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VLBA OBSERVATIONS OF RADIO REFERENCE FRAME SOURCES. III. ASTROMETRIC SUITABILITY OF AN ADDITIONAL 225 SOURCES

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ABSTRACT

We present simultaneous dual-frequency Very Long Baseline Array 2 and 8 GHz observations of 225 of the 560 extragalactic sources for which positions were reported by Johnston and coworkers and which are now part of the International Celestial Reference Frame. These observations represent the third and final in a series of observations intended to obtain single-epoch images of the entire set of sources presented by Johnston and coworkers and, together with previously reported observations, bring the total number of sources observed to 389. As with previous papers in this series, we use these data to quantify the magnitude of the expected effect of intrinsic source structure on astrometric bandwidth synthesis Very Long Baseline Interferometry observations and to calculate a source "structure index" for the observed sources. The structure index can be used as an estimate of the astrometric quality of the sources. Based on this indicator, correlations between the observed radio structure and the astrometric position accuracy and stability of the sources have been found. These correlations indicate that the more extended sources have larger position uncertainties and are less positionally stable than the more compact sources.

Subject headings: astrometry — quasars: general — radio continuum: galaxies — surveys

1. INTRODUCTION

A catalog of the radio positions of 560 extragalactic sources distributed over the entire sky was presented by Johnston et al. (1995). This catalog marked a milestone in defining a global, self-consistent, inertial celestial reference frame accurate on the milliarcsecond level. The most recent realization of the celestial frame, the International Celestial Reference Frame (ICRF), was the joint cooperative effort of a subgroup of the International Astronomical Union (IAU) Working Group on Reference Frames (WGRF), which was formed expressly for the purpose of creating the definitive catalog of extragalactic radio source positions using the best data and analysis methods available at the time the work was done (Ma et al. 1998). The ICRF supersedes the Johnston et al. (1995) frame and has replaced the FK5 optical catalog as the fundamental celestial reference frame. The ICRF is currently realized by the radio positions of 212 extragalactic objects. These "defining" sources set the direction of the ICRF axes and were chosen based on their observing histories and the stability and accuracy of their position estimates. The positions of the defining sources with the highest quality are estimated to be accurate at the 0.25 mas level. In addition, positions for 294 less observed "candidate" sources, along with 102 "other" sources with excessive position variation, were also given to densify the frame (Ma et al. 1998).

Despite its significance and stated accuracy, the ICRF suffers from errors thought to be due mostly to tropospheric propagation effects and to the apparent motions of the sources due to variable intrinsic structure. In this paper, we address only the effects of intrinsic source structure. Extragalactic radio sources are assumed to be very distant (typical redshifts of about 1.0) and thus should exhibit little or no detectable motions. However, most of the compact extragalactic sources that comprise the ICRF have variable emission structure on scales larger than the accuracy of their position estimates, which can, in some cases, induce temporal variations of their derived astrometric positions. Therefore, maintenance of the frame at a high level of accuracy requires measuring and monitoring changes in source structure in order to determine both the short- and the long-term effects of variable intrinsic source structure on astrometric position determination. To this end, we have initiated and are continuing an observing program to image the radio reference frame sources on a regular basis.[1]

Fey, Clegg, & Fomalont (1996) presented dual-frequency Very Long Baseline Array (VLBA)[2] observations of 42 of the sources in the Johnston et al. (1995) list. Fey & Charlot (1997) presented dual-frequency VLBA observations of an additional 127 sources, bringing the total number of sources observed to 169. In this paper, we report dual-frequency VLBA 2 and 8 GHz observations of an additional 220 sources together with repeated observations of five of the sources previously observed by Fey et al. (1996) and by Fey & Charlot (1997). This brings the total number of sources observed so far to 389. These observations represent the third and final in a series of observations intended to obtain single-epoch images of the entire set of sources presented by Johnston et al. (1995), at least in the northern hemisphere. Dual-frequency images now exist for approximately 97% of the Johnston et al. (1995) sources north of $-20°$ declination

[1] Data obtained to date are available for scientific use by anyone and can be accessed from the United States Naval Observatory's Radio Reference Frame Image Database at http://www.usno.navy.mil/RRFID/.

[2] The VLBA is a facility of the National Radio Astronomy Observatory (NRAO), which is operated by Associated Universities, Inc., under cooperative agreement with the National Science Foundation.

or approximately 90% of the ICRF sources north of $-20°$ declination.

Based on the initial work of Charlot (1990), Fey & Charlot (1997) used VLBA images of 169 sources to obtain a quantitative estimate of the contribution of the extended emission structure of the observed sources, measured at a single epoch, to the astrometric quantities used to determine Very Long Baseline Interferometry (VLBI) positions. We continue and extend this analysis using our new images and, based on our new results and those previously reported, discuss the relationship between extended structure and source position accuracy and stability on a statistical basis. Since the ICRF has superseded the Johnston et al. (1995) frame, our analysis is now presented in terms of the ICRF. The results reported here, by providing an indicator of the astrometric quality of each source, constitute an important first step toward long-term maintenance of the ICRF.

2. OBSERVATIONS AND DATA ANALYSIS

Observations were made during two consecutive 24 hr periods on 1997 January 10–11 and 11–12 using the VLBA telescope (Napier et al. 1994) of the NRAO. Eight intermediate frequencies (IFs; frequency channels) were recorded simultaneously, with four at the *S* band (centered at 2.22, 2.23, 2.29, and 2.32 GHz) and four at the *X* band (centered at 8.15, 8.23, 8.41, and 8.55 GHz). Observations on 1997 January 10–11 were recorded using an 8 MHz IF bandwidth for a total bandwidth of 32 MHz in each frequency band, while observations on 1997 January 11–12 were recorded using a 4 MHz IF bandwidth for a total bandwidth of 16 MHz in each frequency band. Observations were made in a dual-frequency bandwidth synthesis mode to facilitate delay measurements for astrometry. The multiplicity of channels allows for the determination of a precise group delay (Rogers 1970), while simultaneous observations in two bands allows for an accurate calibration of the frequency-dependent propagation delay introduced by the Earth's ionosphere. Results of the precise astrometry afforded by these observations will be presented elsewhere. Observations in this mode also allow simultaneous dual-frequency imaging, which is the focus of the work discussed here.

A total of 225 sources were observed using short-duration (≈ 3 minutes) "snapshots" over a number of different hour angles to maximize the (u, v)–plane coverage. Observations were scheduled to maximize mutual visibility between the VLBA antennas, so low-declination sources were usually observed less often than those at higher declinations. Most sources were observed during at least 3–4 scans.

The raw data bits were correlated with the VLBA correlator at the Array Operations Center in Socorro, New Mexico. The correlated data were calibrated and corrected for residual delay and delay rate using the NRAO Astronomical Image Processing System (AIPS). Initial amplitude calibration for each of the eight IFs was accomplished using system temperature measurements taken during the observations and the NRAO-supplied gain curves. Fringe fitting was done in AIPS using solution intervals equal to the scan durations and a point-source model in all cases. After correction for residual delay and delay rate, the data were written to FITS disk files. All subsequent processing was carried out using the Caltech VLBI imaging software, primarily DIFMAP (Shepherd 1997). After phase self-calibration with a point-source model, the 2 s correlator records were coherently averaged to 10 s records and then edited.

Overall amplitude calibration of the 1997 January 11–12 data was improved by observations of the compact source 1749+096. A single amplitude gain correction factor for 1749+096 was derived for each antenna for each IF, based on fitting a simple Gaussian source model to the 1749+096 visibility data after applying only the initial calibration based on the measured system temperatures and gain curves. Gain correction factors were calculated based on the differences between the observed and model visibilities. The resulting set of amplitude gain correction factors was then applied to the 1997 January 11–12 visibility data of 1749+096 as well as to the 1997 January 11–12 visibility data of the remaining sources. The 1997 January 10–11 data were adjusted in a similar manner, except the compact source 0851+202 was used for the calculation of gain correction factors using a source model obtained from fitting to the 0851+202 visibility data from 1997 January 11–12, on the quite reasonable assumption that any structure change of 0851+202 between the two days was insignificant. The benefit of such a scheme is that the two data sets have a common (absolute) flux density scale.

The visibility data for each frequency band were Fourier inverted and CLEANed using DIFMAP. DIFMAP combines the visibilities for each IF of an observation in the (u, v)–plane during gridding, taking into account frequency differences. However, DIFMAP makes no attempt to correct for spectral index effects. The spanned bandwidth of the four IFs in each band is relatively small (0.1 GHz [4% fractional bandwidth] at the *S* band and 0.4 GHz [5% fractional bandwidth] at the *X* band), so we assume that source structure and flux density variations across each of the two frequency bands are negligible.

The data were self-calibrated following the hybrid-imaging technique (Pearson & Readhead 1984) to correct for residual amplitude and phase errors. Most sources were processed using DIFMAP in an automatic mode (Pearson et al. 1994). The data were initially phase self-calibrated and imaged using uniform weighting in the (u, v)–plane before switching to natural weighting after several iterations. A point-source model was used as a starting model for the iterative procedure in all cases. Convergence was defined basically as the iteration when the peak in the residual image became less than a specified factor times the rms noise of the residual image from the previous iteration. Sources with emission structure too complex or too extended for the automatic imaging script to handle (approximately 16% of the sources at the *S* band and 18% at the *X* band) were imaged by hand, i.e., in an interactive mode, following the same prescription as that for the automatic mode. Convergence for these sources was subjective and was based on the iteration at which it was judged that further self-calibration would not significantly improve the resultant image.

3. OBSERVATIONAL RESULTS

Contour plots of the final naturally weighted images of 225 sources at both the *S* and *X* bands are shown in Figure 1. For convenience, the resulting images for each band are identified by only a single fiducial frequency (2.32 and 8.55 GHz, respectively) even though they were made using the data from all frequency channels. Table 1 lists parameters of

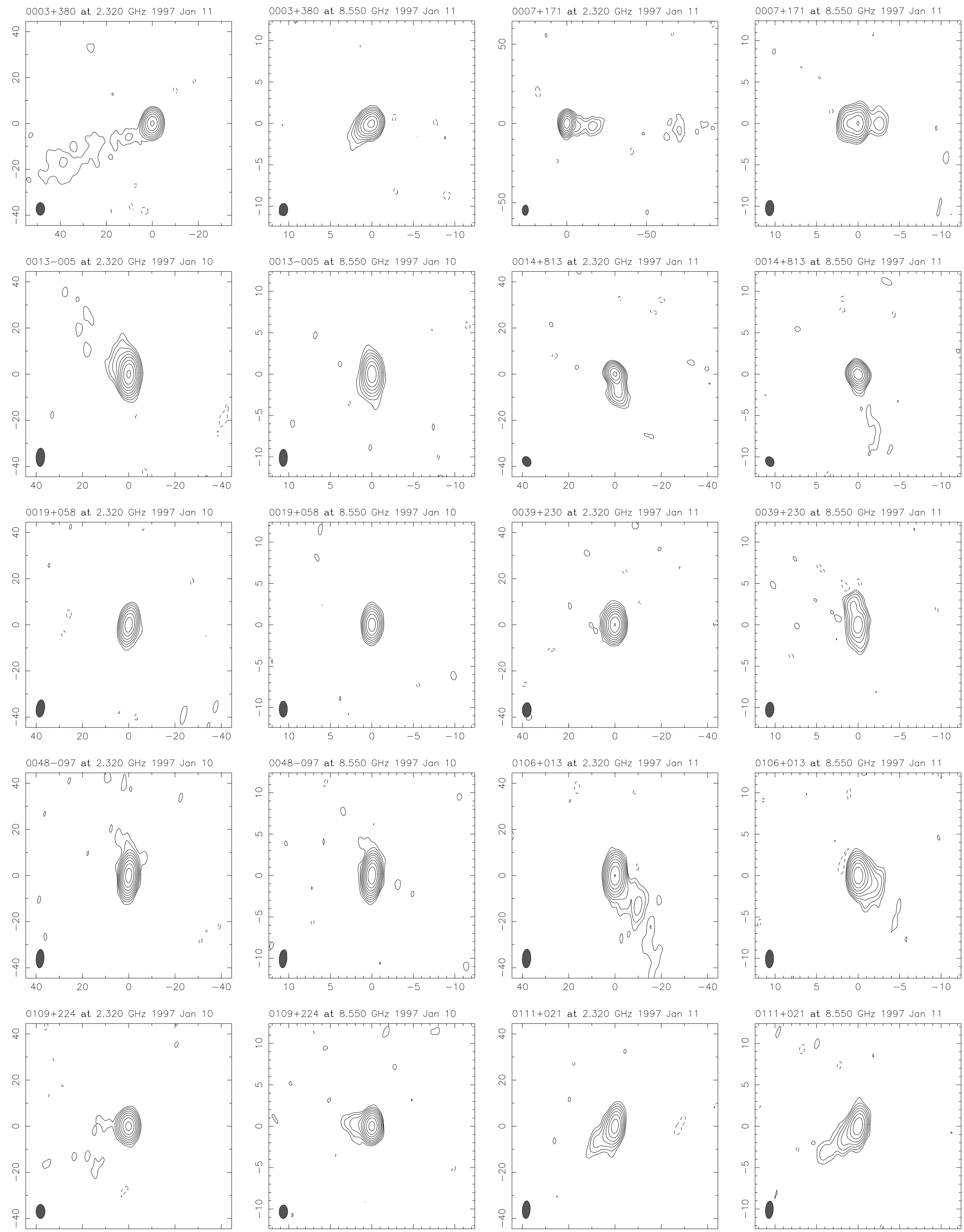


Fig. 1.—Contour plots of 225 extragalactic radio sources at both the *S* and *X* bands. Image parameters are listed in Table 1. Gaussian models fitted to the visibility data at each frequency are listed in Table 2. The scale of each image is in milliarcseconds. The FWHM Gaussian restoring beam applied to the images is shown as a hatched ellipse in the lower left of each panel. For convenience, the images for each band are labeled only by a single fiducial frequency (2.32 and 8.55 GHz, respectively) even though they were made using the data from all frequency channels (see § 2). Note that the names we use for three of the observed sources (0326 + 278 instead of 0326 + 277, 0405 + 305 instead of 0405 + 304, and 1856 + 736 instead of 1856 + 737) are slightly different from those used by Ma et al. (1998). These are, however, the same sources.

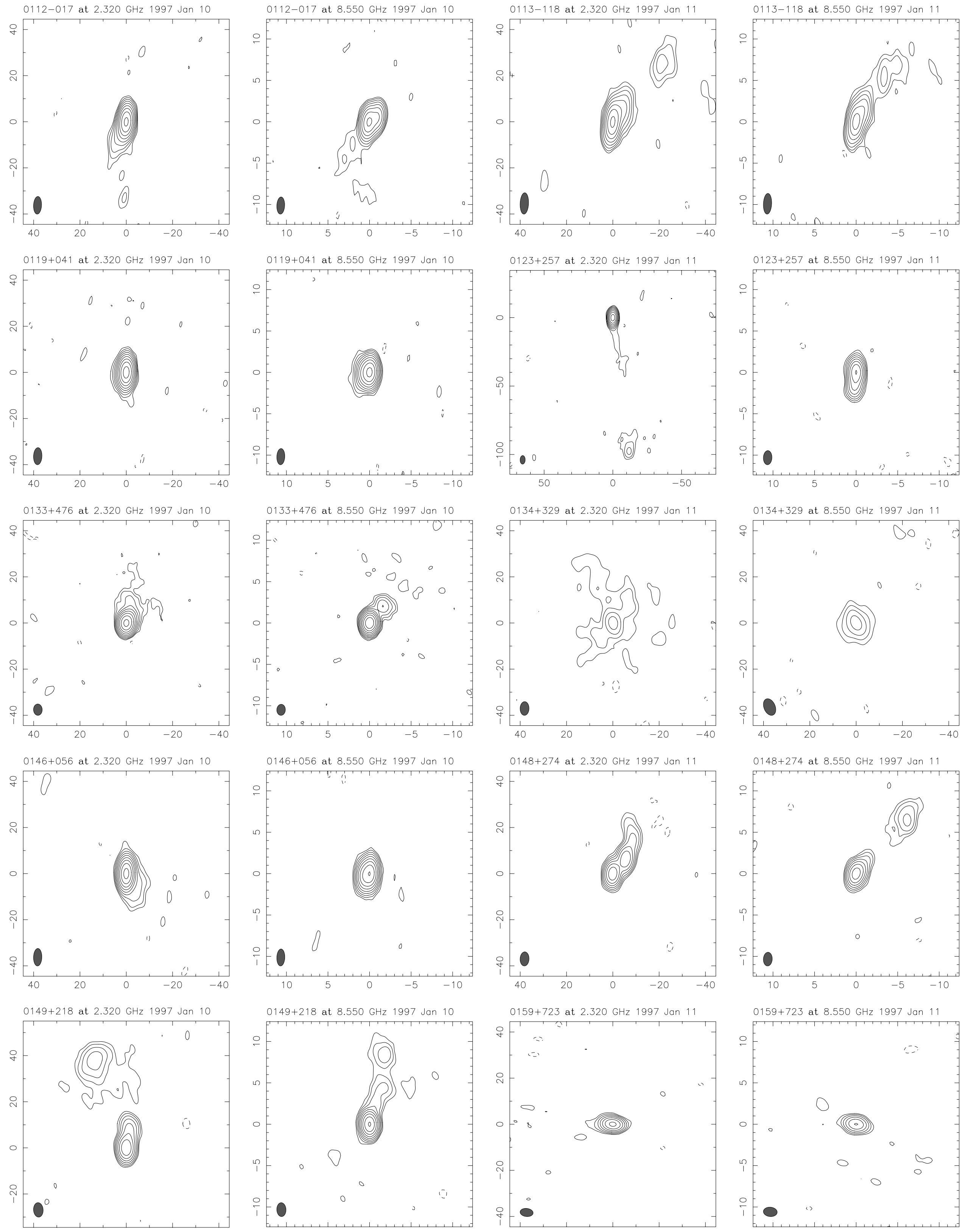


FIG. 1.—*Continued*

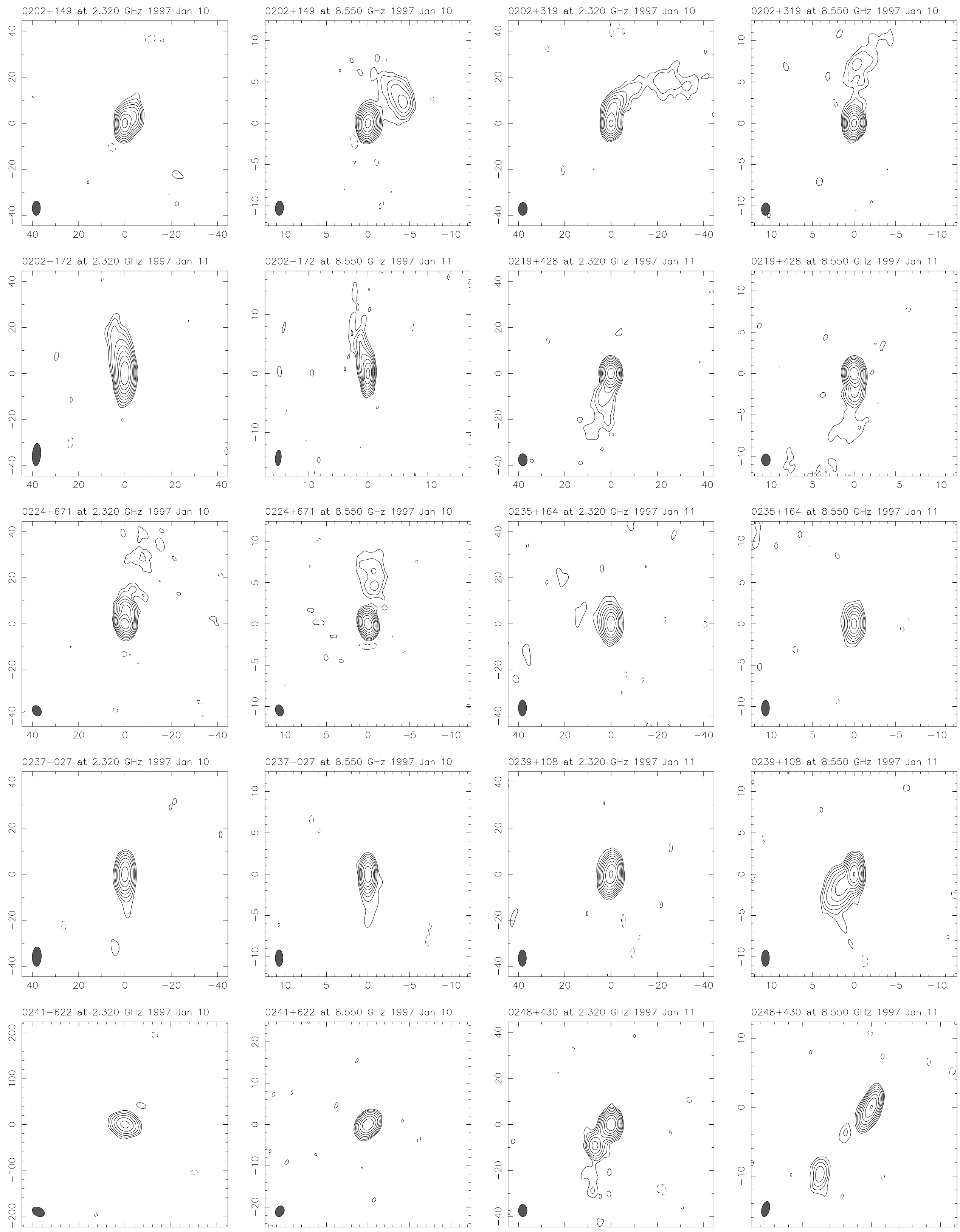
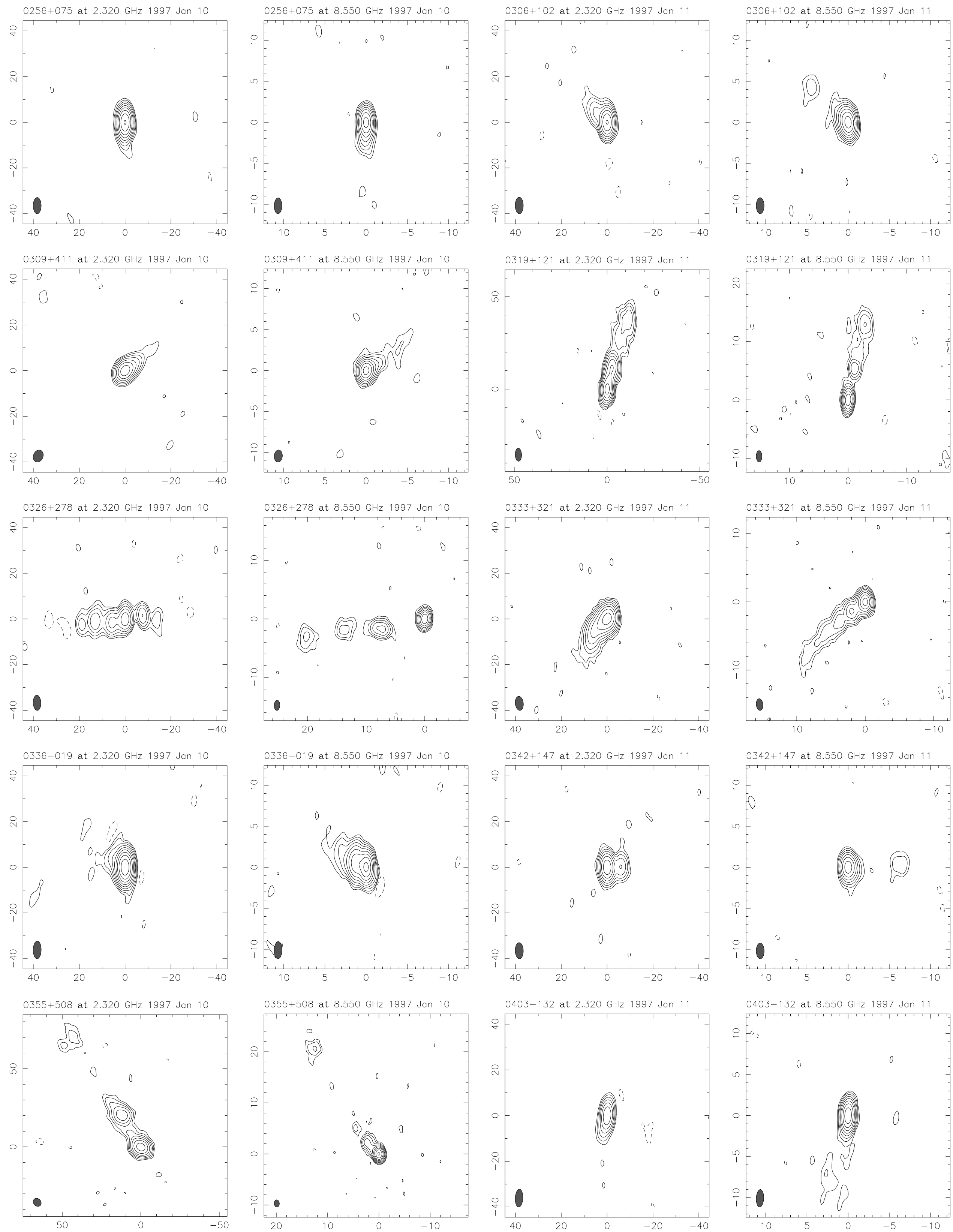


FIG. 1.—*Continued*



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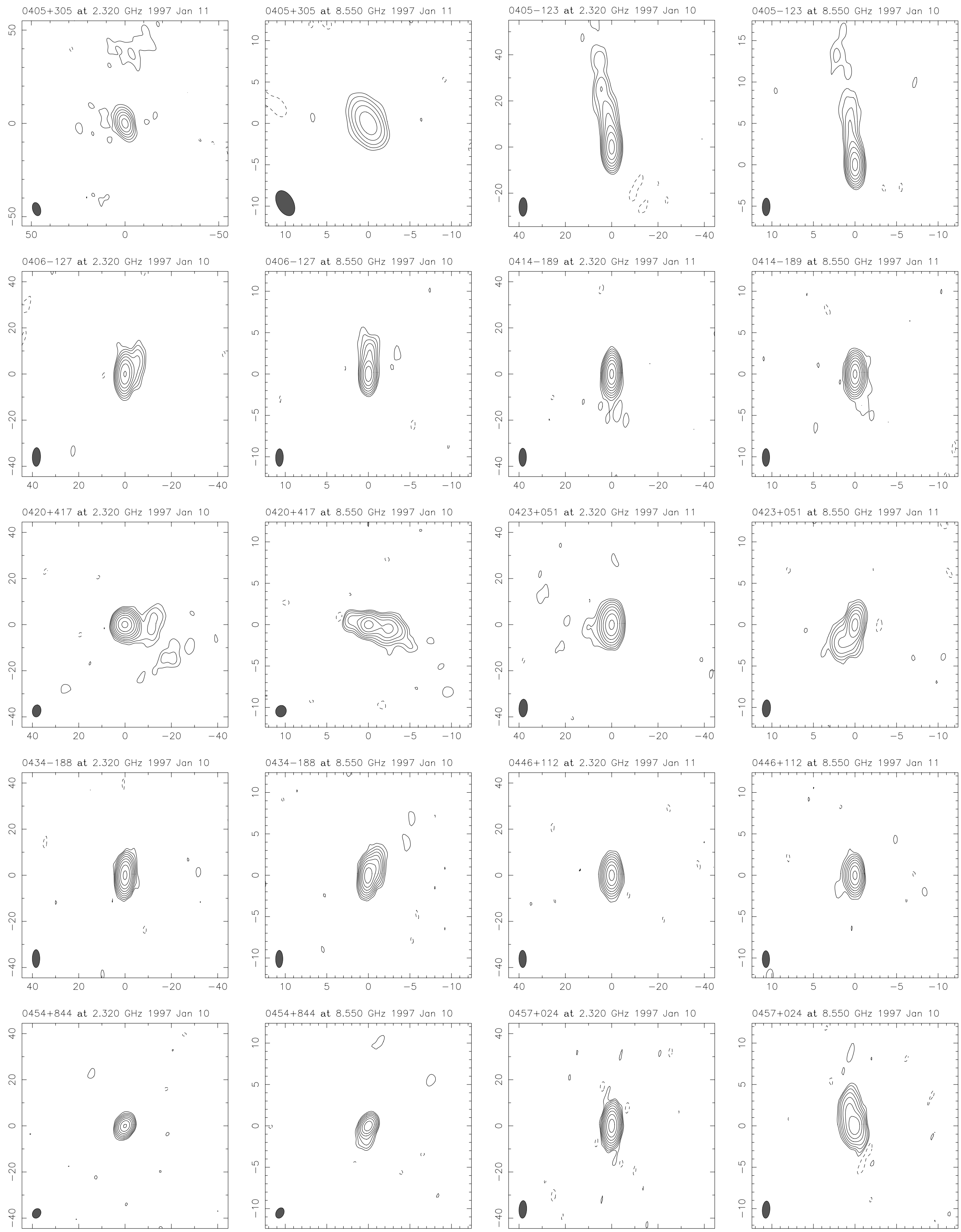


Fig. 1.—*Continued*

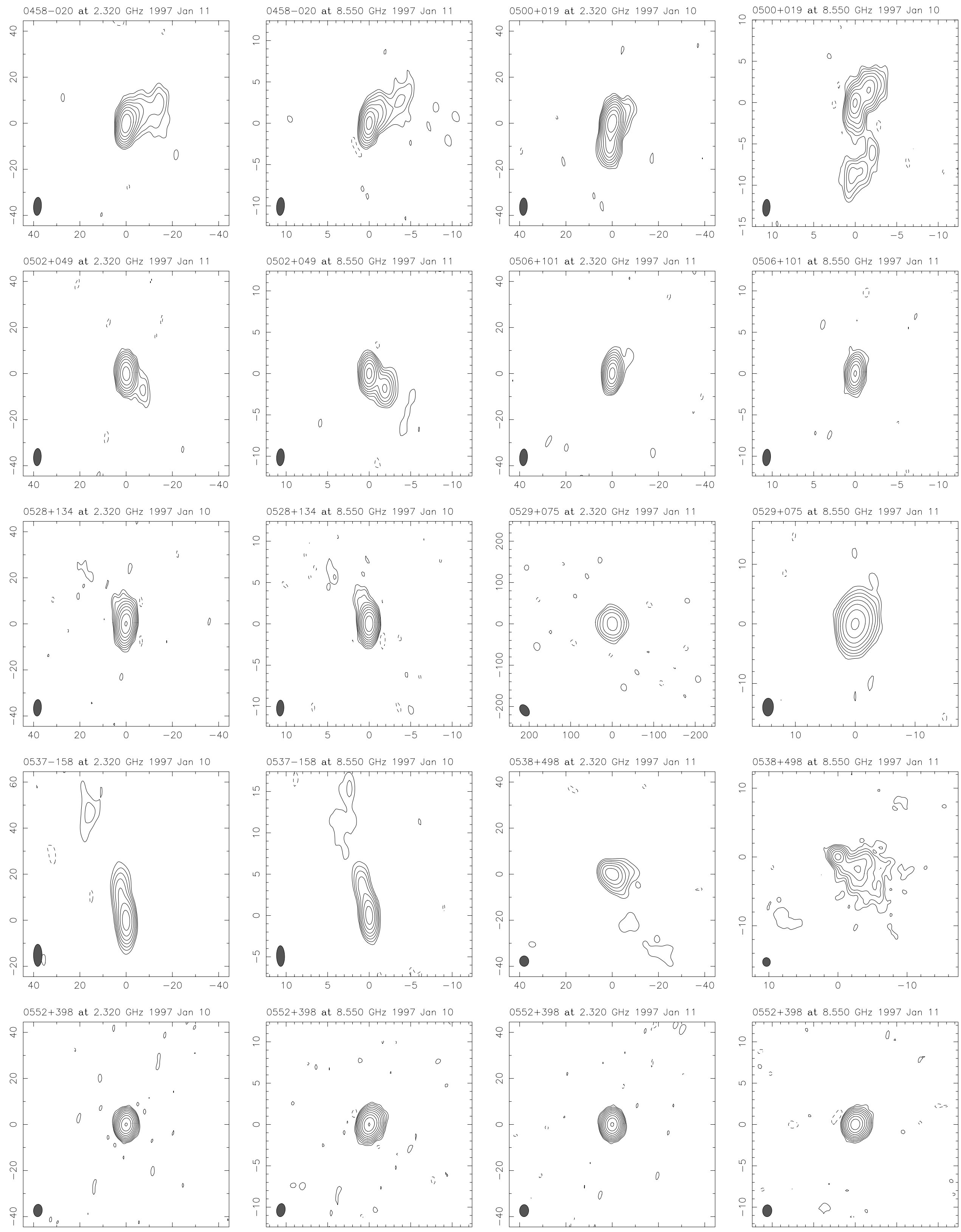


FIG. 1.—*Continued*

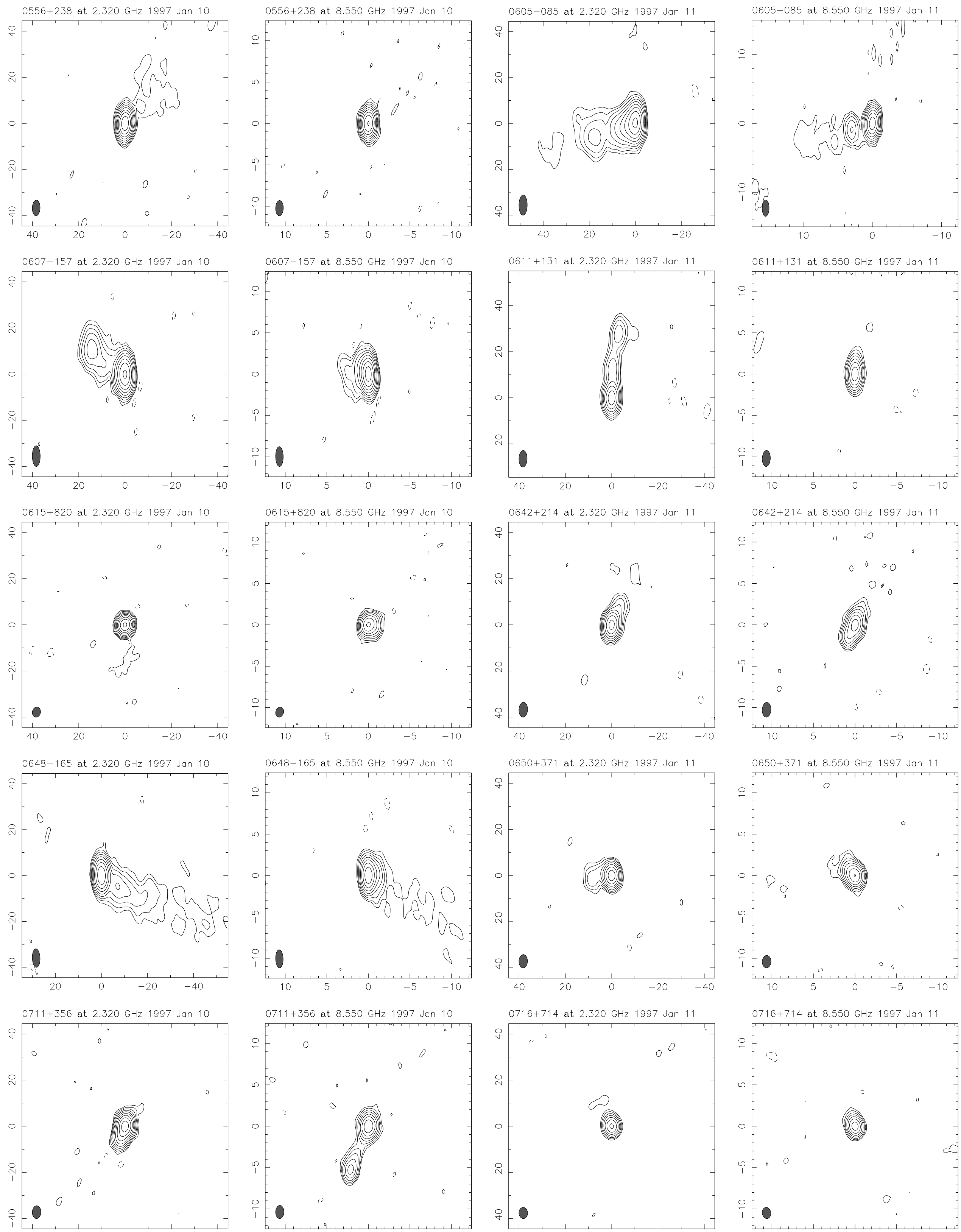


FIG. 1.—*Continued*

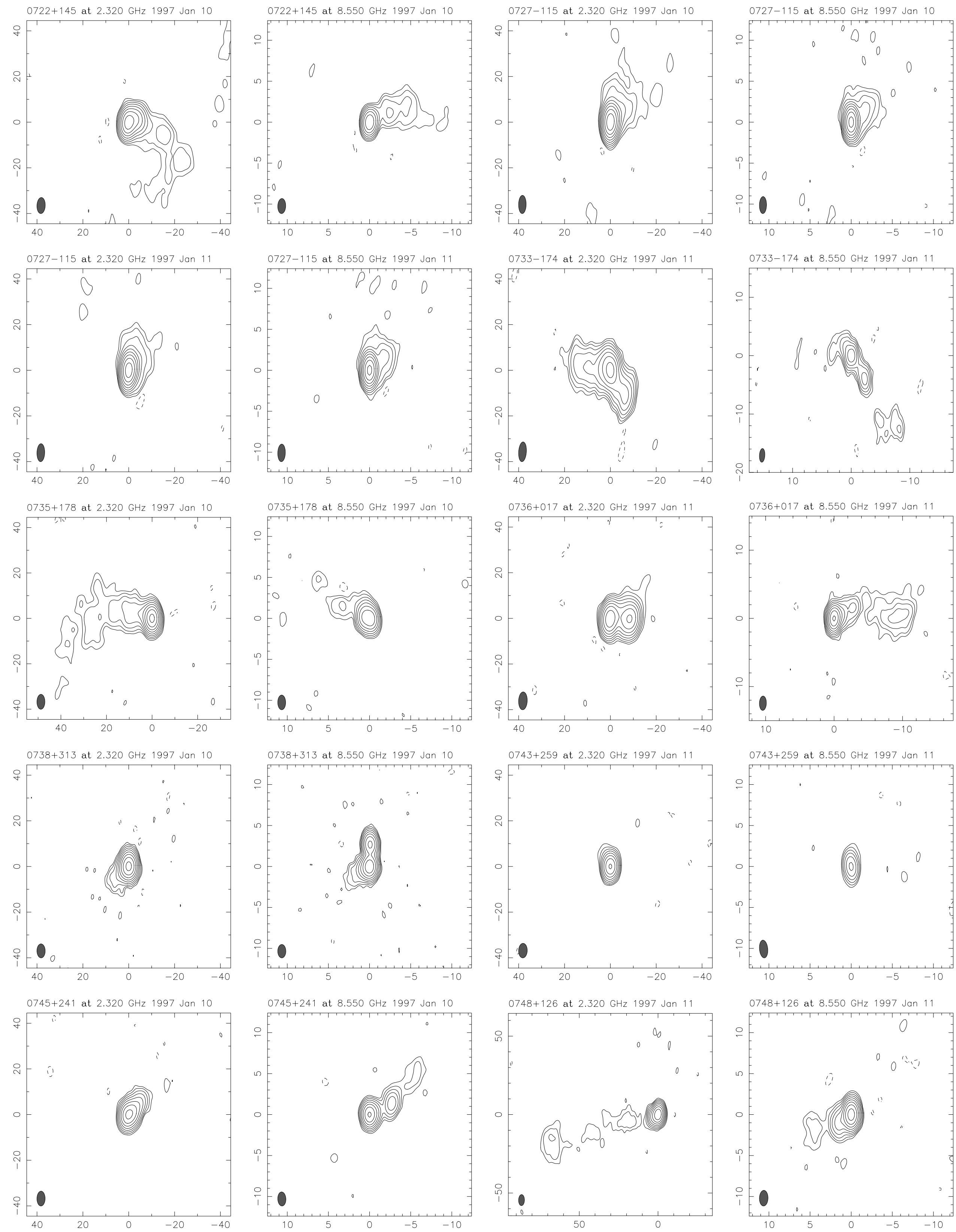


FIG. 1.—*Continued*

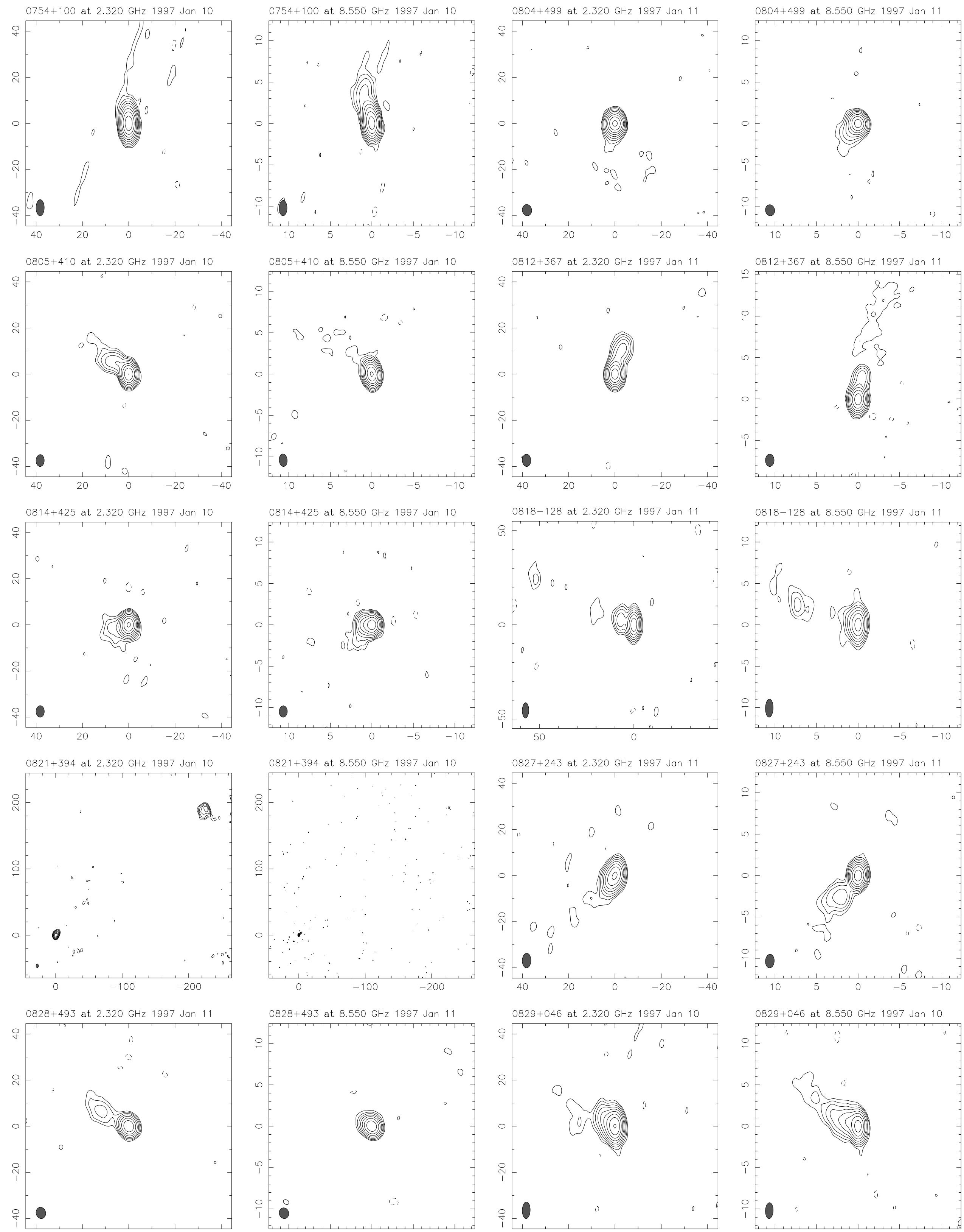


FIG. 1.—*Continued*

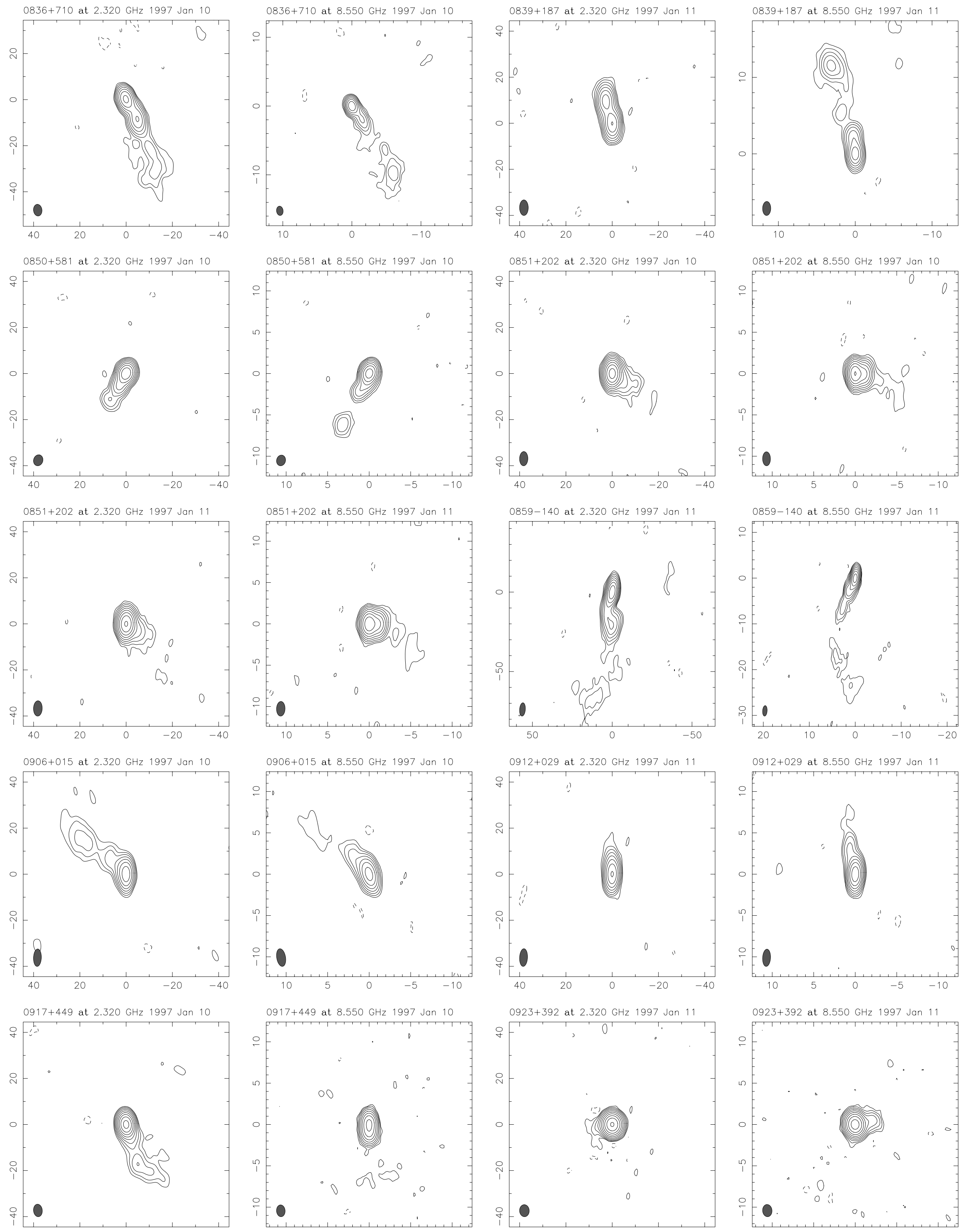


FIG. 1.—*Continued*

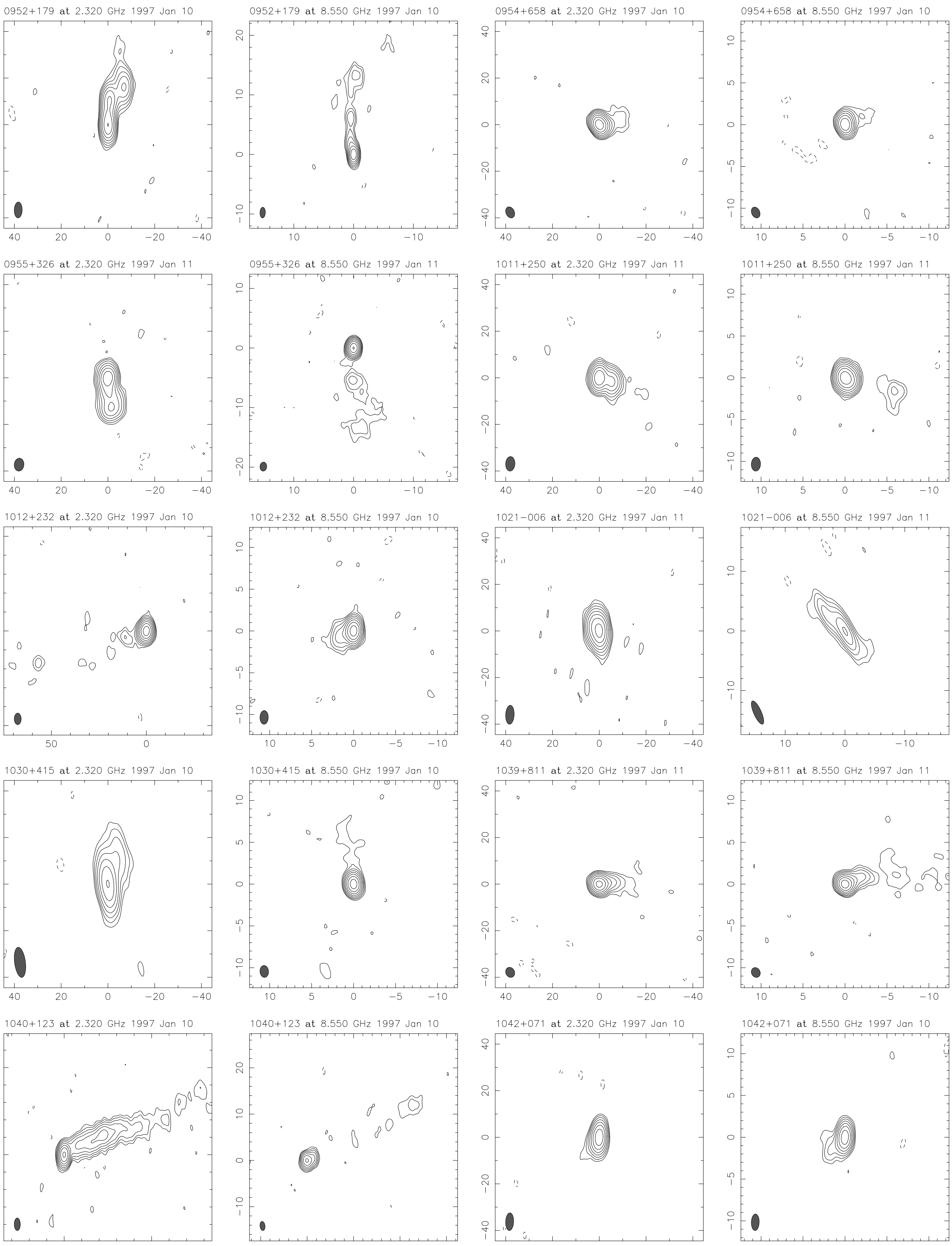


FIG. 1.—*Continued*

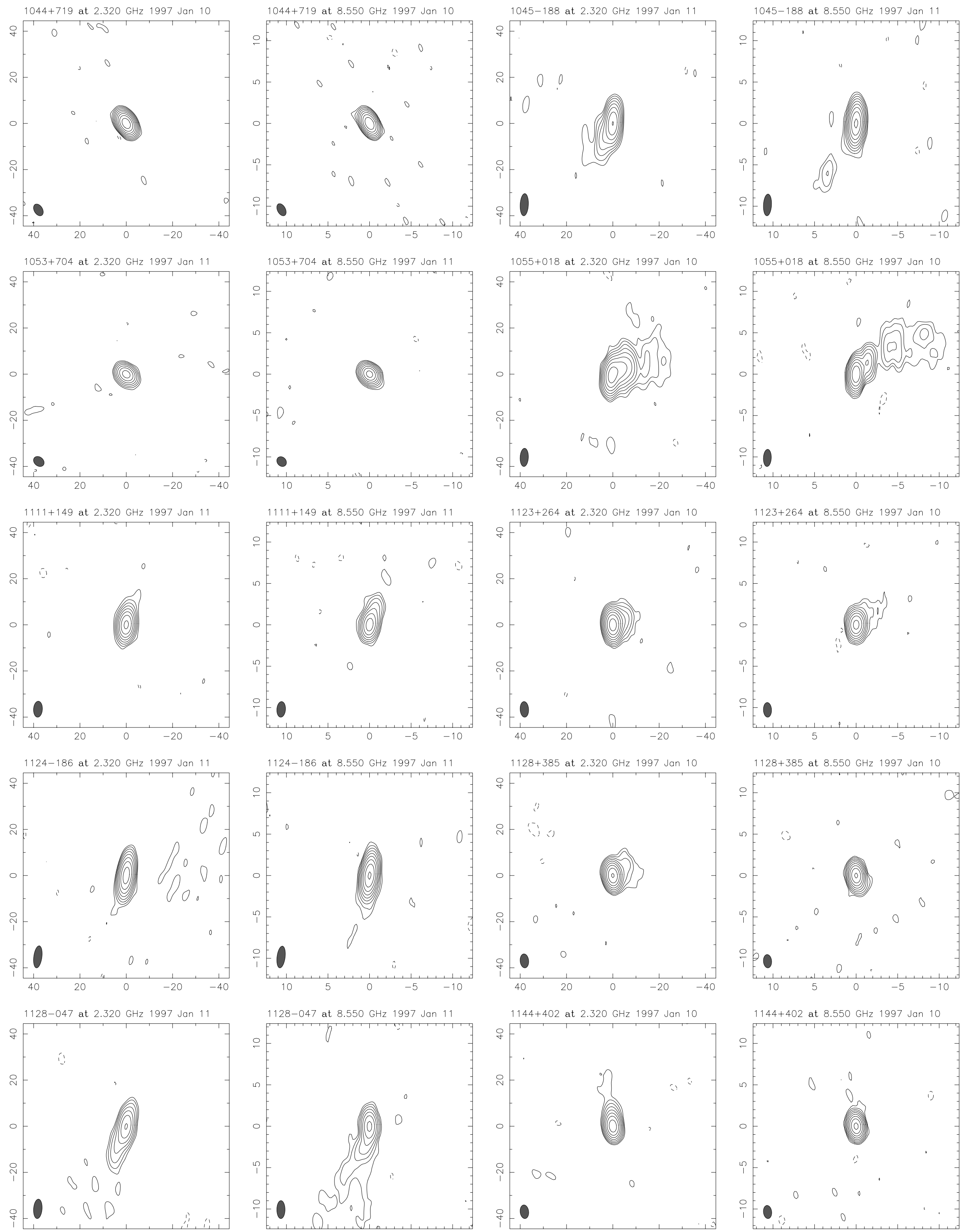


FIG. 1.—*Continued*

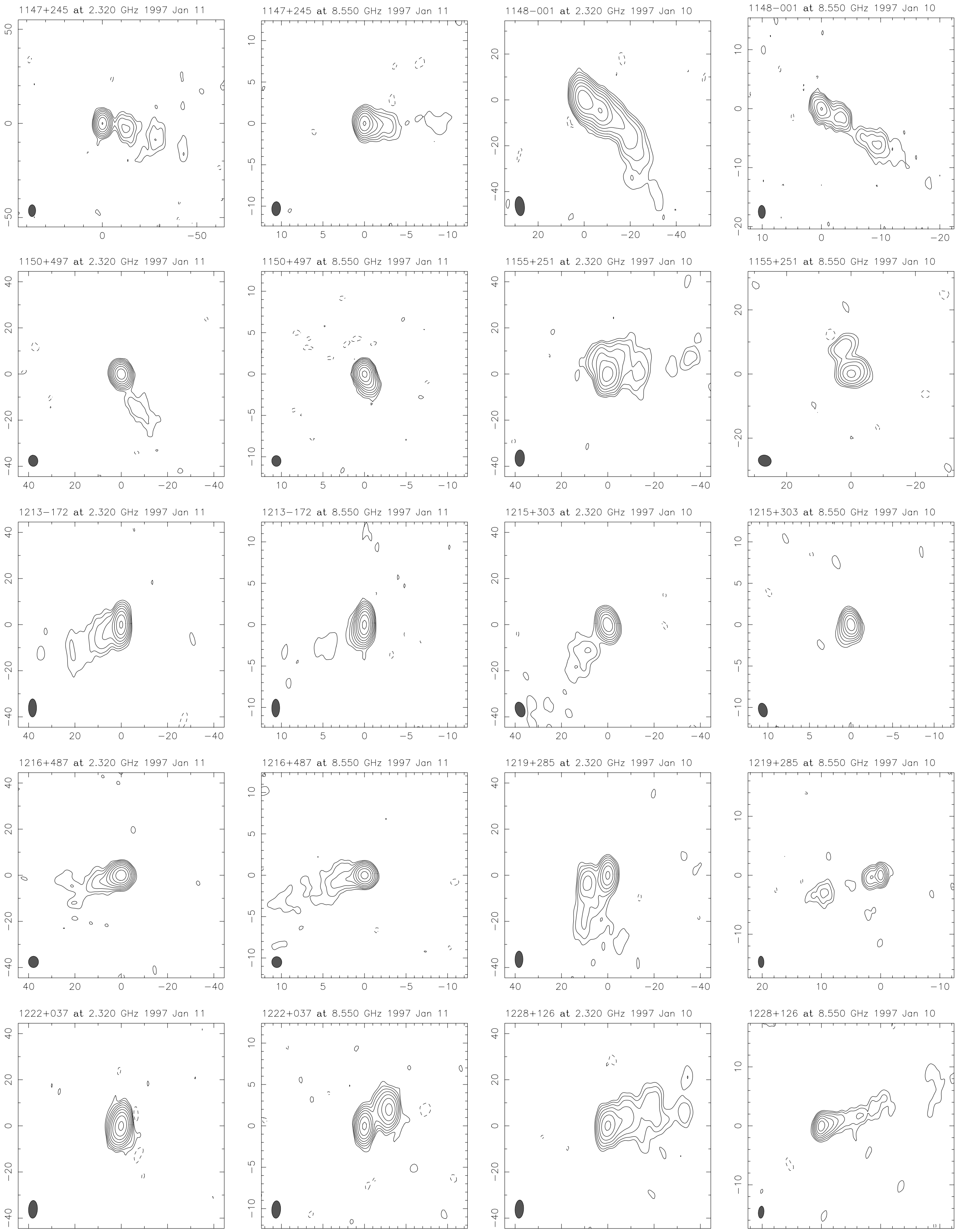


FIG. 1.—*Continued*

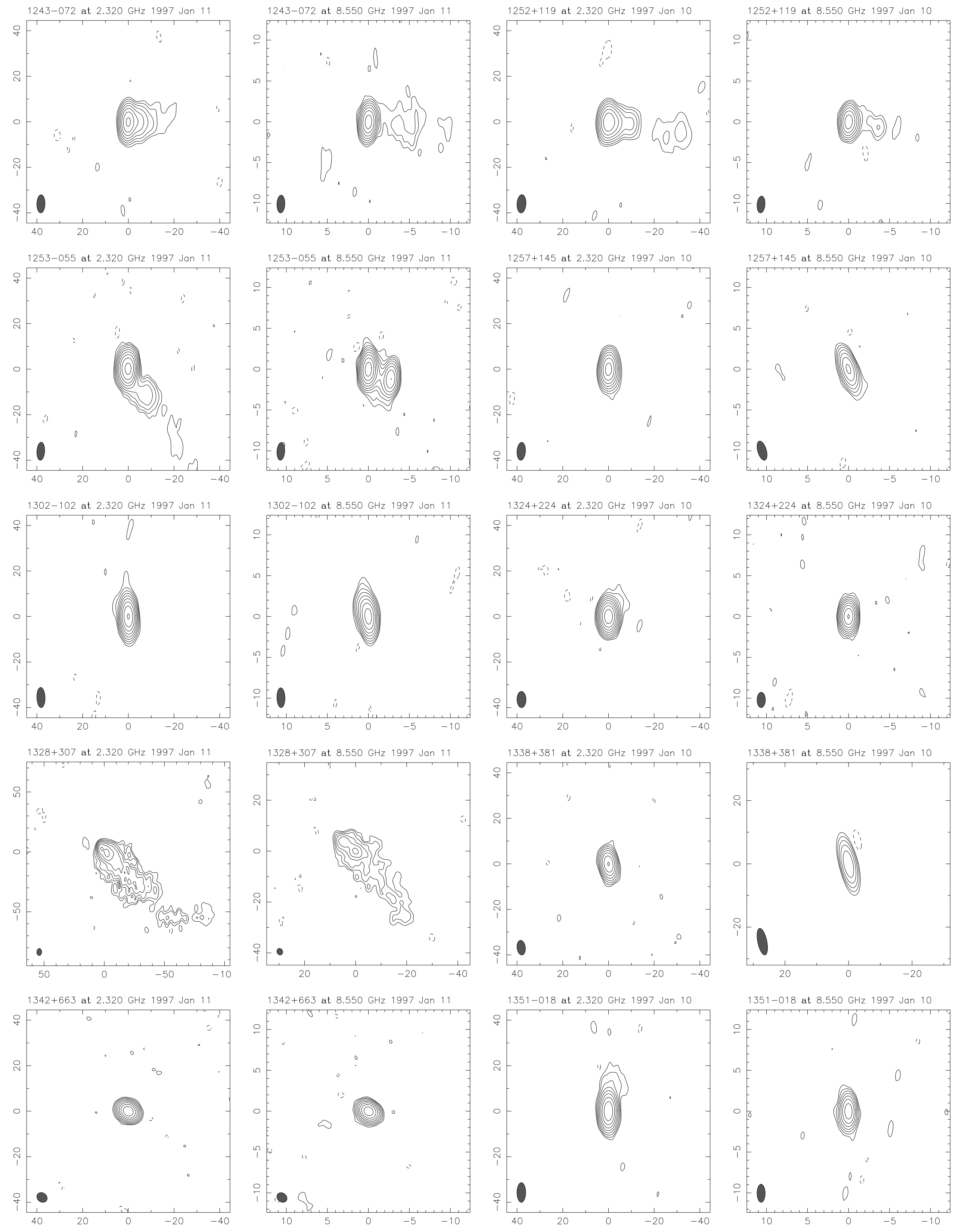


FIG. 1.—*Continued*

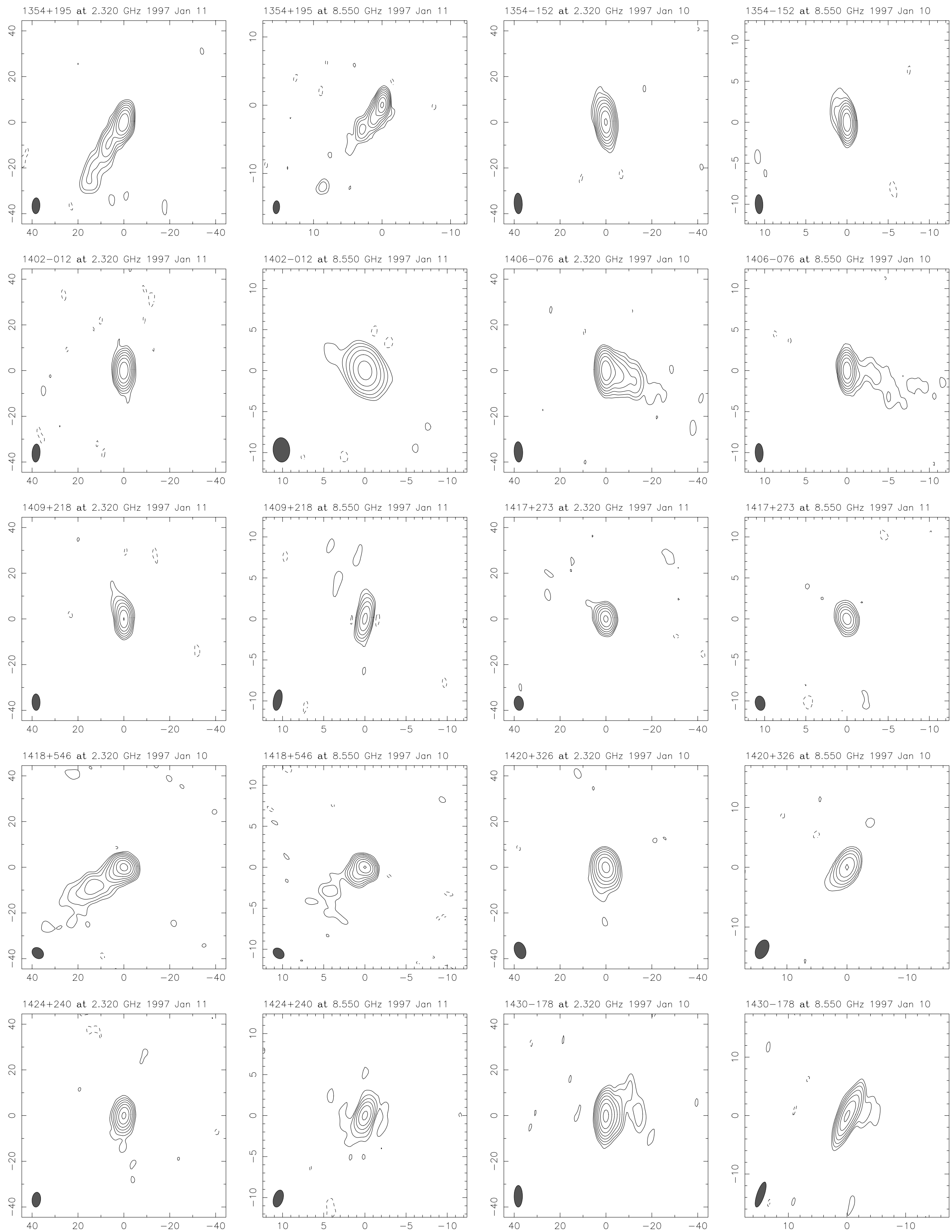
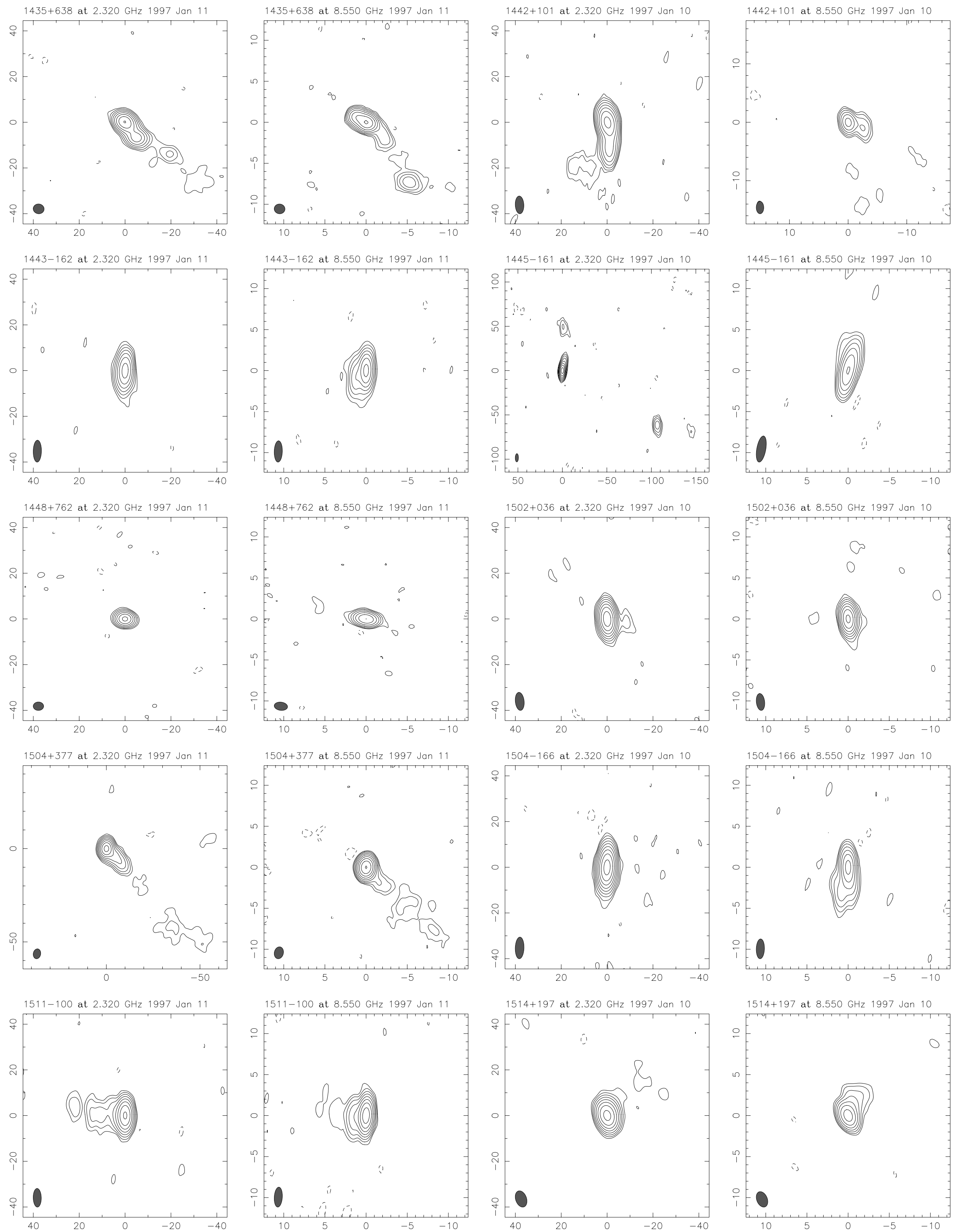


FIG. 1.—*Continued*



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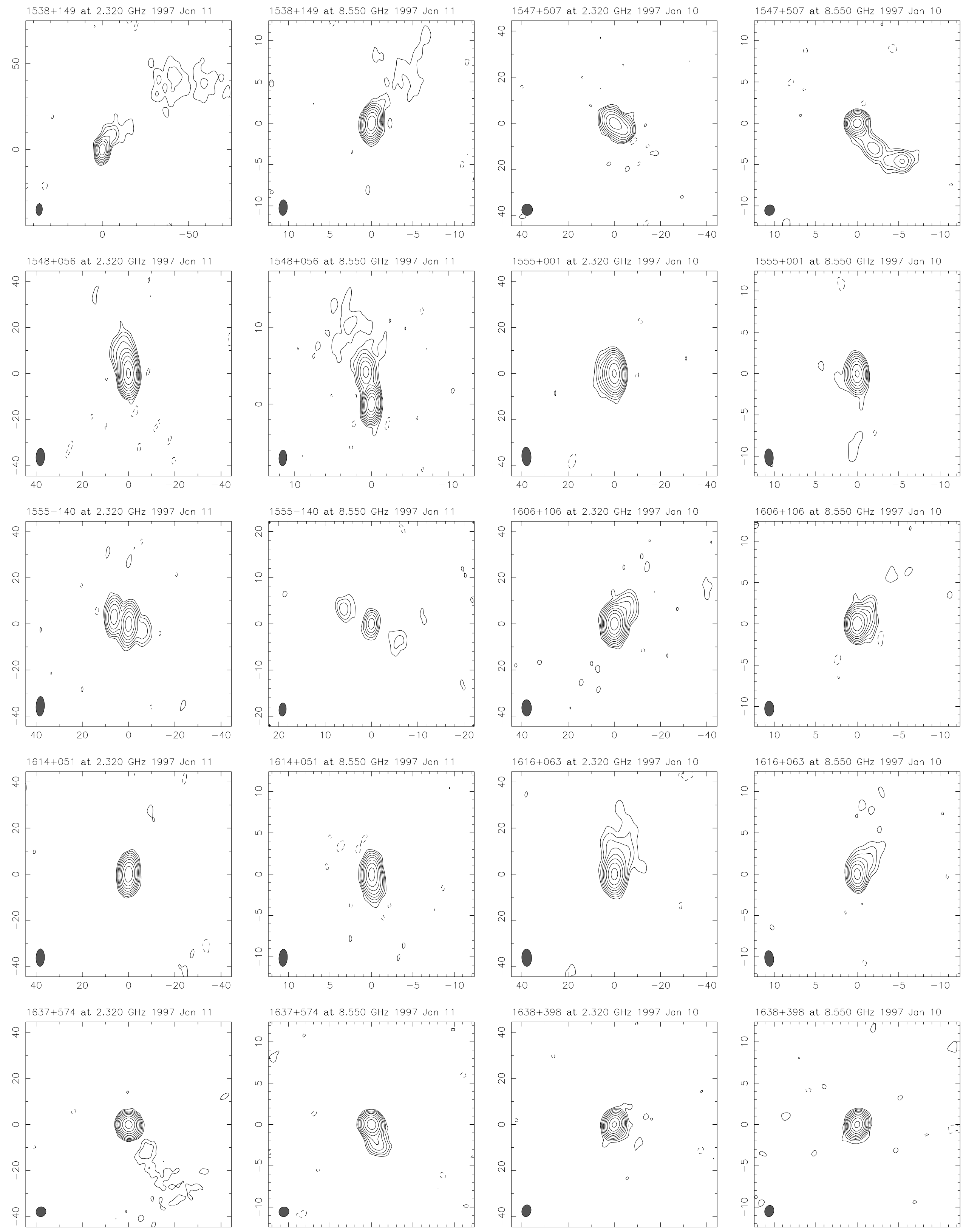


FIG. 1.—*Continued*

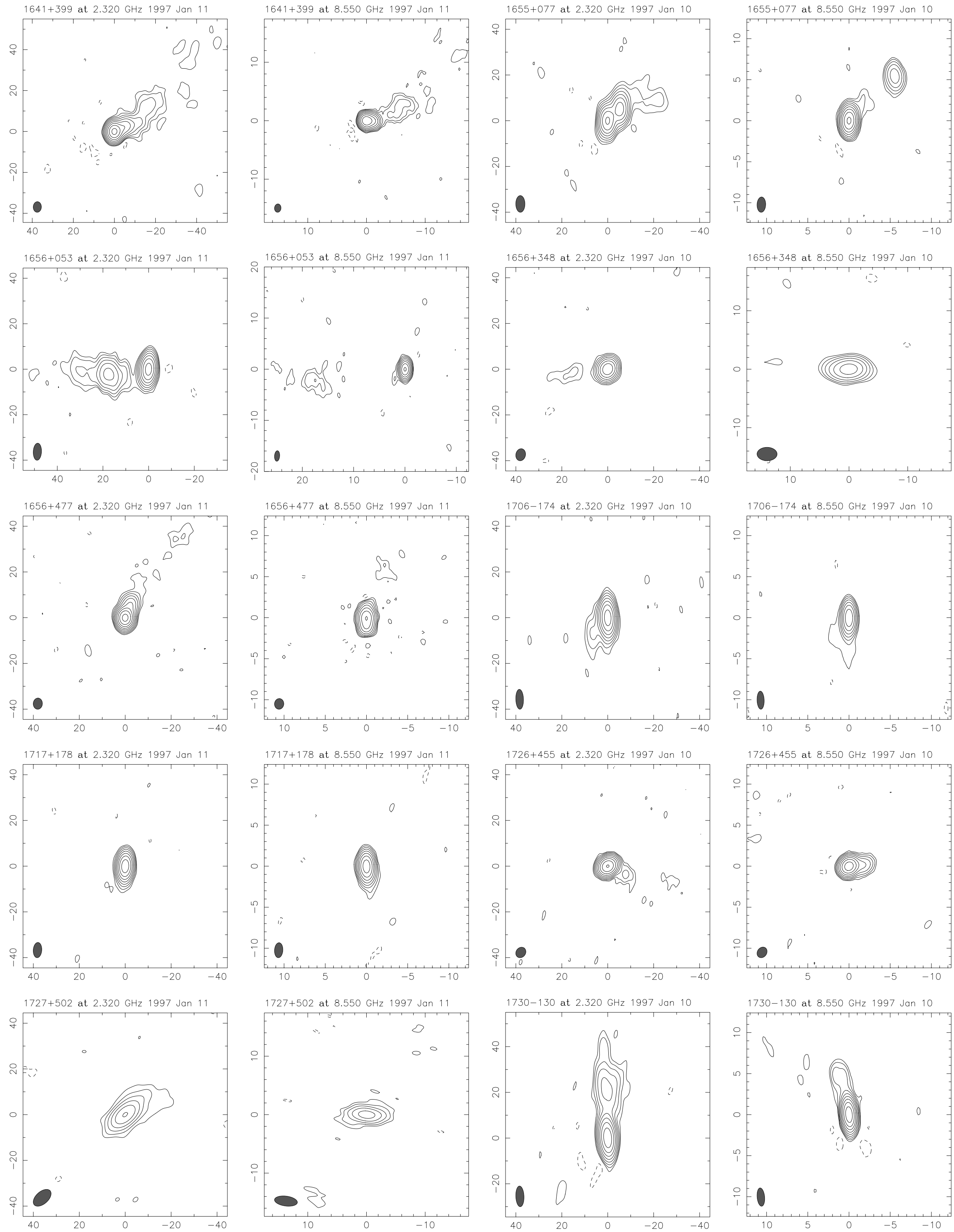


FIG. 1.—*Continued*

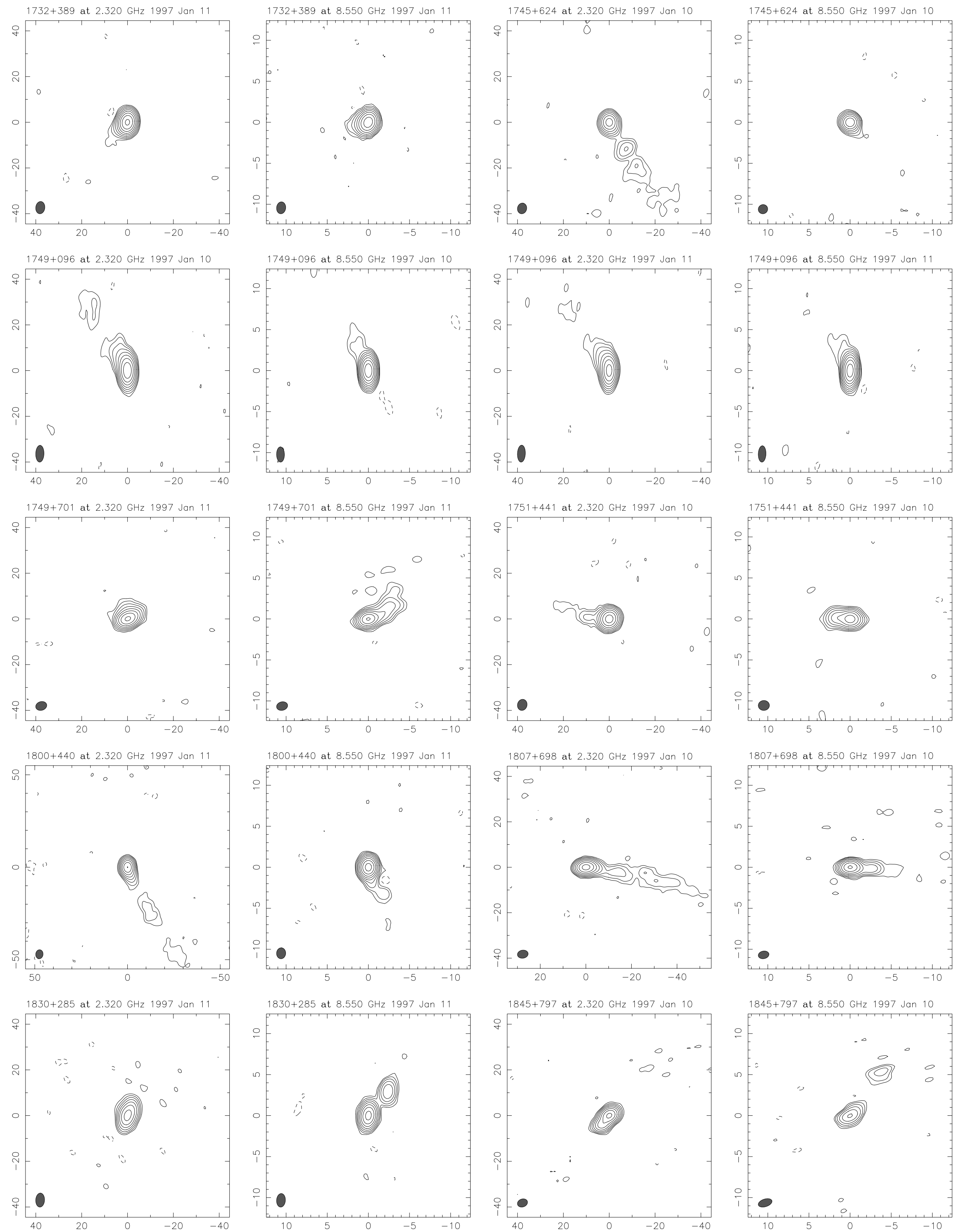


FIG. 1.—*Continued*

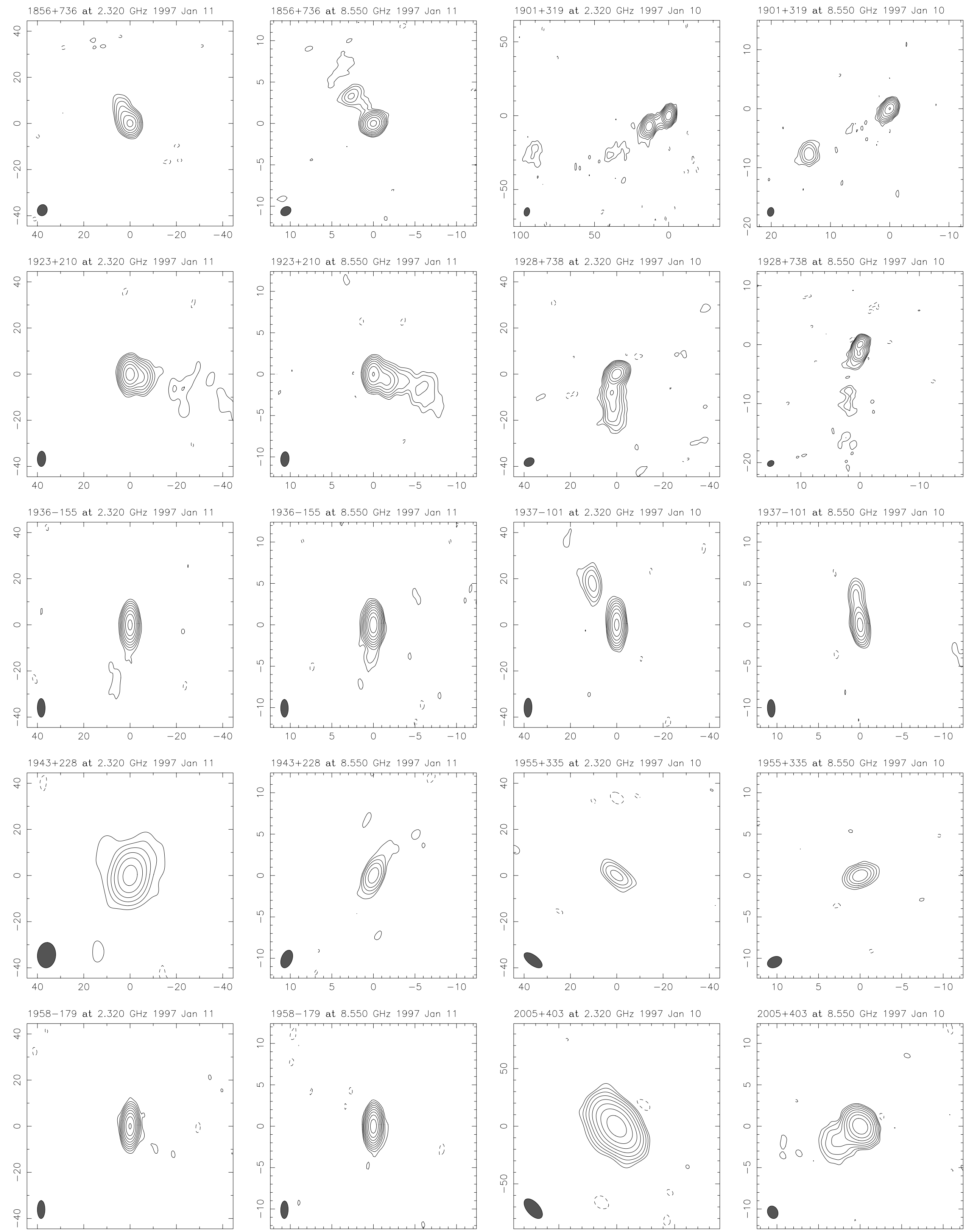
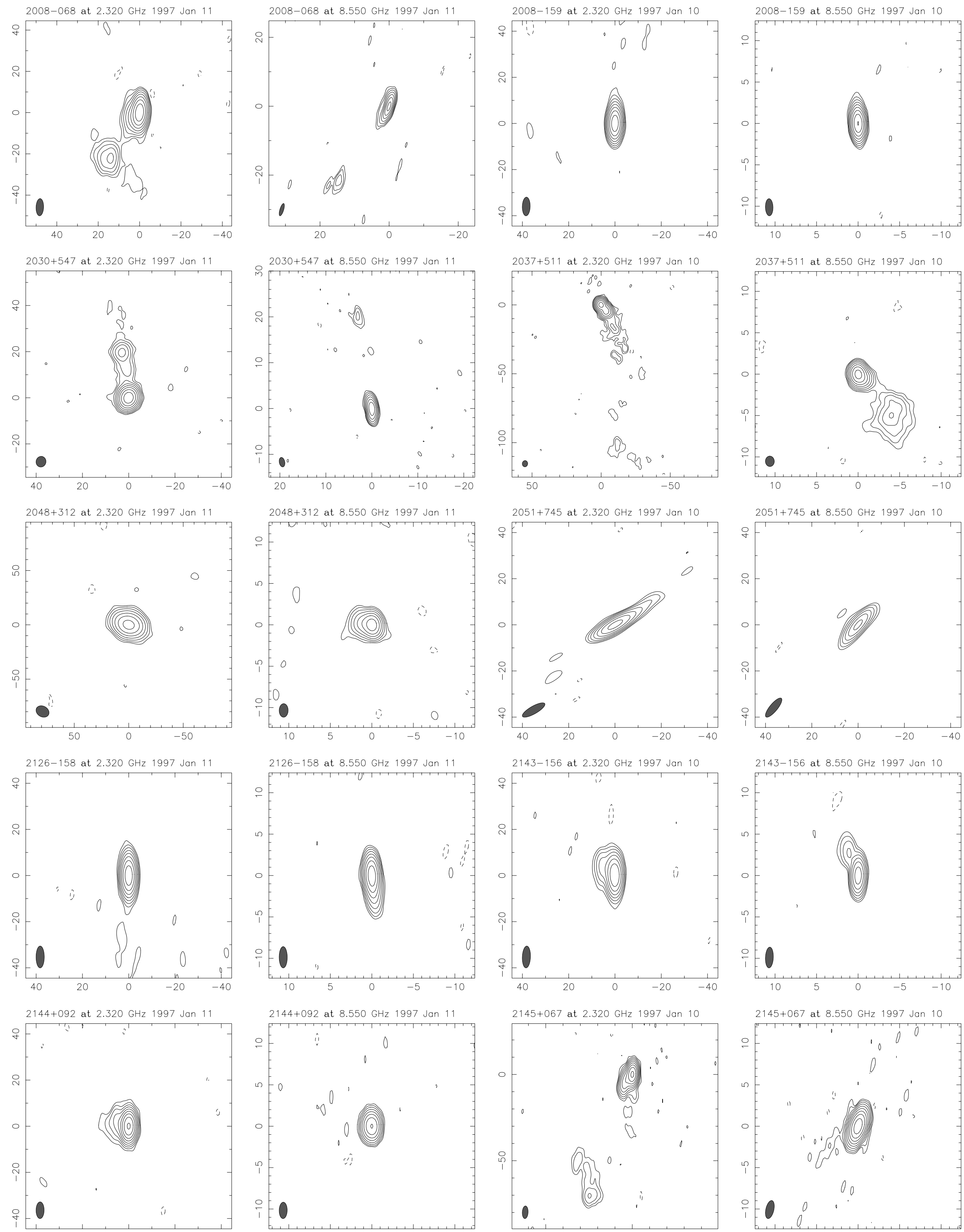


FIG. 1.—*Continued*



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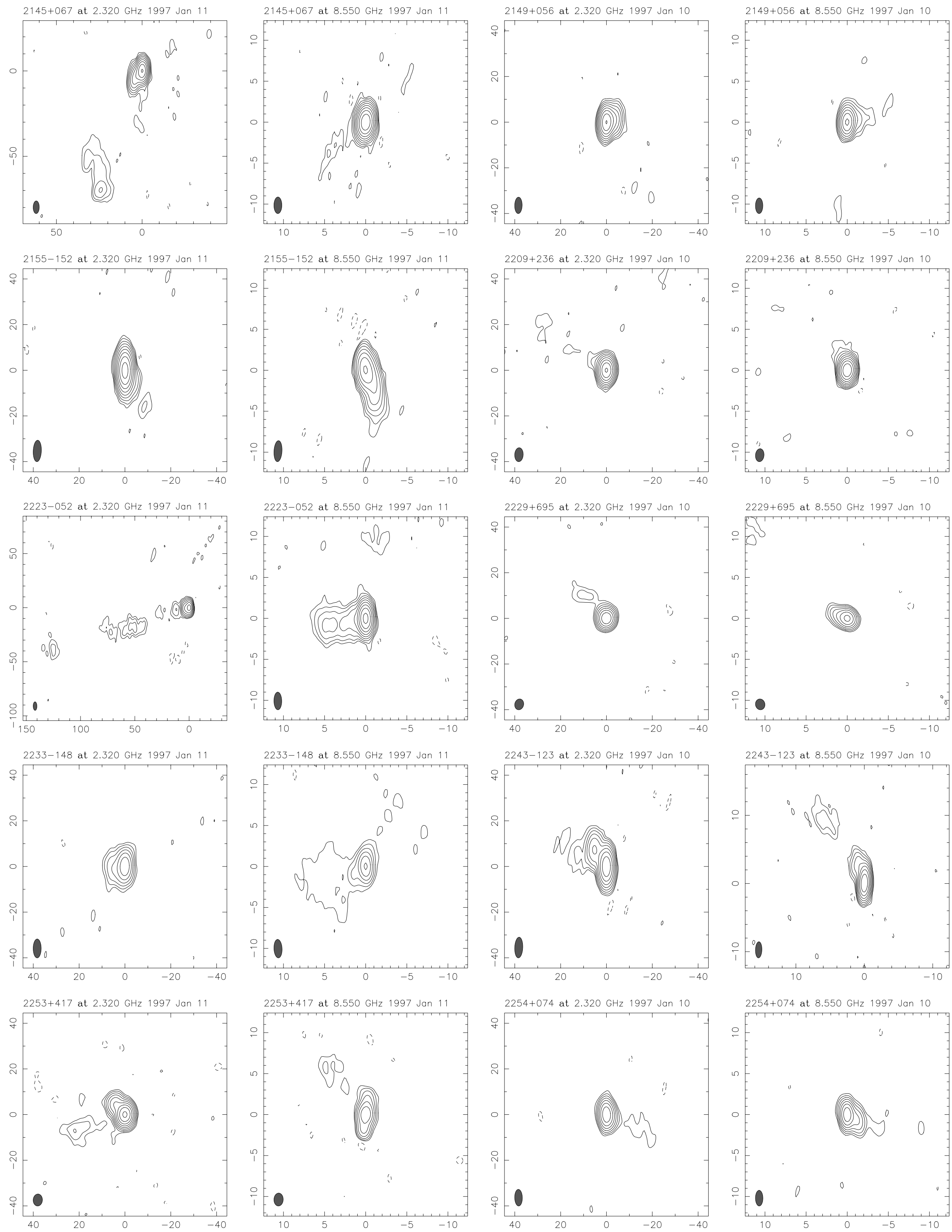

FIG. 1.—*Continued*

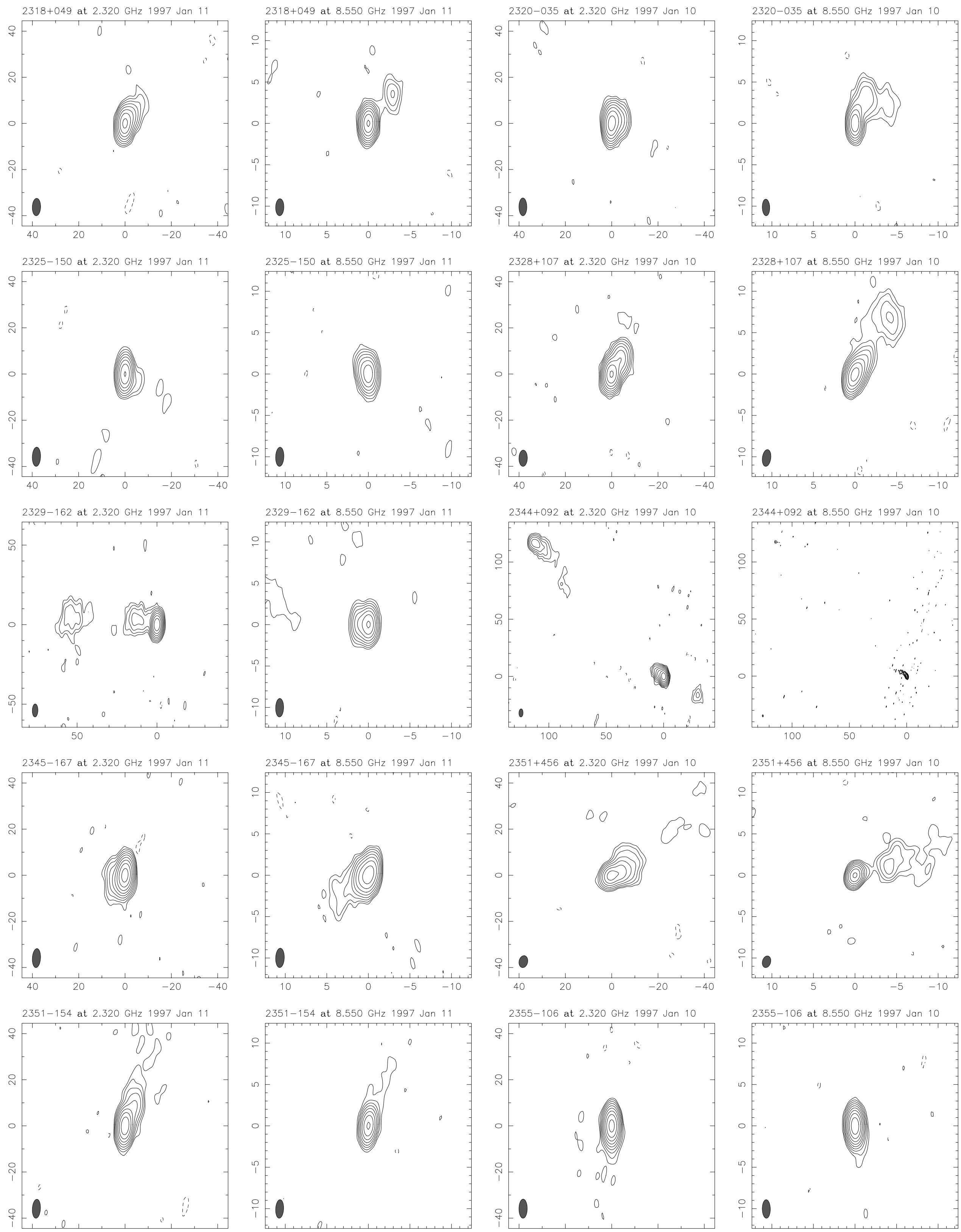

FIG. 1.—*Continued*

TABLE 1

PARAMETERS OF NATURALLY WEIGHTED IMAGES

		Beam[a]					
Source	ν (GHz)	a (mas)	b (mas)	ϕ (deg)	Peak (Jy beam^{-1})	rms[b] (mJy beam^{-1})	Contour Levels[c] (mJy beam^{-1})
0003+380......	2.32	5.6	3.8	0	0.56	1.4	$3.9 \times (1,..., 2^7)$
	8.55	1.5	1.0	−1	0.38	0.9	$2.4 \times (1,..., 2^7)$
0007+171......	2.32	6.6	3.9	−3	0.97	1.4	$4.2 \times (1,..., 2^7)$
	8.55	1.9	1.0	−2	0.33	0.9	$2.4 \times (1,..., 2^7)$
0013−005......	2.32	8.0	3.8	−2	0.79	1.0	$2.7 \times (1,..., 2^8)$
	8.55	2.1	1.0	−1	0.26	0.8	$2.2 \times (1,..., 2^6)$
0014+813......	2.32	4.5	3.6	29	0.62	1.4	$4.2 \times (1,..., 2^7)$
	8.55	1.2	1.0	28	0.58	0.8	$2.3 \times (1,..., 2^7)$
0019+058......	2.32	7.6	3.7	−8	0.25	0.9	$2.4 \times (1,..., 2^6)$
	8.55	1.9	1.0	0	0.16	0.6	$1.5 \times (1,..., 2^6)$
0039+230......	2.32	6.3	3.9	−2	1.04	1.3	$4.0 \times (1,..., 2^8)$
	8.55	1.8	1.0	−4	0.25	1.3	$4.3 \times (1,..., 2^5)$
0048−097......	2.32	8.0	3.4	−4	1.28	1.2	$3.3 \times (1,..., 2^8)$
	8.55	2.2	0.9	−4	1.27	0.8	$2.6 \times (1,..., 2^8)$
0106+013......	2.32	8.1	3.7	−3	1.67	2.0	$6.4 \times (1,..., 2^8)$
	8.55	2.2	1.0	−2	0.81	1.2	$3.5 \times (1,..., 2^7)$
0109+224......	2.32	6.2	3.9	0	0.51	1.0	$3.1 \times (1,..., 2^7)$
	8.55	1.6	1.0	−2	0.69	0.7	$1.9 \times (1,..., 2^8)$
0111+021......	2.32	7.7	3.4	−4	0.41	1.4	$4.2 \times (1,..., 2^6)$
	8.55	2.1	0.9	−4	0.29	0.9	$2.5 \times (1,..., 2^6)$
0112−017......	2.32	7.7	3.5	−3	1.08	1.2	$3.6 \times (1,..., 2^8)$
	8.55	2.1	0.9	−3	0.35	0.8	$2.3 \times (1,..., 2^7)$
0113−118......	2.32	9.3	3.6	−3	0.84	2.0	$5.5 \times (1,..., 2^7)$
	8.55	2.5	1.0	−3	0.34	1.3	$3.7 \times (1,..., 2^6)$
0119+041......	2.32	7.4	3.6	−2	1.17	1.1	$3.3 \times (1,..., 2^8)$
	8.55	2.0	1.0	−2	0.61	0.7	$1.9 \times (1,..., 2^8)$
0123+257......	2.32	6.3	3.7	−1	0.84	1.6	$4.5 \times (1,..., 2^7)$
	8.55	1.7	1.0	−2	0.32	0.9	$2.4 \times (1,..., 2^7)$
0133+476......	2.32	4.9	3.7	2	1.55	1.6	$4.8 \times (1,..., 2^8)$
	8.55	1.3	1.0	−3	1.33	0.9	$2.7 \times (1,..., 2^8)$
0134+329......	2.32	5.9	3.9	−1	0.27	9.9	$21.7 \times (1,..., 2^3)$
	8.55	7.6	4.9	23	0.17	6.0	$15.1 \times (1,..., 2^3)$
0146+056......	2.32	7.6	3.6	−2	1.07	1.1	$3.3 \times (1,..., 2^8)$
	8.55	2.1	1.0	−2	0.60	0.7	$2.2 \times (1,..., 2^8)$
0148+274......	2.32	6.1	3.9	−2	0.47	1.4	$4.1 \times (1,..., 2^6)$
	8.55	1.7	1.1	−3	0.29	1.0	$2.9 \times (1,..., 2^6)$
0149+218......	2.32	6.3	4.1	4	0.61	1.6	$4.8 \times (1,..., 2^6)$
	8.55	1.7	1.1	2	0.72	0.9	$2.6 \times (1,..., 2^8)$
0159+723......	2.32	5.6	3.5	84	0.24	1.0	$3.1 \times (1,..., 2^6)$
	8.55	1.7	1.1	85	0.14	1.4	$4.2 \times (1,..., 2^5)$
0202+149......	2.32	6.3	3.5	−1	1.84	3.6	$10.9 \times (1,..., 2^7)$
	8.55	1.8	1.0	−3	1.19	1.2	$3.5 \times (1,..., 2^8)$
0202+319......	2.32	5.7	3.8	−2	0.40	0.9	$2.6 \times (1,..., 2^7)$
	8.55	1.5	1.0	−5	0.67	0.7	$2.0 \times (1,..., 2^8)$
0202−172......	2.32	9.8	3.6	−4	1.08	1.6	$4.5 \times (1,..., 2^7)$
	8.55	2.7	1.0	−4	0.50	1.1	$3.1 \times (1,..., 2^7)$
0219+428......	2.32	5.3	3.8	2	0.77	1.4	$3.9 \times (1,..., 2^7)$
	8.55	1.4	1.1	1	0.58	0.9	$2.4 \times (1,..., 2^7)$
0224+671......	2.32	4.8	3.7	29	1.21	1.8	$5.3 \times (1,..., 2^7)$
	8.55	1.4	1.0	15	0.99	1.4	$4.2 \times (1,..., 2^7)$
0235+164......	2.32	7.0	3.5	0	0.41	1.4	$3.5 \times (1,..., 2^6)$
	8.55	1.9	1.0	−1	0.21	0.9	$2.5 \times (1,..., 2^6)$
0237−027......	2.32	8.5	3.9	−2	0.33	1.2	$3.5 \times (1,..., 2^6)$
	8.55	2.0	0.9	0	0.29	0.8	$2.4 \times (1,..., 2^6)$
0239+108......	2.32	7.2	3.4	0	1.40	1.6	$4.9 \times (1,..., 2^8)$
	8.55	2.0	1.0	−1	0.71	1.0	$2.6 \times (1,..., 2^8)$
0241+622......	2.32	28.3	19.3	62	0.44	3.7	$10.4 \times (1,..., 2^5)$
	8.55	2.7	2.1	−23	0.43	1.2	$3.5 \times (1,..., 2^6)$
0248+430......	2.32	5.3	3.7	0	1.05	1.4	$4.2 \times (1,..., 2^7)$
	8.55	2.3	1.1	−14	0.45	1.1	$3.3 \times (1,..., 2^7)$
0256+075......	2.32	7.1	3.5	0	0.74	1.0	$2.7 \times (1,..., 2^8)$
	8.55	1.9	0.9	−1	0.35	0.7	$2.0 \times (1,..., 2^7)$
0306+102......	2.32	7.3	3.5	0	0.54	1.3	$4.0 \times (1,..., 2^7)$

TABLE 1—*Continued*

Source	ν (GHz)	Beam[a] a (mas)	b (mas)	φ (deg)	Peak (Jy beam^{-1})	rms[b] (mJy beam^{-1})	Contour Levels[c] (mJy beam^{-1})
	8.55	2.0	1.0	0	0.38	0.8	2.1 × (1,..., 2^7)
0309+411.......	2.32	5.5	4.2	−22	0.28	0.9	2.7 × (1,..., 2^6)
	8.55	1.5	1.0	−4	0.30	0.6	1.7 × (1,..., 2^7)
0319+121.......	2.32	7.1	3.4	2	0.90	1.7	5.1 × (1,..., 2^7)
	8.55	2.0	1.0	0	0.38	1.2	3.5 × (1,..., 2^6)
0326+278.......	2.32	6.7	3.3	2	0.50	3.1	9.4 × (1,..., 2^5)
	8.55	1.8	1.0	−2	0.22	0.7	1.9 × (1,..., 2^6)
0333+321.......	2.32	6.2	3.5	6	1.18	2.2	6.5 × (1,..., 2^7)
	8.55	1.7	1.0	6	0.49	1.0	2.9 × (1,..., 2^7)
0336−019.......	2.32	7.8	3.5	−1	2.03	1.5	4.5 × (1,..., 2^8)
	8.55	2.1	0.9	−1	0.81	0.8	2.5 × (1,..., 2^8)
0342+147.......	2.32	7.1	3.5	1	0.35	1.1	3.1 × (1,..., 2^6)
	8.55	1.9	1.0	1	0.24	0.9	2.4 × (1,..., 2^6)
0355+508.......	2.32	5.6	4.6	42	0.82	2.9	8.7 × (1,..., 2^6)
	8.55	1.4	1.0	4	1.19	1.3	4.2 × (1,..., 2^8)
0403−132.......	2.32	7.9	3.3	−3	0.42	2.9	6.9 × (1,..., 2^5)
	8.55	2.1	0.9	−2	0.66	1.1	2.9 × (1,..., 2^7)
0405+305.......	2.32	7.3	4.3	16	0.23	1.9	5.3 × (1,..., 2^5)
	8.55	3.3	2.0	28	0.12	1.8	4.5 × (1,..., 2^4)
0405−123.......	2.32	8.1	3.6	−1	0.54	1.0	3.1 × (1,..., 2^7)
	8.55	2.1	0.9	−1	0.42	0.8	2.4 × (1,..., 2^7)
0406−127.......	2.32	8.1	3.6	−2	0.34	0.9	2.5 × (1,..., 2^7)
	8.55	2.1	0.9	−1	0.22	0.7	2.1 × (1,..., 2^6)
0414−189.......	2.32	7.9	3.2	0	1.22	1.4	3.9 × (1,..., 2^8)
	8.55	2.1	0.9	−1	0.74	0.9	2.4 × (1,..., 2^8)
0420+417.......	2.32	5.3	3.7	−9	1.00	1.1	3.3 × (1,..., 2^8)
	8.55	1.4	1.3	−21	0.28	1.0	3.1 × (1,..., 2^6)
0423+051.......	2.32	7.7	3.7	−3	0.49	1.2	3.2 × (1,..., 2^7)
	8.55	2.1	1.0	−3	0.19	0.9	2.2 × (1,..., 2^6)
0434−188.......	2.32	7.8	3.3	0	0.91	1.0	3.0 × (1,..., 2^8)
	8.55	2.1	0.9	−1	0.40	0.7	1.8 × (1,..., 2^7)
0446+112.......	2.32	7.5	3.2	1	0.64	1.4	3.8 × (1,..., 2^7)
	8.55	2.0	0.9	1	0.48	1.1	3.1 × (1,..., 2^7)
0454+844.......	2.32	4.4	3.5	−31	0.38	0.9	2.7 × (1,..., 2^7)
	8.55	1.3	0.9	−27	0.19	0.6	1.7 × (1,..., 2^6)
0457+024.......	2.32	7.7	3.3	−3	2.22	1.9	6.0 × (1,..., 2^8)
	8.55	2.1	0.9	−4	0.34	0.9	2.9 × (1,..., 2^6)
0458−020.......	2.32	7.9	3.4	−4	1.33	1.7	5.2 × (1,..., 2^7)
	8.55	2.2	1.0	−4	0.66	1.2	3.6 × (1,..., 2^7)
0500+019.......	2.32	7.6	3.4	−3	1.68	1.3	3.8 × (1,..., 2^8)
	8.55	2.1	0.9	−4	0.41	0.9	2.7 × (1,..., 2^7)
0502+049.......	2.32	7.5	3.4	−3	0.76	1.3	3.9 × (1,..., 2^7)
	8.55	2.1	0.9	−4	0.40	0.9	2.3 × (1,..., 2^7)
0506+101.......	2.32	7.3	3.4	−4	0.61	1.2	3.5 × (1,..., 2^7)
	8.55	2.0	1.0	−5	0.34	0.9	2.4 × (1,..., 2^7)
0528+134.......	2.32	7.2	3.4	−4	1.75	2.0	6.5 × (1,..., 2^8)
	8.55	1.9	0.9	−2	3.31	2.1	6.9 × (1,..., 2^8)
0529+075.......	2.32	30.5	20.5	34	0.93	12.2	42.6 × (1,..., 2^4)
	8.55	3.0	1.8	−2	0.52	1.3	3.5 × (1,..., 2^7)
0537−158.......	2.32	9.6	3.7	0	0.34	1.2	3.3 × (1,..., 2^6)
	8.55	2.5	1.0	1	0.19	0.7	1.9 × (1,..., 2^6)
0538+498.......	2.32	4.6	4.0	1	1.39	7.8	24.9 × (1,..., 2^5)
	8.55	1.3	1.1	5	0.33	1.4	3.8 × (1,..., 2^6)
0552+398[d]......	2.32	5.4	3.8	−5	3.68	2.2	6.9 × (1,..., 2^9)
	8.55	1.6	1.0	−9	3.69	2.2	6.9 × (1,..., 2^9)
0552+398[e]......	2.32	5.3	4.0	−2	3.71	2.2	6.7 × (1,..., 2^9)
	8.55	1.4	1.1	−4	3.71	2.4	8.6 × (1,..., 2^8)
0556+238.......	2.32	6.8	3.4	−2	1.12	1.0	2.6 × (1,..., 2^8)
	8.55	1.9	0.9	−2	0.66	0.8	2.4 × (1,..., 2^8)
0605−085.......	2.32	8.9	3.6	−1	1.98	2.2	6.5 × (1,..., 2^8)
	8.55	2.4	1.0	−1	1.31	2.3	6.8 × (1,..., 2^7)
0607−157.......	2.32	9.0	3.4	1	2.45	2.8	8.5 × (1,..., 2^8)
	8.55	2.4	0.9	1	3.61	3.0	9.4 × (1,..., 2^8)
0611+131.......	2.32	7.2	3.5	−1	0.34	1.1	3.3 × (1,..., 2^6)

TABLE 1—*Continued*

Source	ν (GHz)	Beam[a] a (mas)	Beam[a] b (mas)	Beam[a] φ (deg)	Peak (Jy beam^{-1})	rms[b] (mJy beam^{-1})	Contour Levels[c] (mJy beam^{-1})
	8.55	1.9	1.0	−2	0.25	0.9	$2.4 \times (1,..., 2^6)$
0615+820.......	2.32	4.4	3.5	−11	0.86	1.0	$3.0 \times (1,..., 2^8)$
	8.55	1.2	0.9	−17	0.28	0.7	$1.9 \times (1,..., 2^7)$
0642+214.......	2.32	6.5	3.7	−3	0.57	1.2	$3.5 \times (1,..., 2^7)$
	8.55	1.8	1.0	−3	0.25	0.9	$2.7 \times (1,..., 2^6)$
0648−165.......	2.32	8.1	3.4	2	1.18	1.8	$4.9 \times (1,..., 2^7)$
	8.55	2.2	0.9	2	0.70	1.1	$3.1 \times (1,..., 2^7)$
0650+371.......	2.32	5.8	3.7	−2	0.63	1.1	$3.2 \times (1,..., 2^7)$
	8.55	1.5	1.1	−2	0.31	0.8	$2.3 \times (1,..., 2^7)$
0711+356.......	2.32	5.6	3.7	−2	1.31	1.1	$3.4 \times (1,..., 2^8)$
	8.55	1.6	1.0	−1	0.27	0.8	$2.3 \times (1,..., 2^6)$
0716+714.......	2.32	4.9	3.8	3	0.26	1.3	$3.6 \times (1,..., 2^6)$
	8.55	1.4	1.0	8	0.21	0.8	$2.2 \times (1,..., 2^6)$
0722+145.......	2.32	7.1	3.6	−3	0.59	1.0	$2.8 \times (1,..., 2^7)$
	8.55	1.8	1.0	−2	0.35	0.9	$2.7 \times (1,..., 2^6)$
0727−115[d]......	2.32	8.0	3.3	−1	2.21	1.7	$4.9 \times (1,..., 2^8)$
	8.55	2.1	0.9	−1	1.56	1.5	$4.6 \times (1,..., 2^8)$
0727−115[e]......	2.32	7.9	3.4	−2	2.15	1.7	$5.4 \times (1,..., 2^8)$
	8.55	2.1	0.9	−2	1.55	1.6	$4.9 \times (1,..., 2^8)$
0733−174.......	2.32	8.7	3.4	−4	1.09	1.9	$6.0 \times (1,..., 2^7)$
	8.55	2.4	0.9	−3	0.24	1.5	$4.4 \times (1,..., 2^5)$
0735+178.......	2.32	6.6	3.5	−1	1.05	1.1	$3.3 \times (1,..., 2^8)$
	8.55	1.8	1.0	0	0.36	0.9	$2.8 \times (1,..., 2^6)$
0736+017.......	2.32	7.8	3.8	−2	0.95	1.4	$4.1 \times (1,..., 2^7)$
	8.55	2.1	1.0	−2	0.93	1.1	$3.3 \times (1,..., 2^8)$
0738+313.......	2.32	6.1	3.6	1	2.09	2.0	$6.4 \times (1,..., 2^8)$
	8.55	1.6	1.0	0	1.13	1.4	$4.7 \times (1,..., 2^7)$
0743+259.......	2.32	6.4	3.8	−2	0.45	1.2	$3.3 \times (1,..., 2^7)$
	8.55	2.2	1.0	5	0.12	1.2	$3.2 \times (1,..., 2^5)$
0745+241.......	2.32	6.5	3.6	−1	0.41	0.9	$2.5 \times (1,..., 2^7)$
	8.55	1.7	1.0	2	0.27	0.6	$1.9 \times (1,..., 2^7)$
0748+126.......	2.32	7.1	3.7	−1	1.05	1.5	$4.5 \times (1,..., 2^7)$
	8.55	1.9	1.0	−2	1.71	1.4	$4.5 \times (1,..., 2^8)$
0754+100.......	2.32	7.0	3.5	0	1.48	1.2	$3.5 \times (1,..., 2^8)$
	8.55	1.9	0.9	−1	1.06	0.9	$2.7 \times (1,..., 2^8)$
0804+499.......	2.32	4.9	4.0	9	0.88	1.1	$2.9 \times (1,..., 2^8)$
	8.55	1.3	1.1	9	0.42	0.8	$2.3 \times (1,..., 2^7)$
0805+410.......	2.32	5.2	3.6	−1	0.66	0.9	$2.5 \times (1,..., 2^8)$
	8.55	1.5	1.0	5	0.64	0.8	$2.3 \times (1,..., 2^8)$
0812+367.......	2.32	5.4	3.7	2	0.68	1.2	$3.4 \times (1,..., 2^7)$
	8.55	1.5	1.0	0	0.53	0.9	$2.6 \times (1,..., 2^7)$
0814+425.......	2.32	5.0	3.6	0	0.96	1.1	$3.4 \times (1,..., 2^8)$
	8.55	1.4	1.0	−2	0.68	1.0	$3.2 \times (1,..., 2^7)$
0818−128.......	2.32	8.1	3.4	−1	0.40	1.4	$3.7 \times (1,..., 2^6)$
	8.55	2.2	0.9	−1	0.26	1.0	$2.8 \times (1,..., 2^6)$
0821+394.......	2.32	5.6	3.6	0	0.47	1.4	$4.1 \times (1,..., 2^6)$
	8.55	1.6	1.1	6	0.96	0.7	$2.5 \times (1,..., 2^8)$
0827+243.......	2.32	6.4	3.7	−1	0.59	1.4	$4.0 \times (1,..., 2^7)$
	8.55	1.7	1.1	−4	0.60	1.0	$2.9 \times (1,..., 2^7)$
0828+493.......	2.32	5.0	4.1	14	0.34	1.0	$2.7 \times (1,..., 2^6)$
	8.55	1.3	1.1	17	0.24	0.7	$2.0 \times (1,..., 2^6)$
0829+046.......	2.32	7.2	3.4	−1	0.79	1.1	$3.0 \times (1,..., 2^8)$
	8.55	1.9	0.9	−2	0.49	1.0	$2.6 \times (1,..., 2^7)$
0836+710.......	2.32	5.1	3.7	6	1.24	2.6	$7.9 \times (1,..., 2^7)$
	8.55	1.4	1.0	7	0.63	1.7	$5.1 \times (1,..., 2^6)$
0839+187.......	2.32	6.8	3.8	0	0.61	1.5	$4.6 \times (1,..., 2^7)$
	8.55	1.8	1.1	−1	0.28	1.0	$2.7 \times (1,..., 2^6)$
0850+581.......	2.32	4.8	4.0	−17	0.62	0.9	$2.6 \times (1,..., 2^7)$
	8.55	1.3	1.1	−14	0.39	0.7	$2.0 \times (1,..., 2^7)$
0851+202[d]......	2.32	6.2	3.6	−1	1.23	1.1	$3.4 \times (1,..., 2^8)$
	8.55	1.7	0.9	1	0.71	0.9	$2.6 \times (1,..., 2^8)$
0851+202[e]......	2.32	6.7	3.8	−2	1.24	1.5	$4.5 \times (1,..., 2^8)$
	8.55	1.8	1.0	−2	0.72	1.0	$2.9 \times (1,..., 2^7)$
0859−140.......	2.32	8.4	3.6	−4	1.41	2.3	$6.4 \times (1,..., 2^7)$

TABLE 1—*Continued*

Source	ν (GHz)	Beam[a] a (mas)	b (mas)	ϕ (deg)	Peak (Jy beam^{-1})	rms[b] (mJy beam^{-1})	Contour Levels[c] (mJy beam^{-1})
	8.55	2.3	1.0	−4	0.74	1.4	$3.9 \times (1,..., 2^7)$
0906+015......	2.32	7.6	3.4	−2	0.39	1.2	$3.6 \times (1,..., 2^6)$
	8.55	2.2	1.1	10	0.19	0.8	$2.1 \times (1,..., 2^6)$
0912+029......	2.32	7.7	3.4	−3	0.50	1.3	$3.7 \times (1,..., 2^7)$
	8.55	2.1	1.0	−3	0.46	0.8	$2.1 \times (1,..., 2^7)$
0917+449......	2.32	5.5	3.8	6	1.17	1.2	$3.5 \times (1,..., 2^8)$
	8.55	1.4	1.0	4	0.54	1.0	$3.1 \times (1,..., 2^7)$
0923+392......	2.32	5.2	4.2	3	4.63	2.4	$8.3 \times (1,..., 2^9)$
	8.55	1.5	1.1	5	7.72	5.7	$19.8 \times (1,..., 2^8)$
0952+179......	2.32	6.8	3.4	−1	0.37	1.0	$2.8 \times (1,..., 2^7)$
	8.55	1.8	0.9	−2	0.32	0.9	$2.5 \times (1,..., 2^6)$
0954+658......	2.32	5.0	3.6	25	0.62	1.0	$2.9 \times (1,..., 2^7)$
	8.55	1.4	1.0	24	0.35	0.9	$2.8 \times (1,..., 2^6)$
0955+326......	2.32	5.6	4.1	−6	0.42	1.1	$3.5 \times (1,..., 2^6)$
	8.55	1.5	1.1	−5	0.60	0.8	$2.2 \times (1,..., 2^8)$
1011+250......	2.32	6.3	4.0	−3	0.41	1.1	$3.2 \times (1,..., 2^6)$
	8.55	1.7	1.1	−3	0.47	0.8	$2.2 \times (1,..., 2^7)$
1012+232......	2.32	6.1	3.6	0	0.55	1.0	$2.7 \times (1,..., 2^7)$
	8.55	1.6	1.0	−1	0.56	0.9	$2.9 \times (1,..., 2^7)$
1021−006......	2.32	8.2	3.6	−3	0.79	1.7	$4.5 \times (1,..., 2^7)$
	8.55	4.2	1.3	24	0.19	2.0	$5.5 \times (1,..., 2^5)$
1030+415......	2.32	13.0	4.7	7	0.23	1.2	$3.4 \times (1,..., 2^6)$
	8.55	1.4	1.0	5	0.44	0.8	$2.2 \times (1,..., 2^7)$
1039+811......	2.32	4.5	3.7	27	0.64	1.3	$3.8 \times (1,..., 2^7)$
	8.55	1.2	1.0	28	0.47	0.9	$2.3 \times (1,..., 2^7)$
1040+123......	2.32	7.2	3.5	0	0.50	1.1	$3.4 \times (1,..., 2^7)$
	8.55	2.0	1.1	6	0.22	1.1	$3.1 \times (1,..., 2^6)$
1042+071......	2.32	7.6	3.4	−2	0.30	1.0	$2.6 \times (1,..., 2^6)$
	8.55	2.0	0.9	−2	0.20	0.7	$1.9 \times (1,..., 2^6)$
1044+719......	2.32	5.5	3.6	31	1.44	1.1	$3.4 \times (1,..., 2^8)$
	8.55	1.6	1.0	28	1.06	1.4	$4.4 \times (1,..., 2^7)$
1045−188......	2.32	9.6	3.6	−3	0.57	1.6	$4.4 \times (1,..., 2^7)$
	8.55	2.6	1.0	−3	0.91	1.1	$3.2 \times (1,..., 2^8)$
1053+704......	2.32	5.0	3.9	51	0.28	1.1	$3.1 \times (1,..., 2^6)$
	8.55	1.3	1.1	42	0.37	0.8	$2.1 \times (1,..., 2^7)$
1055+018......	2.32	7.9	3.6	−3	1.48	2.4	$7.3 \times (1,..., 2^7)$
	8.55	2.1	1.0	−3	1.65	2.1	$6.7 \times (1,..., 2^7)$
1111+149......	2.32	6.9	3.8	−3	0.49	1.3	$3.3 \times (1,..., 2^7)$
	8.55	1.9	1.0	−4	0.19	0.8	$1.9 \times (1,..., 2^6)$
1123+264......	2.32	6.8	3.7	3	1.06	1.0	$2.7 \times (1,..., 2^8)$
	8.55	1.8	1.0	2	0.47	0.9	$2.8 \times (1,..., 2^7)$
1124−186......	2.32	9.6	3.5	−8	0.69	1.6	$3.7 \times (1,..., 2^7)$
	8.55	2.6	1.0	−7	0.73	1.0	$2.6 \times (1,..., 2^8)$
1128+385......	2.32	6.1	3.7	5	0.75	0.9	$2.8 \times (1,..., 2^8)$
	8.55	1.6	1.0	5	0.78	0.9	$2.7 \times (1,..., 2^8)$
1128−047......	2.32	8.5	3.7	−4	0.33	1.6	$4.9 \times (1,..., 2^6)$
	8.55	2.2	1.0	0	0.21	1.0	$2.7 \times (1,..., 2^6)$
1144+402......	2.32	5.9	3.7	7	0.52	0.9	$2.5 \times (1,..., 2^7)$
	8.55	1.6	1.0	6	0.76	0.8	$2.5 \times (1,..., 2^8)$
1147+245......	2.32	6.3	3.8	−1	0.55	1.4	$4.2 \times (1,..., 2^7)$
	8.55	1.7	1.1	−3	0.34	0.9	$2.5 \times (1,..., 2^7)$
1148−001......	2.32	8.4	4.1	6	0.93	1.5	$3.9 \times (1,..., 2^7)$
	8.55	2.2	1.2	1	0.23	1.2	$3.4 \times (1,..., 2^6)$
1150+497......	2.32	4.9	4.0	6	0.72	1.1	$3.2 \times (1,..., 2^7)$
	8.55	1.3	1.1	3	0.70	0.8	$2.2 \times (1,..., 2^8)$
1155+251......	2.32	7.1	4.1	−2	0.47	1.7	$5.0 \times (1,..., 2^6)$
	8.55	4.1	3.5	71	0.16	1.3	$3.9 \times (1,..., 2^5)$
1213−172......	2.32	7.9	3.5	0	0.87	2.0	$6.1 \times (1,..., 2^7)$
	8.55	2.2	1.0	−1	1.35	1.3	$4.4 \times (1,..., 2^8)$
1215+303......	2.32	6.6	4.1	17	0.26	0.8	$2.2 \times (1,..., 2^6)$
	8.55	1.7	1.0	14	0.20	0.6	$1.9 \times (1,..., 2^6)$
1216+487......	2.32	4.9	4.3	0	0.60	1.0	$2.6 \times (1,..., 2^7)$
	8.55	1.3	1.2	5	0.37	0.8	$2.1 \times (1,..., 2^7)$
1219+285......	2.32	7.2	3.4	−1	0.36	1.6	$4.9 \times (1,..., 2^6)$

TABLE 1—*Continued*

Source	ν (GHz)	Beam[a] a (mas)	b (mas)	φ (deg)	Peak (Jy beam^{-1})	rms[b] (mJy beam^{-1})	Contour Levels[c] (mJy beam^{-1})
	8.55	1.9	1.0	2	0.17	1.1	$3.1 \times (1,..., 2^5)$
1222+037......	2.32	7.7	3.9	−3	1.10	1.2	$3.6 \times (1,..., 2^8)$
	8.55	2.1	1.1	−3	0.36	0.9	$2.4 \times (1,..., 2^7)$
1228+126......	2.32	7.9	3.7	−3	1.25	5.7	$16.5 \times (1,..., 2^6)$
	8.55	2.1	0.9	−6	0.74	2.6	$7.1 \times (1,..., 2^6)$
1243−072......	2.32	8.0	3.6	−1	0.54	1.4	$3.6 \times (1,..., 2^7)$
	8.55	2.2	1.0	−2	0.56	1.1	$2.9 \times (1,..., 2^7)$
1252+119......	2.32	8.1	4.0	−4	0.51	1.4	$4.0 \times (1,..., 2^6)$
	8.55	2.1	1.0	−5	0.34	1.1	$3.3 \times (1,..., 2^6)$
1253−055......	2.32	7.9	3.4	−4	6.13	6.1	$18.3 \times (1,..., 2^8)$
	8.55	2.2	1.0	−4	7.01	6.1	$17.6 \times (1,..., 2^8)$
1257+145......	2.32	7.9	3.7	−4	0.56	1.0	$3.1 \times (1,..., 2^7)$
	8.55	2.4	1.1	16	0.18	0.9	$2.4 \times (1,..., 2^6)$
1302−102......	2.32	8.9	3.6	2	1.02	1.4	$3.8 \times (1,..., 2^8)$
	8.55	2.4	1.0	1	0.49	1.0	$2.6 \times (1,..., 2^7)$
1324+224......	2.32	7.1	4.0	1	1.97	1.5	$4.5 \times (1,..., 2^8)$
	8.55	1.9	1.0	−1	1.12	1.3	$4.1 \times (1,..., 2^8)$
1328+307......	2.32	5.9	4.1	−2	1.29	5.1	$15.4 \times (1,..., 2^6)$
	8.55	2.7	2.2	21	0.28	2.5	$7.1 \times (1,..., 2^5)$
1338+381......	2.32	6.5	3.7	7	0.41	1.0	$3.1 \times (1,..., 2^7)$
	8.55	8.6	2.9	12	0.11	1.1	$3.4 \times (1,..., 2^4)$
1342+663......	2.32	4.8	4.0	54	0.84	1.2	$3.5 \times (1,..., 2^7)$
	8.55	1.3	1.1	51	0.48	0.8	$2.2 \times (1,..., 2^7)$
1351−018......	2.32	8.7	3.8	0	0.86	1.3	$3.6 \times (1,..., 2^7)$
	8.55	2.2	1.0	0	0.47	1.5	$4.5 \times (1,..., 2^6)$
1354+195......	2.32	7.0	3.5	−3	0.67	1.9	$5.2 \times (1,..., 2^6)$
	8.55	1.9	1.0	−4	0.40	1.0	$2.8 \times (1,..., 2^7)$
1354−152......	2.32	9.1	3.6	2	0.60	1.5	$4.4 \times (1,..., 2^7)$
	8.55	2.3	0.9	2	0.40	1.1	$3.3 \times (1,..., 2^6)$
1402−012......	2.32	8.0	3.5	−4	0.44	1.2	$3.7 \times (1,..., 2^6)$
	8.55	3.0	2.0	3	0.15	1.2	$3.2 \times (1,..., 2^5)$
1406−076......	2.32	9.0	3.8	3	0.49	1.4	$4.1 \times (1,..., 2^6)$
	8.55	2.3	1.0	3	0.46	1.4	$4.0 \times (1,..., 2^6)$
1409+218......	2.32	7.2	3.5	1	0.21	1.1	$3.2 \times (1,..., 2^6)$
	8.55	2.6	1.1	−10	0.13	1.2	$3.4 \times (1,..., 2^5)$
1417+273......	2.32	6.3	4.1	7	0.21	1.1	$2.8 \times (1,..., 2^6)$
	8.55	1.8	1.2	10	0.15	1.1	$3.1 \times (1,..., 2^5)$
1418+546......	2.32	5.5	4.4	48	0.45	1.0	$2.7 \times (1,..., 2^7)$
	8.55	1.5	1.1	48	0.39	1.1	$2.9 \times (1,..., 2^7)$
1420+326......	2.32	7.5	4.9	18	0.25	1.0	$3.0 \times (1,..., 2^6)$
	8.55	3.3	2.1	−24	0.13	1.5	$3.8 \times (1,..., 2^5)$
1424+240......	2.32	6.5	3.8	−6	0.22	1.1	$3.0 \times (1,..., 2^6)$
	8.55	2.2	1.2	−17	0.13	1.2	$3.3 \times (1,..., 2^5)$
1430−178......	2.32	9.5	3.7	0	0.63	1.5	$4.0 \times (1,..., 2^7)$
	8.55	4.5	1.3	−19	0.21	1.1	$2.9 \times (1,..., 2^6)$
1435+638......	2.32	4.8	4.3	81	0.54	1.5	$4.1 \times (1,..., 2^7)$
	8.55	1.3	1.2	83	0.40	1.0	$2.9 \times (1,..., 2^7)$
1442+101......	2.32	7.8	3.8	3	1.10	2.2	$6.9 \times (1,..., 2^7)$
	8.55	2.1	1.3	1	0.19	1.6	$4.4 \times (1,..., 2^5)$
1443−162......	2.32	9.6	3.6	−1	0.38	1.6	$4.3 \times (1,..., 2^6)$
	8.55	2.6	1.0	−2	0.22	1.0	$2.7 \times (1,..., 2^6)$
1445−161......	2.32	9.3	3.7	−1	0.84	1.5	$4.7 \times (1,..., 2^7)$
	8.55	3.2	1.1	−10	0.24	1.3	$3.5 \times (1,..., 2^6)$
1448+762......	2.32	4.6	3.7	−90	0.25	1.1	$3.2 \times (1,..., 2^6)$
	8.55	1.6	1.0	83	0.20	1.2	$3.1 \times (1,..., 2^6)$
1502+036......	2.32	8.0	3.9	6	0.57	1.0	$2.8 \times (1,..., 2^7)$
	8.55	2.1	1.0	7	0.49	1.1	$3.2 \times (1,..., 2^7)$
1504+377......	2.32	5.4	4.0	−11	0.58	1.2	$3.5 \times (1,..., 2^7)$
	8.55	1.5	1.1	−14	0.67	0.9	$2.5 \times (1,..., 2^8)$
1504−166......	2.32	9.5	3.8	−2	2.50	2.3	$7.1 \times (1,..., 2^8)$
	8.55	2.4	1.0	−2	0.83	3.2	$9.9 \times (1,..., 2^6)$
1511−100......	2.32	8.2	3.5	1	0.54	1.4	$3.8 \times (1,..., 2^7)$
	8.55	2.4	1.0	−4	0.68	1.2	$3.4 \times (1,..., 2^7)$
1514+197......	2.32	7.4	4.8	20	0.43	1.0	$2.6 \times (1,..., 2^7)$

TABLE 1—*Continued*

Source	ν (GHz)	Beam[a] a (mas)	b (mas)	ϕ (deg)	Peak (Jy beam^{-1})	rms[b] (mJy beam^{-1})	Contour Levels[c] (mJy beam^{-1})
	8.55	2.0	1.3	23	0.24	0.9	$2.5 \times (1,..., 2^6)$
1538+149.......	2.32	6.9	3.7	−3	0.54	1.7	$4.7 \times (1,..., 2^6)$
	8.55	1.9	1.0	−3	0.49	0.8	$2.1 \times (1,..., 2^7)$
1547+507.......	2.32	5.0	4.7	−6	0.44	1.4	$4.4 \times (1,..., 2^6)$
	8.55	1.3	1.2	−24	0.54	0.9	$2.6 \times (1,..., 2^7)$
1548+056.......	2.32	7.6	3.7	−2	1.81	2.0	$6.0 \times (1,..., 2^8)$
	8.55	2.1	1.0	−3	1.88	1.4	$3.9 \times (1,..., 2^8)$
1555+001.......	2.32	8.1	4.0	4	0.98	1.1	$3.4 \times (1,..., 2^8)$
	8.55	2.1	1.0	4	0.52	1.2	$3.6 \times (1,..., 2^7)$
1555−140.......	2.32	8.5	3.6	−3	0.39	1.5	$4.1 \times (1,..., 2^6)$
	8.55	2.9	1.6	−5	0.16	2.5	$6.3 \times (1,..., 2^4)$
1606+106.......	2.32	7.1	4.2	1	1.33	1.2	$3.5 \times (1,..., 2^8)$
	8.55	1.8	1.1	1	0.85	1.2	$3.5 \times (1,..., 2^7)$
1614+051.......	2.32	7.6	3.7	−2	0.65	1.2	$2.9 \times (1,..., 2^7)$
	8.55	2.1	1.0	−3	0.45	0.9	$2.4 \times (1,..., 2^7)$
1616+063.......	2.32	7.5	4.3	2	0.46	1.1	$2.8 \times (1,..., 2^7)$
	8.55	1.9	1.1	7	0.24	0.9	$2.7 \times (1,..., 2^6)$
1637+574.......	2.32	4.4	4.2	−44	1.08	1.1	$3.0 \times (1,..., 2^8)$
	8.55	1.2	1.2	−53	0.42	0.7	$2.0 \times (1,..., 2^7)$
1638+398.......	2.32	5.3	3.9	−16	1.02	1.1	$3.4 \times (1,..., 2^8)$
	8.55	1.4	1.1	−14	1.19	1.2	$3.7 \times (1,..., 2^8)$
1641+399.......	2.32	5.2	4.0	−2	5.00	5.2	$15.5 \times (1,..., 2^8)$
	8.55	1.4	1.1	−6	2.76	3.3	$10.8 \times (1,..., 2^7)$
1655+077.......	2.32	7.3	4.0	0	0.65	1.4	$4.5 \times (1,..., 2^7)$
	8.55	1.9	1.0	−2	1.09	1.2	$3.7 \times (1,..., 2^8)$
1656+053.......	2.32	7.5	3.6	−3	0.88	1.6	$4.9 \times (1,..., 2^7)$
	8.55	2.1	1.0	−4	0.43	1.1	$3.0 \times (1,..., 2^7)$
1656+348.......	2.32	5.3	4.2	−12	0.36	1.1	$3.2 \times (1,..., 2^6)$
	8.55	3.4	2.3	90	0.15	1.1	$3.2 \times (1,..., 2^5)$
1656+477.......	2.32	4.9	4.0	−4	1.05	1.2	$3.1 \times (1,..., 2^8)$
	8.55	1.3	1.1	−6	0.51	1.2	$3.8 \times (1,..., 2^7)$
1706−174.......	2.32	8.7	3.4	2	0.47	0.9	$2.5 \times (1,..., 2^7)$
	8.55	2.2	0.9	2	0.32	1.0	$2.7 \times (1,..., 2^6)$
1717+178.......	2.32	6.7	3.7	−4	0.66	1.1	$3.2 \times (1,..., 2^7)$
	8.55	1.8	1.0	−4	0.47	0.9	$2.4 \times (1,..., 2^7)$
1726+455.......	2.32	4.9	4.1	−37	0.94	1.2	$3.5 \times (1,..., 2^8)$
	8.55	1.4	1.1	−36	0.44	0.7	$2.2 \times (1,..., 2^7)$
1727+502.......	2.32	9.3	5.4	−48	0.21	2.2	$6.2 \times (1,..., 2^5)$
	8.55	3.9	1.7	82	0.12	2.2	$5.4 \times (1,..., 2^4)$
1730−130.......	2.32	9.1	3.6	2	3.24	4.9	$14.7 \times (1,..., 2^7)$
	8.55	2.2	0.9	5	8.23	6.4	$19.1 \times (1,..., 2^8)$
1732+389.......	2.32	5.4	4.0	−7	0.96	1.1	$3.2 \times (1,..., 2^8)$
	8.55	1.5	1.1	−7	0.49	0.8	$2.4 \times (1,..., 2^7)$
1745+624.......	2.32	4.7	4.0	−14	0.28	1.3	$3.1 \times (1,..., 2^6)$
	8.55	1.2	1.1	−58	0.34	1.0	$2.9 \times (1,..., 2^6)$
1749+096[d]......	2.32	7.3	3.6	−2	0.63	1.1	$2.8 \times (1,..., 2^7)$
	8.55	1.9	1.0	1	1.30	1.0	$2.9 \times (1,..., 2^8)$
1749+096[e]......	2.32	7.4	3.4	−3	0.64	1.3	$3.6 \times (1,..., 2^7)$
	8.55	2.0	0.9	−2	1.33	1.1	$3.3 \times (1,..., 2^8)$
1749+701.......	2.32	4.9	3.8	−73	0.49	1.2	$3.3 \times (1,..., 2^7)$
	8.55	1.4	1.0	−76	0.32	0.8	$2.3 \times (1,..., 2^7)$
1751+441.......	2.32	4.9	4.2	−15	0.51	0.9	$2.8 \times (1,..., 2^7)$
	8.55	1.4	1.2	−87	0.24	0.8	$2.4 \times (1,..., 2^6)$
1800+440.......	2.32	4.9	4.0	−7	0.38	1.2	$2.9 \times (1,..., 2^7)$
	8.55	1.3	1.1	−4	0.78	0.8	$2.2 \times (1,..., 2^8)$
1807+698.......	2.32	4.7	3.6	−81	0.82	1.6	$4.8 \times (1,..., 2^7)$
	8.55	1.3	0.9	−79	0.57	1.3	$4.0 \times (1,..., 2^7)$
1830+285.......	2.32	6.1	3.9	−3	0.37	1.4	$4.3 \times (1,..., 2^6)$
	8.55	1.7	1.1	−4	0.35	0.8	$2.1 \times (1,..., 2^7)$
1845+797.......	2.32	4.5	3.5	−70	0.46	1.1	$3.0 \times (1,..., 2^7)$
	8.55	1.7	0.9	−72	0.21	1.9	$5.9 \times (1,..., 2^5)$
1856+736.......	2.32	5.0	4.3	−18	0.29	1.2	$3.6 \times (1,..., 2^6)$
	8.55	1.3	1.0	−57	0.36	0.8	$2.1 \times (1,..., 2^7)$
1901+319.......	2.32	5.9	3.8	−12	1.09	1.6	$4.3 \times (1,..., 2^7)$

TABLE 1—*Continued*

Source	ν (GHz)	Beam[a] a (mas)	b (mas)	ϕ (deg)	Peak (Jy beam^{-1})	rms[b] (mJy beam^{-1})	Contour Levels[c] (mJy beam^{-1})
	8.55	1.5	1.1	−11	0.48	1.2	$3.6 \times (1,..., 2^7)$
1923+210.......	2.32	6.7	3.6	−2	0.75	1.4	$3.8 \times (1,..., 2^7)$
	8.55	1.8	1.0	−4	0.33	0.9	$2.4 \times (1,..., 2^7)$
1928+738.......	2.32	4.7	3.5	−60	2.39	3.3	$10.4 \times (1,..., 2^7)$
	8.55	1.2	0.9	−57	1.27	2.0	$6.3 \times (1,..., 2^7)$
1936−155.......	2.32	8.1	3.4	1	0.83	1.8	$5.3 \times (1,..., 2^7)$
	8.55	2.2	0.9	0	1.41	1.1	$3.1 \times (1,..., 2^8)$
1937−101.......	2.32	8.3	3.5	−2	0.69	1.4	$4.3 \times (1,..., 2^7)$
	8.55	2.1	0.9	2	0.28	1.1	$3.0 \times (1,..., 2^6)$
1943+228.......	2.32	11.1	7.9	−5	0.24	2.3	$5.2 \times (1,..., 2^5)$
	8.55	2.2	1.3	−21	0.13	1.9	$5.0 \times (1,..., 2^4)$
1955+335.......	2.32	9.4	4.3	52	0.15	4.9	$13.8 \times (1,..., 2^3)$
	8.55	1.8	1.3	−65	0.13	1.5	$4.3 \times (1,..., 2^4)$
1958−179.......	2.32	7.9	3.3	0	1.30	1.8	$4.7 \times (1,..., 2^8)$
	8.55	2.1	0.9	−1	1.23	1.1	$3.1 \times (1,..., 2^8)$
2005+403.......	2.32	20.8	10.9	41	1.58	2.8	$7.8 \times (1,..., 2^7)$
	8.55	1.6	1.2	23	1.01	1.4	$4.1 \times (1,..., 2^7)$
2008−068.......	2.32	8.3	3.6	−2	1.54	2.1	$6.6 \times (1,..., 2^7)$
	8.55	3.7	1.1	−17	0.28	1.1	$3.4 \times (1,..., 2^6)$
2008−159.......	2.32	8.1	3.4	−2	0.81	1.3	$3.8 \times (1,..., 2^7)$
	8.55	2.1	0.9	1	0.72	1.0	$2.7 \times (1,..., 2^8)$
2030+547.......	2.32	4.6	4.3	−14	0.82	1.2	$3.7 \times (1,..., 2^7)$
	8.55	2.1	1.2	11	0.29	0.8	$2.4 \times (1,..., 2^6)$
2037+511.......	2.32	4.5	3.9	−5	1.81	3.4	$9.9 \times (1,..., 2^7)$
	8.55	1.3	1.1	3	1.09	2.0	$6.0 \times (1,..., 2^7)$
2048+312.......	2.32	12.5	9.8	60	0.41	1.6	$4.8 \times (1,..., 2^6)$
	8.55	1.6	1.1	−1	0.25	0.9	$2.4 \times (1,..., 2^6)$
2051+745.......	2.32	11.1	3.4	−60	0.27	1.1	$3.2 \times (1,..., 2^6)$
	8.55	10.4	3.3	−39	0.14	1.5	$3.6 \times (1,..., 2^5)$
2126−158.......	2.32	9.5	3.6	0	0.91	1.6	$4.2 \times (1,..., 2^7)$
	8.55	2.6	1.0	0	0.60	1.1	$2.7 \times (1,..., 2^7)$
2143−156.......	2.32	9.5	3.5	−2	0.52	1.5	$4.1 \times (1,..., 2^6)$
	8.55	2.5	0.9	−3	0.33	1.1	$3.2 \times (1,..., 2^6)$
2144+092.......	2.32	7.2	3.5	0	0.96	1.2	$3.4 \times (1,..., 2^8)$
	8.55	2.0	1.0	−1	0.44	1.1	$3.3 \times (1,..., 2^7)$
2145+067[d]......	2.32	7.3	3.3	−3	2.22	2.5	$7.4 \times (1,..., 2^8)$
	8.55	2.2	1.0	−13	4.43	3.3	$10.7 \times (1,..., 2^8)$
2145+067[e]......	2.32	7.4	3.5	−1	2.23	3.0	$8.3 \times (1,..., 2^8)$
	8.55	2.0	1.0	0	4.27	2.8	$8.9 \times (1,..., 2^8)$
2149+056.......	2.32	7.2	3.2	−1	0.79	1.1	$3.0 \times (1,..., 2^8)$
	8.55	1.9	0.9	0	0.35	0.9	$2.4 \times (1,..., 2^7)$
2155−152.......	2.32	9.4	3.6	−2	2.37	2.2	$6.6 \times (1,..., 2^8)$
	8.55	2.6	1.0	−3	0.70	1.7	$5.0 \times (1,..., 2^7)$
2209+236.......	2.32	6.1	3.7	−3	0.82	1.1	$3.0 \times (1,..., 2^8)$
	8.55	1.6	1.0	−5	1.22	0.8	$2.4 \times (1,..., 2^8)$
2223−052.......	2.32	7.9	3.5	1	1.20	4.6	$13.8 \times (1,..., 2^6)$
	8.55	2.2	0.9	1	1.65	1.8	$5.0 \times (1,..., 2^8)$
2229+695.......	2.32	4.8	3.9	−14	0.39	1.1	$3.1 \times (1,..., 2^6)$
	8.55	1.3	1.1	12	0.19	0.9	$2.4 \times (1,..., 2^6)$
2233−148.......	2.32	8.3	3.5	0	0.31	1.7	$5.0 \times (1,..., 2^5)$
	8.55	2.3	1.0	3	0.17	2.1	$4.9 \times (1,..., 2^5)$
2243−123.......	2.32	9.1	3.5	−2	1.59	2.3	$6.8 \times (1,..., 2^7)$
	8.55	2.4	0.9	−2	1.49	2.0	$6.0 \times (1,..., 2^7)$
2253+417.......	2.32	5.3	4.0	−4	1.12	1.3	$3.8 \times (1,..., 2^8)$
	8.55	1.6	1.1	−2	0.24	1.1	$3.7 \times (1,..., 2^5)$
2254+074.......	2.32	7.3	3.3	1	0.35	1.1	$3.0 \times (1,..., 2^6)$
	8.55	1.9	0.9	0	0.27	0.9	$2.4 \times (1,..., 2^6)$
2318+049.......	2.32	7.6	3.6	−2	0.57	1.3	$3.6 \times (1,..., 2^7)$
	8.55	2.1	1.0	−2	0.64	0.9	$2.2 \times (1,..., 2^8)$

TABLE 1—*Continued*

Source	ν (GHz)	Beam[a] a (mas)	b (mas)	ϕ (deg)	Peak (Jy beam^{-1})	rms[b] (mJy beam^{-1})	Contour Levels[c] (mJy beam^{-1})
2320−035......	2.32	7.7	3.4	0	0.68	1.2	3.5 × (1,..., 2^7)
	8.55	2.0	0.9	2	0.31	0.8	2.5 × (1,..., 2^6)
2325−150......	2.32	8.3	3.6	−2	0.61	1.7	4.5 × (1,..., 2^7)
	8.55	2.3	1.0	−2	0.33	1.1	2.9 × (1,..., 2^6)
2328+107......	2.32	7.1	3.6	−1	0.96	1.1	3.4 × (1,..., 2^8)
	8.55	2.0	1.0	−7	0.42	0.8	2.3 × (1,..., 2^7)
2329−162......	2.32	8.2	3.5	−1	1.00	1.6	4.2 × (1,..., 2^7)
	8.55	2.2	1.0	−2	0.47	1.3	3.3 × (1,..., 2^7)
2344+092......	2.32	7.1	3.6	−2	0.93	1.5	4.4 × (1,..., 2^7)
	8.55	1.9	1.0	3	0.48	1.0	3.5 × (1,..., 2^7)
2345−167......	2.32	8.3	3.5	−4	2.34	2.1	6.4 × (1,..., 2^8)
	8.55	2.3	1.0	−2	0.81	1.3	3.8 × (1,..., 2^7)
2351+456......	2.32	5.3	3.7	−12	0.51	1.9	5.4 × (1,..., 2^6)
	8.55	1.4	1.0	−16	0.51	1.2	3.4 × (1,..., 2^7)
2351−154......	2.32	8.2	3.5	−4	0.81	1.5	3.5 × (1,..., 2^7)
	8.55	2.2	1.0	−3	0.39	1.0	2.7 × (1,..., 2^7)
2355−106......	2.32	8.3	3.6	0	1.05	1.1	3.1 × (1,..., 2^8)
	8.55	2.2	1.0	1	1.15	0.9	2.5 × (1,..., 2^8)

[a] The restoring beam is an elliptical Gaussian with FWHM major axis a and minor axis b, with major axis in position angle ϕ (measured north through east).
[b] The rms of the residuals of the final hybrid image.
[c] Contour levels are represented by the geometric series 1,..., 2^n; e.g., for $n = 5$ the contour levels would be ±1, 2, 4, 8, 16, 32.
[d] Epoch 1997 January 10–11.
[e] Epoch 1997 January 11–12.

the final images. For the 1997 January 10–11 observations (32 MHz total bandwidth at each frequency band), the maximum dynamic range is ∼1670:1 at the *S* band and ∼1710:1 at the *X* band. The average dynamic range is ∼640:1 at the *S* band and ∼570:1 at the *X* band. The average rms noise is ∼1.5 mJy beam^{-1} at the *S* band and ∼1.2 mJy beam^{-1} at the *X* band. The expected thermal noise for the full VLBA is estimated to be ∼0.61 mJy beam^{-1} at both frequencies for a 10 minute observation (assuming a system equivalent flux density [SEFD] of 400 and a value of the VLBA system inefficiency $1/\eta_s \approx 2$). For the 1997 January 11–12 observations (16 MHz total bandwidth at each frequency band), the maximum dynamic range is ∼1950:1 at the *S* band and ∼1530:1 at the *X* band. The average dynamic range is ∼530:1 at the *S* band and ∼500:1 at the *X* band. The average rms noise is ∼1.9 mJy beam^{-1} at the *S* band and ∼1.3 mJy beam^{-1} at the *X* band. The expected thermal noise for the full VLBA is estimated to be ∼0.86 mJy beam^{-1} at both frequencies for a 10 minute observation (assuming an SEFD of 400 and a value of the VLBA system inefficiency $1/\eta_s \approx 2$).

Gaussian models were fitted to the self-calibrated *visibility data* on a source-by-source basis using DIFMAP in an interactive mode. The number of Gaussian components and the choice between elliptical components or circular components was subjective and was based on which model was judged to be a better fit to the data; e.g., if an elliptical component did not improve the fit for a particular source, then a circular component was retained. Results of the model fitting are listed in Table 2.The last column in this table lists the reduced χ^2 of the fit between the model and the visibility data. Only fitted models with a reduced $\chi^2 \lesssim 2.0$ are included in this table. The reduced χ^2 has an expected value of 1.0 (however, when the data are self-calibrated, the number of degrees of freedom is reduced so that the expected value of the reduced χ^2 may actually be significantly less than 1.0; cf. Henstock et al. 1995). At the *S* band, the sources 0134+329, 0538+498, 0923+392, 1228+126, 1328+307, 1641+399, 1730−130, 1928+738, and 2037+511 are too complex to satisfactorily model with the available data. In addition, the sources 0923+392, 1253−055, 1730−130, and 2037+511 are too complex to model at the *X* band. For these sources, we list in Table 2 only the total integrated flux densities (as measured from the images). Although the agreement between the fitted models and the data is not as good as that produced by the hybrid images (models with many CLEAN components), inspection of plots of residuals in the image plane, after subtracting the Gaussian models from the visibility data, revealed that the Gaussian models generally describe the visibility data quite well. However, because of incomplete sampling in the (u, v)–plane, these models may not be unique. They represent only one *possible* deconvolution of complex source structure. Such deconvolutions can be misleading.

Figure 2 shows the distribution of the total integrated flux densities at the *X* and *S* bands along with the *S*/*X* spectral index for 388 of the 389 sources imaged so far. This includes 225 sources from the present paper and 163 sources observed by Fey et al. (1996) and Fey & Charlot (1997). The source 1947+079, observed by Fey & Charlot (1997), was not considered in this and the following analysis because it was not included as part of the ICRF. In the case of sources with multiple-epoch imaging observations, the total integrated flux densities from the most recent epoch were used. Figure 2 indicates that the total flux densities and spectral indices for these sources have a wide range of values. At the *X* band, the total integrated flux densities are between 0.10

TABLE 2

GAUSSIAN MODELS[a]

Source	ν (GHz)	Component Number	S (Jy)	r (mas)	θ (deg)	a (mas)	b/a	ϕ (deg)	χ^2
0003+380......	2.32	1	0.60	0.0	...	1.55	0.00	−53	1.01
		2	0.02	3.4	126	1.27	1.00	...	
		3	0.01	10.2	121	3.81	1.00	...	
		4	0.05	42.8	115	12.09	1.00	...	
	8.55	1	0.33	0.0	...	0.25	0.00	−62	1.03
		2	0.19	0.8	113	0.48	0.00	−56	
		3	0.04	1.4	111	2.50	0.00	−27	
0007+171......	2.32	1	0.95	0.0	...	0.82	1.00	...	1.09
		2	0.10	2.3	−79	1.46	1.00	...	
		3	0.04	6.4	−109	3.72	1.00	...	
		4	0.05	16.5	−96	4.42	1.00	...	
		5	0.03	69.3	−94	12.02	1.00	...	
	8.55	1	0.35	0.0	...	0.45	1.00	...	1.08
		2	0.21	1.2	89	0.64	1.00	...	
		3	0.02	2.5	−91	0.92	1.00	...	
0013−005......	2.32	1	0.78	0.0	...	0.88	1.00	...	1.10
		2	0.12	2.7	33	7.91	1.00	...	
	8.55	1	0.28	0.0	...	0.71	0.44	25	0.97
		2	0.04	0.7	180	1.97	1.00	...	
0014+813......	2.32	1	0.62	0.0	...	0.54	1.00	...	1.67
		2	0.10	4.9	−166	1.51	1.00	...	
		3	0.11	8.8	−171	2.49	1.00	...	
	8.55	1	0.64	0.0	...	0.49	0.52	−7	1.08
		2	0.03	1.0	−177	0.94	0.00	27	
0019+058......	2.32	1	0.25	0.0	...	0.60	1.00	...	0.81
	8.55	1	0.17	0.0	...	0.24	1.00	...	0.56
0039+230......	2.32	1	0.78	0.0	...	0.00	1.00	...	1.11
		2	0.28	1.7	0	1.01	1.00	...	
		3	0.06	2.5	81	1.96	1.00	...	
	8.55	1	0.32	0.0	...	0.98	0.47	−10	1.09
		2	0.04	2.0	−170	0.84	1.00	...	
		3	0.11	2.4	15	0.52	1.00	...	
0048−097......	2.32	1	1.29	0.0	...	0.70	0.34	−27	1.14
		2	0.02	12.3	4	5.08	1.00	...	
	8.55	1	1.29	0.0	...	0.17	0.77	41	1.03
0106+013......	2.32	1	1.60	0.0	...	0.94	0.35	−84	1.05
		2	0.24	2.1	−121	1.70	0.00	−19	
		3	0.04	10.9	−158	7.62	0.30	−32	
		4	0.06	16.1	−139	8.16	0.28	−19	
		5	0.05	37.4	−156	21.14	0.34	−1	
	8.55	1	0.69	0.0	...	0.20	1.00	...	0.98
		2	0.26	0.6	−114	0.60	1.00	...	
		3	0.08	2.0	−120	1.15	1.00	...	
0109+224......	2.32	1	0.47	0.0	...	0.00	1.00	...	0.97
		2	0.07	1.9	87	0.51	1.00	...	
	8.55	1	0.67	0.0	...	0.07	1.00	...	0.94
		2	0.04	0.6	82	0.35	1.00	...	
		3	0.02	1.9	82	1.16	1.00	...	
0111+021......	2.32	1	0.37	0.0	...	0.78	1.00	...	0.96
		2	0.12	2.8	137	1.75	1.00	...	
		3	0.05	9.5	134	4.74	1.00	...	
	8.55	1	0.23	0.0	...	0.25	1.00	...	0.94
		2	0.14	0.7	136	0.50	1.00	...	
		3	0.04	2.3	133	0.76	1.00	...	
		4	0.02	4.9	129	1.35	1.00	...	
0112−017......	2.32	1	1.12	0.0	...	1.73	0.00	−34	1.00
		2	0.07	5.2	150	1.55	1.00	...	
		3	0.03	11.4	157	3.22	1.00	...	
	8.55	1	0.42	0.0	...	0.86	0.36	−44	1.02
		2	0.15	1.2	−60	0.16	1.00	...	
		3	0.02	3.6	150	2.72	1.00	...	
0113−118......	2.32	1	0.89	0.0	...	2.73	0.00	−27	1.27
		2	0.20	6.6	−38	3.41	1.00	...	
		3	0.07	33.4	−40	5.52	1.00	...	
	8.55	1	0.33	0.0	...	0.29	1.00	...	1.09

TABLE 2—*Continued*

Source	ν (GHz)	Component Number	S (Jy)	r (mas)	θ (deg)	a (mas)	b/a	ϕ (deg)	χ^2
		2	0.04	1.5	155	0.27	1.00	...	
		3	0.14	1.7	−30	0.66	1.00	...	
		4	0.05	6.8	−33	2.47	1.00	...	
0119+041......	2.32	1	1.12	0.0	...	0.00	1.00	...	1.06
		2	0.08	1.7	118	0.54	1.00	...	
	8.55	1	0.58	0.0	...	0.31	1.00	...	1.03
		2	0.20	0.7	97	0.45	1.00	...	
0123+257......	2.32	1	0.88	0.0	...	1.79	0.18	−10	0.98
		2	0.05	97.8	−173	5.48	1.00	...	
	8.55	1	0.33	0.0	...	0.60	0.08	7	1.05
		2	0.10	1.7	174	0.40	1.00	...	
0133+476......	2.32	1	1.50	0.0	...	1.36	0.00	−13	1.01
		2	0.27	2.7	−37	1.22	1.00	...	
		3	0.09	8.5	−14	6.85	1.00	...	
	8.55	1	1.38	0.0	...	0.36	0.27	−15	0.97
		2	0.07	2.6	−39	0.78	1.00	...	
0134+329......	2.32	1	1.55[b]	...	...	...	...	...	...
	8.55	1	0.29	0.0	...	5.85	0.78	23	0.78
0146+056......	2.32	1	1.08	0.0	...	0.76	1.00	...	0.90
		2	0.07	5.5	−138	8.46	1.00	...	
	8.55	1	0.54	0.0	...	0.29	0.54	−73	0.80
		2	0.28	0.8	111	0.29	1.00	...	
0148+274......	2.32	1	0.49	0.0	...	1.82	0.00	−34	0.95
		2	0.32	8.5	−41	3.53	0.31	−24	
		3	0.05	16.5	−32	2.44	1.00	...	
		4	0.03	21.2	−22	4.04	1.00	...	
	8.55	1	0.21	0.0	...	0.10	1.00	...	1.08
		2	0.13	0.7	−47	0.33	1.00	...	
		3	0.02	1.9	−44	0.64	1.00	...	
		4	0.07	9.1	−43	1.68	1.00	...	
0149+218......	2.32	1	0.61	0.0	...	1.42	0.23	−12	1.04
		2	0.08	4.7	−17	0.49	1.00	...	
		3	0.12	9.0	−9	2.51	1.00	...	
		4	0.19	40.1	20	7.48	1.00	...	
	8.55	1	0.74	0.0	...	0.31	0.19	−14	0.93
		2	0.02	2.5	−17	0.77	1.00	...	
		3	0.03	4.8	−19	1.66	1.00	...	
		4	0.04	8.6	−12	1.36	1.00	...	
0159+723......	2.32	1	0.25	0.0	...	0.78	1.00	...	1.05
		2	0.01	9.8	83	2.47	1.00	...	
	8.55	1	0.15	0.0	...	0.57	0.00	56	0.73
0202+149......	2.32	1	1.83	0.0	...	0.85	0.29	−38	1.29
		2	0.63	4.6	−52	2.15	1.00	...	
	8.55	1	1.25	0.0	...	0.46	0.00	−45	1.12
		2	0.07	0.7	−76	0.28	1.00	...	
		3	0.12	5.0	−60	0.96	1.00	...	
		4	0.09	5.1	−40	1.42	1.00	...	
0202+319......	2.32	1	0.38	0.0	...	0.24	1.00	...	0.93
		2	0.08	4.7	1	0.90	1.00	...	
		3	0.09	7.5	−9	1.50	1.00	...	
		4	0.03	10.8	−20	2.16	1.00	...	
		5	0.02	17.2	−30	4.30	1.00	...	
		6	0.04	30.8	−54	9.92	1.00	...	
	8.55	1	0.66	0.0	...	0.11	1.00	...	0.92
		2	0.03	1.0	14	0.50	1.00	...	
		3	0.04	6.9	−5	2.36	1.00	...	
0202−172......	2.32	1	1.11	0.0	...	2.64	0.25	13	1.34
		2	0.14	5.0	15	0.72	1.00	...	
		3	0.08	13.3	12	5.04	1.00	...	
	8.55	1	0.55	0.0	...	1.30	0.05	1	1.13
		2	0.11	2.1	19	0.95	1.00	...	
		3	0.04	5.6	15	0.89	1.00	...	
0219+428......	2.32	1	0.66	0.0	...	0.13	1.00	...	1.10
		2	0.17	2.2	176	0.54	1.00	...	
		3	0.04	7.9	167	3.41	1.00	...	
		4	0.06	15.8	167	10.11	1.00	...	

TABLE 2—*Continued*

Source	ν (GHz)	Component Number	S (Jy)	r (mas)	θ (deg)	a (mas)	b/a	φ (deg)	χ^2
	8.55	1	0.53	0.0	...	0.07	1.00	...	1.11
		2	0.12	0.8	−165	0.31	1.00	...	
		3	0.08	2.4	−178	0.85	1.00	...	
0224+671......	2.32	1	1.21	0.0	...	0.95	0.00	−1	1.33
		2	0.43	5.7	−6	4.48	0.38	2	
	8.55	1	1.09	0.0	...	0.60	0.24	6	0.84
		2	0.10	5.4	−7	2.90	1.00	...	
0235+164......	2.32	1	0.40	0.0	...	0.92	1.00	...	0.85
		2	0.09	1.7	39	5.91	1.00	...	
	8.55	1	0.20	0.0	...	0.31	0.00	−23	0.91
		2	0.04	0.3	−2	1.66	1.00	...	
0237−027......	2.32	1	0.32	0.0	...	0.00	1.00	...	1.06
		2	0.02	4.8	−180	1.38	1.00	...	
	8.55	1	0.28	0.0	...	0.11	1.00	...	1.02
		2	0.02	1.5	176	0.20	1.00	...	
0239+108......	2.32	1	0.92	0.0	...	1.73	0.00	−35	1.03
		2	0.89	2.3	134	2.25	0.44	−40	
	8.55	1	0.72	0.0	...	0.15	1.00	...	1.10
		2	0.10	1.4	133	0.86	1.00	...	
		3	0.13	2.4	135	0.89	1.00	...	
		4	0.08	3.6	136	1.48	1.00	...	
0241+622......	2.32	1	0.62	0.0	...	16.26	0.84	−69	1.27
	8.55	1	0.57	0.0	...	1.84	0.49	−66	0.91
0248+430......	2.32	1	1.14	0.0	...	1.85	0.23	−41	0.95
		2	0.07	4.9	137	1.30	1.00	...	
		3	0.19	11.6	143	1.35	1.00	...	
		4	0.02	26.2	166	9.08	1.00	...	
	8.55	1	0.50	0.0	...	1.33	0.14	−30	1.08
		2	0.13	1.5	143	0.40	1.00	...	
		3	0.01	5.3	135	0.55	1.00	...	
		4	0.06	12.4	143	0.91	1.00	...	
0256+075......	2.32	1	0.65	0.0	...	0.00	1.00	...	0.90
		2	0.12	2.5	171	0.86	1.00	...	
		3	0.01	9.4	180	1.13	1.00	...	
	8.55	1	0.37	0.0	...	0.56	0.26	20	0.95
		2	0.04	1.9	177	0.56	1.00	...	
0306+102......	2.32	1	0.55	0.0	...	0.65	1.00	...	0.90
		2	0.06	6.4	48	2.84	1.00	...	
	8.55	1	0.39	0.0	...	0.53	0.00	43	0.91
		2	0.08	0.8	54	0.79	0.00	18	
		3	0.01	2.4	47	0.79	1.00	...	
		4	0.01	6.2	45	0.93	1.00	...	
0309+411......	2.32	1	0.27	0.0	...	0.84	1.00	...	0.78
		2	0.05	4.0	−55	2.27	1.00	...	
	8.55	1	0.29	0.0	...	0.18	1.00	...	0.84
		2	0.04	0.6	−63	0.49	1.00	...	
		3	0.01	1.8	−58	0.84	1.00	...	
		4	0.01	5.3	−53	1.78	1.00	...	
0319+121......	2.32	1	0.93	0.0	...	2.51	0.08	−14	1.02
		2	0.28	5.9	−11	1.18	1.00	...	
		3	0.47	12.6	−13	4.38	0.43	−10	
		4	0.13	29.7	−16	8.01	1.00	...	
		5	0.15	40.1	−16	4.74	1.00	...	
	8.55	1	0.48	0.0	...	1.33	0.23	−8	0.99
		2	0.01	2.9	4	0.77	1.00	...	
		3	0.07	5.5	−12	0.76	1.00	...	
		4	0.04	8.8	−12	2.79	1.00	...	
		5	0.08	13.3	−13	1.69	1.00	...	
0326+278......	2.32	1	0.51	0.0	...	2.04	0.30	−63	0.83
		2	0.34	6.5	97	4.56	0.57	77	
		3	0.21	7.5	−76	1.06	0.00	57	
		4	0.20	13.0	94	2.52	0.00	−36	
		5	0.02	12.8	−95	1.94	1.00	...	
		6	0.03	19.4	101	0.84	0.00	32	
	8.55	1	0.26	0.0	...	0.64	0.15	−75	0.80
		2	0.05	7.2	105	0.83	1.00	...	

TABLE 2—*Continued*

Source	ν (GHz)	Component Number	S (Jy)	r (mas)	θ (deg)	a (mas)	b/a	ϕ (deg)	χ^2
		3	0.04	8.3	100	0.95	1.00	...	
		4	0.03	13.8	97	1.98	1.00	...	
		5	0.03	20.4	99	1.99	1.00	...	
0333+321......	2.32	1	0.85	0.0	...	1.12	1.00	...	0.96
		2	0.59	2.2	−52	0.83	1.00	...	
		3	0.47	2.8	132	1.32	1.00	...	
		4	0.26	5.8	131	1.22	1.00	...	
		5	0.17	9.0	136	1.23	1.00	...	
		6	0.11	12.9	146	3.79	1.00	...	
	8.55	1	0.33	0.0	...	0.11	1.00	...	0.98
		2	0.24	0.5	121	0.33	1.00	...	
		3	0.05	1.4	129	0.73	1.00	...	
		4	0.15	2.6	124	0.83	1.00	...	
		5	0.08	4.9	127	1.17	1.00	...	
		6	0.05	7.2	129	1.64	1.00	...	
		7	0.02	9.3	131	1.06	1.00	...	
		8	0.02	11.6	133	1.30	1.00	...	
0336−019......	2.32	1	1.60	0.0	...	1.01	1.00	...	1.15
		2	0.63	1.2	61	1.06	1.00	...	
		3	0.06	6.0	59	3.02	1.00	...	
	8.55	1	0.80	0.0	...	0.23	0.08	54	1.03
		2	0.45	1.3	68	0.91	1.00	...	
		3	0.02	1.6	−145	0.00	1.00	...	
		4	0.06	2.8	51	2.20	1.00	...	
0342+147......	2.32	1	0.36	0.0	...	0.87	1.00	...	0.92
		2	0.06	6.0	−88	2.20	1.00	...	
	8.55	1	0.23	0.0	...	0.30	1.00	...	0.94
		2	0.04	0.6	−100	0.41	1.00	...	
		3	0.02	6.2	−88	1.21	1.00	...	
0355+508......	2.32	1	1.48	0.0	...	5.25	0.82	78	1.42
		2	0.11	8.4	29	6.41	1.00	...	
		3	0.53	23.5	30	6.06	1.00	...	
		4	0.09	31.1	33	6.93	1.00	...	
		5	0.13	82.1	33	13.23	1.00	...	
	8.55	1	1.31	0.0	...	0.38	1.00	...	1.00
		2	0.09	1.3	51	1.05	1.00	...	
		3	0.09	3.2	45	1.07	1.00	...	
		4	0.02	6.4	40	0.94	1.00	...	
		5	0.06	24.1	32	1.84	1.00	...	
0403−132......	2.32	1	0.41	0.0	...	0.37	1.00	...	1.21
		2	0.05	4.9	163	1.15	1.00	...	
	8.55	1	0.67	0.0	...	0.22	0.00	−11	0.97
		2	0.01	2.2	169	0.78	1.00	...	
		3	0.01	7.5	160	0.81	1.00	...	
0405+305......	2.32	1	0.26	0.0	...	2.08	1.00	...	0.86
		2	0.05	38.6	−6	16.78	1.00	...	
	8.55	1	0.12	0.0	...	0.24	0.00	26	0.42
0405−123......	2.32	1	0.46	0.0	...	0.29	1.00	...	1.14
		2	0.18	4.7	4	0.89	1.00	...	
		3	0.08	12.6	6	3.26	1.00	...	
		4	0.05	25.4	10	4.02	1.00	...	
		5	0.02	42.1	7	4.77	1.00	...	
	8.55	1	0.45	0.0	...	0.67	0.00	17	1.01
		2	0.05	1.8	8	0.26	1.00	...	
		3	0.04	4.8	7	1.23	1.00	...	
		4	0.02	13.8	8	2.90	1.00	...	
0406−127......	2.32	1	0.36	0.0	...	2.25	0.24	−14	1.11
		2	0.02	3.5	−75	0.59	1.00	...	
		3	0.02	8.3	−43	2.03	1.00	...	
	8.55	1	0.22	0.0	...	0.15	1.00	...	0.79
		2	0.04	2.5	−4	0.55	1.00	...	
0414−189......	2.32	1	1.25	0.0	...	1.11	0.21	−32	1.24
		2	0.02	14.2	−173	9.50	1.00	...	
	8.55	1	0.76	0.0	...	0.30	0.35	−45	1.08
		2	0.04	0.7	−108	0.78	0.00	−33	
0420+417......	2.32	1	0.75	0.0	...	1.06	1.00	...	0.85

TABLE 2—*Continued*

Source	ν (GHz)	Component Number	S (Jy)	r (mas)	θ (deg)	a (mas)	b/a	ϕ (deg)	χ^2
		2	0.45	2.1	80	0.80	1.00	...	
		3	0.22	2.4	−111	1.78	1.00	...	
		4	0.06	11.3	−90	7.84	1.00	...	
		5	0.02	23.9	−128	6.01	1.00	...	
	8.55	1	0.26	0.0	...	0.33	1.00	...	1.04
		2	0.09	1.0	−100	0.34	1.00	...	
		3	0.04	1.8	72	0.34	1.00	...	
		4	0.21	2.5	−101	1.13	1.00	...	
		5	0.03	4.2	−105	1.18	1.00	...	
0423+051......	2.32	1	0.32	0.0	...	3.76	0.50	1	1.04
		2	0.37	0.7	120	3.64	1.00	...	
		3	0.02	9.5	108	7.53	1.00	...	
	8.55	1	0.21	0.0	...	0.73	0.37	−12	0.93
		2	0.04	2.0	165	0.81	1.00	...	
		3	0.06	2.8	142	0.98	1.00	...	
0434−188......	2.32	1	0.99	0.0	...	2.10	0.00	−36	1.20
	8.55	1	0.43	0.0	...	0.59	0.00	−35	0.94
		2	0.12	1.3	−44	0.72	0.27	−35	
0446+112......	2.32	1	0.76	0.0	...	2.07	0.63	−70	0.88
	8.55	1	0.47	0.0	...	0.22	1.00	...	0.86
		2	0.07	0.5	100	0.46	1.00	...	
0454+844......	2.32	1	0.35	0.0	...	0.27	1.00	...	1.20
		2	0.04	1.7	165	0.58	1.00	...	
	8.55	1	0.19	0.0	...	0.31	0.40	−32	0.72
		2	0.03	1.2	163	1.86	0.19	18	
0457+024......	2.32	1	2.43	0.0	...	2.39	0.43	9	0.89
	8.55	1	0.48	0.0	...	0.92	0.56	85	0.82
		2	0.11	1.5	25	0.59	1.00	...	
		3	0.02	1.7	−143	0.00	1.00	...	
		4	0.10	2.6	15	0.84	1.00	...	
0458−020......	2.32	1	1.23	0.0	...	2.01	0.00	−31	1.22
		2	0.39	2.4	−62	5.26	0.00	−46	
		3	0.11	9.5	−60	9.43	0.84	5	
		4	0.04	17.4	−60	3.07	1.00	...	
	8.55	1	0.67	0.0	...	0.41	0.46	−13	0.93
		2	0.16	1.4	−42	1.02	1.00	...	
		3	0.07	4.1	−54	2.80	1.00	...	
0500+019......	2.32	1	1.05	0.0	...	0.80	1.00	...	0.86
		2	1.09	2.6	−42	1.27	1.00	...	
		3	0.09	5.7	−44	3.69	1.00	...	
		4	0.50	8.6	180	2.25	1.00	...	
	8.55	1	0.47	0.0	...	0.95	0.22	−16	0.84
		2	0.07	2.1	−170	0.74	1.00	...	
		3	0.32	2.2	−46	1.27	0.56	−38	
		4	0.02	3.9	−52	0.41	1.00	...	
		5	0.02	6.8	−164	0.45	1.00	...	
		6	0.01	8.2	−172	0.00	1.00	...	
		7	0.06	8.8	179	0.72	1.00	...	
0502+049......	2.32	1	0.53	0.0	...	0.62	1.00	...	0.93
		2	0.40	2.2	−134	0.87	1.00	...	
		3	0.03	10.8	−136	3.26	1.00	...	
	8.55	1	0.39	0.0	...	0.21	1.00	...	0.86
		2	0.06	0.9	−128	0.38	1.00	...	
		3	0.11	2.6	−134	0.65	1.00	...	
0506+101......	2.32	1	0.59	0.0	...	0.27	1.00	...	0.91
		2	0.05	2.7	−28	1.73	1.00	...	
	8.55	1	0.35	0.0	...	0.30	0.00	−51	0.90
0528+134......	2.32	1	1.97	0.0	...	4.01	0.30	−15	0.96
		2	0.29	2.6	33	1.32	1.00	...	
		3	0.07	7.6	11	4.77	1.00	...	
	8.55	1	3.22	0.0	...	0.34	0.70	−41	1.02
		2	0.53	0.6	39	0.40	1.00	...	
		3	0.06	3.0	18	1.13	1.00	...	
		4	0.02	7.5	37	0.65	1.00	...	
0529+075......	2.32	1	2.57	0.0	...	35.82	0.72	−16	0.93
	8.55	1	0.72	0.0	...	2.81	0.63	−10	0.99

TABLE 2—*Continued*

Source	ν (GHz)	Component Number	S (Jy)	r (mas)	θ (deg)	a (mas)	b/a	φ (deg)	χ^2
		2	0.48	1.4	−37	3.01	1.00	...	
0537−158.......	2.32	1	0.38	0.0	...	4.15	0.21	11	1.07
		2	0.08	11.7	12	2.96	1.00	...	
		3	0.02	50.2	19	7.44	1.00	...	
	8.55	1	0.21	0.0	...	0.73	0.20	16	0.77
		2	0.04	3.5	14	0.75	1.00	...	
		3	0.02	13.0	13	4.65	1.00	...	
0538+498.......	2.32	1	3.34[b]	...	...	...	...	...	...
	8.55	1	0.35	0.0	...	0.34	0.55	83	1.18
		2	0.11	1.8	−145	1.23	0.68	20	
		3	0.22	3.6	−127	2.30	0.43	28	
		4	0.20	3.7	−106	2.70	0.41	−55	
		5	0.42	4.8	−130	6.84	0.61	39	
0552+398[c]......	2.32	1	3.82	0.0	...	1.04	0.55	−63	1.23
	8.55	1	3.75	0.0	...	0.41	0.77	−84	1.12
		2	0.69	0.7	−71	0.59	1.00	...	
0552+398[d]......	2.32	1	3.84	0.0	...	1.03	0.49	−70	1.46
	8.55	1	3.70	0.0	...	0.40	0.63	−80	1.60
		2	0.68	0.7	−71	0.54	1.00	...	
0556+238.......	2.32	1	1.18	0.0	...	1.74	0.22	−22	0.82
	8.55	1	0.69	0.0	...	0.32	0.76	−4	0.91
0605−085.......	2.32	1	1.93	0.0	...	1.47	0.36	−40	1.14
		2	0.53	3.0	110	1.50	1.00	...	
		3	0.31	6.7	110	3.97	1.00	...	
		4	0.21	18.3	108	8.11	1.00	...	
		5	0.02	39.2	104	11.72	1.00	...	
	8.55	1	1.52	0.0	...	0.69	0.00	−56	1.16
		2	0.16	3.2	108	0.77	1.00	...	
		3	0.04	6.1	114	1.21	1.00	...	
0607−157.......	2.32	1	2.23	0.0	...	0.87	1.00	...	1.41
		2	0.65	2.0	94	0.73	1.00	...	
		3	0.15	10.1	66	5.45	1.00	...	
		4	0.35	18.3	53	4.00	1.00	...	
	8.55	1	3.54	0.0	...	0.12	1.00	...	1.56
		2	0.36	0.8	57	0.24	1.00	...	
		3	0.18	1.7	90	1.50	1.00	...	
0611+131.......	2.32	1	0.35	0.0	...	0.89	1.00	...	0.79
		2	0.03	5.3	−5	1.02	1.00	...	
		3	0.05	12.5	−1	2.01	1.00	...	
		4	0.02	18.8	−2	1.77	1.00	...	
		5	0.06	28.3	−6	2.68	1.00	...	
	8.55	1	0.21	0.0	...	0.00	1.00	...	0.84
		2	0.06	0.9	−1	0.30	1.00	...	
0615+820.......	2.32	1	0.91	0.0	...	0.97	0.85	32	1.12
	8.55	1	0.31	0.0	...	0.78	0.34	4	0.99
		2	0.11	0.7	−91	1.35	0.34	10	
0642+214.......	2.32	1	0.59	0.0	...	1.57	0.16	−30	0.86
		2	0.05	7.2	−25	6.68	0.26	−20	
	8.55	1	0.24	0.0	...	0.26	1.00	...	0.82
		2	0.03	1.0	−25	0.39	1.00	...	
		3	0.09	1.5	150	0.00	1.00	...	
0648−165.......	2.32	1	1.26	0.0	...	1.68	0.62	−27	1.23
		2	0.17	7.9	−122	5.04	1.00	...	
		3	0.14	18.0	−121	10.98	1.00	...	
		4	0.08	43.2	−113	20.43	1.00	...	
	8.55	1	0.71	0.0	...	0.41	0.38	−19	1.06
		2	0.13	0.9	−73	0.87	1.00	...	
0650+371.......	2.32	1	0.65	0.0	...	0.97	0.33	58	0.84
		2	0.06	7.0	92	8.60	0.34	−48	
	8.55	1	0.29	0.0	...	0.25	0.00	45	0.92
		2	0.07	0.8	54	0.38	0.00	13	
		3	0.04	1.2	46	0.92	0.79	44	
0711+356.......	2.32	1	1.34	0.0	...	1.45	0.35	−26	0.92
		2	0.28	4.8	157	1.85	0.00	−28	
	8.55	1	0.32	0.0	...	0.68	0.69	−42	0.94
		2	0.01	1.4	159	0.47	1.00	...	

TABLE 2—*Continued*

Source	ν (GHz)	Component Number	S (Jy)	r (mas)	θ (deg)	a (mas)	b/a	φ (deg)	χ^2
		3	0.03	4.2	157	0.40	1.00	…	
		4	0.11	5.7	158	0.74	0.00	−23	
0716+714…….	2.32	1	0.27	0.0	…	0.90	0.10	27	1.05
	8.55	1	0.21	0.0	…	0.30	0.10	25	0.95
		2	0.01	1.2	20	0.51	1.00	…	
0722+145…….	2.32	1	0.49	0.0	…	0.38	1.00	…	0.91
		2	0.22	2.6	−58	1.82	1.00	…	
		3	0.15	4.8	−74	2.76	1.00	…	
		4	0.06	14.0	−107	8.97	1.00	…	
		5	0.05	26.6	−130	14.53	1.00	…	
	8.55	1	0.31	0.0	…	0.00	1.00	…	0.96
		2	0.06	0.6	−52	0.39	1.00	…	
		3	0.05	2.7	−62	1.43	1.00	…	
		4	0.05	4.9	−68	2.39	1.00	…	
0727−115[c] ……	2.32	1	1.98	0.0	…	0.66	1.00	…	1.25
		2	0.50	2.2	−49	1.59	1.00	…	
		3	0.21	8.0	−29	10.81	1.00	…	
	8.55	1	1.64	0.0	…	0.31	0.35	69	1.07
		2	0.19	1.8	−55	2.97	0.40	−34	
0727−115[d] ……	2.32	1	1.87	0.0	…	0.53	1.00	…	1.17
		2	0.52	2.2	−44	1.55	1.00	…	
		3	0.22	6.9	−30	11.29	1.00	…	
	8.55	1	1.60	0.0	…	0.28	0.00	74	1.23
		2	0.17	2.0	−54	2.93	0.49	−19	
0733−174…….	2.32	1	1.19	0.0	…	2.39	0.46	61	1.25
		2	0.51	3.2	58	6.30	0.41	−17	
		3	0.07	7.4	96	1.29	1.00	…	
		4	0.24	7.3	−160	4.96	0.31	10	
		5	0.34	11.8	81	7.83	1.00	…	
		6	0.43	12.5	−150	6.78	0.39	4	
	8.55	1	0.17	0.0	…	0.73	0.00	−45	1.00
		2	0.24	0.6	61	2.75	0.30	27	
		3	0.13	2.4	−148	3.93	0.10	28	
		4	0.03	3.2	83	1.28	0.00	79	
		5	0.12	4.9	−153	0.90	0.00	81	
		6	0.02	12.3	−159	2.52	0.23	24	
		7	0.07	14.1	−149	2.34	0.51	72	
0735+178…….	2.32	1	1.07	0.0	…	1.01	1.00	…	0.87
		2	0.12	3.0	65	2.26	1.00	…	
		3	0.11	8.4	73	5.57	1.00	…	
		4	0.07	15.6	74	6.71	1.00	…	
		5	0.14	25.5	92	20.95	1.00	…	
	8.55	1	0.27	0.0	…	0.24	1.00	…	0.84
		2	0.33	0.8	70	0.73	1.00	…	
		3	0.04	3.7	64	1.99	1.00	…	
0736+017…….	2.32	1	0.78	0.0	…	0.44	1.00	…	1.18
		2	0.35	2.4	−59	1.85	1.00	…	
		3	0.51	7.7	−91	3.56	0.58	46	
		4	0.35	9.9	−85	1.74	1.00	…	
	8.55	1	0.90	0.0	…	0.35	0.00	−44	1.03
		2	0.16	0.8	−63	1.42	0.00	−67	
		3	0.05	3.3	−61	1.00	1.00	…	
		4	0.01	6.8	−69	0.90	1.00	…	
		5	0.17	9.3	−88	3.01	1.00	…	
0738+313…….	2.32	1	2.08	0.0	…	1.50	1.00	…	0.89
		2	0.30	2.7	−7	1.47	1.00	…	
		3	0.18	2.7	127	0.93	1.00	…	
		4	0.07	7.8	131	3.87	1.00	…	
	8.55	1	1.18	0.0	…	0.47	0.56	−28	1.00
		2	0.13	0.8	113	0.36	1.00	…	
		3	0.06	1.9	117	1.24	1.00	…	
		4	0.77	2.7	−1	0.46	0.09	8	
0743+259…….	2.32	1	0.45	0.0	…	0.24	1.00	…	0.86
		2	0.02	3.9	9	3.06	1.00	…	
	8.55	1	0.12	0.0	…	0.31	0.52	27	0.44
0745+241…….	2.32	1	0.33	0.0	…	0.79	1.00	…	0.86

TABLE 2—*Continued*

Source	ν (GHz)	Component Number	S (Jy)	r (mas)	θ (deg)	a (mas)	b/a	ϕ (deg)	χ^2
		2	0.23	2.8	−58	1.11	1.00	...	
		3	0.07	7.1	−46	1.88	1.00	...	
	8.55	1	0.26	0.0	...	0.15	1.00	...	0.75
		2	0.05	0.7	−66	0.38	1.00	...	
		3	0.07	3.1	−63	0.65	1.00	...	
		4	0.02	6.9	−50	2.63	1.00	...	
0748+126......	2.32	1	1.15	0.0	...	2.27	0.00	−58	1.03
		2	0.19	3.5	113	1.99	1.00	...	
		3	0.06	19.9	102	8.77	1.00	...	
		4	0.04	39.2	104	15.12	1.00	...	
		5	0.09	69.7		12.25	1.00	...	
	8.55	1	1.74	0.0	...	0.21	0.00	69	0.98
		2	0.16	1.7	122	1.00	0.63	−40	
		3	0.03	4.7	112	1.35	1.00	...	
0754+100......	2.32	1	1.34	0.0	...	0.23	1.00	...	0.91
		2	0.25	3.1	11	1.13	1.00	...	
	8.55	1	0.97	0.0	...	0.10	1.00	...	0.98
		2	0.27	1.1	17	0.15	1.00	...	
		3	0.09	3.3	17	1.64	1.00	...	
0804+499......	2.32	1	0.83	0.0	...	0.51	1.00	...	1.01
		2	0.13	2.1	150	1.37	1.00	...	
	8.55	1	0.41	0.0	...	0.16	1.00	...	0.87
		2	0.07	0.9	133	1.07	1.00	...	
0805+410......	2.32	1	0.63	0.0	...	0.00	1.00	...	0.75
		2	0.05	2.4	38	0.76	1.00	...	
		3	0.05	6.9	45	2.09	1.00	...	
		4	0.04	10.4	56	3.14	1.00	...	
	8.55	1	0.58	0.0	...	0.26	0.00	21	0.68
		2	0.12	0.6	32	0.30	1.00	...	
0812+367......	2.32	1	0.59	0.0	...	0.00	1.00	...	0.81
		2	0.15	2.6	−12	0.31	1.00	...	
		3	0.06	8.1	−10	2.13	1.00	...	
		4	0.09	12.3	−17	2.31	1.00	...	
	8.55	1	0.61	0.0	...	0.82	0.13	−7	0.94
		2	0.05	2.6	−9	0.61	1.00	...	
		3	0.04	9.4	−12	5.46	1.00	...	
0814+425......	2.32	1	0.93	0.0	...	0.83	1.00	...	0.75
		2	0.11	1.8	132	1.13	1.00	...	
		3	0.07	6.0	110	5.62	1.00	...	
	8.55	1	0.68	0.0	...	0.33	0.00	−79	0.97
		2	0.23	0.9	88	0.63	1.00	...	
		3	0.03	2.2	138	1.39	1.00	...	
0818−128......	2.32	1	0.40	0.0	...	0.78	0.00	−78	1.09
		2	0.03	2.8	75	1.37	0.00	27	
		3	0.06	7.5	72	2.16	1.00	...	
		4	0.02	21.4	71	5.11	1.00	...	
		5	0.02	59.2	64	5.00	1.00	...	
	8.55	1	0.27	0.0	...	0.37	1.00	...	1.01
		2	0.05	0.9	73	0.49	1.00	...	
		3	0.02	7.7	72	0.68	1.00	...	
0821+394......	2.32	1	0.46	0.0	...	0.60	1.00	...	0.88
		2	0.12	3.7	−45	1.49	1.00	...	
		3	0.31	290.7	−50	12.71	0.75	34	
		4	0.20	296.5	−50	7.80	0.39	34	
	8.55	1	0.95	0.0	...	0.23	0.00	−59	0.64
		2	0.04	0.6	−43	0.42	1.00	...	
		3	0.03	4.1	−45	0.77	1.00	...	
		4	0.04	296.6	−50	6.33	1.00	...	
0827+243......	2.32	1	0.43	0.0	...	1.18	0.00	−33	0.87
		2	0.41	3.3	137	2.77	0.31	−47	
		3	0.03	11.5	143	7.70	1.00	...	
	8.55	1	0.61	0.0	...	0.21	0.00	−48	1.00
		2	0.07	3.3	143	1.01	1.00	...	
		3	0.03	4.5	131	1.16	1.00	...	
0828+493......	2.32	1	0.34	0.0	...	0.69	0.00	61	0.96
		2	0.02	2.6	62	1.37	1.00	...	

TABLE 2—*Continued*

Source	ν (GHz)	Component Number	S (Jy)	r (mas)	θ (deg)	a (mas)	b/a	ϕ (deg)	χ^2
		3	0.04	13.9	61	5.46	1.00	...	
	8.55	1	0.22	0.0	...	0.05	1.00	...	0.86
		2	0.04	0.6	63	0.43	1.00	...	
0829+046.......	2.32	1	0.73	0.0	...	1.00	1.00	...	0.96
		2	0.23	2.3	65	1.15	1.00	...	
		3	0.09	5.7	58	2.48	1.00	...	
	8.55	1	0.44	0.0	...	0.21	0.00	60	0.94
		2	0.12	0.6	61	0.03	1.00	...	
		3	0.10	1.4	67	0.58	1.00	...	
		4	0.05	2.4	70	0.78	1.00	...	
		5	0.03	3.7	64	0.96	1.00	...	
		6	0.01	6.2	59	1.03	1.00	...	
0836+710.......	2.32	1	1.40	0.0	...	2.77	0.21	29	1.41
		2	0.21	3.8	−146	1.79	1.00	...	
		3	0.83	10.2	−150	5.01	0.32	12	
		4	0.09	23.6	−154	4.01	1.00	...	
		5	0.14	34.0	−158	6.35	1.00	...	
	8.55	1	0.62	0.0	...	0.12	1.00	...	1.12
		2	0.12	1.0	−134	0.42	1.00	...	
		3	0.09	2.3	−142	0.46	1.00	...	
		4	0.06	3.3	−145	0.50	1.00	...	
		5	0.02	8.2	−144	1.06	1.00	...	
		6	0.10	11.5	−148	1.50	1.00	...	
0839+187.......	2.32	1	0.64	0.0	...	2.30	0.32	5	1.01
		2	0.12	5.2	19	0.93	1.00	...	
		3	0.47	10.6	16	1.45	1.00	...	
	8.55	1	0.28	0.0	...	0.55	0.00	11	0.92
		2	0.10	2.1	6	1.06	0.60	22	
		3	0.01	5.8	18	0.69	1.00	...	
		4	0.03	11.1	11	1.00	1.00	...	
		5	0.09	12.1	15	1.00	1.00	...	
0850+581.......	2.32	1	0.67	0.0	...	1.96	0.03	−22	1.09
		2	0.13	6.1	152	2.82	0.16	−22	
		3	0.03	13.5	148	2.41	1.00	...	
	8.55	1	0.44	0.0	...	0.64	0.21	−19	1.05
		2	0.04	1.3	167	0.31	1.00	...	
		3	0.03	2.4	151	0.40	1.00	...	
		4	0.03	7.0	153	1.03	1.00	...	
0851+202[c]......	2.32	1	1.25	0.0	...	1.16	0.00	−79	1.02
		2	0.07	1.7	−94	0.67	1.00	...	
		3	0.04	4.6	−113	1.71	1.00	...	
		4	0.05	8.5	−125	6.34	1.00	...	
	8.55	1	0.70	0.0	...	0.23	0.00	89	0.83
		2	0.29	1.0	−92	0.67	0.39	−83	
		3	0.02	3.8	−106	3.10	1.00	...	
0851+202[d]......	2.32	1	1.25	0.0	...	1.16	0.08	−79	0.97
		2	0.08	1.7	−91	1.82	1.00	...	
		3	0.05	5.7	−122	2.47	1.00	...	
		4	0.03	9.6	−120	6.85	1.00	...	
	8.55	1	0.70	0.0	...	0.24	0.00	78	0.87
		2	0.28	1.1	−92	0.63	0.34	−85	
		3	0.02	4.5	−111	3.08	1.00	...	
0859−140.......	2.32	1	1.41	0.0	...	3.25	0.00	−26	1.42
		2	0.38	4.4	154	5.88	0.00	−12	
		3	0.28	16.4	168	7.53	0.21	12	
		4	0.35	21.6	−180	6.77	0.45	−26	
		5	0.08	67.6	170	11.34	1.00	...	
	8.55	1	0.73	0.0	...	0.61	0.20	−22	1.04
		2	0.16	1.3	159	0.33	1.00	...	
		3	0.15	3.2	155	0.79	1.00	...	
		4	0.04	6.6	157	1.03	1.00	...	
		5	0.02	9.1	158	0.94	1.00	...	
		6	0.03	17.6	167	2.27	1.00	...	
		7	0.03	24.0	178	3.07	1.00	...	
0906+015.......	2.32	1	0.37	0.0	...	0.88	1.00	...	0.92
		2	0.09	3.0	47	1.43	1.00	...	

TABLE 2—*Continued*

Source	ν (GHz)	Component Number	S (Jy)	r (mas)	θ (deg)	a (mas)	b/a	ϕ (deg)	χ^2
		3	0.04	9.6	48	3.17	1.00	…	
		4	0.07	24.5	51	7.76	1.00	…	
	8.55	1	0.22	0.0	…	0.93	0.10	42	0.63
		2	0.03	2.3	42	1.25	1.00	…	
		3	0.01	8.4	50	2.67	1.00	…	
0912+029……	2.32	1	0.46	0.0	…	0.34	1.00	…	0.90
		2	0.09	4.1	8	1.21	1.00	…	
	8.55	1	0.47	0.0	…	0.43	0.00	11	0.83
		2	0.03	2.9	13	0.94	1.00	…	
0917+449……	2.32	1	1.19	0.0	…	1.17	0.18	1	1.03
		2	0.06	5.7	−161	3.41	1.00	…	
		3	0.04	17.8	−163	3.40	1.00	…	
		4	0.03	23.3	−153	3.97	1.00	…	
	8.55	1	0.51	0.0	…	0.63	0.12	−5	0.95
		2	0.30	1.1	178	0.45	1.00	…	
0923+392……	2.32	1	4.99[b]	…	…	…	…	…	…
	8.55	1	9.13[b]	…	…	…	…	…	…
0952+179……	2.32	1	0.33	0.0	…	0.57	1.00	…	0.83
		2	0.16	4.9	2	1.06	1.00	…	
		3	0.24	11.5	−3	1.89	1.00	…	
		4	0.15	18.3	−21	2.88	1.00	…	
	8.55	1	0.31	0.0	…	0.00	1.00	…	0.88
		2	0.04	1.4	17	0.36	1.00	…	
		3	0.03	2.7	13	0.82	1.00	…	
		4	0.03	6.2	4	0.80	1.00	…	
		5	0.01	10.2	3	0.52	1.00	…	
		6	0.04	13.1	−1	1.88	1.00	…	
0954+658……	2.32	1	0.57	0.0	…	0.36	1.00	…	1.06
		2	0.11	1.9	−70	2.40	1.00	…	
		3	0.03	8.9	−75	6.13	1.00	…	
	8.55	1	0.35	0.0	…	0.44	0.27	−29	1.08
		2	0.09	0.7	−22	0.36	1.00	…	
		3	0.02	2.1	−61	1.84	1.00	…	
0955+326……	2.32	1	0.42	0.0	…	1.24	0.46	−36	1.05
		2	0.20	5.7	−178	4.35	0.45	27	
		3	0.21	13.1	−173	5.08	0.60	−43	
	8.55	1	0.60	0.0	…	0.00	1.00	…	0.99
		2	0.03	5.5	−180	1.81	1.00	…	
		3	0.04	13.1	−175	2.84	1.00	…	
1011+250……	2.32	1	0.42	0.0	…	0.91	0.00	−78	0.99
		2	0.16	5.5	−107	2.81	0.43	57	
	8.55	1	0.45	0.0	…	0.49	0.00	56	0.91
		2	0.20	0.8	−116	0.14	1.00	…	
		3	0.02	6.4	−107	1.37	1.00	…	
1012+232……	2.32	1	0.47	0.0	…	0.67	1.00	…	0.93
		2	0.15	1.9	115	1.10	1.00	…	
		3	0.02	11.5	109	4.24	1.00	…	
		4	0.01	59.7	107	1.22	1.00	…	
	8.55	1	0.58	0.0	…	0.36	0.00	−76	1.14
		2	0.09	1.4	109	1.30	1.00	…	
1021−006……	2.32	1	0.67	0.0	…	0.83	1.00	…	1.03
		2	0.34	3.2	49	1.29	1.00	…	
		3	0.09	3.0	−155	0.98	1.00	…	
	8.55	1	0.16	0.0	…	0.16	1.00	…	0.60
		2	0.07	2.1	43	0.80	1.00	…	
		3	0.03	3.4	−134	1.44	1.00	…	
		4	0.06	4.7	46	0.26	1.00	…	
1030+415……	2.32	1	0.22	0.0	…	1.06	1.00	…	0.59
		2	0.07	9.5	−14	8.10	1.00	…	
	8.55	1	0.44	0.0	…	0.00	1.00	…	0.98
		2	0.01	2.4	0	1.38	1.00	…	
1039+811……	2.32	1	0.54	0.0	…	0.32	1.00	…	1.20
		2	0.18	1.9	−69	0.46	1.00	…	
		3	0.06	5.5	−81	2.50	1.00	…	
		4	0.03	12.7	−90	6.47	1.00	…	
	8.55	1	0.45	0.0	…	0.09	1.00	…	1.02

TABLE 2—*Continued*

Source	ν (GHz)	Component Number	S (Jy)	r (mas)	θ (deg)	a (mas)	b/a	φ (deg)	χ^2
		2	0.08	0.8	−63	0.36	1.00	…	
		3	0.04	2.1	−67	0.87	1.00	…	
		4	0.02	5.5	−76	3.21	1.00	…	
1040+123……	2.32	1	0.55	0.0	…	1.94	0.00	−54	1.05
		2	0.16	9.7	−57	5.58	1.00	…	
		3	0.24	17.5	−65	5.54	1.00	…	
		4	0.28	25.0	−63	4.33	1.00	…	
		5	0.11	31.2	−65	5.29	1.00	…	
		6	0.11	40.3	−68	8.82	1.00	…	
		7	0.04	57.9	−72	8.60	1.00	…	
	8.55	1	0.29	0.0	…	0.92	0.00	−78	0.83
		2	0.08	1.4	−69	1.03	0.35	−27	
		3	0.05	25.4	−63	3.68	1.00	…	
1042+071……	2.32	1	0.27	0.0	…	0.00	1.00	…	0.74
		2	0.06	2.3	134	1.52	1.00	…	
	8.55	1	0.19	0.0	…	0.12	1.00	…	0.71
		2	0.03	0.8	132	0.24	1.00	…	
		3	0.01	2.3	131	0.86	1.00	…	
1044+719……	2.32	1	1.46	0.0	…	0.78	0.44	24	1.06
	8.55	1	1.12	0.0	…	0.40	0.53	13	1.21
1045−188……	2.32	1	0.58	0.0	…	1.98	0.00	−18	1.27
		2	0.09	6.6	147	5.34	0.00	−26	
		3	0.02	15.0	138	9.30	1.00	…	
	8.55	1	0.92	0.0	…	0.39	0.00	−23	1.05
		2	0.02	7.0	150	1.12	1.00	…	
1053+704……	2.32	1	0.30	0.0	…	1.47	0.63	35	1.06
	8.55	1	0.36	0.0	…	0.00	1.00	…	1.04
		2	0.02	0.7	−143	0.79	1.00	…	
1055+018……	2.32	1	1.07	0.0	…	0.70	1.00	…	1.22
		2	0.47	2.0	141	0.00	1.00	…	
		3	0.70	3.6	−56	1.98	1.00	…	
		4	0.49	7.1	−65	2.90	1.00	…	
		5	0.19	14.8	−73	13.72	1.00	…	
	8.55	1	1.67	0.0	…	0.20	0.00	−51	1.51
		2	0.25	1.9	−44	0.80	0.00	−18	
		3	0.22	5.5	−53	2.23	1.00	…	
		4	0.11	9.3	−63	2.68	1.00	…	
1111+149……	2.32	1	0.52	0.0	…	2.26	0.00	−21	1.19
		2	0.02	5.9	−13	0.59	1.00	…	
	8.55	1	0.19	0.0	…	0.48	0.00	−34	0.83
		2	0.04	1.8	−22	1.73	0.23	−11	
1123+264……	2.32	1	0.96	0.0	…	0.00	1.00	…	0.81
		2	0.16	1.8	−55	1.19	1.00	…	
		3	0.06	5.3	−66	3.96	1.00	…	
	8.55	1	0.54	0.0	…	0.64	0.20	−57	0.96
		2	0.03	1.7	−49	1.97	1.00	…	
1124−186……	2.32	1	0.70	0.0	…	1.66	0.00	−19	1.20
	8.55	1	0.74	0.0	…	0.19	0.42	49	1.02
		2	0.01	3.3	179	1.22	1.00	…	
1128+385……	2.32	1	0.76	0.0	…	0.58	1.00	…	0.83
		2	0.06	5.1	−62	7.21	1.00	…	
	8.55	1	0.75	0.0	…	0.02	1.00	…	1.07
		2	0.07	0.8	−162	0.65	1.00	…	
1128−047……	2.32	1	0.26	0.0	…	0.00	1.00	…	1.12
		2	0.13	3.6	159	0.56	1.00	…	
		3	0.07	11.4	158	4.27	1.00	…	
	8.55	1	0.23	0.0	…	0.43	1.00	…	0.99
		2	0.03	2.0	172	0.59	1.00	…	
		3	0.03	3.0	160	0.72	1.00	…	
		4	0.03	6.3	158	2.97	1.00	…	
1144+402……	2.32	1	0.50	0.0	…	0.00	1.00	…	0.79
		2	0.06	3.7	2	1.72	1.00	…	
		3	0.01	8.4	5	3.58	1.00	…	
	8.55	1	0.76	0.0	…	0.10	0.00	−74	1.01
1147+245……	2.32	1	0.50	0.0	…	0.63	1.00	…	0.83
		2	0.12	2.0	−91	1.86	1.00	…	

TABLE 2—*Continued*

Source	ν (GHz)	Component Number	S (Jy)	r (mas)	θ (deg)	a (mas)	b/a	φ (deg)	χ^2
		3	0.10	12.6	−100	6.38	1.00	...	
		4	0.07	29.3	−105	14.20	1.00	...	
		5	0.01	45.9	−111	1.99	1.00	...	
	8.55	1	0.33	0.0	...	0.18	1.00	...	0.83
		2	0.07	1.0	−103	0.76	1.00	...	
		3	0.03	2.6	−96	1.27	1.00	...	
		4	0.01	8.8	−92	1.50	1.00	...	
1148−001......	2.32	1	0.65	0.0	...	2.04	0.13	43	1.18
		2	0.66	3.0	−115	2.65	0.11	62	
		3	0.74	10.1	−123	4.60	0.38	61	
		4	0.11	17.8	−121	3.04	1.00	...	
		5	0.10	25.5	−126	5.07	1.00	...	
		6	0.05	33.9	−135	7.17	1.00	...	
	8.55	1	0.29	0.0	...	0.72	0.88	59	1.12
		2	0.21	3.2	−119	2.79	0.19	82	
		3	0.11	10.9	−123	4.81	0.17	56	
1150+497......	2.32	1	0.75	0.0	...	1.43	0.00	21	1.00
		2	0.04	17.5	−153	7.92	1.00	...	
	8.55	1	0.67	0.0	...	0.40	0.00	6	0.97
		2	0.14	0.8	−161	0.25	1.00	...	
		3	0.06	1.6	−151	0.27	1.00	...	
1155+251......	2.32	1	0.55	0.0	...	3.94	0.41	−44	0.86
		2	0.11	3.2	−87	2.74	1.00	...	
		3	0.23	6.1	23	5.09	1.00	...	
		4	0.07	10.5	−30	4.15	1.00	...	
		5	0.13	11.4	−78	12.07	1.00	...	
		6	0.03	36.1	−78	3.54	1.00	...	
	8.55	1	0.20	0.0	...	2.46	0.66	−81	0.61
		2	0.09	6.0	12	6.27	1.00	...	
1213−172......	2.32	1	0.88	0.0	...	1.11	0.31	−38	1.25
		2	0.13	4.2	119	4.23	1.00	...	
		3	0.07	10.1	122	4.09	1.00	...	
		4	0.12	20.0	118	19.00	1.00	...	
	8.55	1	1.40	0.0	...	0.37	0.00	−50	1.24
		2	0.06	1.1	138	0.24	0.00	−27	
		3	0.03	5.3	116	2.20	1.00	...	
1215+303......	2.32	1	0.27	0.0	...	1.41	0.00	−37	0.72
		2	0.03	15.2	139	10.55	1.00	...	
	8.55	1	0.19	0.0	...	0.12	1.00	...	0.68
		2	0.03	0.9	144	0.48	1.00	...	
1216+487......	2.32	1	0.51	0.0	...	0.00	1.00	...	0.98
		2	0.13	2.0	96	1.30	1.00	...	
		3	0.07	4.4	110	1.99	1.00	...	
		4	0.03	9.7	109	3.09	1.00	...	
		5	0.03	18.7	106	11.93	1.00	...	
	8.55	1	0.40	0.0	...	0.46	0.14	84	0.96
		2	0.03	1.7	101	1.07	1.00	...	
		3	0.03	3.6	102	2.15	1.00	...	
1219+285......	2.32	1	0.34	0.0	...	1.62	1.00	...	0.87
		2	0.10	2.0	129	1.62	1.00	...	
		3	0.17	9.9	110	3.41	1.00	...	
		4	0.17	15.0	151	15.13	1.00	...	
	8.55	1	0.17	0.0	...	0.30	1.00	...	0.63
		2	0.11	1.6	105	1.39	1.00	...	
		3	0.05	10.2	107	2.14	1.00	...	
1222+037......	2.32	1	1.02	0.0	...	0.81	1.00	...	1.08
		2	0.27	2.8	128	0.75	1.00	...	
	8.55	1	0.36	0.0	...	0.20	0.00	−64	1.00
		2	0.10	3.0	−47	1.86	0.58	−12	
		3	0.21	3.6	−57	0.80	0.51	18	
1228+126......	2.32	1	3.09[b]	...	...	...	...	...	...
	8.55	1	0.85	0.0	...	0.64	0.37	−74	1.67
		2	0.19	1.0	−88	0.58	1.00	...	
		3	0.22	2.0	−75	1.43	1.00	...	
		4	0.17	5.8	−76	3.20	1.00	...	
		5	0.10	10.5	−69	3.14	1.00	...	

TABLE 2—*Continued*

Source	ν (GHz)	Component Number	S (Jy)	r (mas)	θ (deg)	a (mas)	b/a	ϕ (deg)	χ^2
1243−072......	2.32	1	0.54	0.0	...	1.20	0.38	−42	1.08
		2	0.13	3.7	−88	3.10	1.00	...	
		3	0.06	7.7	−92	5.36	1.00	...	
	8.55	1	0.60	0.0	...	0.43	0.00	−69	0.93
		2	0.04	4.6	−96	3.40	1.00	...	
1252+119......	2.32	1	0.50	0.0	...	1.11	1.00	...	0.82
		2	0.15	3.3	−98	1.68	1.00	...	
		3	0.06	9.3	−95	3.39	1.00	...	
		4	0.04	30.2	−100	10.00	1.00	...	
	8.55	1	0.33	0.0	...	0.17	1.00	...	1.02
		2	0.07	0.7	−100	0.42	1.00	...	
		3	0.02	3.8	−99	0.70	1.00	...	
1253−055......	2.32	1	5.07	0.0	...	1.35	0.49	−21	1.64
		2	2.56	2.1	67	0.95	0.13	49	
		3	0.22	7.3	−164	3.57	1.00	...	
		4	0.53	13.8	−147	4.88	1.00	...	
		5	0.11	44.3	−146	12.88	1.00	...	
	8.55	1	10.3[b]	...	...	...	...	...	...
1257+145......	2.32	1	0.54	0.0	...	0.48	1.00	...	0.90
		2	0.07	2.8	−147	1.99	1.00	...	
	8.55	1	0.20	0.0	...	1.25	0.10	18	0.57
1302−102......	2.32	1	1.04	0.0	...	0.64	0.71	29	1.04
	8.55	1	0.47	0.0	...	0.58	0.00	28	0.93
		2	0.12	1.0	35	0.84	0.35	38	
1324+224......	2.32	1	1.97	0.0	...	0.71	0.00	−23	0.87
		2	0.02	3.1	−82	1.08	1.00	...	
		3	0.02	8.8	−30	3.36	1.00	...	
	8.55	1	1.13	0.0	...	0.15	0.52	−68	1.28
1328+307......	2.32	1	11.3[b]	...	...	...	...	...	...
	8.55	1	0.37	0.0	...	2.77	0.62	39	1.07
		2	1.19	0.5	172	11.18	0.67	59	
		3	0.44	5.8	49	3.71	0.66	67	
		4	0.34	12.9	−148	12.04	0.62	56	
		5	0.33	29.4	−143	14.40	0.55	23	
1338+381......	2.32	1	0.45	0.0	...	2.73	0.28	11	0.83
	8.55	1	0.11	0.0	...	0.00	1.00	...	0.31
1342+663......	2.32	1	0.87	0.0	...	0.94	0.54	−24	1.12
	8.55	1	0.41	0.0	...	0.34	0.47	−63	1.04
		2	0.14	0.4	−134	0.74	0.41	−51	
1351−018......	2.32	1	0.88	0.0	...	1.05	0.00	−53	0.95
		2	0.03	11.6	−6	6.10	1.00	...	
	8.55	1	0.48	0.0	...	0.51	0.00	24	1.27
		2	0.03	1.0	135	0.90	0.00	30	
1354+195......	2.32	1	0.48	0.0	...	0.00	1.00	...	1.06
		2	0.34	2.7	143	0.75	1.00	...	
		3	0.07	6.1	137	1.30	1.00	...	
		4	0.10	11.9	145	2.08	1.00	...	
		5	0.05	15.9	145	0.80	1.00	...	
		6	0.09	26.7	149	7.98	1.00	...	
	8.55	1	0.45	0.0	...	0.74	0.00	−35	0.95
		2	0.10	2.2	148	0.64	1.00	...	
		3	0.05	4.6	141	1.08	1.00	...	
		4	0.01	14.7	145	0.57	1.00	...	
1354−152......	2.32	1	0.57	0.0	...	0.74	1.00	...	1.29
		2	0.10	2.9	35	1.65	1.00	...	
	8.55	1	0.40	0.0	...	0.06	1.00	...	1.41
		2	0.02	1.9	43	0.62	1.00	...	
1402−012......	2.32	1	0.50	0.0	...	2.03	0.28	63	1.02
	8.55	1	0.17	0.0	...	1.03	0.41	48	0.54
1406−076......	2.32	1	0.48	0.0	...	0.77	1.00	...	1.15
		2	0.09	3.1	−95	1.20	1.00	...	
		3	0.10	6.9	−111	3.42	1.00	...	
		4	0.06	13.4	−110	4.47	1.00	...	
	8.55	1	0.46	0.0	...	0.22	1.00	...	1.24
		2	0.03	1.1	−98	1.38	1.00	...	
		3	0.04	4.1	−103	2.77	1.00	...	

TABLE 2—*Continued*

Source	ν (GHz)	Component Number	S (Jy)	r (mas)	θ (deg)	a (mas)	b/a	φ (deg)	χ^2
1409+218......	2.32	1	0.21	0.0	...	0.57	1.00	...	0.73
		2	0.03	5.4	18	3.25	1.00	...	
	8.55	1	0.14	0.0	...	0.90	0.00	−13	0.55
1417+273......	2.32	1	0.22	0.0	...	1.26	0.07	84	0.69
	8.55	1	0.16	0.0	...	0.54	0.00	56	0.72
1418+546......	2.32	1	0.46	0.0	...	1.44	0.00	−47	0.99
		2	0.10	4.5	126	3.31	0.42	−52	
		3	0.10	16.1	123	9.89	0.43	−64	
		4	0.02	31.0	131	13.67	1.00	...	
	8.55	1	0.39	0.0	...	0.16	1.00	...	1.44
		2	0.08	1.3	134	0.57	1.00	...	
		3	0.02	5.2	125	1.46	1.00	...	
1420+326......	2.32	1	0.25	0.0	...	1.30	1.00	...	0.77
		2	0.04	3.7	149	2.14	1.00	...	
	8.55	1	0.13	0.0	...	0.00	1.00	...	0.42
1424+240......	2.32	1	0.19	0.0	...	0.00	1.00	...	0.81
		2	0.07	1.1	144	4.62	1.00	...	
	8.55	1	0.13	0.0	...	0.42	0.22	−21	0.59
		2	0.01	2.0	154	1.97	1.00	...	
1430−178......	2.32	1	0.64	0.0	...	2.22	0.00	−44	1.36
		2	0.13	2.9	−80	2.86	1.00	...	
		3	0.05	11.5	−64	11.08	1.00	...	
	8.55	1	0.19	0.0	...	0.30	1.00	...	0.77
		2	0.10	2.0	−41	0.66	1.00	...	
		3	0.02	4.0	−76	2.03	1.00	...	
1435+638......	2.32	1	0.47	0.0	...	1.52	0.00	54	1.33
		2	0.22	2.9	−139	3.20	0.59	46	
		3	0.24	9.0	−143	2.14	0.62	75	
		4	0.04	24.3	−125	4.31	1.00	...	
		5	0.02	41.3	−129	7.87	1.00	...	
	8.55	1	0.45	0.0	...	0.71	0.27	59	1.12
		2	0.18	1.4	60	0.46	0.00	63	
		3	0.04	2.6	−130	1.16	1.00	...	
		4	0.06	8.9	−145	0.75	1.00	...	
1442+101......	2.32	1	0.86	0.0	...	1.37	1.00	...	1.17
		2	0.60	2.7	−127	1.21	1.00	...	
		3	0.18	8.1	−163	2.31	1.00	...	
		4	0.35	12.9	−174	2.23	1.00	...	
		5	0.07	22.7	153	8.98	1.00	...	
	8.55	1	0.23	0.0	...	0.87	0.00	73	0.77
		2	0.08	2.6	−111	1.52	1.00	...	
1443−162......	2.32	1	0.35	0.0	...	1.16	1.00	...	1.17
		2	0.09	2.5	139	1.93	1.00	...	
	8.55	1	0.23	0.0	...	0.24	1.00	...	0.99
		2	0.05	1.6	126	0.49	1.00	...	
1445−161......	2.32	1	0.89	0.0	...	2.51	0.00	−24	1.31
		2	0.09	8.9	−16	2.70	1.00	...	
		3	0.05	48.2	−2	7.15	1.00	...	
		4	0.12	123.1	−120	5.14	1.00	...	
		5	0.02	160.6	−115	5.19	1.00	...	
	8.55	1	0.21	0.0	...	0.26	1.00	...	1.09
		2	0.09	1.6	−25	0.59	1.00	...	
1448+762......	2.32	1	0.25	0.0	...	1.04	0.00	75	1.05
	8.55	1	0.22	0.0	...	0.76	0.15	80	0.98
1502+036......	2.32	1	0.59	0.0	...	1.25	0.00	−39	1.04
		2	0.01	7.8	−103	4.49	1.00	...	
	8.55	1	0.46	0.0	...	0.00	1.00	...	1.28
		2	0.06	0.5	−52	0.32	1.00	...	
1504+377......	2.32	1	0.56	0.0	...	1.09	0.00	26	0.98
		2	0.08	2.7	−135	1.34	0.00	11	
		3	0.09	6.4	−133	1.97	1.00	...	
		4	0.05	10.8	−134	1.51	1.00	...	
		5	0.02	14.4	−137	2.05	1.00	...	
		6	0.01	26.8	−134	7.28	1.00	...	
		7	0.04	53.0	−141	10.30	1.00	...	
		8	0.03	71.7	−134	10.25	1.00	...	

TABLE 2—*Continued*

Source	ν (GHz)	Component Number	S (Jy)	r (mas)	θ (deg)	a (mas)	b/a	ϕ (deg)	χ^2
	8.55	1	0.56	0.0	...	0.00	1.00	...	1.07
		2	0.14	0.4	−150	0.18	1.00	...	
		3	0.02	2.4	−137	1.28	1.00	...	
		4	0.03	7.1	−134	3.14	1.00	...	
		5	0.01	11.3	−133	0.76	1.00	...	
1504−166......	2.32	1	1.89	0.0	...	0.74	1.00	...	1.39
		2	0.85	2.3	156	1.61	1.00	...	
	8.55	1	0.77	0.0	...	0.22	1.00	...	1.65
		2	0.10	1.3	18	0.23	1.00	...	
		3	0.24	1.9	−171	0.72	1.00	...	
		4	0.15	3.2	163	0.67	1.00	...	
1511−100......	2.32	1	0.46	0.0	...	1.05	1.00	...	1.31
		2	0.16	1.8	119	1.82	1.00	...	
		3	0.03	5.5	73	2.93	1.00	...	
		4	0.05	12.2	90	5.69	1.00	...	
		5	0.02	22.7	81	3.58	1.00	...	
	8.55	1	0.68	0.0	...	0.18	1.00	...	0.93
		2	0.11	1.2	95	1.39	1.00	...	
1514+197......	2.32	1	0.42	0.0	...	1.56	0.00	−25	0.92
		2	0.06	3.0	−33	1.21	1.00	...	
	8.55	1	0.22	0.0	...	0.19	0.00	54	1.11
		2	0.06	1.4	−24	2.36	0.32	−27	
1538+149......	2.32	1	0.56	0.0	...	1.39	0.00	−32	1.00
		2	0.03	5.6	−33	1.70	1.00	...	
		3	0.06	10.5	−33	4.60	1.00	...	
		4	0.01	21.0	−48	1.97	1.00	...	
		5	0.13	56.7	−45	20.14	1.00	...	
		6	0.05	73.3	−59	14.94	1.00	...	
	8.55	1	0.53	0.0	...	0.60	0.00	−38	0.89
		2	0.01	2.0	−29	0.80	1.00	...	
		3	0.02	6.5	−35	3.75	1.00	...	
1547+507......	2.32	1	0.34	0.0	...	1.58	1.00	...	1.28
		2	0.26	2.8	−131	1.69	1.00	...	
		3	0.16	6.8	−127	0.53	1.00	...	
	8.55	1	0.54	0.0	...	0.05	1.00	...	1.20
		2	0.02	1.1	−151	0.36	1.00	...	
		3	0.02	2.6	−152	0.82	1.00	...	
		4	0.04	3.7	−146	0.75	1.00	...	
		5	0.02	5.9	−139	0.70	1.00	...	
		6	0.06	7.1	−130	0.71	1.00	...	
1548+056......	2.32	1	1.55	0.0	...	1.45	0.00	1	1.17
		2	0.66	4.3	10	0.91	1.00	...	
		3	0.14	11.0	15	5.24	1.00	...	
	8.55	1	1.90	0.0	...	0.32	0.23	−14	1.05
		2	0.04	2.4	7	1.12	1.00	...	
		3	0.21	4.3	9	0.77	1.00	...	
		4	0.07	9.9	15	6.00	1.00	...	
1555+001......	2.32	1	0.94	0.0	...	0.28	1.00	...	1.14
		2	0.12	2.7	111	2.94	1.00	...	
	8.55	1	0.56	0.0	...	0.42	0.00	−63	1.25
1555−140......	2.32	1	0.42	0.0	...	1.23	1.00	...	1.22
		2	0.03	6.5	−113	1.81	1.00	...	
		3	0.21	7.0	64	0.77	1.00	...	
	8.55	1	0.17	0.0	...	0.53	1.00	...	0.80
		2	0.04	6.2	−123	3.07	1.00	...	
		3	0.06	6.8	62	1.41	1.00	...	
1606+106......	2.32	1	1.40	0.0	...	1.69	0.00	−50	1.14
		2	0.08	7.2	−37	3.78	1.00	...	
	8.55	1	0.80	0.0	...	0.06	1.00	...	1.45
		2	0.12	0.7	−64	0.14	1.00	...	
		3	0.06	1.7	−52	0.37	1.00	...	
1614+051......	2.32	1	0.68	0.0	...	1.42	0.36	−49	1.00
	8.55	1	0.45	0.0	...	0.57	0.35	−11	0.99
		2	0.09	1.3	−158	0.37	1.00	...	
1616+063......	2.32	1	0.35	0.0	...	0.35	1.00	...	1.19
		2	0.15	2.2	−34	1.15	1.00	...	

TABLE 2—*Continued*

Source	ν (GHz)	Component Number	S (Jy)	r (mas)	θ (deg)	a (mas)	b/a	ϕ (deg)	χ^2
		3	0.07	9.3	−12	7.59	1.00	...	
	8.55	1	0.23	0.0	...	0.20	0.00	−43	0.92
		2	0.03	0.7	−38	0.12	1.00	...	
		3	0.03	2.1	−37	1.34	1.00	...	
1637+574......	2.32	1	1.01	0.0	...	1.13	0.00	18	1.12
		2	0.22	2.3	−162	1.02	1.00	...	
		3	0.03	16.0	−148	8.33	1.00	...	
	8.55	1	0.39	0.0	...	0.56	0.20	24	1.14
		2	0.14	0.6	−157	0.84	0.25	−1	
		3	0.06	2.5	−162	1.42	0.46	31	
1638+398......	2.32	1	1.04	0.0	...	0.77	0.62	−45	0.89
	8.55	1	1.17	0.0	...	0.05	1.00	...	1.37
		2	0.04	0.6	160	0.42	1.00	...	
1641+399......	2.32	1	7.29[b]	...	...	...	...	...	...
	8.55	1	2.07	0.0	...	0.32	0.31	73	1.56
		2	1.25	0.6	−103	0.33	0.23	−25	
		3	1.00	1.4	−92	0.83	0.40	65	
		4	0.18	4.9	−79	2.88	0.36	−89	
		5	0.23	7.1	−66	2.98	0.45	−90	
1655+077......	2.32	1	0.69	0.0	...	2.02	0.00	−30	1.22
		2	0.48	7.4	−46	2.24	0.49	−33	
		3	0.06	18.7	−56	12.71	1.00	...	
	8.55	1	1.11	0.0	...	0.29	0.15	−31	1.56
		2	0.02	2.5	−37	1.15	1.00	...	
		3	0.14	7.8	−46	1.24	0.44	35	
1656+053......	2.32	1	0.80	0.0	...	0.58	1.00	...	1.08
		2	0.16	1.9	127	1.48	1.00	...	
		3	0.05	11.7	106	4.21	1.00	...	
		4	0.10	15.6	106	2.72	1.00	...	
		5	0.25	18.1	96	2.93	1.00	...	
		6	0.06	22.2	95	4.01	1.00	...	
		7	0.06	29.9	92	6.96	1.00	...	
	8.55	1	0.45	0.0	...	0.55	0.00	84	1.05
		2	0.08	0.7	−111	0.32	0.00	19	
		3	0.01	2.5	130	1.30	0.17	−23	
		4	0.06	17.7	98	3.08	1.00	...	
1656+348......	2.32	1	0.41	0.0	...	2.27	0.23	−81	1.03
		2	0.02	16.2	98	6.57	1.00	...	
	8.55	1	0.18	0.0	...	1.91	0.00	−81	0.46
1656+477......	2.32	1	1.06	0.0	...	0.89	0.25	−13	1.09
		2	0.14	6.0	−22	2.82	0.52	−13	
		3	0.03	41.7	−34	12.70	1.00	...	
	8.55	1	0.49	0.0	...	0.33	1.00	...	1.29
		2	0.07	1.0	−1	0.23	1.00	...	
		3	0.26	1.1	−179	0.00	1.00	...	
		4	0.01	6.4	−21	1.71	1.00	...	
1706−174......	2.32	1	0.28	0.0	...	0.42	1.00	...	1.24
		2	0.27	0.4	132	3.02	1.00	...	
		3	0.02	9.3	133	3.30	1.00	...	
	8.55	1	0.35	0.0	...	0.56	0.00	−39	1.28
		2	0.02	2.1	165	2.21	1.00	...	
1717+178......	2.32	1	0.67	0.0	...	1.31	0.00	−2	0.94
		2	0.02	5.5	−180	3.65	0.00	−17	
	8.55	1	0.44	0.0	...	0.44	0.12	24	1.04
		2	0.10	0.8	−160	0.42	0.00	−5	
		3	0.01	2.5	−167	1.51	1.00	...	
1726+455......	2.32	1	0.66	0.0	...	0.00	1.00	...	1.14
		2	0.33	1.4	−82	0.67	1.00	...	
		3	0.03	9.0	−114	3.61	1.00	...	
	8.55	1	0.48	0.0	...	0.48	0.00	73	0.92
		2	0.06	1.7	−86	0.77	1.00	...	
1727+502......	2.32	1	0.20	0.0	...	0.57	1.00	...	0.73
		2	0.05	6.4	−41	7.79	1.00	...	
	8.55	1	0.13	0.0	...	0.23	1.00	...	0.46
1730−130......	2.32	1	4.83[b]	...	...	...	...	...	...
	8.55	1	8.69[b]	...	...	...	...	...	...

TABLE 2—*Continued*

Source	ν (GHz)	Component Number	S (Jy)	r (mas)	θ (deg)	a (mas)	b/a	ϕ (deg)	χ^2
1732+389.......	2.32	1	0.96	0.0	...	0.83	0.00	−69	0.99
		2	0.04	3.2	119	2.28	1.00	...	
	8.55	1	0.33	0.0	...	0.00	1.00	...	0.97
		2	0.22	0.5	123	0.22	1.00	...	
		3	0.04	1.2	106	0.73	1.00	...	
1745+624.......	2.32	1	0.31	0.0	...	2.00	0.00	41	1.02
		2	0.04	13.4	−147	3.59	1.00	...	
		3	0.03	23.3	−150	6.67	1.00	...	
	8.55	1	0.35	0.0	...	0.20	1.00	...	1.10
		2	0.01	1.2	−149	0.52	1.00	...	
1749+096[c]......	2.32	1	0.58	0.0	...	0.32	1.00	...	0.96
		2	0.10	3.1	27	1.29	1.00	...	
		3	0.04	7.6	29	4.15	1.00	...	
		4	0.02	32.9	31	8.47	1.00	...	
	8.55	1	1.30	0.0	...	0.05	1.00	...	0.96
		2	0.02	3.0	28	1.00	1.00	...	
1749+096[d]......	2.32	1	0.62	0.0	...	0.48	1.00	...	1.05
		2	0.09	3.5	29	1.35	1.00	...	
		3	0.03	8.2	28	3.56	1.00	...	
	8.55	1	1.33	0.0	...	0.00	1.00	...	1.11
		2	0.02	1.8	28	0.85	1.00	...	
1749+701.......	2.32	1	0.37	0.0	...	1.52	0.00	−69	1.14
		2	0.23	2.4	−60	3.21	0.47	−48	
		3	0.04	4.6	3	5.54	0.57	−64	
	8.55	1	0.32	0.0	...	0.18	1.00	...	1.08
		2	0.05	1.2	−78	0.63	1.00	...	
		3	0.07	2.8	−60	1.43	1.00	...	
1751+441.......	2.32	1	0.56	0.0	...	1.95	0.00	88	1.06
		2	0.01	5.8	82	2.08	1.00	...	
		3	0.01	10.0	85	1.95	1.00	...	
		4	0.01	21.3	75	2.49	1.00	...	
	8.55	1	0.26	0.0	...	0.72	0.00	88	0.87
		2	0.08	1.6	85	0.49	1.00	...	
1800+440.......	2.32	1	0.37	0.0	...	1.01	0.00	25	1.05
		2	0.07	3.7	−159	3.19	0.27	44	
		3	0.04	26.4	−154	15.49	0.30	31	
	8.55	1	0.79	0.0	...	0.20	0.17	10	1.13
		2	0.02	1.9	−168	0.47	1.00	...	
		3	0.01	4.0	−150	0.80	1.00	...	
1807+698.......	2.32	1	0.65	0.0	...	1.01	0.00	−78	1.34
		2	0.23	1.7	−93	0.71	1.00	...	
		3	0.10	4.4	−98	1.82	1.00	...	
		4	0.07	15.4	−99	4.59	1.00	...	
		5	0.07	33.1	−100	6.67	1.00	...	
		6	0.01	47.4	−102	4.82	1.00	...	
	8.55	1	0.56	0.0	...	0.41	0.00	72	0.93
		2	0.14	0.8	−106	0.28	1.00	...	
		3	0.08	2.7	−94	0.67	1.00	...	
1830+285.......	2.32	1	0.39	0.0	...	2.54	0.18	−37	1.20
		2	0.11	3.7	−37	0.50	0.00	59	
	8.55	1	0.38	0.0	...	0.55	0.20	−37	1.02
		2	0.07	3.8	−39	0.44	1.00	...	
1845+797.......	2.32	1	0.53	0.0	...	2.15	0.18	−29	1.31
		2	0.16	5.0	142	0.72	1.00	...	
	8.55	1	0.27	0.0	...	0.97	0.40	−34	0.95
		2	0.06	6.5	−36	0.88	1.00	...	
1856+736.......	2.32	1	0.28	0.0	...	0.85	1.00	...	1.07
		2	0.08	3.6	34	1.46	1.00	...	
		3	0.03	8.0	29	1.27	1.00	...	
	8.55	1	0.41	0.0	...	0.57	0.12	28	1.07
		2	0.01	2.1	31	1.39	1.00	...	
		3	0.03	4.3	39	0.57	1.00	...	
1901+319.......	2.32	1	1.16	0.0	...	1.59	0.20	−62	0.95
		2	0.07	6.7	118	3.74	1.00	...	
		3	0.66	15.0	119	2.09	1.00	...	
		4	0.04	18.6	119	2.21	1.00	...	

TABLE 2—*Continued*

Source	ν (GHz)	Component Number	S (Jy)	r (mas)	θ (deg)	a (mas)	b/a	ϕ (deg)	χ^2
		5	0.07	40.2	125	46.66	0.16	−63	
		6	0.05	94.8	105	12.26	1.00	…	
	8.55	1	0.53	0.0	…	0.78	0.00	−63	1.25
		2	0.14	1.1	134	0.42	1.00	…	
		3	0.11	15.7	120	1.39	1.00	…	
1923+210......	2.32	1	0.85	0.0	…	2.26	0.36	78	0.96
		2	0.26	4.5	−103	4.68	0.42	71	
		3	0.03	23.5	−108	8.70	1.00	…	
	8.55	1	0.34	0.0	…	0.36	0.00	73	1.02
		2	0.06	0.9	−107	0.42	1.00	…	
		3	0.11	1.9	−115	0.58	1.00	…	
		4	0.04	3.0	−107	1.34	1.00	…	
		5	0.05	6.2	−107	2.53	1.00	…	
1928+738......	2.32	1	3.84[b]	…	…	…	…	…	…
	8.55	1	1.24	0.0	…	0.57	0.33	−29	1.50
		2	0.38	0.7	−30	0.30	1.00	…	
		3	0.75	1.5	173	0.97	0.65	26	
		4	0.06	3.2	158	0.92	1.00	…	
		5	0.04	8.0	166	0.81	1.00	…	
		6	0.05	10.4	170	1.96	1.00	…	
		7	0.07	16.3	172	4.03	1.00	…	
1936−155......	2.32	1	0.86	0.0	…	1.56	0.19	−25	1.53
	8.55	1	1.36	0.0	…	0.00	1.00	…	1.22
		2	0.11	0.6	129	0.19	1.00	…	
		3	0.01	4.1	174	0.48	1.00	…	
1937−101......	2.32	1	0.76	0.0	…	3.45	0.08	8	1.32
		2	0.07	20.8	31	3.23	1.00	…	
	8.55	1	0.32	0.0	…	1.12	0.10	15	1.19
		2	0.05	3.4	9	0.85	1.00	…	
1943+228......	2.32	1	0.26	0.0	…	4.68	0.32	−25	0.80
		2	0.06	5.0	−25	20.05	1.00	…	
	8.55	1	0.14	0.0	…	0.60	0.29	−22	0.60
1955+335......	2.32	1	0.17	0.0	…	1.87	1.00	…	0.67
	8.55	1	0.14	0.0	…	0.29	1.00	…	0.29
1958−179......	2.32	1	1.32	0.0	…	1.07	0.00	−25	1.55
	8.55	1	1.23	0.0	…	0.08	1.00	…	1.24
		2	0.01	1.6	−136	0.22	1.00	…	
2005+403......	2.32	1	3.14	0.0	…	17.36	0.74	30	0.92
	8.55	1	1.83	0.0	…	1.47	0.77	53	1.27
		2	0.24	2.3	129	3.57	0.41	−67	
2008−068......	2.32	1	0.85	0.0	…	2.61	0.32	−2	1.30
		2	0.74	1.7	164	3.15	0.00	−42	
		3	0.43	2.7	123	7.08	0.53	−37	
		4	0.15	26.8	148	2.31	1.00	…	
		5	0.09	29.3	142	2.74	1.00	…	
	8.55	1	0.22	0.0	…	1.92	0.12	−31	1.20
		2	0.22	1.2	−17	2.70	0.35	5	
		3	0.06	2.6	147	1.71	0.92	19	
		4	0.04	25.7	146	2.64	0.60	−35	
		5	0.01	28.5	142	2.17	0.00	−25	
2008−159......	2.32	1	0.82	0.0	…	1.63	0.00	0	1.39
	8.55	1	0.76	0.0	…	0.72	0.09	8	1.13
2030+547......	2.32	1	0.99	0.0	…	2.53	0.61	−21	1.16
		2	0.03	5.6	14	4.84	1.00	…	
		3	0.04	13.5	4	3.24	1.00	…	
		4	0.10	19.9	9	2.33	1.00	…	
	8.55	1	0.24	0.0	…	0.41	1.00	…	0.90
		2	0.11	1.3	8	0.50	1.00	…	
		3	0.10	1.5	178	0.16	1.00	…	
		4	0.02	20.3	9	1.22	1.00	…	
2037+511......	2.32	1	4.41[b]	…	…	…	…	…	…
	8.55	1	1.95[b]	…	…	…	…	…	…
2048+312......	2.32	1	0.71	0.0	…	10.91	0.74	82	0.77
	8.55	1	0.19	0.0	…	0.50	0.40	62	0.98
		2	0.22	0.6	84	2.02	0.37	76	
2051+745......	2.32	1	0.25	0.0	…	0.40	1.00	…	0.85

TABLE 2—*Continued*

Source	ν (GHz)	Component Number	S (Jy)	r (mas)	θ (deg)	a (mas)	b/a	ϕ (deg)	χ^2
		2	0.05	6.2	−57	0.67	1.00	…	
		3	0.02	17.5	−57	2.05	1.00	…	
	8.55	1	0.15	0.0	…	0.96	1.00	…	0.40
2126−158…….	2.32	1	0.95	0.0	…	2.65	0.05	2	1.26
	8.55	1	0.44	0.0	…	0.10	1.00	…	1.22
		2	0.21	0.8	−167	0.08	1.00	…	
		3	0.06	2.7	−172	0.42	1.00	…	
2143−156…….	2.32	1	0.41	0.0	…	0.00	1.00	…	1.26
		2	0.19	2.9	27	1.06	1.00	…	
		3	0.07	6.9	51	3.36	1.00	…	
	8.55	1	0.34	0.0	…	0.63	0.00	12	1.24
		2	0.04	3.0	22	0.59	1.00	…	
2144+092…….	2.32	1	0.98	0.0	…	1.01	0.00	−45	0.94
		2	0.09	4.5	73	4.48	1.00	…	
	8.55	1	0.28	0.0	…	0.16	1.00	…	1.13
		2	0.29	0.6	79	0.38	1.00	…	
2145+067[c] ……	2.32	1	2.21	0.0	…	1.39	0.00	−41	1.51
		2	0.71	5.2	135	6.80	0.11	−29	
		3	0.12	59.0	152	12.41	1.00	…	
		4	0.16	73.8	161	5.80	1.00	…	
	8.55	1	5.07	0.0	…	0.71	0.21	−55	1.60
		2	0.05	2.0	121	1.83	1.00	…	
		3	0.02	5.5	131	0.55	1.00	…	
2145+067[d] ……	2.32	1	2.20	0.0	…	1.54	0.00	−35	1.23
		2	0.73	5.1	134	7.03	0.13	−29	
		3	0.15	58.8	152	13.47	1.00	…	
		4	0.16	73.6	161	5.97	1.00	…	
	8.55	1	5.12	0.0	…	0.75	0.19	−53	1.72
		2	0.05	4.7	130	2.53	1.00	…	
2149+056…….	2.32	1	0.78	0.0	…	1.03	0.00	−57	1.08
		2	0.18	3.2	−71	2.81	1.00	…	
	8.55	1	0.39	0.0	…	0.57	0.60	−36	1.23
		2	0.05	1.0	−57	1.98	1.00	…	
2155−152…….	2.32	1	1.73	0.0	…	1.27	0.00	44	1.38
		2	0.92	2.7	−165	1.11	1.00	…	
		3	0.06	9.6	−159	5.10	1.00	…	
	8.55	1	0.52	0.0	…	0.00	1.00	…	1.34
		2	0.36	0.9	−142	0.32	1.00	…	
		3	0.13	0.9	34	0.01	1.00	…	
		4	0.15	2.1	−144	0.50	1.00	…	
		5	0.16	3.8	−160	1.03	1.00	…	
2209+236…….	2.32	1	0.80	0.0	…	0.00	1.00	…	1.08
		2	0.05	2.4	31	1.58	1.00	…	
		3	0.01	7.1	56	2.68	1.00	…	
	8.55	1	1.21	0.0	…	0.05	1.00	…	1.04
		2	0.04	1.1	18	0.09	1.00	…	
2223−052…….	2.32	1	1.17	0.0	…	1.47	0.64	−52	1.44
		2	0.74	3.5	102	3.39	0.42	−90	
		3	0.13	13.3	102	6.15	1.00	…	
		4	0.12	41.7	111	13.18	1.00	…	
		5	0.39	55.0	109	10.93	1.00	…	
		6	0.19	72.7	107	16.31	1.00	…	
		7	0.21	131.7	107	14.80	1.00	…	
	8.55	1	1.38	0.0	…	0.00	1.00	…	1.47
		2	0.35	0.3	85	0.23	1.00	…	
		3	0.18	1.8	101	1.78	1.00	…	
		4	0.15	4.6	100	1.94	1.00	…	
2229+695…….	2.32	1	0.40	0.0	…	1.38	0.00	65	1.06
		2	0.04	3.0	25	2.08	1.00	…	
		3	0.02	15.0	44	5.88	1.00	…	
	8.55	1	0.19	0.0	…	0.29	1.00	…	0.81
		2	0.05	1.0	73	0.63	1.00	…	
2233−148…….	2.32	1	0.30	0.0	…	1.54	0.00	−53	1.27
		2	0.15	3.3	106	6.73	1.00	…	
	8.55	1	0.19	0.0	…	0.49	0.68	−52	1.01
		2	0.03	1.7	122	1.33	0.00	−35	

TABLE 2—*Continued*

Source	ν (GHz)	Component Number	S (Jy)	r (mas)	θ (deg)	a (mas)	b/a	ϕ (deg)	χ^2
2243−123......	2.32	1	1.18	0.0	...	0.00	1.00	...	1.34
		2	0.56	2.3	27	1.02	1.00	...	
		3	0.30	9.9	34	2.54	1.00	...	
		4	0.02	14.3	63	2.22	1.00	...	
	8.55	1	1.22	0.0	...	0.07	1.00	...	1.24
		2	0.50	1.2	−5	0.13	1.00	...	
		3	0.13	3.1	16	1.10	1.00	...	
		4	0.05	11.2	31	2.21	1.00	...	
2253+417......	2.32	1	1.19	0.0	...	1.74	0.34	−4	0.98
		2	0.17	5.9	43	2.65	1.00	...	
		3	0.03	22.5	108	4.45	1.00	...	
	8.55	1	0.24	0.0	...	0.33	1.00	...	1.00
		2	0.06	1.5	−7	0.75	1.00	...	
		3	0.08	1.7	172	0.00	1.00	...	
		4	0.02	7.5	40	1.07	1.00	...	
2254+074......	2.32	1	0.34	0.0	...	0.93	1.00	...	0.91
		2	0.05	2.2	−110	1.67	1.00	...	
	8.55	1	0.28	0.0	...	0.23	1.00	...	1.06
		2	0.07	1.3	−120	0.85	1.00	...	
2318+049......	2.32	1	0.55	0.0	...	0.16	1.00	...	1.06
		2	0.11	4.2	−41	1.39	1.00	...	
		3	0.02	11.0	−42	2.16	1.00	...	
	8.55	1	0.64	0.0	...	0.10	1.00	...	1.12
		2	0.03	4.7	−39	0.91	1.00	...	
2320−035......	2.32	1	0.47	0.0	...	0.00	1.00	...	1.12
		2	0.28	2.7	−24	0.97	1.00	...	
		3	0.17	4.1	−58	3.17	1.00	...	
	8.55	1	0.33	0.0	...	0.52	0.13	−19	1.11
		2	0.05	1.9	−10	0.64	1.00	...	
		3	0.08	3.5	−24	1.30	1.00	...	
		4	0.04	4.0	−57	2.88	1.00	...	
2325−150......	2.32	1	0.61	0.0	...	0.51	1.00	...	1.32
		2	0.02	6.4	−129	2.04	1.00	...	
	8.55	1	0.35	0.0	...	0.43	0.70	59	1.32
		2	0.07	1.0	47	0.49	0.00	15	
2328+107......	2.32	1	1.02	0.0	...	2.01	0.00	−36	0.97
		2	0.28	7.6	−30	2.66	1.00	...	
	8.55	1	0.54	0.0	...	1.26	0.16	−39	1.01
		2	0.05	2.1	−37	0.90	1.00	...	
		3	0.06	8.0	−31	2.35	1.00	...	
2329−162......	2.32	1	1.06	0.0	...	1.30	0.00	−72	1.34
		2	0.12	9.7	77	9.80	1.00	...	
		3	0.07	14.3	74	4.90	1.00	...	
		4	0.15	53.1	85	12.12	1.00	...	
	8.55	1	0.50	0.0	...	0.46	1.00	...	1.36
		2	0.17	1.0	84	0.81	1.00	...	
2344+092......	2.32	1	0.98	0.0	...	2.37	0.12	40	1.04
		2	0.31	4.2	56	4.70	0.15	64	
		3	0.04	33.7	−119	4.85	1.00	...	
		4	0.03	117.4	48	10.99	1.00	...	
		5	0.19	155.6	44	12.19	0.47	49	
		6	0.18	162.1	44	5.64	0.29	79	
	8.55	1	0.73	0.0	...	1.68	0.06	37	1.42
		2	0.07	2.8	37	0.87	1.00	...	
		3	0.03	6.3	55	0.00	1.00	...	
		4	0.01	5.1	49	0.43	1.00	...	
		5	0.01	163.9	44	2.37	1.00	...	
2345−167......	2.32	1	1.72	0.0	...	0.00	1.00	...	1.44
		2	0.77	1.4	124	0.63	1.00	...	
		3	0.15	4.2	123	0.99	1.00	...	
		4	0.07	6.6	107	3.50	1.00	...	
	8.55	1	0.59	0.0	...	0.29	1.00	...	1.03
		2	0.36	0.8	101	0.60	1.00	...	
		3	0.34	0.9	−36	0.16	1.00	...	
		4	0.06	3.2	125	2.51	1.00	...	
2351+456......	2.32	1	0.53	0.0	...	1.97	0.48	87	1.13

TABLE 2—*Continued*

Source	ν (GHz)	Component Number	S (Jy)	r (mas)	θ (deg)	a (mas)	b/a	ϕ (deg)	χ^2
		2	0.36	4.3	−73	3.03	1.00	...	
		3	0.30	7.9	−60	7.96	1.00	...	
	8.55	1	0.52	0.0	...	0.28	0.23	−81	1.08
		2	0.01	1.3	−81	0.19	1.00	...	
		3	0.07	4.1	−76	1.26	1.00	...	
		4	0.09	5.7	−68	2.82	1.00	...	
2351−154......	2.32	1	0.78	0.0	...	0.00	1.00	...	1.33
		2	0.08	3.1	−32	1.10	1.00	...	
		3	0.10	10.0	−25	3.48	1.00	...	
	8.55	1	0.32	0.0	...	0.09	1.00	...	1.26
		2	0.11	0.7	−32	0.30	1.00	...	
2355−106......	2.32	1	1.06	0.0	...	0.45	1.00	...	1.19
		2	0.02	7.9	−179	4.18	1.00	...	
	8.55	1	1.15	0.0	...	0.16	1.00	...	1.10
		2	0.03	0.9	−148	0.52	1.00	...	

[a] The models fitted to the visibility data are of Gaussian form with flux density S and FWHM major axis a and minor axis b, with major axis in position angle ϕ (measured north through east). Components are separated from the (arbitrary) origin of the image by an amount r in position angle θ, which is the position angle (measured north through east) of a line joining the components with the origin.
[b] The emission structure is too complex to fit a model; only the total integrated flux density (as measured from the image) is listed.
[c] Epoch 1997 January 10–11.
[d] Epoch 1997 January 11–12.

and 21.2 Jy with a median value of 0.69 Jy. At the S band, the total integrated flux densities are between 0.16 and 15.4 Jy with a median value of 1.01 Jy. The spectral index α (defined by $S_\nu \propto \nu^\alpha$, where S_ν is the total flux density at the observing frequency ν) varies from −1.62 to 0.65 with a median value of −0.28, indicating that the sources are generally flat spectrum, as would be expected for compact extragalactic sources (cf. Kellermann & Pauliny-Toth 1981), but are marginally stronger, in the mean, at the S band than at the X band.

4. DISCUSSION

In this section, we attempt to quantify the expected effects of intrinsic source structure on astrometric bandwidth synthesis VLBI observations and discuss the overall magnitude and impact of these effects in the ICRF. As shown by Charlot (1990), the contribution of intrinsic source structure to a VLBI bandwidth synthesis delay measurement can be significant and depends on the exact form of the spatial brightness distribution of the extended radio source relative

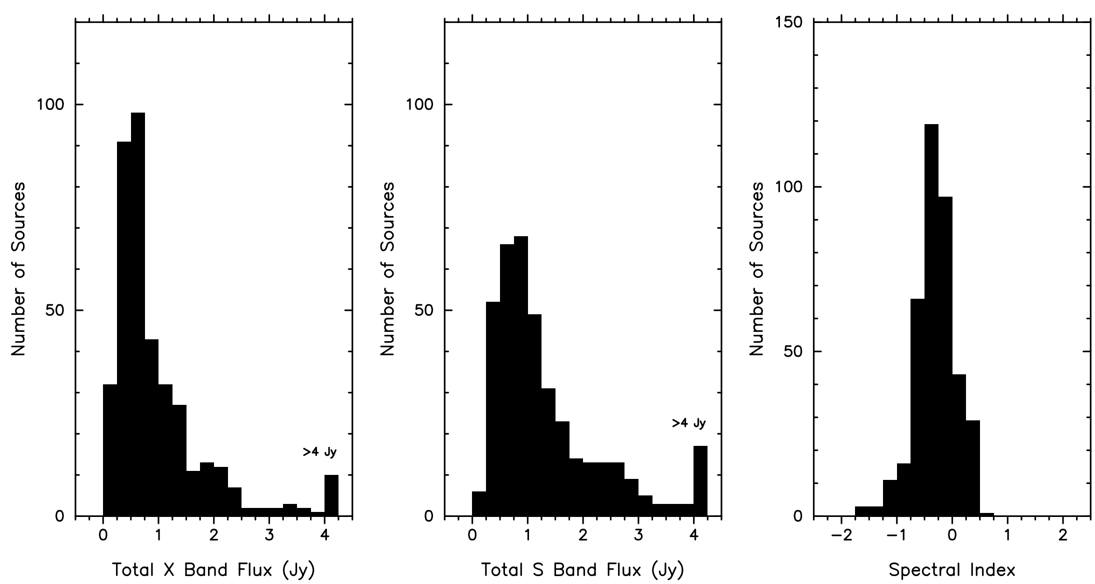

FIG. 2.—Distribution of the total integrated flux densities at the X and S bands along with the S/X spectral index for 388 ICRF sources. The total integrated flux densities were taken from the images in Fig. 1 and from those published in Fey et al. (1996) and Fey & Charlot (1997). In the case of multiple-epoch observations, only the images from the most recent epoch were used. The spectral index α is defined by $S_\nu \propto \nu^\alpha$, where S_ν is the total flux density at the observing frequency ν.

to the geometry of the VLBI baseline vector projected onto the plane of the sky. The overall source structure effect magnitude for a given source is most easily estimated by calculating corrections to the bandwidth synthesis delay, based on the observed source structure, for a range of (u, v) coordinates (the coordinates u and v are the coordinates of the baseline vector projected onto the plane of the sky and are expressed in units of the observing wavelength). Following such a scheme, Fey & Charlot (1997) defined a source "structure index" according to the median value of the structure delay corrections, $\tau_{\rm median}$, calculated for all projected VLBI baselines that could possibly be observed with Earth-based VLBI [i.e., for all baselines with $(u^2 + v^2)^{1/2}$ less than the diameter of the Earth], separating the sources into four classes as follows:

$$\text{structure index} = \begin{cases} 1, & \text{if } 0 \text{ ps} \le \tau_{\rm median} < 3 \text{ ps,} \\ 2, & \text{if } 3 \text{ ps} \le \tau_{\rm median} < 10 \text{ ps,} \\ 3, & \text{if } 10 \text{ ps} \le \tau_{\rm median} < 30 \text{ ps, and} \\ 4, & \text{if } 30 \text{ ps} \le \tau_{\rm median} < \infty \text{ .} \end{cases}$$

Based on this definition, two structure indexes are obtained for each source, one at the X band and one at the S band, each of which provides an indication of the source structure effect magnitude at the corresponding frequency band. For consistency with the procedure used to calibrate the frequency-dependent propagation delay introduced by the Earth's ionosphere, the structure corrections are scaled by 1.08 at the X band and by 0.08 at the S band, prior to the structure index assignment. These scale factors represent the relative contributions of the X- and S-band delay measurements to the dual-frequency–calibrated delay, which is the quantity actually modeled for the determination of astrometric positions. The interested reader is referred to Fey & Charlot (1997) for more details on the structure index definition and to Charlot (1990) for a more thorough discussion of the algorithm used to calculate source structure effects in the VLBI delay observable.

The initial structure index calculation of Fey & Charlot (1997) was carried out for 169 sources. By using source models derived from the VLBA images presented in Figure 1, we have calculated X- and S-band structure indexes for an additional 225 sources. These values are listed in Table 3 together with the mean, rms, maximum, and median values of the structure delay corrections (absolute values) calculated for all possible (u, v) values as discussed above.[3] For convenience, we identify values in Table 3 by only a single fiducial frequency (2.32 and 8.55 GHz, respectively) even though these corrections represent bandwidth synthesis delay structure corrections determined over all relevant frequency channels, as discussed in Fey & Charlot (1997). Given that five of the listed sources had previously been observed by Fey et al. (1996) and by Fey & Charlot (1997) and that one source (1947+079) observed by Fey & Charlot (1997) is not part of the ICRF, this brings the total number of ICRF sources with currently available structure indexes to 388. Such a sample, about two-thirds of the ICRF catalog, or approximately 90% of the ICRF catalog north of $-20°$ declination, provides a strong basis for evaluating the overall astrometric suitability of the ICRF sources in terms of their observed radio structure.

4.1. *Structure Index and Source Compactness*

Evaluation of source compactness for each structure index class is a necessary first step to test whether the structure index traces the complexity of intrinsic source structure accurately. For this evaluation, the ratio of the X-band core flux density to the total X-band flux density was used as an indicator of the compactness of a source. The X-band flux density values were taken from the Gaussian models fitted to the visibility data listed in Table 2 of this paper, Table 2 of Fey et al. (1996), and Table 2 of Fey & Charlot (1997). In the case of sources observed at multiple epochs, only models from the most recent epoch were used. The total source flux density, $S_{\rm total}$, is the sum of all Gaussian model components. The core flux density, $S_{\rm core}$, is assumed to be the value of the Gaussian model component defined to be at the origin of the image (which is generally the location of the peak brightness in the image). This latter assumption may not be true for all sources, as is the case for 0923+392 (4C 39.25; Fey, Eubanks, & Kingham 1997), a source for which the brightest component is not the core but is a superluminal jet moving with an apparent transverse velocity greater than the speed of light. However, sources such as 0923+392 presumably represent only a very small fraction of the total sample of sources. Further, it is generally believed that VLBI astrometric observations are most sensitive to the peak brightness in a source, as is evidenced by the change in astrometric position of 0923+392 (Fey et al. 1997). Consequently, for any particular epoch, VLBI astrometric results are representative of the peak brightness in a source regardless of whether the peak brightness is the core or not. For these reasons, our estimate of source compactness should, in general, be valid for comparison with structure index.

In Table 4, the mean and median core-to-total flux density ratios are compared for each structure index class. This comparison indicates that, on average, the more compact sources have smaller structure indexes than the more extended sources. Thus, the compactness of a source has a direct bearing on the structure index, as expected. The source 0923+392 was not included in this analysis.

4.2. *Structure Index Distribution in the ICRF*

A first insight on the quality of the sources in the ICRF catalog is obtained by examining the structure index distribution. Figure 3 shows the overall structure index distribution at the X and S bands for the 388 ICRF sources with currently available structure indexes. At the X band, 229 sources (approximately 60% of the sources in our sample) have structure indexes of either 1 or 2, an indication of compact or very compact structures. The remaining 159 sources with structure indexes of either 3 or 4 have more extended emission structures. As such structures are more likely to affect the observed VLBI bandwidth synthesis delays, Fey & Charlot (1997) recommended that these sources, especially those with structure indexes of 4 (approximately 13% of the sources in our sample), should be avoided in VLBI experiments requiring the highest accuracy. At the S band, source structure effects appear to be less significant, as reflected by the large number of sources with S-band structure indexes of either 1 or 2 in Figure 3 (340 sources out of a total of 388 sources). This is an indirect

[3] False-color images of the structure corrections as a function of (u, v) are available for each source at http://www.observ.u-bordeaux.fr/public/radio/PCharlot/structure.html.

TABLE 3

SOURCE STRUCTURE INDEX

Source	ν (GHz)	τ_{mean} (ps)	τ_{rms} (ps)	τ_{max} (ps)	τ_{median} (ps)	Structure Index
0003+380......	2.32	2.1	2.8	13.4	1.4	1
	8.55	19.7	26.9	76.3	14.9	3
0007+171......	2.32	1.7	2.2	9.3	1.2	1
	8.55	25.0	33.2	91.3	17.7	3
0013−005......	2.32	0.6	0.8	2.8	0.5	1
	8.55	6.8	8.8	25.1	5.3	2
0014+813......	2.32	3.6	5.3	21.9	2.1	1
	8.55	2.4	3.3	11.5	1.9	1
0019+058......	2.32	0.3	0.4	0.8	0.3	1
	8.55	1.6	2.0	6.2	1.3	1
0039+230......	2.32	0.8	1.0	2.4	0.7	1
	8.55	49.4	89.6	1717.0	28.1	3
0048−097......	2.32	0.2	0.3	1.4	0.2	1
	8.55	0.2	0.3	1.1	0.2	1
0106+013......	2.32	1.9	2.8	11.3	1.2	1
	8.55	11.5	14.9	50.5	9.7	2
0109+224......	2.32	1.0	1.4	4.1	0.8	1
	8.55	2.3	3.2	9.8	1.5	1
0111+021......	2.32	3.9	5.3	15.6	2.9	1
	8.55	21.9	27.6	79.0	17.0	3
0112−017......	2.32	1.1	1.4	4.6	0.8	1
	8.55	59.6	110.4	900.3	41.8	4
0113−118......	2.32	4.4	5.8	22.8	3.4	2
	8.55	24.8	33.8	142.7	17.8	3
0119+041......	2.32	0.5	0.6	2.0	0.4	1
	8.55	12.4	16.2	36.7	9.0	2
0123+257......	2.32	2.0	2.6	11.1	1.5	1
	8.55	26.2	33.1	92.9	22.7	3
0133+476......	2.32	2.5	3.1	7.8	2.1	1
	8.55	4.6	6.2	18.2	3.2	2
0134+329......	2.32	52.3	81.2	763.4	33.8	4
	8.55	47.4	64.7	352.2	34.9	4
0146+056......	2.32	0.6	0.7	2.4	0.5	1
	8.55	20.5	28.8	86.3	15.3	3
0148+274......	2.32	14.9	21.3	105.8	10.5	3
	8.55	37.9	55.0	270.9	24.5	3
0149+218......	2.32	6.9	9.0	37.3	5.3	2
	8.55	7.4	9.9	37.7	5.5	2
0159+723......	2.32	1.2	1.7	6.8	0.9	1
	8.55	1.5	1.9	7.4	1.3	1
0202+149......	2.32	3.6	4.6	14.8	3.2	2
	8.55	11.9	16.9	74.2	7.7	2
0202+319......	2.32	6.0	8.0	29.6	4.4	2
	8.55	5.2	6.7	23.1	4.1	2
0202−172......	2.32	2.3	3.2	16.3	1.6	1
	8.55	17.5	24.0	98.8	12.5	3
0219+428......	2.32	2.1	2.8	10.7	1.6	1
	8.55	10.4	13.5	46.9	8.4	2
0224+671......	2.32	1.8	2.3	10.6	1.4	1
	8.55	6.7	9.4	38.8	4.6	2
0235+164......	2.32	1.5	2.0	7.0	1.3	1
	8.55	2.5	3.1	7.2	2.3	1
0237−027......	2.32	0.9	1.3	3.8	0.7	1
	8.55	3.4	4.4	12.1	2.7	1
0239+108......	2.32	12.9	18.4	64.0	8.1	2
	8.55	9.5	12.7	43.9	6.9	2
0241+622......	2.32	3.5	4.6	24.1	2.6	1
	8.55	4.9	6.7	30.6	3.6	2
0248+430......	2.32	8.7	11.8	44.9	6.9	2
	8.55	60.3	88.0	528.4	40.7	4
0256+075......	2.32	0.6	0.9	3.8	0.4	1
	8.55	6.5	8.5	26.5	4.6	2
0306+102......	2.32	1.6	2.1	5.8	1.1	1
	8.55	13.6	17.4	57.3	11.2	3
0309+411......	2.32	3.8	4.9	18.8	3.0	2

TABLE 3—*Continued*

Source	ν (GHz)	τ_{mean} (ps)	τ_{rms} (ps)	τ_{max} (ps)	τ_{median} (ps)	Structure Index
	8.55	5.5	7.6	31.1	4.1	2
0319+121.......	2.32	22.0	45.3	530.0	11.9	3
	8.55	52.7	75.3	338.1	35.7	4
0326+278.......	2.32	16.9	24.0	110.9	11.0	3
	8.55	81.4	121.4	495.5	46.3	4
0333+321.......	2.32	16.8	32.2	456.8	10.0	3
	8.55	41.0	63.5	500.1	22.7	3
0336−019.......	2.32	1.3	1.7	7.1	0.9	1
	8.55	11.5	14.9	50.4	9.5	2
0342+147.......	2.32	3.3	4.2	14.9	2.8	1
	8.55	16.3	23.8	94.5	9.0	2
0355+508.......	2.32	48.4	83.6	829.9	28.5	3
	8.55	10.3	13.9	67.9	7.6	2
0403−132.......	2.32	1.6	2.1	5.6	1.2	1
	8.55	0.9	1.1	3.3	0.6	1
0405+305.......	2.32	3.9	5.3	24.8	2.9	1
	8.55	3.6	4.9	17.1	2.6	1
0405−123.......	2.32	7.3	9.9	40.7	5.4	2
	8.55	9.0	12.0	41.5	6.8	2
0406−127.......	2.32	2.2	3.0	10.8	1.7	1
	8.55	16.4	21.3	63.5	12.6	3
0414−189.......	2.32	0.4	0.5	1.2	0.3	1
	8.55	1.8	2.5	8.6	1.3	1
0420+417.......	2.32	11.4	20.1	106.8	3.6	2
	8.55	48.9	72.6	528.9	32.4	4
0423+051.......	2.32	4.5	6.4	24.8	3.1	2
	8.55	23.2	32.8	176.7	16.0	3
0434−188.......	2.32	1.0	1.2	2.4	1.0	1
	8.55	12.1	15.6	52.0	11.5	3
0446+112.......	2.32	0.9	1.2	4.4	0.6	1
	8.55	4.7	6.1	16.6	3.9	2
0454+844.......	2.32	0.7	0.9	2.7	0.5	1
	8.55	4.5	5.6	17.1	3.9	2
0457+024.......	2.32	0.5	0.7	2.2	0.4	1
	8.55	70.8	125.7	1625.7	37.9	4
0458−020.......	2.32	3.0	3.9	15.8	2.4	1
	8.55	7.7	9.9	34.7	6.4	2
0500+019.......	2.32	20.9	37.3	501.5	13.4	3
	8.55	59.3	80.6	449.4	43.5	4
0502+049.......	2.32	9.0	12.1	38.1	7.0	2
	8.55	19.5	24.8	68.2	16.0	3
0506+101.......	2.32	0.5	0.7	2.4	0.4	1
	8.55	0.9	1.2	3.6	0.6	1
0528+134.......	2.32	2.3	3.0	11.7	1.7	1
	8.55	3.6	5.1	24.1	2.5	1
0529+075.......	2.32	99.5	161.5	785.3	34.9	4
	8.55	57.2	128.6	1617.0	31.4	4
0537−158.......	2.32	6.8	8.9	34.9	5.3	2
	8.55	19.0	24.7	81.2	15.3	3
0538+498.......	2.32	23.4	43.8	676.6	13.3	3
	8.55	103.5	191.0	2094.7	55.1	4
0552+398[a]......	2.32	0.1	0.2	0.7	0.1	1
	8.55	5.8	8.0	25.5	3.9	2
0552+398[b]......	2.32	0.2	0.3	1.1	0.2	1
	8.55	7.8	9.9	26.3	7.2	2
0556+238.......	2.32	0.4	0.5	1.7	0.3	1
	8.55	0.9	1.1	3.7	0.7	1
0605−085.......	2.32	3.8	5.3	26.1	2.6	1
	8.55	20.8	31.2	175.6	12.5	3
0607−157.......	2.32	5.8	8.8	42.5	3.6	2
	8.55	3.7	4.8	15.2	3.1	2
0611+131.......	2.32	10.4	13.2	44.5	8.4	2
	8.55	6.5	8.4	21.4	5.1	2
0615+820.......	2.32	0.6	0.8	4.3	0.4	1
	8.55	27.1	44.9	1715.9	19.4	3
0642+214.......	2.32	1.3	1.7	4.8	1.0	1

TABLE 3—*Continued*

Source	ν (GHz)	τ_{mean} (ps)	τ_{rms} (ps)	τ_{max} (ps)	τ_{median} (ps)	Structure Index
	8.55	25.5	31.8	80.1	25.1	3
0648−165.......	2.32	3.0	4.3	17.8	1.9	1
	8.55	7.5	9.4	37.5	6.5	2
0650+371.......	2.32	0.8	1.1	3.6	0.6	1
	8.55	14.6	18.4	45.8	13.1	3
0711+356.......	2.32	2.7	3.3	7.6	2.9	1
	8.55	85.7	125.2	1013.7	60.1	4
0716+714.......	2.32	0.5	0.7	1.5	0.5	1
	8.55	1.5	1.8	5.3	1.3	1
0722+145.......	2.32	6.2	8.2	34.7	4.8	2
	8.55	11.7	16.1	74.7	8.3	2
0727−115[a]......	2.32	2.1	2.8	7.5	1.7	1
	8.55	3.0	3.9	15.0	2.3	1
0727−115[b]......	2.32	2.6	3.2	9.2	2.2	1
	8.55	3.4	4.4	16.3	2.6	1
0733−174.......	2.32	22.9	43.2	487.5	11.3	3
	8.55	120.6	188.7	1993.2	80.3	4
0735+178.......	2.32	3.0	4.3	21.1	2.1	1
	8.55	32.9	50.1	485.2	22.2	3
0736+017.......	2.32	20.4	35.1	511.2	13.2	3
	8.55	14.9	19.8	89.9	11.5	3
0738+313.......	2.32	2.1	2.8	10.1	1.6	1
	8.55	93.7	138.6	803.1	65.8	4
0743+259.......	2.32	0.4	0.6	1.8	0.3	1
	8.55	1.0	1.2	3.5	0.8	1
0745+241.......	2.32	10.0	15.7	76.3	5.7	2
	8.55	17.1	24.4	133.3	11.8	3
0748+126.......	2.32	5.3	7.2	31.5	3.9	2
	8.55	4.8	6.3	21.9	3.8	2
0754+100.......	2.32	1.4	1.9	6.4	1.1	1
	8.55	8.9	12.1	45.8	6.1	2
0804+499.......	2.32	1.2	1.5	4.3	1.0	1
	8.55	3.6	4.5	10.8	3.0	2
0805+410.......	2.32	2.0	2.8	9.0	1.2	1
	8.55	4.2	5.1	10.2	4.3	2
0812+367.......	2.32	3.8	5.0	18.1	2.9	1
	8.55	10.6	14.7	81.0	7.7	2
0814+425.......	2.32	1.1	1.4	5.3	0.8	1
	8.55	8.3	11.2	43.4	5.9	2
0818−128.......	2.32	3.0	4.2	20.3	2.1	1
	8.55	22.9	30.1	103.9	17.2	3
0821+394.......	2.32	12.4	18.9	264.4	8.4	2
	8.55	9.4	13.0	99.7	7.2	2
0827+243.......	2.32	9.0	12.1	37.6	7.2	2
	8.55	7.1	9.4	35.5	5.3	2
0828+493.......	2.32	2.0	2.8	10.8	1.3	1
	8.55	4.5	5.6	11.9	4.2	2
0829+046.......	2.32	3.9	5.0	11.8	3.4	2
	8.55	20.2	31.1	121.1	10.4	3
0836+710.......	2.32	17.7	26.3	169.1	10.5	3
	8.55	24.0	31.8	121.0	18.7	3
0839+187.......	2.32	32.1	63.9	503.5	17.3	3
	8.55	48.9	70.8	380.4	32.0	4
0850+581.......	2.32	5.5	7.7	24.8	3.6	2
	8.55	11.8	16.0	70.3	8.6	2
0851+202[a]......	2.32	0.9	1.3	4.5	0.6	1
	8.55	9.8	12.9	37.7	7.4	2
0851+202[b]......	2.32	1.0	1.4	6.6	0.7	1
	8.55	9.3	11.8	31.1	8.1	2
0859−140.......	2.32	14.1	20.0	314.9	10.4	3
	8.55	27.1	37.1	131.1	18.9	3
0906+015.......	2.32	4.8	6.8	28.6	3.1	2
	8.55	15.9	22.2	94.1	10.7	3
0912+029.......	2.32	1.4	1.8	4.7	1.3	1
	8.55	4.3	5.4	15.9	3.5	2
0917+449.......	2.32	1.5	2.1	9.0	1.0	1

TABLE 3—*Continued*

Source	ν (GHz)	τ_{mean} (ps)	τ_{rms} (ps)	τ_{max} (ps)	τ_{median} (ps)	Structure Index
	8.55	41.9	62.8	297.3	32.0	4
0923+392......	2.32	0.8	1.0	4.4	0.5	1
	8.55	5.7	8.5	38.1	3.4	2
0952+179......	2.32	32.0	63.2	518.9	15.9	3
	8.55	18.0	24.2	108.8	13.3	3
0954+658......	2.32	0.9	1.3	5.7	0.7	1
	8.55	11.9	16.0	53.1	8.7	2
0955+326......	2.32	12.5	25.9	337.3	7.3	2
	8.55	5.3	7.0	27.8	4.0	2
1011+250......	2.32	5.1	6.5	30.5	4.2	2
	8.55	30.9	41.9	157.2	22.6	3
1012+232......	2.32	3.3	4.5	15.5	2.2	1
	8.55	5.2	7.0	24.3	3.8	2
1021−006......	2.32	5.1	7.4	26.1	3.2	2
	8.55	42.1	53.2	152.1	37.4	4
1030+415......	2.32	4.3	5.9	22.5	3.2	2
	8.55	0.9	1.3	3.1	0.6	1
1039+811......	2.32	2.9	4.0	13.6	1.9	1
	8.55	6.1	8.3	43.2	4.5	2
1040+123......	2.32	29.2	46.2	240.7	15.5	3
	8.55	60.5	214.9	3568.3	29.0	3
1042+071......	2.32	1.8	2.2	4.8	1.7	1
	8.55	7.1	9.2	23.9	5.5	2
1044+719......	2.32	0.4	0.4	1.3	0.3	1
	8.55	0.5	0.6	2.1	0.4	1
1045−188......	2.32	1.5	1.9	6.7	1.3	1
	8.55	3.2	4.2	14.3	2.5	1
1053+704......	2.32	0.5	0.7	2.0	0.4	1
	8.55	0.8	1.0	3.6	0.8	1
1055+018......	2.32	12.7	21.0	467.3	7.2	2
	8.55	14.2	19.6	113.8	9.9	2
1111+149......	2.32	0.9	1.2	6.3	0.9	1
	8.55	7.1	9.1	25.1	5.8	2
1123+264......	2.32	1.4	1.7	4.0	1.1	1
	8.55	7.9	10.7	35.2	5.6	2
1124−186......	2.32	0.3	0.3	0.9	0.2	1
	8.55	0.6	0.8	2.8	0.5	1
1128+385......	2.32	0.6	0.8	2.7	0.5	1
	8.55	1.8	2.4	6.4	1.4	1
1128−047......	2.32	6.3	8.5	46.4	4.5	2
	8.55	19.7	27.1	130.1	14.0	3
1144+402......	2.32	1.0	1.3	5.5	0.9	1
	8.55	0.5	0.6	1.8	0.4	1
1147+245......	2.32	4.8	7.0	35.3	3.0	2
	8.55	7.4	9.7	32.0	5.4	2
1148−001......	2.32	26.9	43.3	557.5	17.0	3
	8.55	102.8	168.1	2020.0	64.6	4
1150+497......	2.32	1.4	2.0	9.2	0.9	1
	8.55	10.3	13.3	33.8	8.1	2
1155+251......	2.32	22.4	42.5	613.9	12.3	3
	8.55	66.3	88.9	484.0	48.7	4
1213−172......	2.32	3.4	4.6	19.9	2.4	1
	8.55	3.4	4.6	16.9	2.6	1
1215+303......	2.32	2.5	3.5	15.5	1.8	1
	8.55	3.5	4.4	10.9	3.0	2
1216+487......	2.32	3.3	4.4	15.1	2.7	1
	8.55	8.4	12.6	60.8	4.9	2
1219+285......	2.32	14.3	21.7	267.5	9.5	2
	8.55	35.7	50.5	260.5	23.7	3
1222+037......	2.32	3.4	4.3	10.9	3.3	2
	8.55	83.5	120.0	598.4	56.7	4
1228+126......	2.32	22.8	48.4	608.6	10.7	3
	8.55	36.6	54.0	266.8	21.7	3
1243−072......	2.32	1.7	2.5	12.1	1.3	1
	8.55	5.1	7.3	32.1	3.4	2
1252+119......	2.32	4.2	5.7	20.4	2.9	1

TABLE 3—*Continued*

Source	ν (GHz)	τ_{mean} (ps)	τ_{rms} (ps)	τ_{max} (ps)	τ_{median} (ps)	Structure Index
	8.55	9.1	12.2	39.1	6.3	2
1253−055......	2.32	5.7	8.1	30.1	3.5	2
	8.55	45.8	65.1	228.8	28.5	3
1257+145......	2.32	0.8	1.0	3.4	0.7	1
	8.55	4.4	5.7	21.0	3.4	2
1302−102......	2.32	0.5	0.6	2.4	0.4	1
	8.55	9.4	11.9	29.4	8.1	2
1324+224......	2.32	0.2	0.2	0.8	0.1	1
	8.55	0.3	0.4	1.5	0.3	1
1328+307......	2.32	89.0	136.5	975.1	52.2	4
	8.55	372.7	567.6	5526.7	217.1	4
1338+381......	2.32	2.0	2.6	7.3	1.8	1
	8.55	19.5	26.5	113.0	14.1	3
1342+663......	2.32	0.1	0.2	0.5	0.1	1
	8.55	5.5	6.9	21.3	4.8	2
1351−018......	2.32	0.7	0.9	3.6	0.5	1
	8.55	2.6	3.2	8.3	2.0	1
1354+195......	2.32	10.7	15.8	119.2	7.1	2
	8.55	34.3	48.8	214.3	21.5	3
1354−152......	2.32	1.6	1.9	4.3	1.5	1
	8.55	3.3	4.2	13.2	2.7	1
1402−012......	2.32	1.2	1.6	5.2	0.8	1
	8.55	6.2	8.1	23.5	4.9	2
1406−076......	2.32	3.7	5.1	20.6	2.7	1
	8.55	5.5	8.0	40.9	3.6	2
1409+218......	2.32	1.4	1.8	5.0	1.0	1
	8.55	2.6	3.5	10.9	2.1	1
1417+273......	2.32	0.6	0.8	3.3	0.5	1
	8.55	4.0	5.1	12.1	3.8	2
1418+546......	2.32	5.6	8.6	44.0	3.1	2
	8.55	7.0	9.0	28.9	6.1	2
1420+326......	2.32	2.2	2.7	8.6	1.9	1
	8.55	1.5	2.1	6.5	1.0	1
1424+240......	2.32	0.9	1.2	3.9	0.8	1
	8.55	4.8	6.3	23.8	3.7	2
1430−178......	2.32	3.9	5.5	28.8	2.6	1
	8.55	35.4	47.9	290.2	27.2	3
1435+638......	2.32	26.2	53.7	515.7	10.6	3
	8.55	77.9	156.0	3036.4	39.0	4
1442+101......	2.32	19.0	32.8	505.4	10.4	3
	8.55	25.4	35.9	171.1	17.2	3
1443−162......	2.32	2.2	2.7	6.4	2.0	1
	8.55	10.2	13.1	49.7	8.2	2
1445−161......	2.32	5.4	7.2	35.4	4.1	2
	8.55	21.1	28.1	101.4	15.5	3
1448+762......	2.32	0.5	0.7	1.9	0.4	1
	8.55	0.7	0.8	2.5	0.6	1
1502+036......	2.32	0.5	0.7	2.7	0.4	1
	8.55	2.4	3.2	9.0	1.9	1
1504+377......	2.32	4.3	6.0	28.6	2.7	1
	8.55	4.6	6.4	28.6	3.2	2
1504−166......	2.32	1.5	1.9	4.4	1.3	1
	8.55	22.1	30.9	92.2	13.9	3
1511−100......	2.32	4.0	5.7	29.7	2.6	1
	8.55	3.7	5.4	24.4	2.6	1
1514+197......	2.32	2.1	2.6	7.8	1.8	1
	8.55	6.2	8.5	35.6	4.6	2
1538+149......	2.32	3.9	5.1	27.9	2.9	1
	8.55	4.9	6.6	29.3	3.5	2
1547+507......	2.32	18.4	43.0	477.4	11.4	3
	8.55	14.1	18.1	63.6	11.7	3
1548+056......	2.32	6.3	8.5	27.8	4.9	2
	8.55	9.2	12.3	41.5	6.6	2
1555+001......	2.32	0.7	0.9	2.8	0.5	1
	8.55	1.3	1.7	5.1	1.1	1
1555−140......	2.32	13.3	18.5	71.7	9.9	2

TABLE 3—*Continued*

Source	ν (GHz)	τ_{mean} (ps)	τ_{rms} (ps)	τ_{max} (ps)	τ_{median} (ps)	Structure Index
	8.55	43.5	59.9	262.4	30.4	4
1606+106.......	2.32	1.0	1.4	4.7	0.7	1
	8.55	5.9	7.4	23.5	5.0	2
1614+051.......	2.32	0.9	1.1	4.0	0.7	1
	8.55	11.2	14.0	41.7	9.9	2
1616+063.......	2.32	2.6	3.4	13.2	2.0	1
	8.55	8.5	11.0	32.8	6.4	2
1637+574.......	2.32	2.9	3.8	11.6	2.3	1
	8.55	17.1	24.9	86.1	9.4	2
1638+398.......	2.32	0.1	0.2	0.5	0.1	1
	8.55	0.6	0.7	2.5	0.5	1
1641+399.......	2.32	3.6	5.3	29.7	2.4	1
	8.55	54.8	93.3	915.4	31.2	4
1655+077.......	2.32	23.2	38.0	225.9	13.5	3
	8.55	15.2	20.9	69.5	10.3	3
1656+053.......	2.32	11.8	17.7	99.5	7.4	2
	8.55	24.2	34.5	173.4	15.9	3
1656+348.......	2.32	3.2	4.7	22.5	1.7	1
	8.55	9.9	12.8	34.4	7.6	2
1656+477.......	2.32	1.7	2.1	6.4	1.5	1
	8.55	38.1	52.6	291.5	30.5	4
1706−174.......	2.32	1.6	2.1	6.4	1.3	1
	8.55	5.9	7.6	21.5	4.8	2
1717+178.......	2.32	0.4	0.5	2.3	0.3	1
	8.55	7.9	9.7	21.2	6.9	2
1726+455.......	2.32	1.2	1.8	7.6	0.7	1
	8.55	9.2	13.7	45.9	5.0	2
1727+502.......	2.32	1.4	2.0	7.9	1.0	1
	8.55	6.6	8.9	30.8	4.6	2
1730−130.......	2.32	6.5	8.7	53.0	4.8	2
	8.55	3.0	3.7	13.3	2.5	1
1732+389.......	2.32	0.6	0.8	2.4	0.5	1
	8.55	12.6	16.3	50.5	9.8	2
1745+624.......	2.32	5.7	8.2	36.3	3.7	2
	8.55	1.5	1.9	4.5	1.3	1
1749+096[a]......	2.32	1.8	2.3	8.2	1.6	1
	8.55	0.9	1.2	4.4	0.6	1
1749+096[b]......	2.32	1.1	1.4	3.6	1.0	1
	8.55	0.5	0.7	2.4	0.5	1
1749+701.......	2.32	4.8	6.3	24.0	3.7	2
	8.55	10.6	15.7	102.1	7.4	2
1751+441.......	2.32	1.6	2.5	12.8	0.8	1
	8.55	21.3	27.6	99.8	18.9	3
1800+440.......	2.32	2.7	3.6	13.4	2.0	1
	8.55	3.0	4.0	13.7	2.2	1
1807+698.......	2.32	5.8	8.7	37.9	3.2	2
	8.55	14.8	19.3	59.4	11.0	3
1830+285.......	2.32	6.5	8.7	22.8	5.7	2
	8.55	37.1	48.0	125.5	29.6	3
1845+797.......	2.32	9.8	15.0	70.5	7.0	2
	8.55	47.9	66.2	364.1	34.4	4
1856+736.......	2.32	3.7	5.0	17.6	2.8	1
	8.55	18.8	27.5	116.9	10.6	3
1901+319.......	2.32	19.9	27.6	124.4	14.3	3
	8.55	55.1	74.9	351.4	40.7	4
1923+210.......	2.32	6.7	10.1	48.2	3.9	2
	8.55	22.7	32.7	175.7	16.0	3
1928+738.......	2.32	10.6	17.9	123.0	4.6	2
	8.55	41.0	68.1	661.5	23.7	3
1936−155.......	2.32	0.7	0.9	3.0	0.6	1
	8.55	2.6	3.2	7.5	2.3	1
1937−101.......	2.32	4.1	5.7	22.0	2.8	1
	8.55	29.1	38.9	125.8	23.2	3
1943+228.......	2.32	1.7	2.3	7.7	1.1	1
	8.55	2.0	2.7	7.2	1.4	1
1955+335.......	2.32	1.0	1.2	3.8	0.8	1

TABLE 3—*Continued*

Source	ν (GHz)	τ_{mean} (ps)	τ_{rms} (ps)	τ_{max} (ps)	τ_{median} (ps)	Structure Index
	8.55	1.8	2.2	7.2	1.6	1
1958 − 179	2.32	0.2	0.2	0.7	0.2	1
	8.55	0.3	0.4	1.1	0.2	1
2005 + 403	2.32	19.9	45.0	588.3	7.7	2
	8.55	52.2	129.6	1823.5	20.9	3
2008 − 068	2.32	9.4	12.9	55.5	6.9	2
	8.55	39.9	52.4	339.3	31.8	4
2008 − 159	2.32	0.4	0.5	1.6	0.3	1
	8.55	1.7	2.4	8.4	1.2	1
2030 + 547	2.32	8.3	11.2	40.8	6.3	2
	8.55	46.4	62.9	335.2	35.7	4
2037 + 511	2.32	20.8	52.3	578.1	10.0	3
	8.55	54.0	86.1	750.0	28.3	3
2048 + 312	2.32	6.6	8.9	44.6	4.8	2
	8.55	12.9	18.3	109.2	9.5	2
2051 + 745	2.32	2.7	3.7	14.4	2.0	1
	8.55	9.6	12.7	68.6	7.6	2
2126 − 158	2.32	0.9	1.1	4.2	0.8	1
	8.55	6.4	8.7	27.3	4.8	2
2143 − 156	2.32	3.6	4.8	13.7	3.0	2
	8.55	12.1	16.0	49.3	9.1	2
2144 + 092	2.32	0.6	0.8	3.7	0.4	1
	8.55	38.4	58.0	191.0	22.1	3
2145 + 067[a]	2.32	3.5	4.6	18.1	2.8	1
	8.55	2.2	3.0	10.6	1.6	1
2145 + 067[b]	2.32	3.5	4.5	17.6	2.9	1
	8.55	5.0	7.0	26.6	2.9	1
2149 + 056	2.32	1.4	1.8	5.3	1.1	1
	8.55	5.1	7.0	25.8	3.6	2
2155 − 152	2.32	1.6	2.3	10.4	1.1	1
	8.55	49.2	80.5	518.8	29.8	3
2209 + 236	2.32	0.7	0.9	2.9	0.6	1
	8.55	1.2	1.5	4.1	1.1	1
2223 − 052	2.32	17.7	40.6	783.7	10.8	3
	8.55	7.2	10.7	64.5	4.4	2
2229 + 695	2.32	1.7	2.5	10.2	1.2	1
	8.55	9.2	12.4	32.9	6.2	2
2233 − 148	2.32	2.2	2.9	10.9	1.6	1
	8.55	11.7	15.8	56.7	8.6	2
2243 − 123	2.32	3.7	5.0	20.4	2.7	1
	8.55	14.9	19.5	57.3	11.2	3
2253 + 417	2.32	3.0	4.0	16.0	2.2	1
	8.55	40.9	53.9	229.5	32.2	4
2254 + 074	2.32	2.4	3.0	11.8	1.9	1
	8.55	4.0	5.5	16.7	2.8	1
2318 + 049	2.32	2.9	4.0	14.6	2.1	1
	8.55	4.5	5.6	17.7	4.0	2
2320 − 035	2.32	5.8	7.5	24.2	4.7	2
	8.55	15.3	21.0	100.2	10.8	3
2325 − 150	2.32	2.0	2.6	13.9	1.6	1
	8.55	7.7	10.2	31.4	5.5	2
2328 + 107	2.32	6.0	8.0	30.4	4.4	2
	8.55	53.3	103.1	1806.9	26.8	3
2329 − 162	2.32	4.7	6.7	36.4	3.2	2
	8.55	18.8	27.6	78.2	11.0	3
2344 + 092	2.32	10.4	13.4	53.4	8.4	2
	8.55	29.5	44.5	278.2	18.3	3
2345 − 167	2.32	1.6	2.1	5.9	1.4	1
	8.55	40.5	63.7	1557.0	26.3	3
2351 + 456	2.32	11.1	19.4	293.8	6.9	2
	8.55	16.0	23.0	118.8	10.8	3
2351 − 154	2.32	1.7	2.2	7.0	1.2	1
	8.55	7.1	8.7	19.3	6.8	2
2355 − 106	2.32	0.4	0.5	1.6	0.3	1
	8.55	0.8	1.0	2.8	0.7	1

[a] Epoch 1997 January 10–11.
[b] Epoch 1997 January 11–12.

TABLE 4

STRUCTURE INDEX VERSUS CORE FLUX DENSITY

		S_{core}/S_{total}	
STRUCTURE INDEX	NUMBER OF SOURCES	Mean	Median
1	74	0.94	0.96
2	153	0.82	0.83
3	104	0.67	0.67
4	50	0.53	0.53

NOTE.—The X-band flux density values are taken from the Gaussian models fitted to the visibility data and are listed in Table 2 of this paper, Table 2 of Fey et al. (1996), and Table 2 of Fey & Charlot (1997). The core flux density, S_{core}, is assumed to be the value of the Gaussian model component defined to be at the origin of the image, while the total flux density, S_{total}, is the sum of all model components. All sources for which we have images are included in the analysis here except for the sources 0831 + 557, 0923 + 392, 1253 − 055, 1730 − 130, 2021 + 317, 2023 + 336, and 2037 + 511, which were too complex to satisfactorily model with the available data. We have also excluded the source 1947 + 079 (although an image was previously presented, this source is not in the ICRF). In the case of sources observed at multiple epochs, only results from the most recent epoch were used. The structure index is that defined at the X band.

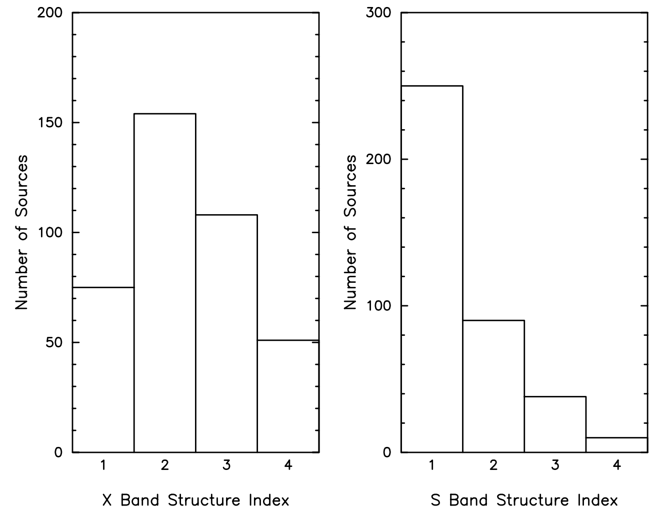

FIG. 3.—Distribution of the structure indexes at the X and S bands for 388 ICRF sources. The individual structure indexes are available from Table 3 of this paper and from Table 3 of Fey & Charlot (1997). In the case of multiple-epoch observations, the structure indexes from the most recent epoch were used.

indication that the contribution of the S-band structure to the dual-frequency calibrated delay is usually smaller compared with the X-band structure contribution, a consequence of the fact that the S-band structure corrections have been scaled by a factor of 0.08. Without scaling, the S-band corrections would be very large because intrinsic structure in extragalactic sources is generally more extended at the S band than at the X band. Comparing the X- and S-band structure indexes individually for each source indicates that, with only three exceptions (0355 + 508, 1413 + 135, & 2223 − 052), all sources that have S-band structure indexes of either 3 or 4 also have X-band structure indexes of either 3 or 4. This result suggests that the X-band structure index alone can be used for selection of the most compact sources.

In Figure 4, the X-band structure index distribution is compared for each ICRF source category. The definition of the three ICRF source categories is given in Ma et al. (1998) along with the individual source classification. Basically, the sources were divided into three categories: defining sources that set the direction of the ICRF axes, candidate sources that may be considered for future promotion to defining sources pending additional astrometric observations, and "other" sources that have identified excessive position variation and are unsuitable for the definition of a high-accuracy reference frame. The difference in distribution

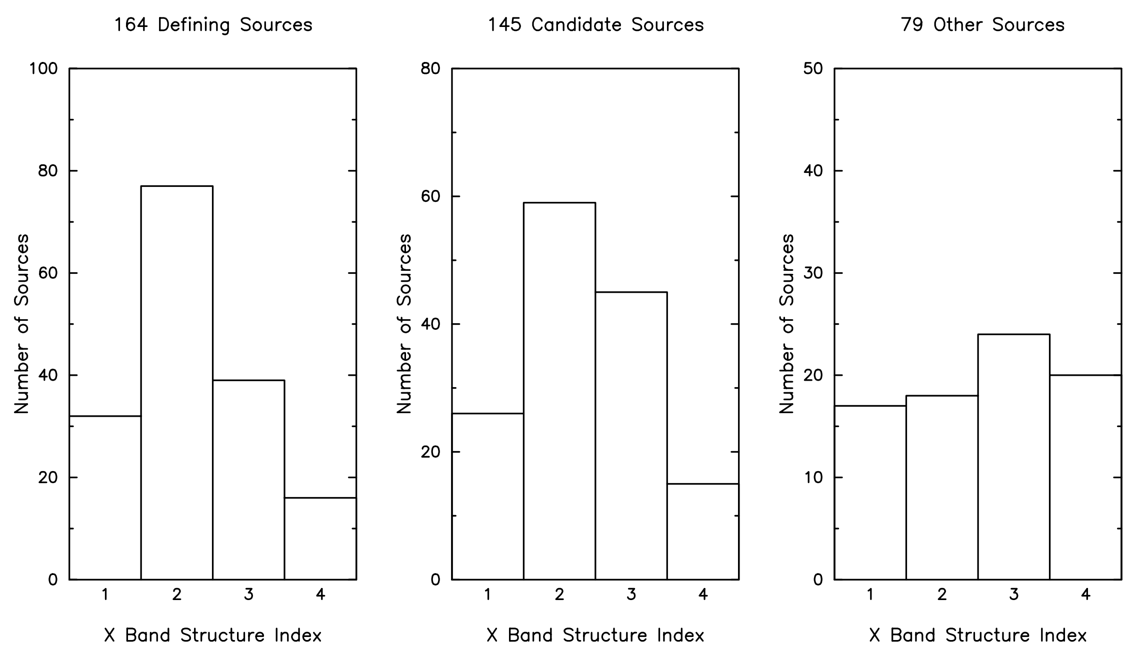

FIG. 4.—Distribution of the X- band structure indexes in each ICRF source category. The definitions of the three ICRF categories of sources (defining, candidate, and "other") are given in Ma et al. (1998) along with the individual source categorization. The 388 ICRF sources with currently available structure indexes are included in this figure.

between the sources in the defining and "other" sources categories is striking (see Fig. 4). While two-thirds of the defining sources (109 sources from a total of 164 defining sources) are found to have structure indexes of either 1 or 2, only 44% of the "other" sources (35 sources from a total of 79 "other" sources) have similar structure indexes. This difference may be further quantified by means of a Kolmogorov-Smirnov test, which gives the probability that two data sets are drawn from the same parent distribution. A Kolmogorov-Smirnov test comparing the distribution of the median structure correction values (which are used to define the structure indexes) for the defining and "other" sources shows that the two data sets have about a 0.3% probability of being drawn from the same distribution. The difference between the two distributions strongly suggests a causal relationship between the extended intrinsic structure of the "other" sources and their unsuitability for inclusion in the ICRF defining category. The candidate sources appear to have a distribution intermediate between that of the defining sources and the "other" sources categories, with 59% of the candidate sources having structure indexes of either 1 or 2. We note that the distribution of the candidate sources is almost identical to the overall structure index distribution at the *X* band (Fig. 3), which is consistent with the fact that some of the candidate sources could be designated defining sources in a future realization of the ICRF as more data become available or analysis methods improve, whereas others may fall into the "other" sources category.

The defining sources category includes a majority of compact or very compact sources, as expected from their empirical selection at the time the ICRF was built (see Ma et al. 1998). However, despite the stringency of the selection criteria, about one-third of the defining sources are found to have structure indexes of either 3 or 4, indicating that they are somewhat spatially extended and thus may not be appropriate for defining the celestial frame with the highest level of accuracy. Such sources, especially those with structure indexes of 4 (see Table 5), should be given specific attention in the ICRF maintenance process and should be monitored for unexpected behavior, as may be anticipated from the values of their structure indexes.

TABLE 5

ICRF Defining Sources with Structure Index 4

ICRF Designation	Source Name
ICRF J015734.9+744243......	0153+744
ICRF J025134.5+431515......	0248+430
ICRF J045952.0+022931......	0457+024
ICRF J052109.8+163822......	0518+165
ICRF J054236.1+495107......	0538+498
ICRF J073545.8−173548......	0733−174
ICRF J074110.7+311200......	0738+313
ICRF J083454.9+553421......	0831+557
ICRF J084205.0+183540......	0839+187
ICRF J092058.4+444153......	0917+449
ICRF J115825.7+245017......	1155+251
ICRF J143645.8+633637......	1435+638
ICRF J153452.4+013104......	1532+016
ICRF J184208.9+794617......	1845+797
ICRF J201114.2−064403......	2008−068
ICRF J203147.9+545503......	2030+547

Note.—The complete set of ICRF defining sources is listed in Ma et al. (1998). The structure index is that defined at the *X* band.

4.3. *Structure Index and ICRF Source Position Accuracy*

Evaluation of the impact of source structure on the ICRF can be further studied by comparing structure index and ICRF source position accuracy on a statistical basis. For this study, we have examined the distribution of uncertainties in right ascension and declination for each *X*- band structure index class. Source position uncertainties are from Ma et al. (1998). As shown in Figure 5, the histograms of source position uncertainties progressively deteriorate from an approximately Poisson-like distribution peaked near 0.25 mas for the structure index 1 sources to an almost random distribution for the structure index 4 sources. While the structure index 1 and 2 histograms look similar, the structure index 3 histogram has apparently an excess of sources near 0.3–0.4 mas position accuracy. A Kolmogorov-Smirnov test shows that the probability that the position uncertainties for the structure index 1 sources are drawn from the same parent distribution as for the structure index 2 sources is about 68%, thus indicating that the distributions of position uncertainties for the structure index 1 and structure index 2 sources are not statistically significantly different. The probability that the position uncertainties for the structure index 1 sources are drawn from the same parent distribution as for the structure index 3 sources is only about 0.7% and is insignificant for the structure index 4 sources. This indicates that the distributions of position uncertainties for the structure index 3 and the structure index 4 sources do differ significantly from the distribution for the structure index 1 sources.

The deterioration of the position accuracy as the structure index becomes larger is also confirmed when calculating the median and mean uncertainties in right ascension and declination for each *X*-band structure index class. Table 6 shows that such values increase regularly when the structure index goes up from a value of 1 to a value of 4. Note that only sources with more than 100 bandwidth synthesis delay observations, as defined in Ma et al. (1998), were retained for these calculations. Position uncertainties for sources with a limited number of observations are more likely to be dominated by the noise of the measurements

TABLE 6

Structure Index versus ICRF Position Uncertainty

		Position Uncertainty			
		Mean (mas)		Median (mas)	
Structure Index	Number of Sources	$\alpha \cos \delta$	δ	$\alpha \cos \delta$	δ
1	50	0.34	0.42	0.28	0.31
2	106	0.38	0.45	0.29	0.32
3	72	0.44	0.54	0.33	0.36
4	36	0.54	0.72	0.76	1.07

Note.—ICRF position uncertainties are given in Ma et al. (1998). Right ascension values have been scaled by the cosines of their respective declinations. Only sources with more than 100 bandwidth synthesis delay observations, as defined in Ma et al. (1998), are included in this analysis. Additionally, sources that have poorly determined positions, with uncertainties in $\alpha \cos \delta$ or δ larger than 2 mas, are excluded for the calculation of the mean. In the case of multiple-epoch imaging observations, only structure indexes from the most recent epoch were used. The structure index is that defined at the *X* band.

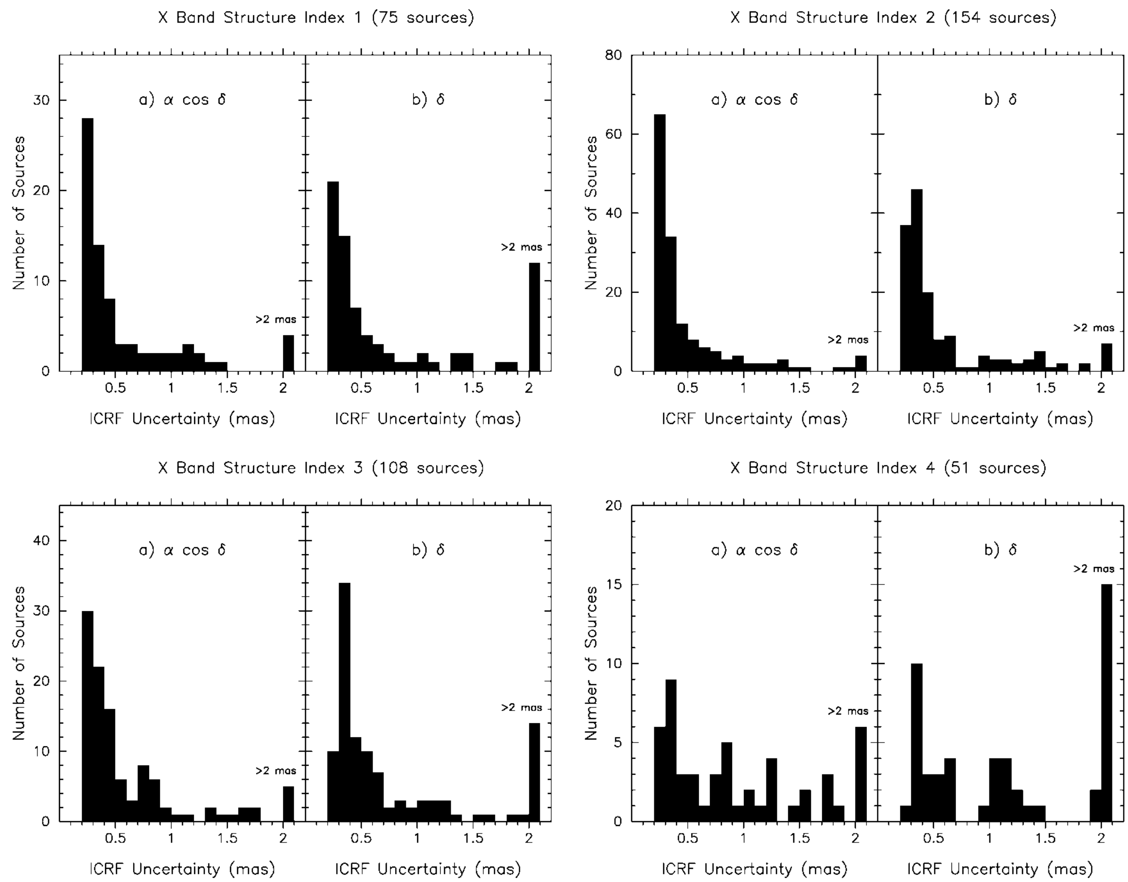

FIG. 5.—Distribution of ICRF position uncertainties in (*a*) $\alpha \cos \delta$ and (*b*) δ for each *X*-band structure index class. The individual source position uncertainties are given in Ma et al. (1998). The 388 ICRF sources with currently available structure indexes are included in this figure. The number of sources in each structure index class is listed above each subpanel.

rather than by systematic effects caused by extended intrinsic structure. Additionally, sources that have a poorly determined position, with uncertainties in $\alpha \cos \delta$ or δ larger than 2 mas, are excluded for the calculation of the mean. If considered, these are found to significantly bias the calculation even though their number is limited. The results of Figure 5 and Table 6, along with the Kolmogorov-Smirnov tests, confirm the previous finding of Fey & Charlot (1997), which indicates that sources with larger structure indexes have larger position uncertainties.

4.4. *Structure Index and ICRF Source Position Stability*

An additional test involves comparing structure index and ICRF source position stability. Time variation of the astrometric coordinates of the sources is usually attributed to variability of their intrinsic structure (cf. Charlot 1994; Fey et al. 1997). Thus, it is worthwhile to search for any correlation between such variations and the structure index. An indication of the stability of the source positions is obtained from astrometric solutions, similar to that from which the ICRF was derived, for which a separate source position is estimated for each VLBI session in which the source was observed. Positions derived in this manner are generally called "arc" source position estimates. For our study, we have used the time series of source positions from Eubanks (1997) and characterized the stability of each source by the weighted rms (wrms) of its position time series. Figure 6 compares the distribution of the arc source position wrms for each structure index class. As shown by the histograms plotted in this figure, the peak in the distributions is near 0.3–0.4 mas for the first three structure index classes while it is closer to 0.5–0.6 mas for the structure index 4 class. A Kolmogorov-Smirnov test indicates that the distribution of position wrms for the structure index 2 sources does not differ significantly from that of the structure index 1 sources (the probability that both distributions are drawn from the same parent distribution is about 88%), whereas the distributions of the structure index 3 and structure index 4 sources do differ significantly from the distribution of the structure index 1 sources (with probabilities of only about 20% and 3%, respectively, that the distributions are drawn from the same parent distribution).

To further quantify the observed differences, we have calculated the mean and median values of the arc source position wrms for each structure index class. These values are listed in Table 7. As with the previous analysis, only sources with more than 100 bandwidth synthesis delay observations, as defined in Ma et al. (1998), were retained for these calculations. The comparison in Table 7 shows that the mean and median wrms are similar for the structure index 1 and 2 classes but are larger by about 0.05 mas for the structure index 3 class and by 0.15–20 mas for the structure index 4 class. Thus, on average, the more extended sources are found to have larger position instability than the more compact sources. This is evidence that the source structure size directly correlates not only with the ICRF position accuracy but also with the magnitude of the time variations of the source coordinates.

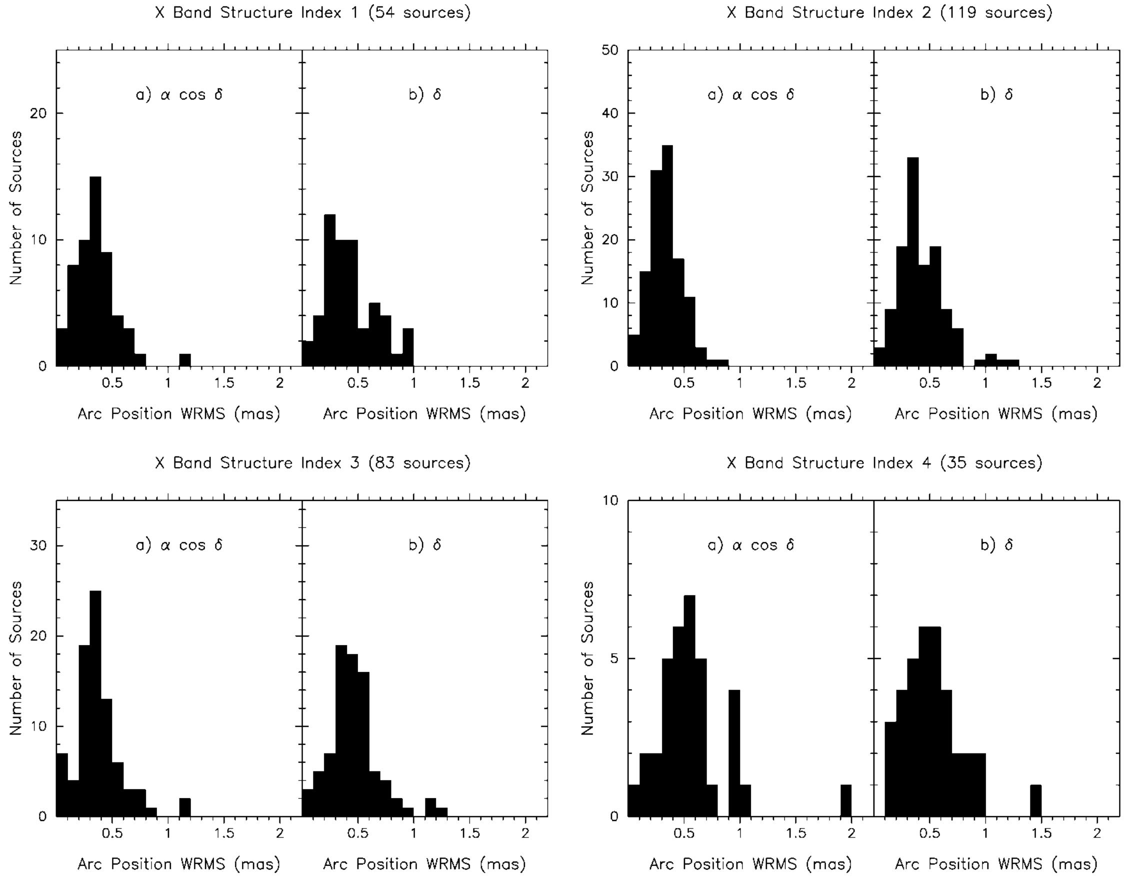

FIG. 6.—Distribution of arc position–weighted rms (wrms) in (*a*) $\alpha \cos \delta$ and (*b*) δ for each *X*-band structure index class. The individual arc position wrms values were taken from Eubanks (1997). All ICRF sources with currently available structure indexes and arc position results in Eubanks (1997) are included in this figure. The number of sources in each structure index class is listed above each subpanel.

4.5. *Structure Index as an Indicator for Astrometry*

Based on the results presented in this section, we suggest that the structure index can be used as an estimate of the astrometric quality of extragalactic radio sources. Therefore, we reiterate our previous recommendation in Fey & Charlot (1997) that only sources with *X*-band structure indexes of 1 or 2 should be used for astrometric and geodetic VLBI experiments where the highest accuracy is required. Sources with *X*-band structure indexes of 3 should be considered marginal and used only with caution, whereas those with *X*-band structure indexes of 4 should not be used at all for astrometric or geodetic work. Such recommendations are further supported by the results of the Kolmogorov-Smirnov tests carried out above. The *S*-band structure index should also have a value of 1 or 2 and should be verified in all cases, although this condition is generally ensured for sources with *X*-band structure indexes of 1 or 2.

TABLE 7

STRUCTURE INDEX VERSUS ARC POSITION wrms

		ARC POSITION WRMS			
		Mean (mas)		Median (mas)	
STRUCTURE INDEX	NUMBER OF SOURCES	$\alpha \cos \delta$	δ	$\alpha \cos \delta$	δ
1	45	0.33	0.42	0.32	0.39
2	97	0.33	0.44	0.32	0.39
3	65	0.40	0.49	0.37	0.46
4	29	0.60	0.57	0.53	0.51

NOTE.—The individual arc position–weighted rms (wrms) values were taken from Eubanks (1997). Right ascension values have been scaled by the cosines of their respective declinations. Only sources with more than 100 bandwidth synthesis delay observations, as defined in Ma et al. (1998), are included in this analysis. In the case of multiple-epoch imaging observations, only structure indexes from the most recent epoch were used. The structure index is that defined at the *X* band.

A caveat on the use of the structure index is worth noting at this point. The ICRF astrometric positions are derived from least-squares fits to repeated observations taken over many years. It is well known that extragalactic radio sources observed at VLBI resolutions may exhibit variable emission structure on angular scales of order several milliarcseconds over such a time span. Thus, the structure index may vary over time, as is the case for the source 0851+202, a source with repeated observations in Fey et al. (1996), Fey & Charlot (1997), and in this paper, which has an *X*-band structure index of 3 at epoch 1994 July and a structure index of 2 at epoch 1997 January. The analyses presented in this section and by Fey & Charlot (1997) do not in any way attempt to account for such time-variable intrinsic structure, as they are based on snapshot images of the sources at a *single epoch*. Thus, although we have demonstrated a clear relationship between the intrinsic compactness of the sources and the magnitude of the temporal variations in their astrometric positions, caution should be used in applying this result, obtained on a statistical basis, to individual sources. We stress that single-epoch structure index should not be the sole method for classifying sources for astrometric suitability but should be given at least equal consideration with other source selection criteria (cf. Ma et al. 1998).

5. SUMMARY

We have calculated structure delay corrections based on the Charlot (1990) and Fey & Charlot (1997) analyses using source models derived from VLBA observations of 225 extragalactic radio sources that are part of the ICRF. Together with results presented by Fey & Charlot (1997), this brings the total number of ICRF sources with calculated structure corrections to 388. Results of these calculations show that intrinsic structure contributions to the measured bandwidth synthesis delay are significant, ranging from maximum delay corrections of only a few picoseconds for the most compact sources to maximum delay corrections of several nanoseconds for the most extended sources. The structure corrections presented here and in Fey & Charlot (1997) can be used to estimate the additional noise introduced into a bandwidth synthesis delay measurement by intrinsic source structure. We have also calculated a source "structure index" based on the median structure corrections and reiterate our previous suggestion in Fey & Charlot (1997) that this index can be used as an estimate of the astrometric quality of the sources. A correlation between the compactness of the sources and their position uncertainties was found, confirming the previous result of Fey & Charlot (1997) that the more extended sources have larger position uncertainties. The more extended sources are also found to have less temporally stable positions than those with more compact structure.

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