BC, CANADA Lick Obs.	A new sample of BL Lac objects.	20	25	3.0
AB-248	Backer, D.C. Sramek, R.A.	UC Berkeley NRAO/VLA	Astrometric observations of the compact source in Sagittarius A.	2, 6, 18	5,29 19	22.5
AB-312	Baan, W.A. Haschick, A.D. Schmelz, J.T.	Arecibo Obs Haystack Obs Penn State U	OH and HI in NGC3690.	18, 20 line	9,11	16
AB-321	Browne, I. Muxlow, T. Mantovani, F. Padrielli, L.	Jodrell Bank, UK Jodrell Bank, UK Bologna, ITALY Bologna, ITALY	Multiple hotspots and tails in 3C159.	6, 18	2,8	8.5
AB-324	Blaha, C. Pedelty, J. Dickey, J. Kennicutt, R. Jr	Minnesota U of Minnesota U of Minnesota U of Minnesota U of	"Hot Spot" nuclei.	2, 6, 20	29	6
AB-325	Bieging, J.H. Cohen, M.	UC Berkeley NASA-Ames	Flux density and spectral index monitoring of V410 Tau.	2, 6	8	1
AB-327	Bieging, J. Churchwell, E. Abbott, D.	UC Berkeley UW Madison UC Boulder	Stellar wind temperature determination by visibility measurements for two early-type stars.	2, 6	28	9
AB-329	Baan, W.A. Haschick, A.D. Schmelz, J.	Arecibo Obs Haystack Obs Penn State U	Intense water maser source in NGC3079.	1.3 line	8	8
AC-114	Clark, B.G. Perley, R.A.	NRAO/VLA NRAO/VLA	High rsolution source structure survey.	2 and 6	29	1.4
AC-115	Catalano, S. Gibson, D.M. Rodono, M.	Oss.Astro. Catania ITALY NMIMT Oss.Astro. Catania ITALY	Flux and luminosity limited surveys of Algol binaries.	6	11,22	10.5
AC-116	Churchwell, E. Abbott, D. Bieging, J.	UW Madison UC Boulder UC Berkeley	Monitoring a new class of stellar nonthermal emitters.	2, 6, 20	13	6
AC-120	Conway, R.G. Davis, R.J. Flatters, C. Perley, R.	Jodrell Bank, UK Jodrell Bank, UK Jodrell Bank, UK NRAO/VLA	Polarization observations of 3C273, 3C345 and 3C454.3.	6, 18	30	20
AC-122	Crane, P.C. van der Hulst, J.M. Ford, H.C. Lawrie, D.G. Jacoby, G.C.	NRAO/VLA NFRA, NETH STScI Ohio State U NOAO	Nuclear region of M51.	6	26	12
AC-128	Cameron, R.A. Bicknell, G.V. Ekers, R.D.	VLA/Mt Stromlo, AUST Mt Stromlo, AUST NRAO/VLA	Jet radio sources in southern clusters: 2104-25.	6, 18, 21	7	7
AD-141	Drake, S.A. Linsky, J.L.	Colorado U of, JILA Colorado U of, JILA	Chromospheric radio emission and temperatures in nearby cool giant stars.	2, 6	17	9.2
AD-149	Dickel, H.R. Goss, W.M. Rots, A.H.	Illinois U of Groningen U, NETH NRAO/VLA	H2CO absorption at 2cm towards W 58 C1 (ON 3).	2 line	18	13
AD-158	Dreher, J.W. Laing, R.A.	MIT RGO, UK	Hotspots in nearby radio sources.	2	26	16
AE-40	Emerson, D.T. Forveille, T. Weliachew, L.	IRAM, FRANCE IRAM, FRANCE IRAM, FRANCE	The compact HII region in CEP A: flux measurements.	1.3, 2, 6	17	2

VLA UTILIZATION JANUARY 1985 (Cont.)

Program	Observer	Affiliation	Program title	Bands (cm)	Obsv date	Sched hrs
AF-92	Feigelson, E. Geldzahler, B. Johnston, K.	Penn State U Sachs-Freeman/NRL NRL	Coordinated radio, optical, ultraviolet, and X-ray observations of the BL Lac object H0323+022.	2, 6, 20	23,24	3.0
AG-154	Gaume, R.A. Mutel, R.L.	Iowa U of Iowa U of	The main line and 1720 MHz satellite line emission toward star formation regions.	18 line	6	10 w/AG155
AG-155	Gaume, R.A. Mutel, R.L.	Iowa U of Iowa U of	The 1720 MHz Hydroxyl emision toward supernova remnants.	18 line	6	10 w/AG154
AG-162	Giovannini, G. Feretti, L. Gregorini, L. Parma, P. Zamorani, G.	Bologna, ITALY Bologna, ITALY Bologna, ITALY Bologna, ITALY Bologna, ITALY	Elliptical radio galaxies with undetected core radio emission.	6	11,20	7
AG-164	Gower, A.C. Hutchings, J.B.	Victoria U, CANADA DAO, CANADA	Low redshift quasars.	1.3, 2	19	3.5
AG-167	Gregory, P.C. Taylor, A.R.	BC U, CANADA Toronto U, CANADA	"Short-term" variable sources in the galactic plane.	6, 20	12	10
AG-171	Giovannini, G. Feretti, L.	Bologna, ITALY Bologna, ITALY	New wide angle tail radio source associated with NGC4874.	6, 20	6	4
AG-177	Garay, G. Moran, J. Reid, M. Rodriguez, L.	ESO, FRG CFA CFA UNAM, Mexico.	Monitoring theta 1 Orionis.	2, 6, 20	9,18	4.1
AH-143	Hummel, E. van der Hulst, J.M. Sramek, R.A.	MPIR, FRG NFRA, NETH NRAO/VLA	Monitoring star burst galaxies to search for supernovae.	6	13	10
AH-171	Hintzen, P. Owen, F.	NASA/GSFC NRAO/VLA	Snapshot survey of radio QSOs to identify distorted sources.	20	1	18.5
AH-177	Hutchings, J.B. Gower, A.C.	DAO, CANADA Victoria U, CANADA	A comparison of low and intermediate redshift quasars.	6, 20	3	24
AH-181	Hutchings, J.B. Gower, A.C. van Gorkom, J.H. Sramek, R.A.	DAO, CANADA Victoria U, CANADA NRAO/VLA NRAO/VLA	21cm absorption in quasars and active galaxies.	20 line	5	12.5
AH-185	Hennessy, G.	NMIMT	Monitoring Nova Vulpeculae.	2	13	1
AJ-104	Johnston, K. Florkowski, D. Wade, C. Gatewood, G. de Vegt, C. Shao, M.	NRL USNO NRAO/VLA Pittsburgh U of Hamburger Sternwarte, FRG NRL	Optical/Radio positions of the stars Algol, HR1099 and UX ARi.	6	10	12
AJ-121	Johnston, K. Florkowski, D. Wade, C. de Vegt, C.	NRL USNO NRAO/VLA Hamburger Sternwarte, FRG	Relationship of radio and optical reference frames.	6	12,14	35.5
AJ-122	Johnston, K.J. Bowers, P. Spencer, J. Diamond, P. de Vegt, C. Lane, A.	NRL NRL NRL Onsala, SWEDEN Hamburger Sternwarte, FRG NRAO/CV	Optical/radio positions of OH maser stars.	18 line	19	12

VLA UTILIZATION JANUARY 1985 (Cont.)

Program	Observer	Affiliation	Program title	Bands (cm)	Obsv date	Sched hrs
AJ-123	Johnston, K. Spencer, J. Bowers, P. Lane, A. Booth, R. Diamond, P. Cohen, R.	NRL NRL NRL NRAO/CV Onsala, SWEDEN Onsala, SWEDEN Manchester U, UK	Water maser emission from late type stars.	1.3 line	20	17
AK-114	Katgert, P. Oort, M.J.A. Windhorst, R.	Leiden U, NETH Leiden U, NETH Mt Wilson & Las Campanas	Morphology-Luminosity correlation at high (greater than 0.3) redshifts.	20	27	24 w/A058,AW127
AK-121	Kollatschny, W. Fricke, K.J. Huchtmeier, W.K.	Gottingen U, FRG Gottingen U, FRG MPIR, FRG	Radio morphology of multiple nucleus galaxies.	6, 20	21,22	11
AM-124	McHardy, I.M. Warwick, R.S. Smith, A.	Leicester U, UK Leicester U, UK ESTEC, NETH	Coordinated radio, optical and X-ray observations of optically violently variable extragalactic radio sources and BL Lacertae objects.	2, 6, 20	12,21	7.5 w/AS79
AM-139	Miley, G.K. de Grijp, R.	STScI/Leiden, NETH Leiden U, NETH	Study of infrared AGN candidates.	6, 20	20,28	13.5
AM-143	Moran, J. Garay, G. Reid, M. Genzel, R.	CFA ESO, FRG CFA UC Berkeley	IRc2 and BN in Orion KL.	1.3, 2, 6	18	8
AM-146	Michalitsianos, A. Hollis, J.M. Kafatos, M.	NASA/GSFC NASA/GSFC George Mason U	R Aquarii: Structure of the wind the LPV.	2	11	8
AN-28	Norris, R. Johnston, K.J. Simon, R.S.	CSIRO, AUST NRL NRL	OH masers associated with Orion IRc2.	18 line	6	11
AO-58	Oort, M.J.A. Katgert, P. Windhorst, R.	Leiden U, NETH Leiden U, NETH Mt Wilson & Las Campanas	Angular sizes and morphology of very weak radiogalaxies.	20	27 w/AK114,AW127	24
AP-94	Parma, P. de Ruiter, H. Fanti, C. Fanti, R. Ekers, R.D.	Bologna, ITALY Bologna, ITALY Bologna, ITALY Bologna, ITALY NRAO/VLA	B2 0755+37.	6, 18-21	16	8
AP-96	Pedelty, J. Rudnick, L.	Minnesota U of Minnesota U of	Properties of nuclear cores.	6, 20	31	2.1
AR-116	Rusk, R. Seaquist, E. Yen, A.	Toronto U, CANADA Toronto U, CANADA Toronto U, CANADA	Brightness and polarization structure of sources with published VLBI structural position angles.	2, 6, 18	7	20
AR-120	Reid, M. Ho, P.	CFA CFA	Conetary HII regions.	20	24,25	9.0
AR-121	Rodriguez, L.F. Canto, J.	UNAM, MEXICO UNAM, MEXICO	Search for triple structure in continuum sources associated with bipolar outflows.	2	4	5
AS-79	Spangler, S. Cotton, W. Allendorf, S.	Iowa U of NRAO/CV Iowa U of	Monitoring low frequency variables.	1.3,2,6,20	12,21	7.5 w/AM124
AS-211	Sramek, R.A. Weiler, K.W. van der Hulst, J.M. Panagia, N.	NRAO/VLA NSF NFRA, NETH STScI	Statistical properties of radio supernovae.	2,6,20	15	0.5

VLA UTILIZATION JANUARY 1985 (Cont.)

Program	Observer	Affiliation	Program title	Bands (cm)	Obsv date	Sched hrs
AS-216	Shone, D.L. Walsh, D.	Jodrell Bank, UK Jodrell Bank, UK	Compact High-Redshift Quasars.	2	25	5.0
AS-218	Shone, D.L Brown, I. Walsh, D. Rudnick, L. Pedelty, J.	Jodrell Bank, UK Jodrell Bank, UK Jodrell Bank, Uk Minnesota U of Minnesota U of	The Jet in 0800+608.	2,6	24,25	16.0
AT-55	Taylor, A. Seaquist, E. S. Kenyon	Toronto U, CANADA Toronto U, CANADA CFA	Radio spectra of symbiotic stars.	1.3, 2, 6 and 20	22 w/Move Ops	2.5
AW-48	Wade, C. Johnston, K.J. Seidelmann, P.K. Kaplan, G.H.	NRAO/VLA NRL USNO USNO	Astrometric observations of minor planets.	6	22	9.5
AW-124	White, R. Becker, R.	STScI UC, Davis	Resolution of stellar wind radio sources.	2, 6, 20	20,29	10.5
AW-127	Windhorst, R.A. Oort, M.J.A. Katgert, P.	Mt Wilson & Las Campanas Leiden U, NETH Leiden U, NETH	Identifications of mJy sources in ultradeep optical fields.	20	27 w/AK114,	24 A058
AY-7	Yusef-Zadeh, F. Morris, M.	Columbia U UCLA	Continuum arc near the Galactic Center.	20	10	8
AZ-25	Zukowski, E. Kronberg, P.P.	Toronto U, CANADA Toronto U, CANADA	Strong extended radio sources which exhibit peculiar integrated polarization curves.	18-22	21,23	5.5
	NRAO staff		Electronics			60.0
			Software			23.2
			Pointing, baselines, startup			45.5
			Standard field observation			12
			General tests			49.6
			New Years Day			16

The average downtime for the month of January, 1985 was approximately 8.86 percent.

$$\text{Average downtime of operational antennas} = \frac{\text{Total number of antenna-hours of operational antennas lost due to hardware and software failures during scheduled observing}}{\text{Total number of antenna-hours of operational antennas scheduled}} \times 100$$

where "antenna-hours" definition is: An array consisting of N antennas operating for Y hours is defined to have YN antenna-hours operation.

The array was scheduled for 97.8 percent (728.0 hours) of the time: 72.5 percent (539.8 hours) to astronomical programs, 14.1 percent (105.0 hours) to scheduled test/calibration, and the remaining 11.2 percent (83.2 hours) went to scheduled maintenance.

The total number of programs run for the month of January, 1985 was 59.

The following independent proposals shared simultaneous observing: (67.7 hrs Total Simultaneous Observing)

AG154/AH155	10.0
AS79 /AM124	7.5
AG117/Test/Perley	2.1
AK114/A058/AW127	24.0

850207PDH/tm