

VLBA Utilization Report December 1999

Progrm	Observer	Affiliation	Program Title	Stns	Bands cm	Observing Date	Sched Hours
BA029	Alberdi, A. Gomez, J.L. Marcaide, J.M. Perez-Torres, M. Marscher, A.P.	IAA IAA Valencia Valencia Boston	Superluminal source 4C39.25		0.7, 1.3, 2	31	14.0
BA037	Aller, H.D. Aller, M.F. Hughes, P.A. Wardle, J.F.C. Homan, D.C.	Michigan Michigan Michigan Brandeis Brandeis	Sources with rapidly variable polarization		0.7, 2	23	24.0
BB112	Benz, A. Pestalozzi, M. Conway, J. Gudel, M. Smith, K.	ETH Onsala Onsala Paul Scherrer ETH	Imaging single T Tau star coronae and the jet/disk interface		3.6 With Y27, EB	15	12.0
BB116	Beasley, A.J. Herrnstein, J.R.	NRAO-CV Renaissance Tech	Non-thermal emission from O supergiants		3.6 With Y27	4	10.0
BB117	Beasley, A.J. Herrnstein, J.R.	NRAO-CV Renaissance Tech	Monitoring of WR 140		2, 3.6, 6	21	10.0
BB118	Briskin, W. Benson, J. Fomalont, E. Goss, M. Thorsett, S.	Princeton NRAO-Socorro NRAO-CV NRAO-Socorro Princeton	Parallaxes of ten nearby radio pulsars		18	2, 10	10.0
BC091	Clark, T. Ma, C. Johnston, K. Fey, A. Gaume, R. Eubanks, M. Gordon, D. Vandenberg, N. Himwich, E. Shaffer, D. Boboltz, D. Kingham, K. Fomalont, E. Walker, C.	NASA-GSFC NASA-GSFC USNO USNO USNO USNO Hughes-GSFC NVI-GSFC NVI-GSFC Radiometrics USNO USNO NRAO-CV NRAO-Socorro	VLBA Geodesy/Astronomy observations for 1999		3.6 scheduled as RDV18	20	25.0
BC095	Cawthorne, T.V. Gabuzda, D.C. Reynolds, C.	Lancashire JIVE Lancashire	Total intensity and polarization structure of BL lacertae objects on scales between milliarcseconds and arcseconds		90,50,20,1 3	13	24.0
BC100	Chatterjee, S. Cordes, J.M. Arzoumanian, Z. Goss, M. Fomalont, E.B. Beasley, A.J. Benson, J. Lazio, T.J.W. Xilouris, K.	Cornell Cornell NASA-GSFC NRAO-Socorro NRAO-CV NRAO-CV NRAO-Socorro NRL NAIC	Gated pulsar astrometry		18	1, 12	20.0
BD062	Diamond, P.J. Kemball, A.J.	Jodrell Bank NRAO-Socorro	TX Cam: the sequel		0.7 With Y1	19	8.0
BF055	Faison, M. Goss, M.	NRAO/Wisconsin NRAO-Socorro	Neutral hydrogen absorption towards 3C 138		18 With Y27	22	12.0
BG095	Gabuzda, D.C. Aller, M.F. Aller, H.D. Hughes, P.A.	JIVE Michigan Michigan Michigan	Polarization of BL lac objects		2, 3.6, 6	27	48.0
BL058	Lonsdale, C. Diamond, P. Smith, H. Lonsdale, C.	Haystack Jodrell Bank Calif.-San Diego Caltech-IPAC	Radio supernovae in OH megamaser galaxy Arp220		3.6, 6, 18 With Y27	19	11.0
BM108	Moellenbrock, G. Roberts, D.H. Wardle, J.F.C.	NRAO-GB Brandeis Brandeis	Polarization monitoring of gamma ray blazars		0.7, 1.3, 2, 3.6	6, 30	24.0
BM116	Marscher, A.P. Cawthorne, T.V. Gear, W.K. Stevens, J.A. Marchenko, S.G. Lister, M.L. Gabuzda, D.C. Yurchenko, A.V. Forster, J.R.	Boston Lancashire Cardiff MRAO Boston JPL JIVE St. Petersburg Calif.-Berkeley	Monitoring mm-bright AGN		0.7	5	24.0

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Progm	Observer	Affiliation	Program Title	Stns	Bands cm	Observing Date	Sched Hours
BM120	Mundell, C.G. Wilson, A.S. Ulvestad, J.S. Roy, A.L.	Maryland Maryland NRAO-Socorro MPIFR	Thermal (?) nuclear emission in NGC 4388		18 With Y27	23	12.0
BN012	Norbury, M. Jackson, N. Browne, I. Wilkinson, P. Marlow, D. Myers, S. Rusin, D. Koopmans, L. Readhead, T. Pearson, T. Blandford, R.	Jodrell Bank Jodrell Bank Jodrell Bank Jodrell Bank Pennsylvania NRAO-Socorro Pennsylvania Groningen Caltech Caltech Caltech	Long track observations of top CLASS lens candidates		6, 18 With Y1	10	24.0
BP061	Phillips, R.B. Boboltz, D.A.	Haystack USNO	Monitoring of 43 GHz SiO maser emission towards MIRA		0.7	17	8.0
BR057	Roberts, D.H. Moellenbrock, G.A. Wardle, J.F.C. Gabuzda, D.C. Brown, L.F.	Brandeis NRAO-GB Brandeis JIVE Connecticut	Four 3C quasars with VSOP observations		0.7, 1.3, 2, 3.6	12	12.0
BR063	Ratner, M.I. Bartel, N. Bietenholz, M.F. Lebach, D.E. Lestrade, J-F. Ransom, R.R. Shapiro, I.I.	CfA York York CfA Meudon York CfA	Astrometry of HR 8703 in 1999 for the gravity probe B mission		3.6, 6 With Y27, EB, RO, GO, TI	9	16.5
BS065	Sasao, T. Asaki, Y. Imai, H. Kameya, O. Miyoshi, M. Mochizuki, N. Okudaira, A. Omadaka, T. Yasuda, S.	NAO NAO NAO NAO NAO NAO Kagoshima Kogoshima Kagoshima	Towards determination of outer rotation curve of the Milkyway Galaxy		1	16	4.0
BT044	Taylor, G.B. Beasley, T. Frail, D. Kulkarni, S.	NRAO-Socorro NRAO-CV NRAO-Socorro Caltech	VLBA observations of gamma-ray bursters		4	14,18,26	31.0
BU013	Ulvestad, J. Bower, G. Falcke, H. Krichbaum, T. Roy, A. Wilson, A. Wrobel, J. Zensus, A.	NRAO-Socorro MPIFR MPIFR MPIFR MPIFR Maryland NRAO-Socorro MPIFR	Component motions in two Seyfert galaxies		4,2,1	16	10.0
BU015	Ulvestad, J. Antonucci, R. Kinney, A. Pringle, J. Schmitt, H.	NRAO-Socorro UCSB STScI Cambridge STScI	Parsec-scale cores, jets, and millihaloes in Seyfert galaxies		20	3	24.0
VT762	Fomalont, E.	NRAO-CV	0528+134		6	17	9.0
VT763	Fomalont, E.	NRAO-CV	0528+134		6	18	9.0
	Staff	NRAO	Maintenance				113.0

The average downtime was 26.0 hours (6.0%)

Actual observing time was 400.5 hours

The VLBA was scheduled 82% of the time 582.0 hours of a possible (708 hours)

Astronomical Observations = 60% (426.5 hours)

Tests and Calibrations = 12% (86.0 hours)

Maintenance = 10% (69.0 hours)

Total Number of astronomical programs was 26

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Progm	Observer	Affiliation	Program Title	Stns	Bands cm	Observing Date	Sched Hours
BB109	Beasley, A.J. Herrnstein, J.H.	NRAO-CV NRAO-Socorro	VLBA Monitoring of WR 140 (HD 193793)		2, 3.6, 6 with Y1	1	12.0
BB114	Bartel, N. Bietenholz, M.F.	York U. York U.	VLBA Imaging of supernova remnant 41.9+58 in M82		13	5	12.0
BB117	Beasley, A.J. Herrnstein, J.R.	NRAO-CV NRAO-Socorro	Monitoring of WR 140		2,3.6,6	20 with Y1	12.0
BB118	Brisken, W. Benson, J. Fomalont, E. Goss, M. Thorsett, S.	Princeton NRAO-Socorro NRAO-CV NRAO-Socorro Princeton	Parallaxes of ten nearby radio pulsars		18	8, 13, 15	15.0
BB119	Britzen, S. Vermeulen, R.C. Taylor, G.B. Wilkinson, P.N. Pearson, T.J. Readhead, A.C.S.	NFRA NFRA NRAO-Socorro Jodrell Bank Caltech Caltech	Caltech-Jodrell Snapshot survey of superluminal motion		6	21, 23, 26	72.0
BC090	Carilli, C. Taylor, G. Ulvestad, J. Wrobel, J.	NRAO-Socorro NRAO-Socorro NRAO-Socorro NRAO-Socorro	BL Lacs		90, 50	19	12.0
BC092	Coles, W.A.	Calif.-San Diego	Measurements of solar wind speed near the sun using IPS	KLP	2, 3.6, 6 (Not VLBI)	11	3.0
BC096	Cohen, A.S. Hewitt, J.N.	MIT MIT	Determining a model of gravitational lens 0218+357		18 with Y1	4, 6, 27	36.0
BD059	Desai, K. Brisken, W. Chatterjee, S. Fey, A. Lazio, T.J. Lestrade, J.F.	NRAO-Socorro Princeton Cornell USNO NRL Meudon	Serendipitous observations of an extreme scattering even towards PSR J1643-12		2	13	11.75
BD062	Diamond, P.J. Kemball, A.J.	Jodrell Bank NRAO-Socorro	TX Cam: the sequel		0.7 with Y1	14	8.0
BE019	Eisner, J.A. Greenhill, L. Herrnstein, J.R. Moran, J.	Harvard CfA Renaissance Tech CfA	SiO masers and outflow in the W51-IRS2 star-forming region		7	7	5.5
BF050	Fanti, C. Cotton, W. Fanti, R. Mantovani, F.	IRA NRAO-CV IRA IRA	Search for CSS and GPS candidates		20, 6	3	12.0
BF056	Falcke, H. Aller, M. Aller, H.D. Bower, G.C. Brunthaler, A. Terasranta, H.	MPIfR Michigan Michigan NRAO-Socorro MPIfR Metsahovi	Monitoring the major radio outburst in the extremely variable spiral galaxy III Zw 2		21, 7	12	8.25
BG073	Gomez, J.L. Alberdi, A. Marscher, A.P.	IAA, Granada IAA, Granada Boston	Comparison of observed and simulated relativistic jets: 22 and 43 GHz monitoring observations of the radio galaxy 3C120		1, 7	1	12.0
BG093	Gallimore, J. Baum, S.A. O'Dea, C.	NRAO-CV STScI STScI	Flat spectrum sources in Seyfert Galaxies: measuring properties of the obscuring Torus		13, 4	14	4.25
BK068	Kellermann, K. Cohen, M. Vermeulen, R. Zensus, A.	NRAO-CV Caltech NFRA MPIfR	Kinematics of quasars and AGN		2	6	24.0
BK071	Kowatsch, P. Krichbaum, T.P. Roy, A. Zensus, J.A. Witzel, A. Fricke, K.J.	MPIfR MPIfR MPIfR MPIfR MPIfR Gottingen	Two-sided jet in Seyfert 2 galaxy NGC 3079		3.6, 6, 18 with EB, Y1	20	12.0
BL066	Lobanov, A.P. Kraus, A. Otterbein, K.	MPIfR MPIfR Heidelberg	0836+710: Jet kinematics related to the broad-band activity		4,1,7	11	15.25
BP057	Piner, B.G. Edwards, P.G.	JPL ISAS	Multi-epoch observations of the TeV source		2	9	8.0
BP061	Phillips, R.B. Boboltz, D.A.	Haystack USNO	Monitoring of 43 GHz SiO maser emission towards MIRA		0.7	18	8.0

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Progm	Observer	Affiliation	Program Title	Stns	Bands cm	Observing Date	Sched Hours
BS065	Sasao, T. Miyoshi, M. Manabe, S. Kameya, O. Asaki, Y. Imai, H. Mochizuki, N. Omodaka, T. Yasuda, S. Okudaira, A.	NAO-Mizusawa NAO-Mizusawa NAO-Mizusawa NAO-Mizusawa NAO-Mizusawa NAO-Mizusawa Graduate University Kagoshima Kagoshima Kagoshima	Towards determination of outer rotation curve of the Milky Way Galaxy		1.3	17	4.0
BU015	Ulvestad, J. Antonucci, R. Kinney, A. Pringle, J. Schmitt, H.	NRAO-Socorro UCSC STScI IofA STScI	Parsec-scale cores, jets, and millihaloes in Seyfert galaxies		20	28,29	48.0
GB035	Bartel, N. Rupen, M.P. Bietenholz, M.F. Beasley, A.J. Conway, J. Altunin, V. Graham, D. Venturi, T. Umana, G.	York NRAO-Socorro York NRAO-CV Onsala JPL MPIfR Bologna Noto	Evolving spectral index distribution in images of SN 1993J		6 with EbJbMcNtTr WbOnSh+Y27	23	12.0
GD013	Diamond, P.J. Booth, R.S. van Langeveide, H.J. Vlemmings, W.	Jodrell Bank Onsala JIVE Leiden	Global VLBI of the 1612 MHz masers towards OH127.8-0.0		18 with EB, JB, WB	14	13.0
GP022	Peck, A. Taylor, G. Giovannini, G.	NRAO/NMIMT NRAO-Socorro Bologna	HI gas toward the core of 3C 293		18 with EbWbOnNtMc Tr, Y27	18	11.0
GP024	Pihlstrom, Y. Conway, J. Vermeulen, R.	Onsala Onsala NFRA	HI absorption in the FR II galaxy 3C321		18 with EB, WB, ON, Y27	17	12.0
GR019	Rioja, M. Colomer, F. Porcas, R. Fomalont, E. Gurvits, L. Schilizzi, R. Sasao, T. Asaki, Y. Mantovani, F.	OAN OAN MPIfR NRAO-CV JIVE JIVE NAO-Mizusawa NAO-Mizusawa Bologna	Phase referencing at L-band using cluster-cluster mode		18 with 4 Y, 4 WB	16	6.0
	Staff	NRAO	Maintenance Thanksgiving Shutdown				75.0 24.0

The average downtime was 29.0 hours (7.0%)

Actual observing time was 386.0 hours

The VLBA was scheduled 78% of the time 539.0 hours of a possible (696 hours)

Astronomical Observations = 60% (415.0 hours)

Tests and Calibrations = 10% (67.0 hours)

Maintenance = 8% (57.0 hours)

Total Number of astronomical programs was 27

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Progm	Observer	Affiliation	Program Title	Stns	Bands cm	Observing Date	Sched Hours
BA037	Aller, H.D. Aller, M.F. Hughes, P.A. Wardle, J.F.C. Roman, D.C.	Michigan Michigan Michigan Brandeis Brandeis	Sources with rapidly variable polarization		0.7, 2	16	24.0
BB109	Beasley, A.J. Herrnstein, J.H.	NRAO-CV NRAO-Socorro	VLBA Monitoring of WR 140 (HD 193793)		2, 3.6, 6 with Y1	1	12.0
BB114	Bartel, N. Bietenholz, M.F.	York University York University	VLBA Imaging of supernova remnant 41.9+58 in M82		13	30	12.0
BC098	Claussen, M.J. Marvel, K.B. Wilking, B.A. Wootten, H.A.	NRAO-Socorro AAS Missouri NRAO-CV	Magnetic fields in YSO jets		1.0	8	8.0
BD055	Doeleman, S. Barvainis, R. Lonsdale, C. Greenhill, L. Phillips, R.	Haystack REB Research Haystack Cfa Haystack	SiO masers in Orion Nebula		0.7	20	9.0
BD061	Doeleman, S.S. Boboltz, D.A. Lonsdale, C.J.	Haystack USNO Haystack	7mm and 3mm imaging of SiO masers around Chi Cygni	BHNS	0.7	22	13.5
BD062	Diamond, P.J. Kemball, A.J.	Jodrell Bank NRAO-Socorro	TX Cam: the sequel		0.7 with Y1	15	8.0
BH054	Hagiwara, Y. Diamond, P.J. Herrnstein, J.R. Miyoshi, M.	Graduate University Jodrell Bank Renaissance Tech NRO, Japan	Multi-frequency continuum observations of NGC 5793		20,6,4	10	8.0
BJ028	Jones, D.L. Piner, B.G. Wehrle, A.E.	JPL JPL IPAC	Measurement of proper motions in the jet and counterjet of NGC 4261		4	21	8.0
BK069	Kaplan, D. Chatterjee, S. Condon, J. Cordes, J. Lazio, T.J.	Cornell University Cornell University NRAO-CV Cornell University NRL	High resolution imaging of compact steep spectrum objects		13	12, 27	28.0
BM112	Moran, J.M. Bragg, A. Diamond, P.J. Greenhill, L.J. Henkel, C. Trotter, A.S.	Cfa Cfa Jodrell Bank Cfa MPIFR Harvard	Next generation study of NGC 4258 accretion disk physics from measurement of month-to-month variations		1	29	12.0
BM116	Marscher, A.P. Cawthorne, T.V. Gear, W.K. Stevens, J.A. Marchenko, S.G. Lister, M.L. Gabuzda, D.C. Yurchenko, A.V. Forster, J.R.	Boston Lancashire MRAO MRAO Boston JPL JIVE St. Petersburg Calif.-Berkeley	Monitoring mm-bright AGN		0.7	6	24.0
BN008	Nagar, N. Falcke, H. Wilson, A.	Maryland MPIFR Maryland	Investigating the parsec-scale jets in the LINERs NGC 4278 and NGC 6500		20,6,4,2	31	10.0
BP055	Peck, A.B. Taylor, G.B. Vermeulen, R.C.	NRAO/NMIMT NRAO-Socorro NFRA	HI in compact symmetric object J1816+3457		18 with WB	17, 18	16.0
BP057	Piner, G. Edwards, P.G.	JPL ISAS	Multi-epoch observations of the TeV source 1ES 2344+514		2	1	8.0
BR066	Reid, M.J. Davis, J.	Cfa Cfa	Proper motion of Sgr A*		0.7	15, 16, 20	24.0
BS076	Strelitski, V. Benson, P. Kogan, L. Salter, D.	Maria Mitchell Obs. Wellesley NRAO-Socorro Wellesley	Imaging of VX Uma in the 1.35cm H2O Maser Line		1.3	1	8.0
BS077	Spangler, S.R. Mutel, R.L.	Iowa Iowa	Measurement of solar wind acceleration using VLBI phase scintillation		3.6, 6	1	1.0
BU018	Ulvestad, J.S.	NRAO-Socorro	Gravitational lens candidate J1605+3029		20,13,6,4, 2	17	12.0
BV037	Vlemmings, W.H.T. Baudry, A. Diamond, P.J. Habing, H.J. Schilizzi, R.T. van Langevelde, H.J.	Leiden Bordeaux Jodrell Bank Leiden JIVE JIVE	Fundamental data for a sample of enshrouded AGB stars		20	9	12.0

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Progm	Observer	Affiliation	Program Title	Stns	Bands cm	Observing Date	Sched Hours
BW045	Hewitt, J.N. Schechter, P.L.	MIT MIT	Milliarcsecond imaging of new gravitational lens candidates		6	11	10.0
W044	Krichbaum, T.P. Witzel, A. Kraus, A. Lobanov, A. Zensus, J.A.	MPiFR MPiFR MPiFR MPiFR MPiFR	Intraday variables		6 with EB	2, 4	24.0
W096	Murphy, D. Canizares, C. Coppi, Y. Edwards, P. Lister, M. Marshall, H. Piner, G. Preston, R.	JPL/ISAS MIT Yale ISAS JPL MIT JPL JPL	Gamma ray quasar 0836+710 simultaneous observation with Chandra		18,6	7	14.0
CMVA			Combined Millimeter VLBI Array	FPKOM		23, 22	135.0
	Staff	NRAO	Maintenance				96.0

The average downtime was 32.0 hours (7.3%)

Actual observing time was 405 hours

The VLBA was scheduled 81% of the time 599.0 hours of a possible
(744 hours)

Astronomical Observations = 59% (437.0 hours)

Tests and Calibrations = 13% (94.0 hours)

Maintenance = 9% (68.0 hours)

Total Number of astronomical programs was 24

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Progm	Observer	Affiliation	Program Title	Stns	Bands cm	Observing Date	Sched Hours
BB109	Beasley, A.J. Herrnstein, J.H.	NRAO-CV NRAO-Socorro	VLBA Monitoring of WR 140 (HD 193793)		2, 3.6, 6 with Y1	6	12.0
BD062	Diamond, P.J. Kemball, A.J.	Jodrell Bank NRAO-Socorro	TX Cam: the sequel		0.7	9	8.0
BE018	Engels, D. Winnberg, A.	Hamburger Sternwarte Onsala	3D Mapping of H2O masers in OH83.4-0.9		1	28	9.0
BG086	Gomez, J.L. Marscher, A.P. Alberdi, A. Gabuzda, D.C.	IAA Boston IAA JIVE	BL Lac object 0735+178		0.7, 1.3, 2	1	12.0
BH063	Hjellming, R. Mioduszewski, A.J. Rupen, M.	NRAO-Socorro NRAO-Socorro NRAO-Socorro	TOO VLBA observations of SAX J1819.3-2525		20,4,2	17,20,22	23.0
BM108	Moellenbrock, G. Roberts, D.H. Wardle, J.F.C.	ISAS/Brandeis Brandeis Brandeis	Polarization monitoring of gamma ray blazars		0.7, 1.3, 2, 3.6	26	12.0
BM110	Mutel, R.L. Denn, G.R.	Iowa Iowa	Monitoring BL Lac		0.7, 1.3, 2	12	14.0
BM112	Moran, J. Bragg, A. Diamond, P.J. Greenhill, L.J. Henkel, C.	CfA Harvard Jodrell Bank CfA MPIFR	Next generation study of NGC 4258 accretion disk physics		1	15	11
BP048	Perlman, E.S. Carilli, C. Minter, A. Langston, G. Ghigo, F. Stoeke, J. Conway, J.	STScI NRAO-Socorro NRAO-GB NRAO-GB NRAO-GB Colorado Onsala	Monitoring PKS 1413+135		0.7, 1.3, 2, 3.6	19	10.0
BR057	Roberts, D.H. Moellenbrock, G.A. Wardle, J.F.C. Gabuzda, D.C. Brown, L.F.	Brandeis ISAS/Brandeis Brandeis JIVE Connecticut	Four 3C quasars with VSOP observations		0.7, 1.3, 2, 3.6 with Y1	27	12.0
BR060	Rector, T. Gabuzda, D. Stoeke, J.	NOAO ASC CASA	Second epoch observations of x-ray loud BL lacs		6	11	24.0
BR063	Ratner, M.I. Bartel, N. Bietenholz, M.F. Lebach, D.E. Lestrade, J-F. Ranson, R.R. Shapiro, I.I.	CfA York York CfA Meudon York CfA	Astrometry of HR 8703 in 1999 for the gravity probe B mission		3.6, 6 with Eb-RoGoTi- Y27	18	18.5
BS071	Stockdale, C. Cowan, J. Rupen, M. Chu, Y.-H.	Oklahoma Oklahoma NRAO-Socorro Illinois	Imaging SN 1961V: is it a supernova?		18 with Y27	24	12.0
BS077	Spangler, S.R. Mutel, R.L.	Iowa Iowa	Measurement of solar wind acceleration using VLBI phase scintillation		3.6, 6	30	11.0
BU012	Ulvestad, J.S. Vestrand, W.T. Stacy, J.G. Biretta, J.A.	NRAO-Socorro New Hampshire New Hampshire STScI	Flaring CGRO Blazar 2255-282		0.7, 1.3, 2	25	8.0
GB035	Bartel, N. Rupen, M.P. Bietenholz, M.F. Beasley, A.J. Conway, J. Altunin, V. Graham, D. Venturi, T. Umaña, G.	York NRAO-Socorro York NRAO-CV Onsala JPL MPIFR Bologna Noto	Evolving spectral index distribution in images of SN 1993J		18 with EbMcNtWbJb On-RoGo-Y2 7	28	11.5

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GM035	Marcaide, J.M. Perez-Torres, M.A. Guirado, J.C. Alberdi, A. Ros, E. Diamond, P.J. Shapiro, I.I. Preston, R.A. Schilizzi, R.T. Mantovani, F. Trigilio, C. Van Dyk, S. Weiler, K.W. Sramek, R.A. Whitney, A.R.	Valencia Valencia Valencia IAA MPIFR Jodrell Bank Cfa JPL JIVE Bologna Noto UCLA NRL NRAO-Socorro Haystack	Monitoring of the expansion of SN 1993J at 6 and 18cm		6 with EbNtWbJb-Y27	22	14.0
V026	Walker, R.C.	NRAO-Socorro	3C120 structure from 0.1 to 250 pc		6 with EbNtTrJbMc WbShOn-Y27	21	11.5
VW018	Snellen, I.	Cambridge	GPS Sources 0626x82		20 VLBA	26,27	9.0
W027	Murphy, D.W. Conway, J.E. Polatidis, A. Preston, R.A. Tingay, S.J. Jones, D.L. Meier, D.L. Hirabayashi, H. Kobayashi, H.	JPL Onsala JIVE-Onsala JPL JPL JPL JPL ISAS ISAS	Monitoring of 1928+738		6	25	12.0
W044	Krichbaum, T.P. Witzel, A. Kraus, A. Lobanov, A. Zensus, J.A.	MPIFR MPIFR MPIFR MPIFR MPIFR	Intraday variables		6 with EB	5, 7	25.0
W048	Taylor, A.R. Dougherty, S.M. Peracaula, M. Paredes, J.M.	Calgary DRAO/Calgary Barcelona Barcelona	The core of radio star LSI + 61 303		6 with EbNtTrJbMc WbShOn-Y27	16	46.0
W059	Kedziora-Chudczer, Jauncey, D.L. Reynolds, J.E. Tzioumis, A.K. Wieringa, M.H. Nicolson, G.D. Quick, J.F.H. Walker, M.A. McCulloch, P.M.	Sydney Univ ATNF ATNF ATNF ATNF Hartebeesthoek Hartebeesthoek Sydney Univ Tasmania	Complete sample of intra-day variables		6 with CD, AT, MP	15, 23	17.0
W069	Zensus, J.A. Lobanov, A.P. Unwin, S.C. Cohen, M.H.	MPIFR MPIFR JPL Caltech	Jet in quasar 3C345		18, 6 with GO, Y27	9, 10	26.0
W081	Moellenbrock, G.A. Roberts, D.H. Wardle, J.F.C.	ISAS/Brandeis Illinois Brandeis	Polarization monitoring of gamma ray blazars		18, 6 with EB	2, 3	23.5
	Staff	NRAO	Maintenance Pointing				100.0 24.0

The average downtime was 11.5 hours (3.0%)
 Actual observing time was 363.5 hours
 The VLBA was scheduled 78% of the time 558.0 hours of a possible (720 hours)
 Astronomical Observations = 52% (375.0 hours)
 Tests and Calibrations = 16% (115.0 hours)
 Maintenance = 10% (68.0 hours)
 Total Number of astronomical programs was 25

VLBA Utilization Report August 1999

Progm	Observer	Affiliation	Program Title	Stns	Bands cm	Observing Date	Sched Hours
BB109	Beasley, A.J. Herrnstein, J.H.	NRAO-CV NRAO-Socorro	VLBA Monitoring of WR 140 (HD 193793)		2, 3.6, 6 With Y1	12	13.0
BB111	Brisken, W. Dewey, R. Thorsett, S. Beasley, A. Benson, J.	Princeton Princeton Princeton NRAO-CV NRAO-Socorro	Proper motions of pulsars in supernova remnants		18 With Y27	24	13.5
BB113	Backer, D.C. Bower, G.C. Sramek, R.A.	Calif.-Berkeley NRAO-Socorro NRAO-Socorro	Imaging of galactic center proper motion calibrator sources		3.6, 6 With Y1	29	7.0
BC091	Clark, T. Ma, C. Johnston, K. Fey, A. Gaume, R. Eubanks, M. Gordon, D. Vandenberg, N. Himwich, E. Shaffer, D. Boboltz, D. Kingham, K. Fomalont, E. Walker, C.	NASA-GSFC NASA-GSFC USNO USNO USNO USNO Hughes-GSFC NVI-GSFC NVI-GSFC Radiometrics USNO USNO NRAO-CV NRAO-Socorro	VLBA Geodesy/Astronomy observations for 1999		3.6, scheduled as RDV17	2	25.0
BD057	Diamond, P.J. Kemball, A.J.	Jodrell Bank NRAO-Socorro	Continuation of the VLBA monitoring of SiO masers around TX Cam		0.7 With Y1	11, 24	16.0
BG093	Gallimore, J.F. Baum, S.A. O'Dea, C.P.	NRAO-CV STScI STScI	Flat spectrum sources in Seyfert Galaxies		13,4	15	4.0
BH057	Hough, D.H. Homan, D.C. Porcas, R.W. Readhead, A. Wardle, J.F.C. Zensus, J.A.	Trinity U. Brandeis MPIfR Caltech Brandeis MPIfR	Multi-frequency polarization imaging of the nuclei in the lobe-dominated quasars 3C207, 3C212, 3C263, and 3C334		6,4	21,30	46.0
BL078	Lobanov, A. Ros, E. Zensus, J.A.	MPIfR MPIfR MPIfR	Monitoring the ongoing flare in the VLBI core of 3C345		2,1,7	23	3.0
BM108	Moellenbrock, G. Roberts, D.H. Wardle, J.F.C.	ISAS/Brandeis Brandeis Brandeis	Polarization monitoring of gamma ray blazars		0.7, 1.3, 2, 3.6	7	12.0
BM118	Marlow, D. Myers, S. Rusin, D. Blandford, R. Wilkinson, P. Browne, I. Jackson, N. Norbury, M. de Bruyn, G. Koopmans, L.	Pennsylvania NRAO-Socorro Pennsylvania Caltech Jodrell Bank Jodrell Bank Jodrell Bank Jodrell Bank NFRA Groningen	CLASS 3 candidate gravitational lenses		6 With Y1	1	22.0
BN009	Norbury, M. Blandford, R. Browne, I. Jackson, N. Koopmans, L. Marlow, D. Myers, S. Pearson, T. Rusin, D. Wilkinson, P.	Jodrell Bank Caltech Jodrell Bank Jodrell Bank Groningen Pennsylvania Pennsylvania Caltech Pennsylvania Jodrell Bank	Long track observations of top CLASS lens candidates		20	12,29	26.0
BR057	Roberts, D.H. Moellenbrock, G.A. Wardle, J.F.C. Gabuzda, D.C. Brown, L.F.	Brandeis ISAS/Brandeis Brandeis JIVE Connecticut	Four 3C quasars with VSOP observations		0.7, 1.3, 2, 3.6 With Y1	8	11.0
BT046	Pearson, T. Readhead, A. Taylor, G.	Caltech Caltech NRAO-Socorro	High frequency second epoch observations of 4 compact symmetric objects		2,7	4	14.0
V030	Preston, R.A.	JPL	Pearson-Readhead survey from space		6	16	5.0
V037	Menten, K.M.	MPIfR	Extragalactic OH masers		18 With EB, RO, GO	7	4.5
V085	Schilizzi, R.T.	JIVE	Morphological and spectral study of GPS galaxies and quasars		6 With Y27	6	13.0

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Progm	Observer	Affiliation	Program Title	Stns	Bands cm	Observing Date	Sched Hours
W004	Venturi, T. Bondi, M. Dallacasa, D. Fanti, R. Mantovani, F. Padrielli, L. Stanghellini, C. Comastri, A. Ferrari, A.	Bologna Bologna Bologna Bologna Bologna Bologna Noto Bologna Torino	Gamma-ray-loud blazars		6	11	7.0
W018	Snellen, I.A.G. Tschager, W. Schilizzi, R.T. deBruyn, A.G. Miley, G.K. Rottgering, H.J.A. vanLangevelde, H.J. Fanti, C. Fanti, R.	Cambridge Leiden JIVE NFRA Leiden Leiden NRAO-Socorro Bologna Bologna	GPS galaxies and quasars		18 With RO, GO	5, 18	29.0
W030	Tingay, S. Jauncey, D. Reynolds, J. Tzioumis, A. King, E. Edwards, P. Lovell, J. Hirabayashi, H. McCulloch, P.	JPL ATNF ATNF ATNF ATNF ISAS ATNF ISAS Tasmania	Gamma ray loud and quiet AGN		6	1	5.0
W032	Romney, J.D. Alef, W. Backer, D.C. Benson, J.M. Dhawan, V. Kellermann, K.I. Readhead, A.C.S. Vermeulen, R.C. Walker, R.C.	NRAO-Socorro MPIfr Calif.-Berkeley NRAO-Socorro NRAO-Socorro NRAO-CV Caltech NFRA NRAO-Socorro	Core of 3C84		18, 6 With EB, RO, GO	15, 21	19.0
W049	Hagiwara, Y. Kameno, S. Miyoshi, M. Edwards, P. Kawabe, R. Miyaji, T.	MPIfr NAO-Nobeyama NAO-Mizusawa ISAS NAO-Nobeyama NAO-Mizusawa	OH absorption in NGC 4945	M	18 MK only	7	7.0
W081	Moellenbrock, G.A. Roberts, D.H. Wardle, J.F.C.	ISAS/Brandeis Illinois Brandeis	Polarization monitoring of gamma ray blazars		18, 6 with EB, RO, GO	8, 14, 25, 26, 27, 28	60.5
	Staff	NRAO	Maintenance Software			19	103.5 6.0

The average downtime was 7.5 hours (2.0%)

Actual observing time was 361.5 hours

The VLBA was scheduled 73% of the time 543.0 hours of a possible
(744 hours)

Astronomical Observations = 50% (369.0 hours)

Tests and Calibrations = 12% (93.0 hours)

Maintenance = 11% (81.0 hours)

Total Number of astronomical programs was 22

VLBA Utilization Report July 1999

Progm	Observer	Affiliation	Program Title	Stns	Bands cm	Observing Date	Sched Hours
BA029	Alberdi, A. Gomez, J.L. Marcaide, J.M. Perez-Torres, M. Marscher, A.P.	IAA, Granada IAA, Granada Valencia Valencia Boston	Superluminal source 4C39.25		0.7, 1.3, 2	16	14.0
BA037	Aller, H.D. Aller, M.F. Hughes, P.A. Wardle, J.F.C. Homan, D.C.	Michigan Michigan Michigan Brandeis Brandeis	Sources with rapidly variable polarization		0.7, 2	24	24.0
BB105	Blundell, K. Beasley, A.J.	Oxford NRAO-CV	Motion in a radio quiet quasar		3.6 With phased VLA	20	6.5
BB109	Beasley, A.J. Herrnstein, J.H.	NRAO-CV NRAO-Socorro	VLBA Monitoring of WR 140 (HD 193793)		2, 3.6, 6 With VLA single antenna	5, 23	24.0
BC096	Cohen, A.S.	MIT	Determining a model of gravitational lens 0218+357		18 With VLA single antenna	8	12.0
BD057	Diamond, P.J. Kemball, A.J.	Jodrell Bank NRAO-Socorro	Continuation of the VLBA monitoring of SiO masers around TX Cam		0.7 With VLA single antenna	12, 30	16.0
BD060	Dhawan, V. Kellermann, K.I. Romney, J.D.	NRAO-Socorro NRAO-CV NRAO-Socorro	Monitoring the accelerating, bent jet in 3C84		0.7 With VLA single antenna	10	14.0
BF050	Fanti, C. Cotton, W.D. Fanti, R. Mantovani, F.	IRA NRAO-Socorro IRA IRA	Search for CSS and GPS candidates		4,2	20	12.0
BF054	Furuya, R. Claussen, M.J. Kawabe, R. Kitamura, Y. Wootten, H.A.	Graduate Univ. NRAO-Socorro Nobeyama ISAS NRAO-CV	Study of evolution of protostellar jets		1	4	8.0
BF056	Falcke, H. Aller, M. Aller, H.D. Bower, G.C. Brunthaler, A. Terasranta, H.	MPIfR Michigan Michigan NRAO-Socorro MPIfR Metsahovi	Monitoring the major radio outburst in extremely variable spiral galaxy III Zw 2		2,7	15	6.0
BG063	Gabuzda, D.C. Cawthorne, T.V. Pushkarev, A.B.	ASC Lancashire Moscow State	Multi-frequency observations of a 1 Jy complete sample of BL Lac objects		13, 4	9,29	12.0
BK068	Kellermann, K. Cohen, M. Vermeulen, R. Zensus, A.	NRAO-CV Caltech NFRA MPIfR	Kinematics of quasars and AGN		2	19	24.0
BL080	Lobanov, A.P. Zensus, J.A. Ros, E. Klare, J. Geisecke, A.	MPIfR MPIfR MPIfR MPIfR MPIfR	Multi-frequency monitoring of the parsec scale jet in 3C345		0.7, 1.3, 2, 3.6, 6	30	14.0
BM108	Moellenbrock, G. Roberts, D.H. Wardle, J.F.C.	ISAS/Brandeis Brandeis Brandeis	Polarization monitoring of gamma ray blazars		0.7, 1.3, 2, 3.6	28	12.0
BM112	Moran, J. Bragg, A. Diamond, P.J. Greenhill, L.J. Henkel, C. Herrnstein, J.R. Trotter, A.S.	CfA CfA Jodrell Bank CfA MPIfR NRAO-Socorro Harvard	Next generation study of NGC 4258 accretion disk physics from measurment of month-to-month variations		1	15	12.
BM114	Marcaide, J.M. Guirado, J.C. Perez-Torres, M.A. Ros, E.	Valencia Valencia Valencia MPIfR	Absolute kinematics of radio source components in complete S5 polar cap sample		2	26	24.0

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Progm	Observer	Affiliation	Program Title	Stns	Bands cm	Observing Date	Sched Hours
BM116	Marscher, A.P. Cawthorne, T.V. Gear, W.K. Stevens, J.A. Marchenko, S.G. Lister, M.L. Gabuzda, D.C. Yurchenko, A.V. Forster, J.R.	Boston Lancashire MRAO MRAO St. Petersburg JPL Lebedev St. Petersburg Calif.-Berkeley	Monitoring mm-bright AGN		0.7	17	24.0
BM118	Marlow, D. Myers, S. Rusin, D. Blandford, R. Wilkinson, P. Browne, I. Jackson, N. Norbury, M. de Bruyn, G. Koopmans, L.	Pennsylvania Pennsylvania Pennsylvania Caltech Jodrell Bank Jodrell Bank Jodrell Bank Jodrell Bank NFRA Groningen	CLASS 3 candidate gravitational lenses		6 w/VLA single antenna	31	2.0
BN008	Nagar, N. Falcke, H. Wilson, A.	Maryland MPIfr Maryland	Investigating the Parsec-scale jets in the LINERs NGC 4278 and NGC 6500		20,6,4,2	30	10.0
BN010	Nakai, N. Ishihara, Y. Inoue, M. Hagiwara, Y. Miyoshi, M. Diamond, P.J.	NAO-Nobeyama NAO-Nobeyama NAO-Nobeyama NAO-Nobeyama NAO-Mitzuzawa Jodrell Bank	H2O Megamaser in LINER IC1481		1.3 With phased VLA	25	12.0
BP048	Perlman, E.S. Carilli, C. Minter, A. Langston, G. Ghigo, F. Stocke, J. Conway, J.	STScI NRAO-Socorro NRAO-GB NRAO-GB NRAO-GB Colorado Onsala	Monitoring PKS 1413+135		0.7, 1.3, 2, 3.6	25	10.0
BP053	Polatidis, A.G. Conway, J.E. Murphy, D.W.	JIVE-Onsala Onsala JPL	Continued coordinated monitoring of 1928+738		0.7, 2	17	12.0
BT047	Taylor, G. Vermeulen, R.	NRAO-Socorro NFRA	Measuring absolute motions in bi-directional jets of 1946+708		4, 2	11	13.0
BU017	Uson, J. Beasley, A.J.	NRAO-CV NRAO-CV	Spatial and spectral resolution of HI Absorption in 0902+343		90 With VLA single Antenna	31	6.0
W015	Claussen, M.J. Ulvestad, J. Diamond, P.J. Braatz, J. Wilson, A. Henkel, C.	NRAO-Socorro NRAO-Socorro Jodrell Bank Cfa Maryland MPIfr	Low frequency structure of the NGC 1052 jet		6, 18 with GO, TI	28, 29	19.0
W016	Gabuzda, D.C. Pushkarev, A.B. Kochanov, P.Y. Cawthorne, T.V.	Lebedev Lebedev Moscow Univ. Lancashire	Polarization of BL Lac objects		6 polarizati on, with AT	10	6.0
W020	Minter, A.H. Langston, G. Ghigo, F. Perlman, E. Carilli, C. Stocke, J. Conway, J.	NRAO-GB NRAO-GB NRAO-GB STScI NRAO-Socorro Colorado Onsala	PKS 1413+135		6, 18 with NT, TR, SH, GO, KA	5, 6	19.0
W060	Lovell, J. Edwards, P. Jauncey, D. Reynolds, J. Tzioumis, A. King, E. Preston, R. Tingay, S. Murphy, D.	ISAS ISAS ATNF ATNF ATNF ATNF JPL JPL JPL	Southern High Brightness Temperature AGN		6 With AT	18	6.0
W069	Zensus, J.A. Lobanov, A.P. Unwin, S.C. Cohen, M.H.	MPIfr MPIfr JPL Caltech	Jet in quasar 3C345		6, 18 polarizati on with EbRoGo	1, 2	20.0

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Progm	Observer	Affiliation	Program Title	Stns	Bands cm	Observing Date	Sched Hours
W079	Meier, D.L. Tingay, S.J. Preston, R.A. Murphy, D.W. Jones, D.L. Fujisawa, K. Hirabayashi, H. Kobayashi, H. Edwards, P.	JPL JPL JPL JPL NAO ISAS ISAS ISAS	Centaurus A		6 with AT, Y27	3	5.5
W081	Moellenbrock, G.A. Roberts, D.H. Wardle, J.F.C.	ISAS/Brandeis Illinois Brandeis	Polarization monitoring of gamma ray blazars		6, 18 polarization With EbRoGo	8, 11	18.0
W094	Hirabayashi, H. Wehrle, A. Unwin, S. Makino, F. Kii, T. Kobayashi, H. Edwards, P. Okayasu, R. Valtaoja, E.	ISAS IPAC JPL ISAS ISAS ISAS ISAS ISAS Tuorla	3C279		6 polarization, with Y27	6	9.0
	Staff	NRAO	Maintenance				135.0

The average downtime was 17.4 hours (4.0%)

Actual observing time was 417.6 hours

The VLBA was scheduled 79% of the time 564.0 hours of a possible (720 hours)

Astronomical Observations = 61% (435.0 hours)

Tests and Calibrations = 8% (57.0 hours)

Maintenance = 10% (72.0 hours)

Total Number of astronomical programs was 32

VLBA Utilization Report June 1999

Progm	Observer	Affiliation	Program Title	Stns	Bands cm	Observing Date	Sched Hours
BA036	Augusto, P.	Madeira	B2114+022, a gravitational lensing candidate		90 with Y1	3	12.0
BC090	Carilli, C. Taylor, G. Ulvestad, J. Wrobel, J.	NRAO-Socorro NRAO-Socorro NRAO-Socorro NRAO-Socorro	Ultra-luminous infrared galaxies		18,80 with phased VLA	1,6	22.5
BC091	Clark, T. Ma, C. Johnston, K. Fey, A. Gaume, R. Eubanks, M. Gordon, D. Vandenberg, N. Himwich, E. Shaffer, D. Boboltz, D. Kingham, K. Fomalont, E. Walker, C.	NASA-GSFC NASA-GSFC USNO USNO USNO USNO Hughes-GSFC NVI-GSFC NVI-GSFC Radiometrics USNO USNO NRAO-CV NRAO-Socorro	VLBA Geodesy/Astronomy observations for 1999		3.6 scheduled	21 as RDV16	24.0
BD057	Diamond, P.J. Kemball, A.J.	Jodrell Bank NRAO-Socorro	Continuation of the VLBA monitoring of SiO masers around TX Cam		0.7 with Y1	12, 27	16.0
BD058	Dhawan, V. Mirabel, I.F. Rodríguez, L.F.	NRAO-Socorro Saclay UNAM	GRS 1915 Jet evolution on AU scales		13,4,2	9	5.0
BD060	Dhawan, V. Kellermann, K.I. Romney, J.D.	NRAO-Socorro NRAO-CV NRAO-Socorro	Monitoring the accelerating, bent jet in 3C84		13,4,2	2	5.0
BF053	Fomalont, E.B. Brisken, W. Chatterjee, S. Cordes, J. Goss, M. Kaplan, D.	NRAO-CV Princeton NRAO-Socorro Cornell NRAO-Socorro Cornell	VLBA Search of pulsar fields for inbeam calibrators		20	15	4.0
BF054	Furuya, R. Claussen, M.J. Kawabe, R. Kitamura, Y. Wootten, H.A.	Graduate Univ. NRAO-Socorro Nobeyama ISAS NRAO-CV	Study of evolution		1	5	8.0
BG091	Gabuzda, D.C. Cawthorne, T.V. Pushkarev, A.B.	JIVE Central Lancashire Astro Space Center	Finishing Multi-frequency observations of complete sample of 1-Jy BL Lac objects		6,4,2	17	12.0
BH042	Herrnstein, J.R. Moran, J.M. Greenhill, L.J.	NRAO-Socorro CfA CfA	Are quasars being ejected from the Nucleus of NGC 4258?		18 with Y27	3	10.0
BH056	Ho, P.T.P. Anglada, G. Curiel, S. Gomez, J.F. Patel, N. Rodríguez, L.F. Torrelles, J.M.	CfA IAA, Granada UNAM IAA, Granada CfA UNAM IAA, Granada	Proper motion studies of circumstellar water masers in NGC 2071 and W75N		1	4	13.0
BM106	Mutel, R.L. Molnar, L.A.	Iowa Iowa	Astrometric mapping of HR 1099: test of polar emission model		3.6 with Y27, EB	19	10.0
BN009	Norbury, M. Blandford, R. Browne, I. Jackson, N. Koopmans, L. Marlow, D. Myers, S. Pearson, T. Readhead, T. Rusin, D. Wilkinson, P.	Jodrell Bank Caltech Jodrell Bank Jodrell Bank Groningen Pennsylvania Pennsylvania Caltech Caltech Pennsylvania Jodrell Bank	Long-track observation of top CLASS lens candidates		20	18	2.0
BR060	Rector, T. Gabuzda, D. Stocke, J.	NOAO Astro Space Center CASA	Second-epoch observations of x-ray loud BL Lacs		6	19	24.0

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Progm	Observer	Affiliation	Program Title	Stns	Bands cm	Observing Date	Sched Hours
GB033	Bartel, N. Rupen, M.P. Bietenholz, M.F. Beasley, A.J. Conway, J. Altunin, V. Graham, D. Venturi, T. Umana, G.	York NRAO-Socorro York NRAO-CV Onsala JPL MPIFR Bologna Noto	VLBI imaging of Supernova 1993J in M81		6, 18 with Y27RoGoEbW bOnMcNt	5, 16	21.5
GF007	Fomalont, E.B. Bradshaw, C.F. Geldzahler, B.J. Waltman, E.B.	NRAO-CV George Mason George Mason NRL	Formation and rapid variability of hot spots in Sco X-1		6, 18 with Y27	11, 12, 13	27.0
GG040	Garrington, S.T. Garrett, M.A. Polatidis, A.	Jodrell Bank JIVE JIVE	Faint GPS sources selected from a VLBI + MERLIN survey		6 with EB JB MC NT TR WB ON	13	10.5
GM035	Marcaide, J.M. Perez-Torres, M.A. Guirado, J.C. Alberdi, A. Ros, E. Diamond, P.J. Shapiro, I.I. Preston, R.A. Schilizzi, R.T. Mantovani, F. Trigilio, C. Van Dyk, S. Weiler, K.W. Sramek, R.A. Whitney, A.R.	Valencia Valencia Valencia IAA MPIFR Jodrell Bank CfA JPL JIVE Bologna Noto UCLA NRL NRAO-Socorro Haystack	Monitoring of the expansion of SN 1993J at 6 and 18cm		6 with Y27, EB, NT, WB	10	11.0
GR016	Ros, E. Marcaide, J.M. Guirado, J.C. Perez-Torres, M.A. Lara, L. Alberdi, A.	MPIFR Valencia Valencia Valencia IAA IAA	Proper motions in quad gravitational lenses		3.6 with Y27 GO RO EB MC NT WB	8	14.0
V030	Preston, R.A.	JPL	Pearson-Readhead survey from space		6	1	10.0
W022	Reid, M.J. Greenhill, L.J. Argon, A.L. Moran, J.M.	CfA CfA CfA CfA	Nuclear Jet in M87		18 with RO, GO	23	11.0
W023	Jones, D.L. Wehrle, A.E.	JPL JPL	NGC 4261		6, 18 with Y27 RO GO TI KA SH	22, 27	18.0
W027	Murphy, D.W. Conway, J.E. Polatidis, A. Preston, R.A. Tingay, S.J. Jones, D.L. Meier, D.L. Hirabayashi, H. Kobayashi, H.	JPL Onsala JIVE JPL JPL JPL JPL ISAS ISAS	Monitoring of 1928+738		6 with NT EB GB JB MC WB SH ON	15, 16	32.0
W040	Junor, B. Biretta, J.	New Mexico STScI	Proper motion in the Vir A jet		6 with EB	29	10.0
W053	Rioja, M.J. Porcas, R.W. Hirabayashi, H. Asaki, Y. Machalski, J.	OAN MPIFR ISAS NAO-Mitzusawa Jagiellonian	Astrometry on the pair 1308+326,8		6, 18 with EB, RO	18, 25	18.5
W059	Kedziora-Chudczer, Jauncey, D.L. Reynolds, J.E. Tzioumis, A.K. Wieringa, M.H. Nicolson, G.D. Quick, J.F.H. Walker, M.A. McCulloch, P.M.	Sydney Univ ATNF ATNF ATNF ATNF Hartebeesthoek Hartebeesthoek Sydney Univ Tasmania	Complete sample of intra-day variables		6	2	7.0

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Progm	Observer	Affiliation	Program Title	Stns	Bands cm	Observing Date	Sched Hours
W068	Zensus, J.A. Carrara, E. Abraham, Z. Lobanov, A.P. Unwin, S.C.	MPIfR NRAO-Socorro Sao Paulo MPIfR JPL	Quasar 3C 273		6 with EB	17	10.0
W088	Roberts, D.H. Moellenbrock, G.A. Wardle, J.F.C. Gabuzda, D.C. Brown, L.F.	Illinois ISAS/Brandeis Brandeis Lebedev Connecticut	Polarization monitoring of four bright quasars at 5 and 1.6 GHz		18, with Y27, G0, T1, KA, SH	6, 21, 26, 28	31.0
	Staff	NRAO	Maintenance Maintenance and Painting	SHN			72.0 184.0

The average downtime was 8.0 hours (2.0%)

Actual observing time was 400.5 hours

The VLBA was scheduled 77% of the time 551.8 hours of a possible
(744 hours)

Astronomical Observations = 57% (408.5 hours)

Tests and Calibrations = 7% (48.3 hours)

Maintenance = 13% (95.0 hours)

Total Number of astronomical programs was 28

VLBA Utilization Report May 1999

Progm	Observer	Affiliation	Program Title	Stns	Bands cm	Observing Date	Sched Hours
BB106	Briskin, W. Fomalont, E. Goss, M.	Princeton NRAO-Socorro NRAO-Socorro	VLBA Pulsar Astronomy		20	16	3.5
BC090	Carilli, C. Taylor, G. Wrobel, J. Ulvestad, J.	NRAO-Socorro NRAO-Socorro NRAO-Socorro NRAO-Socorro	Ultra-luminous infrared galaxies		18, 90 With phased VLA	31	1.5
BC091	Clark, T. Ma, C. Johnston, K. Fey, A. Gaume, R. Eubanks, M. Gordon, D. Vandenberg, N. Himwich, E. Shaffer, D. Boboltz, D. Kingham, K. Fomalont, E. Walker, C.	NASA-GFSC NASA-GSFC USNO USNO USNO USNO Hughes-GSFC NVI-GSFC NVI-GSFC Radiometrics USNO USNO NRAO-CV NRAO-Socorro	VLBA Geodesy/Astronomy observations for 1999		3.6 Scheduled as RDV15	10	25.0
BD057	Diamond, P.J. Kemball, A.J.	Jodrell Bank NRAO-Socorro	Continuation of the VLBA monitoring of SiO masers around TX Cam		0.7 With VLA single antenna	14, 31	16.0
BF050	Fanti, C. Cotton, W.D. Fanti, R. Mantovani, F.	IRA NRAO-CV IRA IRA	Search for CSS and GPS candidates		20,6	2	12.0
BF054	Furuya, R. Claussen, M.J. Kawabe, R. Kutamura, Y. Wootten, H.A.	Graduate Univ. NRAO-Socorro Nobeyama ISAS NRAO-CV	Study of evolution of protostellar jets		1	5	8.0
BI012	Iguchi, S. Fujisawa, K. Hirotani, K. Kameno, S.	NAO NAO NAO NAO	VLBA and VSOP monitorings of extremely high speed jet source		4, 2, 7	7	10.5
BI013	Imai, M. Inoue, M. Kameno, S. Kanno, T. Oono, T. Tuboi, M. Venturi, T.	NAO NAO NAO Ibaraki Ibaraki Ibaraki CNR	VLBI Mapping of double nuclei of 3C75		4	1	13.0
BJ029	Justtanont, K. Claussen, M.J. Kerschbaum, F. Yates, J.	Stockholm NRAO-Socorro Univ. of Vienna Hertfordshire	High angular resolution observations of SiO maser in AGB stars		7	9	8.0
BK066	Koratkar, A. Antonucci, R. Gallimore, J.F.	STSci UCSB NRAO-CV	Testing the accretion disk model: radio jets in UV polarized QSOs		13, 4	28	4.0
BK068	Kellermann, K. Cohen, M. Vermeulen, R. Zensus, A.	NRAO-Socorro Caltech NFRA MPIfR	Kinematics of quasars and AGN		2	21	24
BL070	Lo, K.Y. Ho, P.T.P. Shen, Z. Zhao, J-H.	ASIAA, Taipei Cfa ASIAA, Taiwan Harvard	VLBA Observations of Intrinsic source structure of Sgr A*		7	23, 31	19.0
BL078	Lobanov, A.P. Ros, E. Zensus, J.A.	MPIfR MPIfR MPIfR	New flare in 3C345		0.7, 1.3, 2	18	3.0
BM110	Mutel, R.L. Denn, G.R.	Iowa Iowa	Monitoring BL Lac		0.7, 1.3, 2	29	12.0
BM112	Moran, J.M. Greenhill, L.J. Herrnstein, J.R. Diamond, P.J. Bragg, A. Trotter, A.S. Henkel, C.	CFA CFA NRAO-Socorro Jodrell Bank Harvard CFA MPIfR	Next generation study of NGC 4258 accretion disk physics		1.3 With phased VLA, Eb, Ro, Go	18, 26	26.0

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Prog#	Observer	Affiliation	Program Title	Stns	Bands cm	Observing Date	Sched Hours
BM114	Marcaide, J. Guirado, J.C. Perez-Torres, M.A. Ros, E.	Valencia, Spain Valencia, Spain Valencia, Spain MPIfR	Absolute kinematics of radio source components in complete S5 polar cap sample		4	28	24.0
BM115	Morris, M. Reid, M.	UCLA CfA	Nature of an unusual point source near the galactic center		4	13	5.5
BP051	Paredes, J.M. Massi, M. Marti, J. Ribo, M.	Barcelona MPIfR U. Jaen Barcelona	X-Ray binary LS 5039		6 With phased VLA	8	4.0
BR057	Roberts, D.H. Moellenbrock, G.A. Wardle, J.F.C. Gabuzda, D.C. Brown, L.F.	Brandeis ISAS/Brandeis Brandeis Lebedev Connecticut	Four 3C quasars with VSOP observations		0.7, 1.3, 2, 3.6 With VLA single antenna	16	24.0
BR059	Reid, M. Wilner, D. Menten, K.	CfA CfA MPIfR	Synchrotron jet in the star forming region W3OH		18 With phased VLA	22	9.0
BR063	Ratner, M.I. Bartel, N. Bietenholz, M.F. Lebach, D.E. Lestrade, J-F. Ranson, R.R. Shapiro, I.I.	CfA York York CfA Meudon York CfA	Astrometry of HR 8703 in 1999 for the gravity probe B mission		3.6, 6 With phased VLA, EbRoGoTi	15	18.5
BR064	Roy, A. Colbert, E.J.M. Mundell, C.G. Ulvestad, J.S. Wilson, A.S.	MPIfR GSFC Maryland NRAO-Socorro STScI	Component motions in NGC 1068		20,6	3	11.5
BT038	Tingay, S. Jauncey, D.L. Jones, D.L. Meier, D.L. Murphy, D.W. Preston, R.A. Reynolds, J.E. Tzioumis, A.K.	JPL ATNF JPL JPL JPL JPL ATNF ATNF	Continued 8.4 GHz monitoring of Centaurus A		4	1	7.0
BT041	Tingay, S. Jauncey, D.L. Jones, D.L. Meier, D.L. Murphy, D.W. Preston, R.A. Tzioumis, A.K.	JPL ATNF JPL JPL JPL JPL ATNF	Near-simultaneous VLBA observations of Centaurus A at 2.3, 4.8 and 8.4 GHz		13	2,4	14.0
BT045	Thorsett, S. Dewey, R. Briskin, W.	Princeton Princeton Princeton	Orbital phase - resolved measurement of PSR B1534+12		90 With phased VLA	3	11.0
BU012	Ulvestad, J.S. Vestrand, W.T. Stacy, J.G. Biretta, J.A.	NRAO-Socorro New Hampshire New Hampshire STScI	Flaring CGRO Blazar 2255-282		0.7, 1.3, 2	26	8.0
GK019	Koopmans, L.V.E. de Bruyn, A.G. Marlow, D. Wilkinson, P.N. Browne, I.W.A. Jackson, N.J. Fassnacht, C.D.	Groningen NFRA Pennsylvania Jodrell Bank Jodrell Bank Jodrell Bank NRAO-Socorro	Multi-frequency observations of a "dark" lens or binary quasar		18 With EVN	30	12.0
W006	Yakimov, V.E. Gabuzda, D.C. Vetukhnovskaya, Y.N.	Lebedev Lebedev Lebedev	Polarization of 1055+018		18, 6 with Eb, Ro, Go, Ud	12, 13	22.0
W008	Ulvestad, J.S. Wrobel, J.M. Carilli, C.L.	NRAO-Socorro NRAO-Socorro NRAO-Socorro	Seyfert Galaxy Mrk 231		6 with phased VLA, Eb	16	10.5
W025	Tingay, S. Tornikoski, M. Muecke, A. Bignall, H. Clay, R. Tzioumis, A. King, E. Lovell, J.	JPL Metsahovi Adelaide Adelaide Adelaide ATNF ATNF ISAS	The bursting gamma ray source, PKS 2255-282		6 with At, Ho, Mp	18	3.5

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Progm	Observer	Affiliation	Program Title	Stns	Bands cm	Observing Date	Sched Hours
W027	Murphy, D.W. Conway, J.E. Polatidis, A. Preston, R.A. Tingay, S.J. Jones, D.L. Meier, D.L. Hirabayashi, H. Kobayashi, H.	JPL Onsala JIVE JPL JPL JPL JPL ISAS ISAS	Monitoring of 1928+738		18 with EVN	29	15.5
W039	Guirado, J.C. Preston, R.A. Jones, D.L. Marcaide, J.M. Perez, M.A. Lestrade, J.-F.	Valencia JPL JPL Valencia Valencia Meudon	Proper motion in a closely spaced quasar pair: 1342+662/1342+663		6 with Eb, Ka	8	20.0
W051	Porcas, R.W. Xanthopoulos, E. Browne, I.W.A. Wilkinson, P.N. Patnaik, A.R.	MPIfR Jodrell Bank Jodrell Bank Jodrell Bank MPIfR	Gravitational lens system 1030+074		18, 6 with HhRoGoTi, Eb	9, 17	18.0
W056	Bartel, N. Bietenholz, M.	York York	Structural variability in the core-jet of the Galaxy M81		18, 6 with phased VLA+EbGbJd , RoGo, EbGbJd	1, 5, 6	28.0
W059	Kedziora-Chudczer, Jauncey, D.L. Reynolds, J.E. Tzioumis, A.K. Wieringa, M.H. Nicolson, G.D. Quick, J.F.H. Walker, M.A. McCulloch, P.M.	Sydney Univ ATNF ATNF ATNF ATNF Hartebeesthoek Hartebeesthoek Sydney Univ Tasmania	Complete sample of intra-day variables		6	20	8.0
W071	Kameno, S. Wajima, K. Imai, M. Inoue, M. Sato, S.	NAO-Nobeyama Ibaraki NAO-Mitaka NAO-Nobeyama NAO-Mitaka	Survey for GPS Sources		18 With Ro, Go	23	9.0
W094	Hirabayashi, H. Wehrle, A. Unwin, S. Makino, F. Kii, T. Kobayashi, H. Edwards, P. Okayasu, R. Valtaoja, E.	ISAS JPL JPL ISAS ISAS ISAS ISAS ISAS ISAS Tuorla	3C279		6 with Phased VLA, At, Mp	12	10.0
	Staff	NRAO	Maintenance				88.5

The average downtime was 19.6 hours (4.0%)

Actual observing time was 609.0 hours

The VLBA was scheduled 82% of the time 609 hours of a possible
(744 hours)

Astronomical Observations = 66% (490.0 hours)

Tests and Calibrations = 7% (52.0 hours)

Maintenance = 9% (67.0 hours)

Total Number of astronomical programs was 37

VLBA Utilization Report April 1999

Progm	Observer	Affiliation	Program Title	Stns	Bands cm	Observing Date	Sched Hours
BB010	Beasley, A.J. Herrnstein, J.R.	NRAO-CV NRAO-Socorro	Target of opportunity observations of WR140 (HD 193793)		20, 4	8	5.0
BC091	Clark, T. Ma, C. Johnston, K. Fey, A. Gaume, R. Eubanks, M. Gordon, D. Vandenberg, N. Himwich, E. Shaffer, D. Boboltz, D. Kingham, K. Fomalont, E. Walker, C.	NASA-GSFC NASA-GSFC USNO USNO USNO USNO Hughes-GSFC NVI-GSFC NVI-GSFC Radiometrics USNO USNO NRAO-CV NRAO-Socorro	VLBA Geodesy/Astronomy observations for 1999		3.6 Scheduled as RDV14	15	25.0
BD057	Diamond, P.J. Kenball, A.J.	Jodrell Bank NRAO-Socorro	Continuation of the VLBA monitoring of SiO masers around TX Cam		0.7	12, 24	16.0
BD059	Desai, K.M. Brisken, W. Chatterjee, S. Fey, A. Lazio, T.J.W. Lestrade, J.F.	NRAO-Socorro Princeton NRAO/Cornell USNO NRL CNRS	Serendipitous observations of an extreme scattering event towards PSR J1643-12		20	30	6.0
BF043	Fey, A. Gaume, R. Eubanks, M. Johnston, K. Ma, C.	USNO USNO USNO USNO NASA-GSFC	Southern hemisphere astrometry for the celestial reference frame	NS	3.6 Correlated in Washington	19	25.0
BF051	Falcke, H. Nagar, N. Ulvestad, J. Wilson, A.	MPIFR Maryland NRAO-Socorro Maryland	Properties of Parsec-scale radio cores in a distance-and-radio-flux-limited samle of low luminosity AGN		6	1	10.5
BF052	Faison, M. Goss, M. Marscher, A.	NRAO/Wisconsin NRAO-Socorro Boston	Imaging small scale structure in galactic molecular gas		6	26	16.0
BF054	Furuya, R. Claussen, M.J. Kawabe, R. Kitamura, Y. Wootten, H.A.	Graduate Univ. NRAO-Socorro Nobeyama ISAS NRAO-CV	Study of Evolution of Protostellar jets		1	1	8.0
BG087	Gaume, R. Boboltz, D. Fey, A. Johnston, K. Hajian, A.	USNO USNO USNO USNO USNO	Astrometric observations of two radio stars with the VLBA and NPO1		3.6	2, 8	12.0
BG088	Britton, M. Gwinn, C. Hirano, C.	UC, Santa Barbara UC, Santa Barbara UC, Santa Barbara	Angular broadening of a nearby pulsar		90	8	5.0
BG089	Gregory, P.C. Capak, P. Wrobel, J.M.	Univ. British Columb Univ. British Columb NRAO-Socoro	Probable new galactic jet source		20, 4	25	9.0
BH056	Ho, P.T.P. Torrelles, J.M. Anglada, G. Curiel, S. Gomez, J.F. Patel, N. Rodriguez, L.F.	CfA IAA, Granada IAA, Granada UNAM LAEFF, Spain CfA UNAM	Proper motion studies of circumstellar water masers in NGC 2071 and W75N(B)		1	2	12.0
BL058	Lonsdale, C. Diamond, P. Smith, H. Lonsdale, C.	Haystack Jodrell Bank Calif.-San Diego Caltech-IPAC	Radio supernovae in OH megamaser galaxy Arp220		3.6, 6, 18	23	11.0
BL070	Lo, K.Y. Ho, P.T.P. Shen, Z. Zhao, J-H.	Taiwan CfA Taiwan CfA	VLBA Observations of intrinsic source structure of Sgr A*		7	24	11.0
BL077	Lister, M.L. Preston, R.A. Tingay, S.J. Piner, B.G.	JPL JPL JPL JPL	Pearson-Readhead sources at 43 GHz		0.7	6	24.0
BL078	Lobanov, A.P. Ros, E. Zensus, J.A.	MPIFR MPIFR MPIFR	New flare in 3C345		0.7, 1.3, 2	12	3.0

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Progm	Observer	Affiliation	Program Title	Stns	Bands cm	Observing Date	Sched Hours
BM116	Marscher, A.P. Cawthorne, T.V. Gear, W.K. Stevens, J.A. Marchenko, S.G. Lister, M.L. Gabuzda, D.C. Yurchenko, A.V. Forster, J.R.	Boston Lancashire MRAO MRAO St. Petersburg JPL Lebedev St. Petersburg Calif.-Berkeley	Monitoring mm-bright AGN		0.7	29	24.0
BM117	Mioduszewski, A.J. Rupen, M. Hjellming, R.M.	NRAO-Socorro NRAO-Socorro NRAO-Socorro	High resolution observations of the quiescent black hole candidate V404 Cyg		2	10	12.0
BR057	Roberts, D.H. Moellenbrock, G.A. Wardle, J.F.C. Gabuzda, D.C. Brown, L.F.	Brandeis ISAS/Brandeis Brandeis Lebedev Connecticut	Four 3C quasars with VSOP observations		0.7, 1.3, 2, 3.6	4	12.0
BY009	Yates, J.A. Claussen, M.J. Justtanont, K. Kerschbaum, F. Olofsson, H.	Hertfordshire NRAO-Socorro Stockholm Vienna, Austria Stockholm	H2O maser proper motion study of mass-loss from 2 Mira variables		1	11	9.0
V022	Wilkinson, P.	Jodrell Bank	Investigation of three gravitational milli lens candidates	BHNO	6 with NtTrJbUd	11	11.0
V030	Preston, R.A.	JPL	Pearson-Readhead survey from space		6	9, 24	14.0
V050	Kollgaard, R.I.	Fermilab	Subparsec scale structure of x-ray selected BL Lacertae objects		6 with Nt, Tr	1	8.0
V057	Gabuzda, D.	Lebedev	VSOP Polarization monitoring of 4 BL lacertae objects		With Eb	4	11.0
W022	Reid, M.J. Greenhill, L.J. Argon, A.L. Moran, J.M.	Cfa Cfa Cfa Cfa	Nuclear Jet in M87		18 with Go, Ti	13	11.5
W030	Tingay, S. Jauncey, D. Reynolds, J. Tzioumis, A. King, E. Edwards, P. Lovell, J. Hirabayashi, H. McCulloch, P.	JPL ATNF ATNF ATNF ATNF ISAS ISAS ISAS Tasmania	Gamma ray loud and quiet AGN		6 with Ho, Mp	25	9.0
W040	Junor, B. Biretta, J.	New Mexico STScI	Proper motion in the Vir A jet		6 With Eb, Ud, Y27	7, 26	19.0
W056	Bartel, N. Bietenholz, M.	York York	Structural variability in the core-jet of the Galaxy M81		6 with Eb, Gb, Y27	21, 30	34.0
W066	Lobanov, A.P. Krichbaum, T.P. Kraus, A. Witzel, A. Zensus, J.A.	MPIfR MPIfR MPIfR MPIfR MPIfR	0836+710 Jet kinematics		18, 6 with NtTrUd	17, 18	20.0
W068	Zensus, J.A. Carrara, E. Abraham, Z. Lobanov, A.P. Unwin, S.C.	MPIfR NRAO-Socorro Sao Paulo MPIfR JPL	Quasar 3C 273		6 with Eb	11	9.5
W088	Roberts, D.H. Moellenbrock, G.A. Wardle, J.F.C. Gabuzda, D.C. Brown, L.F.	Illinois ISAS/Brandeis Brandeis Lebedev Connecticut	Polarization monitoring of four bright quasars at 5 and 1.6 GHz		18 With Ro, Go, Ti, Eb, Jb	14, 15	19.0
W094	Hirabayashi, H. Wehrle, A. Unwin, S. Makino, F. Kii, T. Kobayashi, H. Edwards, P. Okayasu, R. Valtaoja, E.	ISAS JPL JPL ISAS ISAS ISAS ISAS ISAS Tuorla	3C279		6 With Eb, Ud	9	10.0
	Staff	NRAO	Combined Millimeter VLBI array Maintenance		0.3	17	135.0 86.0

The average downtime was 25.0 hours (5.0%)
Actual observing time was 480.0 hours
The VLBA was scheduled 85% of the time 480 hours of a possible
(720 hours)
Astronomical Observations = 70% (505.5 hours)
Tests and Calibrations = 10% (69.0 hours)
Maintenance = 5% (37.0 hours)
Total Number of astronomical programs was 32

VLBA Utilization Report March 1999

Progm	Observer	Affiliation	Program Title	Stns	Bands cm	Observing Date	Sched Hours
BB102	Beasley, A.J. Herrnstein, J.R.	NRAO-CV NRAO-Socorro	VLBA monitoring of WR140		2, 3.6, 6, 18 with phased VLA	3	8.0
BB105	Blundell, K. Beasley, T.	Oxford NRAO-CV	Motion in a radio quiet quasar		3.6 With phased VLA	20	8.0
BC091	Clark, T. Ma, C. Johnston, K. Fey, A. Gaume, R. Eubanks, M. Gordon, D. Vandenberg, N. Hinwich, E. Shaffer, D. Boboltz, D. Kingham, K. Fomalont, E. Walker, C.	NASA-GFSC NASA-GSFC USNO USNO USNO Hughes-GSFC NVI-GSFC NVI-GSFC Radiometrics USNO USNO NRAO-CV NRAO-Socorro	VLBA Geodesy/Astronomy observations for 1999		3.6 With NAVNET, Scheduled as RDV13	8	25.0
BD057	Diamond, P.J. Kemball, A.J.	Jodrell Bank NRAO-Socorro	Continuation of the VLBA monitoring of SiO masers around TX Cam		0.7 With VLA single antenna	12, 29	16.0
BD059	Desai, K.M. Lestrade, J.F. Fey, A.L. Brisken, W. Chatterjee, S. Lazio, T.J.W.	NRAO-Socorro Meudon USNO NRAO/Princeton NRAO/Cornell NRL	Extreme Scattering Event towards PSR J1643-12		18	31	8.0
BE017	Engels, D. Winnberg, A. Yie, J.	Hamburg Onsala Onsala	Structure of H2O masers in OH/IR stars		1.3 With VLA single antenna	29	7.5
BG073	Gomez, J.L. Marscher, A.P. Alberdi, A.	IAA, Granada Boston IAA, Granada	3C 120 rapid variations		0.7, 1.3	19	12.0
BG085	Gallimore, J.F. Baum, S.A. Kukula, M. O'Dea, C.P. Pedlar, A. Thean, A.	NRAO-CV STScI STScI STScI Jodrell Bank Jodrell Bank	Searching for mini-jets in Seyfert galaxies		13, 4	11, 12, 14, 15, 21, 30	24.0
BK053	Krichbaum, T.P. Lobanov, A. Britzen, S. Witzel, A. Zensus, J.A.	MPIfr MPIfr Dwingeloo MPIfr MPIfr	Broad band variability and jet bending in PKS 0528+134		0.7, 1.3, 3.6 With EB	16	14.0
BK056	Kemball, A. Patnaik, A. Porcas, R.	NRAO-Socorro MPIfr MPIfr	Faraday rotation in the gravitational lens system B0218+35.7		0.7, 1.3, 2, 3.6 With EB, Y1	5, 6	24.0
BK066	Koratkar, A. Antonucci, R. Gallimore, J.F.	STScI Calif., Santa Barbar NRAO-CV	Testing the accretion disk model: radio jets in UV polarized QSOs		13, 4 20	20	4.0
BL074	Lazio, J. Cordes, J.	NRL Cornell	G359.28-0.92, the Mouse		6 With phased VLA	15	3.0
BL078	Lobanov, A.P. Ros, E. Zensus, J.A.	MPIfr MPIfr MPIfr	New flare in 3C345		0.7, 1.3, 2	11	3.0
BM110	Mutel, R.L. Denn, G.R.	Iowa Iowa	Monitoring BL Lac		0.7, 1.3, 2	1	2.0
BM112	Moran, J.M. Greenhill, L.J. Herrnstein, J.R. Diamond, P.J. Bragg, A. Trotter, A.S. Henkel, C.	Cfa Cfa NRAO-Socorro Jodrell Bank Harvard Cfa MPIfr	Next generation study of NGC 4258 accretion disk physics		1.3	19	12.0
BP047	Preuss, E. Kellermann, K.I. Alef, W.	MPIfr NRAO-CV MPIfr	Third epoch VLBI of FR II radio galaxy 3C390.3		0.7, 1.3, 6 With EB	7	10.0
BR061	Ramachandran, R. Galama, T.J. Stappers, B.W. Strom, R.G.	Amsterdam Amsterdam Amsterdam Amsterdam	Anisotropic scattering in the ISM		20	12	24.0

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Progm	Observer	Affiliation	Program Title	Stns	Bands cm	Observing Date	Sched Hours
BR063	Ratner, M.I. Bartel, N. Bietenholz, M.F. Lebach, D.E. Lestrade, J-F. Ranson, R.R. Shapiro, I.I.	CfA York York CfA Meudon York CfA	Astrometry of HR 8703 in 1999 for the gravity probe B mission		3.6, 6 With phased VLA, EbRoGoTi	13	19.0
BT043	Tingay, S.J. Jauncey, D.L. Preston, R.A. Reynolds, J.E. Tzioumis, A.K.	JPL ATNF JPL ATNF ATNF	VLBA Observations of the nearby FR-II radio galaxy, Pictor A		4	7	4.0
BT044	Taylor, G. Beasley, A.J. Frail, D.A. Kulkarni, S.	NRAO-Socorro NRAO-CV NRAO-Socorro Caltech	VLBA Observations of gamma-ray bursters		6	9	6.0
BV030	Venturi, T. Morganti, R. Spagnesi, S.	Bologna Bologna Bologna	Low luminosity radiogalaxy 3C 317		3.6, 6, 18 With EB, Y1	5	11.0
GJ009	Junor, B. Biretta, J.A. Livio, M.	New Mexico STScI STScI	Structure on light week scales in the Nucleus of 3C274		0.7 With phased VLA, EbMcOn	4	16.0
V047	Gurvits, L.I.	JIVE	Structure of extremely high redshift quasars		6, 18 with Eb, Go, Ud, Sh	26, 27	32.0
V057	Gabuzda, D.	Lebedev	Polarization of BL Lacs: OJ 287		6 with Eb	8	9.0
V085	Schilizzi, R.T.	JIVE	GPS galaxies and quasars: 0552+398		6	23	12.0
VT751	VSOG	ISAS	1.3 cm test observation		1.3	22	6.0
W022	Reid, M.J. Greenhill, L.J. Argon, A.L. Moran, J.M.	CfA CfA CfA CfA	Nuclear Jet in M87		18 with phased VLA, RoGoUdTi	16, 21	18.0
W044	Krichbaum, T.P. Witzel, A. Kraus, A. Lobanov, A. Zensus, J.A.	MPIfR MPIfR MPIfR MPIfR MPIfR	Intraday variables: J0808+49		6 with Eb	9, 11	18.5
W056	Bartel, N. Bietenholz, M.	York York	Structural variability in the core-jet of the Galaxy M81		18 with RO and GO	28	14.0
W094	Hirabayashi, H. Wehrle, A. Unwin, S. Makino, F. Kii, T. Kobayashi, H. Edwards, P. Okayasu, R. Valtaoja, E.	ISAS JPL-IPAC JPL ISAS ISAS ISAS ISAS ISAS ISAS Tuorla	3C279		6 with phased VLA, EB and UD	15	9.5
	Staff	NRAO	Maintenance PT Real-Time Link Tests Resting-Comp. for observing at high bitrat Software	P		4, 25	232.0 16.0 74.0 5.5

The average downtime was 9.5 hours (4.0%)

Actual observing time was 323.5 hours

The VLBA was scheduled 76% of the time 744 hours of a possible (549 hours)

Astronomical Observations = 45% (333.0 hours)
 Tests and Calibrations = 12% (89.0 hours)
 Maintenance = 19% (127.0 hours)

Total Number of astronomical programs was 30

VLBA Utilization Report February 1999

Progm	Observer	Affiliation	Program Title	Stns	Bands cm	Observing Date	Sched Hours
BA029	Alberdi, A. Gomez, J.L. Marcaide, J.M. Perez-Torres, M. Marscher, A.P.	IAA, Granada IAA, Granada Valencia Valencia Boston	Superluminal source 4C39.25		0.7, 1.3, 2	8	14.0
BB099	Blundell, K. Willott, C. Rawlings, S. Beasley, I.	Oxford Oxford Oxford NRAO-CV	Core structure and spectra of a complete sample of radio sources		3.6	8, 14	24.0
BB101	Bower, G.C. Backer, D.C.	MPIFR Calif.-Berkeley	Gamma ray blazar NRAO 530		0.7, 1.3, 3.6	12	8.0
BB103	Blundell, K. Close, L. Leahy, P.	Oxford Oxford Jodrell Bank	Low frequency study of hotspots in powerful radio sources		90 With VLA single antenna	1	6.0
BC084	Cotton, W.D. Saslaw, W.C.	NRAO-CV Virginia	Search for gravitational lensing of 3C 455B by stellar object		3.6 With VLA single antenna	6	10.0
BC092	Coles, W.A.	Calif.-San Diego	Measurements of solar wind speed near the sun using IPS		2, 3.6, 6 (No recording)	9, 15	8.0
BD046	Diamond, P.J. Kemball, A.J. Boboltz, D.A.	Manchester NRAO-Socorro USNO	Monitoring SiO masers through a cycle of Mira TX Cam		0.7 With VLA single antenna	6, 19	16.0
BD059	Desai, K.M. Lestrade, J.F. Fey, A.L. Briskin, W. Chatterjee, S. Lazio, T.J.W.	NRAO-CV Meudon USNO NRAO/Princeton NRAO/Cornell NRL	Extreme Scattering Event towards PSR J1643-12		18	3	8.0
BG073	Gomez, J.L. Marscher, A.P. Alberdi, A.	IAA, Granada Boston IAA, Granada	3C 120 rapid variations		0.7, 1.3	10	12.0
BG086	Gomez, J.L. Marscher, A.P. Alberdi, A. Gabuzda, D.C.	IAA, Granada Boston IAA Lebedev	BL Lac object 0735+178		0.7, 1.3, 2	27	12.0
BL078	Lobanov, A.P. Ros, E. Zensus, J.A.	MPIFR MPIFR MPIFR	New flare in 3C345		0.7, 1.3, 2	11	3.0
BM095	Marscher, A.P. Cawthorne, T.V. Gear, W.K. Stevens, J.A. Marchenko, S.G. Yurchenko, A.V. Gabuzda, D.C. Lister, M.L. Forster, J.R.	Boston Lancashire MRAO MRAO St. Petersburg St. Petersburg Lebedev JPL Calif.-Berkeley	Monitoring bright AGNs at 7mm		0.7	13	24.0
BM106	Mutel, R.L. Molnar, L.A.	Iowa Iowa	Astrometric mapping of HR 1099: test of polar emission model		3.6	1	3.0
BM110	Mutel, R.L. Denn, G.R.	Iowa Iowa	Monitoring BL Lac		0.7, 1.3, 2	28	12.0
BU016	Ulvestad, J.	NRAO-Socorro	Radio quiet quasars		6	24	13
BV028	Jones, D.	JPL	Proper motion jet in NGC 4261		4	26	8
GB029	Bartel, N. Bietenholz, M.F.	York York	VLBI Imaging of Supernova 1986J in NGC 891		6 With EVN, Phased VLA	21	12.0
GP021	Peck, A. Taylor, G.	NRAO/NMIMT NRAO-Socorro	HI in absorption toward 1946+708		18 With EVN, Phased VLA	23	16.0
GS014	Snellen, I. Schilizzi, R.T. de Bruyn, A.G. Miley, G.K. van Langevelde, H.J.	Cambridge JIVE NFRA Leiden JIVE	Self similar evolution of young sources		18 With EVN	27	13.0
V008	Linfield, R.	JPL	Brightness temperature measurements of two very compact sources		6, 18 With UdGoTiAtMp	4, 5, 10	19.0
V026	Walker, R.C.	NRAO-Socorro	3C120 structure from 0.1 to 250 pc		6, 18 with EVN, phased VLA, GbGo	11, 24	23.0
V080	Xu, W.	JPL-IPAC	Observation of selected gamma ray blazars: 0917+449		6	7	9.0
V129	Inoue, M.	NAO-Nobeyama	Obscuring system in 3C84		6	12	10.0

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Progm	Observer	Affiliation	Program Title	Stns	Bands cm	Observing Date	Sched Hours
VT741	VSOG	ISAS	Orion maser		1.3	20	8.0
VT743	VSOG	ISAS	Orion Maser		1.3 correlation in Mitaka	21	6.0
W032	Romney, J.D. Alef, W. Backer, D.C. Benson, J.M. Dhawan, V. Kellermann, K.I. Readhead, A.C.S. Vermeulen, R.C. Walker, R.C.	NRAO-Socorro MPIFR Calif.-Berkeley NRAO-Socorro NRAO-Socorro NRAO-CV Caltech NFRA NRAO-Socorro	Core of 3C84		18 With RoGoUd	17	8.0
CMVA			Combined Millimeter VLBI Array	KO	0.1	17, 18	60.0
	Staff	NRAO	Maintenance Pointing and other non-tape activities Resting-Comp. for observing at high bitrat Software Y2K tests			26	72.0 8.0 43.0 11.0 9.0

The average downtime was 12 hours (4.0%)

Actual observing time was 290 hours

The VLBA was scheduled 68% of the time 441 hours of a possible (648 hours)

Astronomical Observations = 47% (302.0 hours)

Tests and Calibrations = 14% (96.0 hours)

Maintenance = 07% (43.0 hours)

Total Number of astronomical programs was 27

VLBA Utilization Report January 1999

Progm	Observer	Affiliation	Program Title	Stns	Bands cm	Observing Date	Sched Hours
BB099	Blundell, K. Willott, C. Rawlings, S. Beasley, T.	Oxford Oxford Oxford NRAO-CV	Core structure and spectra of a complete sample of radio sources		3.6	15	12.0
BB102	Beasley, A.J. Herrnstein, J.R.	NRAO-CV NRAO-Socorro	VLBA monitoring of WR140		2, 3.6, 6, 18 With phased VLA	4	8.0
BB103	Blundell, K. Close, L. Leahy, P.	Oxford Oxford Jodrell Bank	Low frequency study of hotspots in powerful radio sources		90 With VLA single antenna	31	18.0
BC087	Carilli, C. Menten, K. Reid, M.	NRAO-Socorro MPIFR CfA	Imaging the HC3N absorption in 1830-211		1.3, 2 With phased VLA	29	8.5
BD046	Diamond, P.J. Kemball, A.J. Boboltz, D.A.	NRAO-Socorro NRAO-Socorro USNO	Monitoring SiO masers through a cycle of Mira TX Cam		0.7 With VLA single antenna	5, 23	16.0
BD059	Desai, K.M. Lestrade, J.F. Fey, A.L. Briskin, W. Chatterjee, S. Lazio, T.J.W.	NRAO-CV Meudon USNO NRAO/Princeton NRAO/Cornell NRL	Extreme Scattering Event towards PSR J1643-12		18	15	3.0
BF045	Fey, A. Gaume, R.	USNO USNO	Gravitational lens candidate PKS 1445-161		3.6, 6, 18	6, 8	14.0
BG073	Gomez, J.L. Marscher, A.P. Alberdi, A.	IAA, Granada Boston IAA, Granada	3C 120 rapid variations		0.7, 1.3	10	12.0
BG077	Gurvits, L.I. Kellermann, K.I. Fomalont, E.B.	JIVE NRAO-CV NRAO-CV	Resolution matching survey of VSOP survey sources		2	2	24.0
BG084	Guirado, J.C. Marcaide, J.M. Perez-Torres, M.A. Ros, E.	Valencia Valencia Valencia MPIFR	Millimeter VLBI astrometry: absolute kinematics of 1928+738		0.7	3	10.0
BL073	Lister, M.L.	JPL	Low optical polarization blazars		0.7, 1.3	12	36.0
BM104	Minier, V. Booth, R. Conway, J. Phillips, C.	Onsala Onsala Onsala JIVE	12.2 GHz methanol masers in star forming regions		2	8	12.0
BM106	Mutel, R.L. Molnar, L.A.	Iowa Iowa	Astrometric mapping of HR 1099: test of polar emission model		3.6 With phased VLA	4, 17, 20	10.0
BM108	Moellenbrock, G. Roberts, D.H. Wardle, J.F.C.	ISAS/Brandeis Brandeis Brandeis	Polarization monitoring of gamma ray blazars		0.7, 1.3, 2, 3.6	7	12.0
BM109	Molnar, L.A. Mutel, R.L.	Iowa Iowa	Coordinated VLBA and X-ray observations of Algol		3.6 With phased VLA, EB	17, 20, 23	36.0
BM112	Moran, J.M. Greenhill, L.J. Herrnstein, J.R. Diamond, P.J. Bragg, A. Trotter, A.S. Henkel, C.	CfA CfA NRAO-Socorro NRAO-Socorro Harvard CfA MPIFR	Next generation study of NGC 4258 accretion disk physics		1.3	28	12.0
BP048	Perlman, E.S. Carilli, C. Minter, A. Langston, G. Ghigo, F. Stoeke, J. Conway, J.	STScI NRAO-Socorro NRAO-GB NRAO-GB NRAO-GB Colorado Onsala	Monitoring PKS 1413+135		0.7, 1.3, 2, 3.6	9	10.0
BP050	Peck, A. Rupen, M. Mioduszewski, A.	NRAO/NMIMT NRAO-Socorro JIVE-Socorro	HI absorption towards SS 433		18 With phased VLA	30	12.5
BU012	Ulvestad, J.S. Vestrand, W.T. Stacy, J.G. Biretta, J.A.	NRAO-Socorro New Hampshire New Hampshire STScI	Flaring CGRO Blazar 2255-282		0.7, 1.3, 2	6	8.0
BV027	Venturi, T. Dallacasa, D. Bondi, M. Stanghellini, C.	Bologna Bologna Bologna Noto	Polarimetric monitoring of blazars		1.3, 3.6 With EB	11	24.0

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Progm	Observer	Affiliation	Program Title	Stns	Bands cm	Observing Date	Sched Hours
BV032	Vermeulen, R.C. Taylor, G.B.	NFRA NRAO-Socorro	Neutral hydrogen in CSO 0831+557		18 With VLA single antenna	25	22.0
V022	Wilkinson, P.	Jodrell Bank	Investigation of three gravitational milli lens candidates		6	10	11.0
W015	Claussen, M.J. Ulvestad, J. Diamond, P. Braatz, J. Wilson, A. Henkel, C.	NRAO-Socorro NRAO-Socorro NRAO-Socorro CFA Maryland MPIfR	Low frequency structure of the NGC 1052 jet		18 With GO, TI, 6 w/GO, TI	18,21	11.0
W016	Gabuzda, D.C. Pushkarev, A.B. Kochanev, P.Y. Cawthorne, T.V.	Lebedev Lebedev Moscow Univ. Lancashire	Polarization of BL Lac objects		6 With phased VLA	30	8.0
W018	Snellen, I.A.G. Tschager, W. Schilizzi, R.T. deBruyn, A.G. Miley, G.K. Rottgering, H.J.A. vanLangevelde, H.J. Fanti, C. Fanti, R.	Cambridge Leiden JIVE NFRA Leiden Leiden NRAO-Socorro Bologna Bologna	GPS galaxies and quasars		18	15	10.0
W022	Reid, M.J. Greenhill, L.J. Argon, A.L. Moran, J.M.	CFA CFA CFA CFA	Nuclear Jet in M87		18 With GO, RO, TI	22	9.5
W059	Kedziora-Chudczer, Jauncey, D.L. Reynolds, J.E. Tzioumis, A.K. Wieringa, M.H. Nicolson, G.D. Quick, J.F.H. Walker, M.A. McCulloch, P.M.	Sydney Univ ATNF ATNF ATNF ATNF Hartebeesthoek Hartebeesthoek Sydney Univ Tasmania	Complete sample of intra-day variables		6	7	10.0
W079	Meier, D.L. Tingay, S.J. Preston, R.A. Murphy, D.W. Jones, D.L. Fujisawa, K. Hirabayashi, H. Kobayashi, H. Edwards, P.	JPL JPL JPL JPL JPL NAO ISAS ISAS ISAS	Centaurus A		6, 18 With Phased VLA, GoTiAt	20, 21	13.0
	Staff	NRAO	Maintenance			5, 14, 19, 26	89.5
			Pointing and other non-tape activities			4, 10, 24	22.0
			Resting-Comp. for observing at high bitrat			3, 4, 16,	39.5
			Software			7, 21	10.5

The average downtime was 24 hours (6.0%)

Actual observing time was 372.25 hours

The VLBA was scheduled 73% of the time 535.75 hours of a possible (720 hours)

Astronomical Observations = 54% (399.25 hours)

Tests and Calibrations = 10% (69.5 hours)

Maintenance = 09% (67.0 hours)

Total Number of astronomical programs was 20