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# A 1.49 GHz SUPPLEMENTARY ATLAS OF SPIRAL GALAXIES WITH *H*-MAGNITUDES

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## ABSTRACT

The VLA has been used in its most compact D- and C/D-configurations to make low-resolution ($\theta \approx 0'.9$) 1.49 GHz maps of spiral galaxies with measured infrared magnitudes $H_{-0.5}$ and H I velocity widths from the 1982 list of Aaronson and coworkers. Many appear in the 1.49 GHz atlas of all spiral galaxies brighter than $B_T = +12$ and north of $\delta = -45°$; this supplementary atlas presents maps and radio source parameters of the 55 fainter galaxies observed.

*Subject headings:* galaxies: structure — radio sources: galaxies

## I. INTRODUCTION

This paper presents 1.49 GHz continuum maps, integrated flux densities, and component parameters for 55 spiral galaxies north of $\delta = -45°$ with measured infrared magnitudes $H_{-0.5}$ and H I velocity widths (Aaronson *et al.* 1982) not included in the 1.49 GHz atlas of spiral galaxies brighter than $B_T = +12$ (Condon 1987, hereafter Paper I). The observations and data reduction methods used are similar to those of the main atlas, so they are described only briefly here. The entire sample of 161 galaxies with both $H_{-0.5}$ magnitudes and peak rotation velocities ($\Delta V/2$) used to investigate the relationship between stellar population and radio continuum emission (Burstein, Condon, and Yin 1987), and the derived quantities employed in that study, are listed in Table 3.

## II. THE OPTICAL GALAXY SAMPLE

Low-resolution Very Large Array (VLA) maps have been made of most galaxies north of $\delta = -45°$ in the Aaronson *et al.* (1982) sample of spirals with known $H_{-0.5}$ magnitudes and H I velocity widths. The sample itself is not statistically complete in any strict sense, and it is biased against nearly face-on galaxies because they have poorly determined true rotation velocities. All of the galaxies brighter than $B_T = +12$ have already been mapped (Paper I), and most of the fainter ones are reported here. The few sample galaxies not mapped with the VLA were missed only because of scheduling constraints, so their omission should not introduce any significant bias. Table 1 lists the 55 galaxies comprising the supplementary atlas as follows, on a consistent basis with the data given in Paper I:

*Column (1).*—Galaxy name.

*Columns (2) and (3).*—Optical position (equinox 1950.0) taken from Dressel and Condon (1976) for $\delta \geq -2°.5$, from Gallouët, Heidmann, and Dampierre (1975) for $-33° \leq \delta \leq -2°.5$, or measured with overlays on the Palomar Observatory Sky Survey prints and UK Schmidt Southern Sky Survey film copies. The rms uncertainties in these coordinates are usually 4″, but they can be much bigger for large or irregular galaxies.

*Column (4).*—Apparent blue ($B_T$) magnitude from the *Revised Shapley-Ames Catalog of Bright Galaxies* (Sandage and Tammann 1981, hereafter RSA).

*Column (5).*—Optical major diameter $D_{25}$ and minor diameter $d_{25}$ of the 25 mag arcsec$^{-2}$ isophote from the *Second Reference Catalogue of Bright Galaxies* (de Vaucouleurs, de Vaucouleurs, and Corwin 1976, hereafter RC2).

*Column (6).*—Optical major-axis position angle from Nilson (1973) for $\delta \geq -2°.5$ and from Lauberts (1982) for $\delta \leq -17°.5$.

*Column (7).*—Hubble distance $D$ based on $H_0 = 50$ km s$^{-1}$ Mpc$^{-1}$ or, for group members, the group distance given by the RSA or by Kraan-Korteweg and Tammann (1979).

*Column (8).*—Absolute blue magnitude corrected for Galactic extinction and internal absorption as specified in the RSA.

*Columns (9) and (10).*—RC2 and RSA morphological types, respectively.

## III. VLA OBSERVATIONS AND DATA REDUCTION

All galaxies listed in Table 1 were observed with the D- and C/D-arrays of the VLA between 1985 November 2 and 1986

[1]The National Radio Astronomy Observatory is operated by Associated Universities, Inc., under contract with the National Science Foundation.

TABLE 1

OPTICAL DATA

| GALAXY NAME | R.A. (1950.0) | Decl. (1950.0) | $B_T$ (mag) | $D_{25} \times d_{25}$ | P.A. | $D$ (Mpc) | $M^{0,i}_{B_T}$ (mag) | RC2 TYPE | RSAC TYPE |
|---|---|---|---|---|---|---|---|---|---|
| NGC 0024 | $00^h07^m23^s.8$ | −25°14′35″ | 12.10 | 5′.5 × 1′.6 | 46° | 12.4 | −19.12 | .SAS5.. | Sc(s)II-III |
| NGC 0493 | 01 19 34.8 | +00 41 10 | 12.95 | 3.8 × 1.4 | 58 | 48.7 | −21.15 | .SBS6*/ | |
| NGC 0701 | 01 48 35.3 | −09 56 58 | 12.90 | 2.5 × 1.3 | | 38.5 | −20.56 | .SBT5.. | Sc(s)III |
| NGC 1035 | 02 37 01.3 | −08 20 45 | 13.07 | 2.2 × 0.9 | | 26.1 | −19.67 | .SAS5$ | Sc:III |
| NGC 1090 | 02 44 00.0 | −00 27 20 | 12.60 | 3.8 × 1.8 | 102 | 56.7 | −21.74 | .SBT4.. | SBc(s)I-II |
| NGC 1292 | 03 16 07.6 | −27 47 34 | 12.59 | 3.2 × 1.7 | 7 | 27.8 | −20.16 | .SAS5.. | Sc(s)II |
| NGC 1325 | 03 22 11.8 | −21 43 16 | 12.32 | 4.6 × 1.8 | 56 | 31.5 | −21.15 | .SAS4.. | Sb |
| NGC 1406 | 03 37 22.6 | −31 28 59 | 12.59 | 3.9 × 1.0 | 15 | 20.0 | −19.73 | .SBS4$/ | Sc(II) |
| NGC 2701 | 08 55 27.0 | +53 57 50 | 12.80 | 2.1 × 1.4 | 23 | 48.4 | −21.12 | .SXT5*. | Sc(s)II-III |
| IC 0529 | 09 13 27.0 | +73 58 07 | 12.66 | 3.7 × 1.8 | 145 | 48.4 | −21.40 | .SAS5*. | |
| NGC 3003 | 09 45 37.9 | +33 39 16 | 12.17 | 5.9 × 1.7 | 79 | 29.2 | −20.91 | .S..4$. | Sc:III: |
| NGC 3027 | 09 51 15.8 | +72 26 26 | 12.45 | 4.7 × 2.3 | 130 | 24.2 | −20.09 | .SBT7*. | |
| NGC 3320 | 10 36 37.4 | +47 39 25 | 12.93 | 2.2 × 1.2 | 20 | 47.6 | −20.98 | .S..6*. | Sc(s)II-III |
| NGC 3430 | 10 49 24.2 | +33 13 06 | 12.15 | 3.9 × 2.3 | 30 | 31.1 | −20.78 | .SXT5.. | Sbc(r)I-II |
| NGC 3455 | 10 51 51.6 | +17 33 08 | 12.81 | 2.8 × 1.8 | 80 | 19.8 | −19.12 | PSXT3.. | Sc(s)II: |
| NGC 3495 | 10 58 40.9 | +03 53 43 | 12.42 | 4.6 × 1.3 | 20 | 19.4 | −19.78 | .S..7*. | Sc(s)III |
| NGC 3510 | 11 01 00.9 | +29 09 19 | 13.30 | 3.8 × 0.9 | 163 | 13.2 | −18.12 | .SBS9./ | SBc(s) |
| NGC 3666 | 11 21 49.7 | +11 37 03 | 12.36 | 4.2 × 1.4 | 100 | 18.5 | −19.68 | .SAT5*. | ScII-III |
| NGC 3756 | 11 34 04.7 | +54 34 22 | 12.15 | 4.4 × 2.4 | 177 | 27.4 | −20.55 | .SXT4.. | Sc(s)I-II |
| NGC 3813 | 11 38 40.1 | +36 49 27 | 12.30 | 2.3 × 1.2 | 87 | 29.2 | −20.55 | .SAT3*. | Sc(s)II.8 |
| NGC 3917 | 11 48 07.7 | +52 06 14 | 12.40 | 4.9 × 1.4 | 77 | 20.8 | −19.94 | .SA.6*. | Sc(s)III |
| NGC 3936 | 11 49 48.1 | −26 37 33 | 12.83 | 4.0 × 0.8 | 63 | 34.8 | −20.85 | .SBS3$. | Sc(s)I-II |
| NGC 3956 | 11 51 27.7 | −20 17 17 | 12.54 | 3.5 × 1.2 | 58 | 27.9 | −20.44 | .SAS5*. | Sc(s)II |
| NGC 4094 | 12 03 19.7 | −14 14 51 | 12.54 | 4.2 × 1.8 | | 23.7 | −19.99 | .SAT5*. | Sbc(s)II |
| NGC 4102 | 12 03 51.6 | +52 59 23 | 12.30 | 3.2 × 1.9 | 38 | 19.0 | −19.80 | .SXS3$. | Sb(r)II |
| NGC 4116 | 12 05 02.7 | +02 58 15 | 12.37 | 3.8 × 2.4 | 155 | 22.8 | −19.88 | .SBT8.. | SBc(r)III |
| IC 0764 | 12 07 38.8 | −29 27 29 | 12.35 | 4.8 × 1.8 | 177 | 37.0 | −21.60 | .SAS5$/ | Sb(r)I-II |
| NGC 4183 | 12 10 47.2 | +43 58 35 | 12.40 | 5.0 × 0.9 | 166 | 19.4 | −19.90 | .SAS6$/ | Scd (on edge) |
| NGC 4206 | 12 12 43.7 | +13 18 10 | 12.77 | 5.2 × 1.2 | 0 | 21.9 | −19.33 | .SAS4*. | Sbc(s): |
| NGC 4294 | 12 18 44.8 | +11 47 18 | 12.62 | 3.1 × 1.3 | 155 | 21.9 | −19.68 | .SBS6.. | SBc(s)II-III |
| NGC 4380 | 12 22 49.6 | +10 17 33 | 12.38 | 3.7 × 2.2 | 153 | 21.9 | −20.04 | .SAT3*$ | Sab(s) |
| NGC 4519 | 12 30 58.1 | +08 55 48 | 12.34 | 3.1 × 2.2 | 145 | 21.9 | −19.76 | .SBT7.. | SBc(rs)II.2 |
| NGC 4522 | 12 31 07.8 | +09 27 02 | 12.70 | 3.7 × 1.1 | 33 | 21.9 | −19.73 | .SBS6*/ | Sc/Sb: |
| NGC 4532 | 12 31 46.7 | +06 44 43 | 12.30 | 2.9 × 1.3 | 160 | 21.9 | −19.70 | .IB.9.. | SmIII-IV |
| NGC 4592 | 12 36 44.5 | −00 15 17 | 12.16 | 4.6 × 1.5 | 97 | 18.1 | −19.82 | .SAS8*. | ScdIII |
| NGC 4713 | 12 47 25.6 | +05 34 58 | 12.21 | 2.8 × 1.9 | 100 | 21.9 | −19.92 | .SXT7.. | SBc(s)II-III |
| NGC 4808 | 12 53 17.0 | +04 34 28 | 12.56 | 2.7 × 1.3 | 127 | 12.6 | −18.51 | .SAS6*. | Sc(s)III |
| NGC 4951 | 13 02 31.5 | −06 13 39 | 12.56 | 3.3 × 1.4 | | 19.9 | −19.54 | .SXT6*. | Sc(s)II: |
| NGC 5480 | 14 04 30.2 | +50 57 54 | 12.89 | 1.8 × 1.3 | 0 | 39.3 | −20.50 | .SAS5*. | Sc(s)III |
| NGC 5496 | 14 09 03.3 | −00 55 24 | 12.59 | 4.4 × 1.0 | 172 | 28.0 | −20.48 | .S..7*/ | Sc(s) |
| NGC 5523 | 14 12 35.4 | +25 33 00 | 12.47 | 4.5 × 1.4 | 99 | 20.8 | −19.83 | .SAS6*. | Sc(s)II-III |
| NGC 5690 | 14 35 09.3 | +02 30 14 | 12.50 | 3.5 × 1.2 | 143 | 33.1 | −20.79 | .S..5$/ | ScII: |
| NGC 5806 | 14 57 28.4 | +02 05 20 | 12.30 | 3.1 × 1.7 | 170 | 25.4 | −20.23 | .SXS3.. | Sb(s)II.8 |
| NGC 5879 | 15 08 29.2 | +57 11 25 | 12.10 | 4.4 × 1.7 | 0 | 18.6 | −20.24 | .SAT4*$ | Sb(s)II |
| NGC 5949 | 15 27 18.8 | +64 56 12 | 12.94 | 2.4 × 1.2 | 147 | 12.5 | −18.13 | .SAR4$. | Sc |
| NGC 5984 | 15 40 33.4 | +14 23 25 | 12.94 | 3.0 × 0.9 | 144 | 22.4 | −19.60 | .SBT7*. | SBcdIII: |
| NGC 6106 | 16 16 21.4 | +07 31 56 | 12.80 | 2.6 × 1.5 | 140 | 29.2 | −20.10 | .SAS5.. | Sc(rs)II.3 |
| NGC 7307 | 22 30 57.3 | −41 11 28 | 12.84 | 4.2 × 1.0 | 9 | 37.3 | −20.85 | .SXS5*P | SBc(s)II |
| NGC 7361 | 22 39 31.0 | −30 19 14 | 12.95 | 3.5 × 1.0 | 4 | 25.5 | −19.82 | .S.R5*$ | ScII-III: |
| NGC 7456 | 22 59 22.9 | −39 50 19 | 12.06 | 5.9 × 1.8 | 23 | 24.0 | −20.57 | .SAS6*. | Sc(s)II-III |
| NGC 7462 | 22 59 56.8 | −41 06 13 | 12.79 | 3.7 × 0.6 | 75 | 20.4 | −19.63 | .SBS5$/ | SBc(s) |
| NGC 7531 | 23 12 01.8 | −43 52 22 | 12.14 | 3.5 × 1.5 | 15 | 32.1 | −21.00 | .SAR4.. | Sbc(r)I-II |
| NGC 7537 | 23 12 01.9 | +04 13 33 | 13.80 | 2.3 × 0.7 | 79 | 57.3 | −21.16 | .SA.4*. | |
| NGC 7541 | 23 12 10.3 | +04 15 43 | 12.45 | 3.5 × 1.4 | 102 | 57.7 | −21.99 | .SBT4*P | Sc(s)II |
| NGC 7721 | 23 36 13.8 | −06 47 43 | 12.30 | 3.4 × 1.5 | | 44.0 | −21.50 | .SAS5.. | Sbc(s)II.2 |

January 30. Nearly all were covered by two or three "snapshots" of ~4 minutes duration each and separated by ~2 hr to improve $(u,v)$ coverage. The $(u,v)$ data were edited and calibrated as described in Paper I. Square maps, usually 512 pixels × 14″/pixel ≈ 2° on a side, were made and fully CLEANed to eliminate aliasing and sidelobe responses from background sources anywhere in the primary beam (FWHM ≈ 30′) or its first sidelobe. Uniform weighting and Gaussian tapers ranging from 3 to 3.8 kλ at the 30% intensity radius were used to produce nearly circular synthesized beams with FWHM diameters $\theta \approx 0'.9$, and maps containing sources with peak flux densities $S_p > 100$ mJy were self-calibrated to increase their dynamic ranges. The CLEANed maps were restored with circular Gaussian beams of exactly 0′.8, 0′.9, or 1′.0 FWHM diameter and finally divided by the primary-beam attenuated pattern at $\nu = 1.49$ GHz. The central 128 × 128-pixel portions of the final maps were written onto a single 1600 BPI FITS-format (Wells, Greisen, and Harten 1981) tape. Copies of this tape (which also includes all of the maps in the main atlas [Paper I]) are available directly from the first

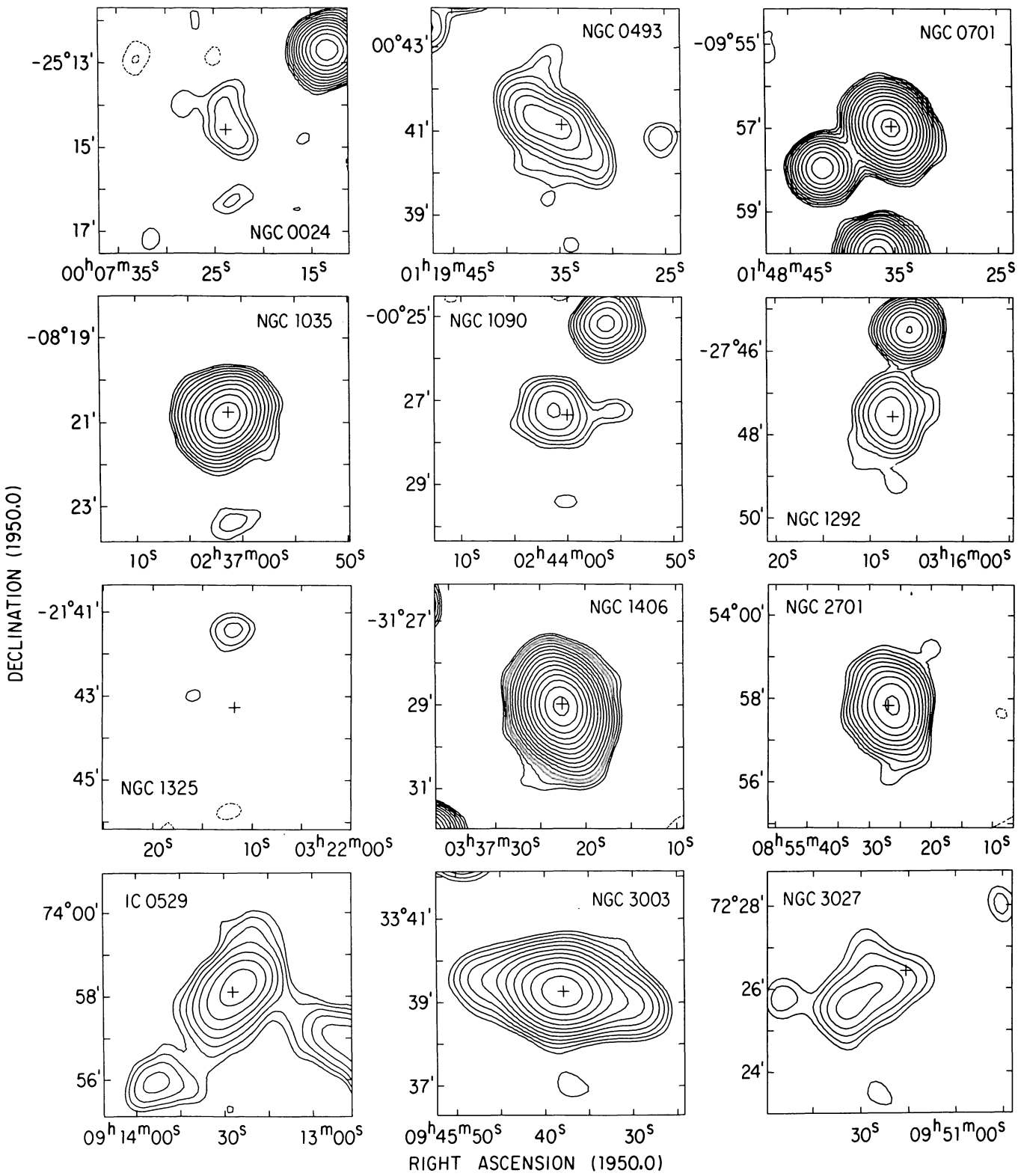


FIG. 1.—Contour maps, in order of increasing right ascension. The optical position of the galaxy is indicated by a cross. Contour levels are plotted at $\pm 2^{n/2}$, $\pm 2^{(n+1)/2}$, $\pm 2^{(n+2)/2}$,... mJy per restoring beam solid angle. The value of $n$ for each galaxy is listed in Table 2.

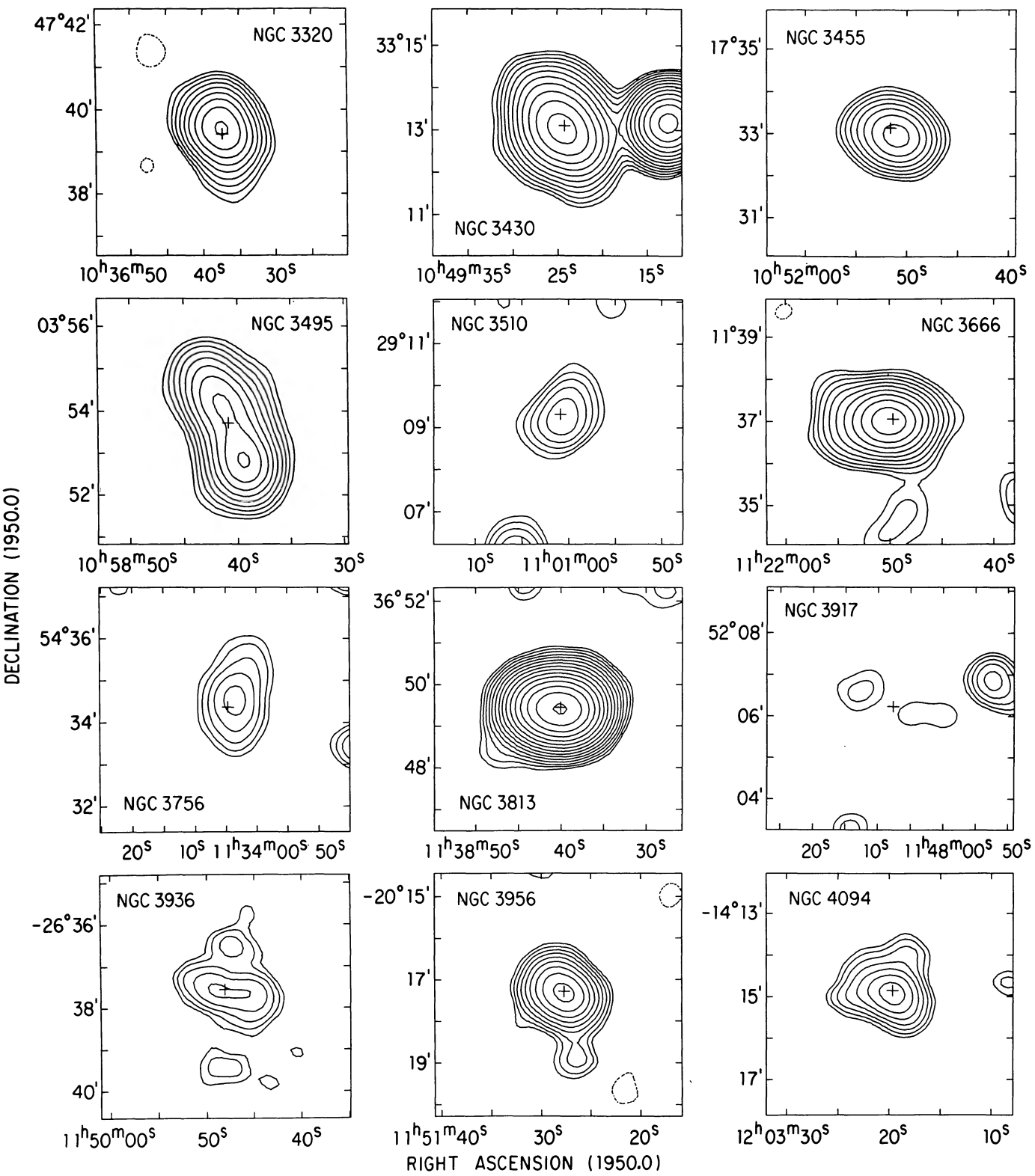


FIG. 1—*Continued*

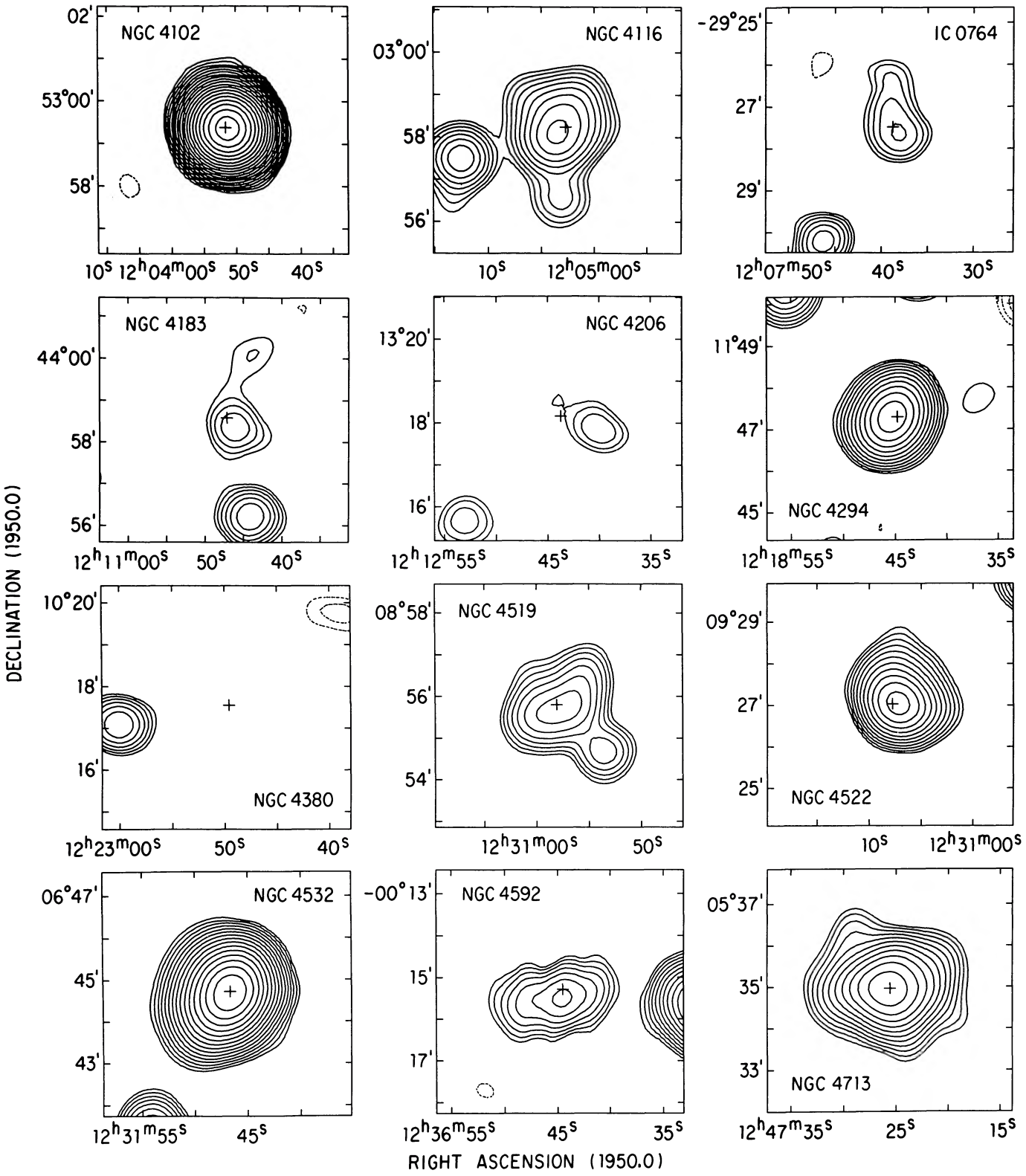


FIG. 1—*Continued*

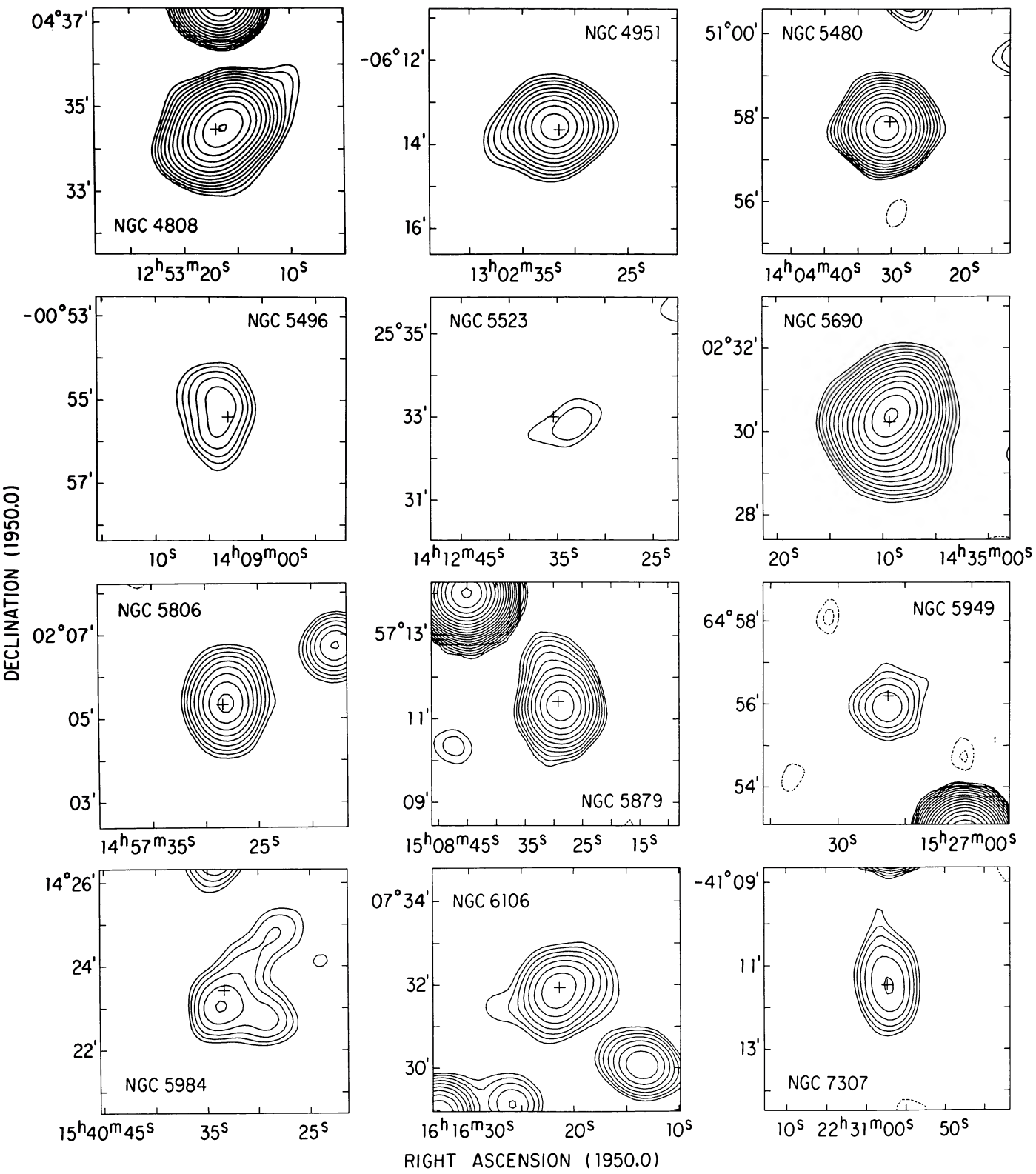


FIG. 1—*Continued*

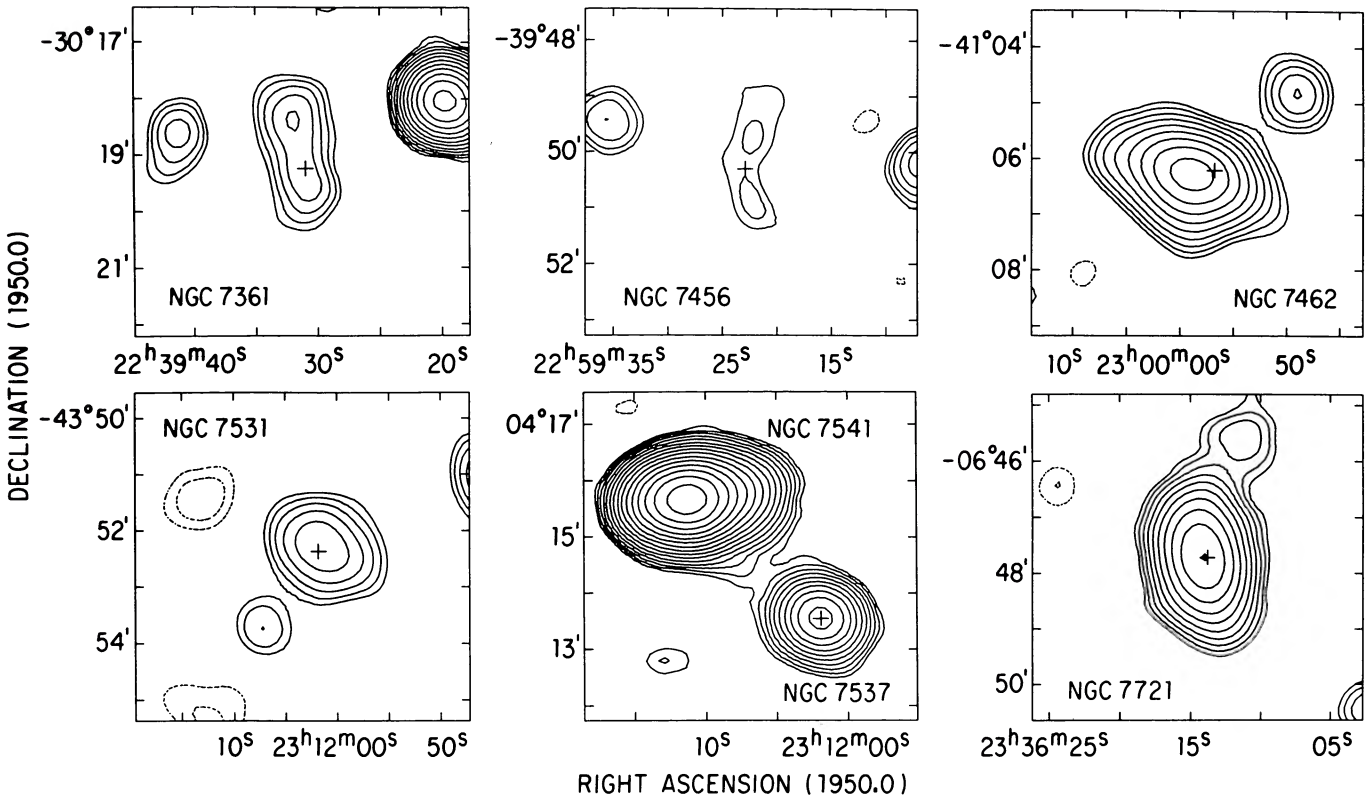


FIG. 1—*Continued*

author for the cost of the blank tape plus shipping (about $15 each).

Total flux densities $S$ of the galaxies were obtained by integrating over their optical areas on the final maps and subtracting any background sources (cf. Paper I). Many of the galaxy brightness distributions could be approximated by one or two elliptical Gaussians. In these cases the Gaussian center positions $(\alpha, \delta)$, peak flux densities $S_P$, integrated flux densities $S_I$, FWHM major and minor axes $(\theta_M, \theta_m)$, and major-axis position angles P.A. (measured east from north) were determined. Some of the remaining galaxies contain non-Gaussian central peaks whose positions and peak flux densities only were estimated.

## IV. RESULTS

The results of the radio observations are presented as an atlas of contour maps and a table of fitted parameters. Figure 1 contains the contour plots for all 55 galaxies in order of right ascension. The optical positions of the galaxies are indicated by crosses with 8″ arm radius. Both positive (*continuous*) and negative (*broken*) contours have been plotted at levels $\pm 2^{n/2}$, $\pm 2^{(n+1)/2}$, $\pm 2^{(n+2)/2}$,... mJy per restoring beam solid angle. The value of $n$ given in Table 2 specifies the faintest contour level plotted; e.g., $n = -3$ means $\sim 0.35$ mJy per beam. The contours are separated by factors of $2^{1/2}$ in brightness, or 1.25 log $2 \approx 0.38$ mag. A brightness of 1 mJy per beam at $\nu = 1.49$ GHz is equivalent to Rayleigh-Jeans brightness temperatures 0.24, 0.19, and 0.15 K for FWHM beamwidths of 0.′8, 0.′9, and 1.′0, respectively. The table of radio source parameters (Table 2) is arranged as follows:

*Column (1).*—Galaxy name.

*Column (2).*—Restoring beamwidth $\theta$ (FWHM).

*Column (3).*—The value of $n$ that specifies the faintest contour level plotted, $2^{n/2}$ mJy per beam solid angle.

*Column (4).*—Total 1.49 GHz flux density $S$, obtained by direct integration on the map and corrected for recognizable confusion. Uncertain values are indicated by parentheses, and values estimated from filled-aperture observations are enclosed in brackets. Usually the integration area is obvious from the contour map; if not, it is described in the notes to Table 2 in § IV*a*.

*Column (5).*—The 1.49 GHz absolute spectral luminosity calculated from $L = 4\pi D^2 (1+z)^{1+\alpha} S$ assuming $\alpha \approx +0.75$.

The next six columns do not describe the whole source directly, but give parameters of Gaussian fits to one or more components of the source. If just the right ascension, declination, the peak flux density $S_P$ are specified, only the source peak was fitted. For full Gaussian fits down to the baseline level, the Gaussian integrated flux densities $S_I$ are also listed. If a component was clearly resolved, its deconvolved major and minor FHWM diameters $(\theta_M, \theta_m)$ and its major-axis position angle P.A. are given.

*Columns (6) and (7).*—Right ascension and declination (equinox 1950.0).

*Column (8).*—1.49 GHz peak flux density.

*Column (9).*—1.49 GHz integrated flux density.

TABLE 2

RADIO DATA

| GALAXY NAME | BEAM | PLOT n | S (mJy) | log(L) (W Hz$^{-1}$) | COMPONENT PARAMETERS R.A. (1950.0) | Decl. (1950.0) | $S_P$ (mJy) | $S_I$ (mJy) | $\theta_M \times \theta_m$ | P.A. | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|
| NGC 0024 | 0.'8 | −3 | 1.9 | 19.54 | 00$^h$07$^m$23$^s$.1 | −25°14′41″ | 1.1 | | | | |
| NGC 0493 | 0.8 | −3 | 11.6 | 21.52 | 01 19 36.0 | +00 41 10 | 4.0 | 10.2 | 1.'3 × 0.'7 | 54° | |
| NGC 0701 | 0.8 | −3 | 39.7 | 21.85 | 01 48 35.4 | −09 57 00 | 27.6 | 39.8 | 0.7 × 0.3 | 38 | * |
| NGC 1035 | 0.8 | −3 | 27.1 | 21.35 | 02 37 01.5 | −08 20 51 | 15.2 | 26.6 | 0.7 × 0.7 | | |
| NGC 1090 | 0.9 | −3 | 3.8 | 21.16 | 02 44 01.1 | −00 27 17 | 2.5 | 3.2 | 0.6 × 0.4 | 5 | * |
| NGC 1292 | 0.8 | −3 | 5.5 | 20.71 | 03 16 07.7 | −27 47 35 | 2.9 | 5.9 | 1.0 × 0.7 | 179 | * |
| NGC 1325 | 0.8 | −3 | (0.5) | (19.77) | | | | | | | * |
| NGC 1406 | 0.8 | −3 | 131.0 | 21.80 | 03 37 22.7 | −31 29 03 | 73.9 | 127.0 | 0.9 × 0.4 | 17 | |
| NGC 2701 | 0.8 | −3 | 19.7 | 21.74 | 08 55 26.4 | +53 57 49 | 9.1 | 19.2 | 1.1 × 0.6 | 12 | |
| IC 0529 | 1.0 | −3 | 8.0 | 21.35 | 09 13 26.0 | +73 58 10 | 3.5 | 7.9 | 1.6 × 0.6 | 141 | * |
| NGC 3003 | 1.0 | −3 | 31.2 | 21.50 | 09 45 38.2 | +33 39 15 | 10.3 | 14.0 | 0.7 × 0.5 | 87 | * |
| | | | | | 09 45 37.5 | +33 39 16 | 5.4 | 17.2 | 2.7 × 0.5 | 79 | |
| NGC 3027 | 1.0 | −3 | 4.5 | 20.50 | | | | | | | * |
| NGC 3320 | 1.0 | −2 | 13.3 | 21.56 | 10 36 37.5 | +47 39 32 | 8.6 | 13.1 | 1.0 × 0.4 | 25 | |
| NGC 3430 | 1.0 | −3 | 28.9 | 21.52 | 10 49 24.5 | +33 13 03 | 13.4 | 28.7 | 1.4 × 0.8 | 37 | * |
| NGC 3455 | 1.0 | −3 | 7.0 | 20.52 | 10 51 51.2 | +17 32 58 | 4.8 | 7.0 | 0.9 × 0.4 | 68 | |
| NGC 3495 | 1.0 | −3 | 17.4 | 20.89 | 10 58 40.3 | +03 53 22 | 5.4 | 18.1 | 2.8 × 0.6 | 20 | * |
| NGC 3510 | 1.0 | −3 | 3.1 | 19.81 | 11 01 00.6 | +29 09 17 | 1.9 | 3.1 | 1.1 × 0.4 | 143 | |
| NGC 3666 | 1.0 | −3 | 17.7 | 20.86 | 11 21 50.3 | +11 37 00 | 10.2 | 16.7 | 1.1 × 0.5 | 88 | * |
| NGC 3756 | 0.9 | −3 | 4.2 | 20.58 | 11 34 03.4 | +54 34 33 | 1.6 | 4.3 | 1.7 × 0.7 | 171 | |
| NGC 3813 | 0.9 | −3 | 88.3 | 21.95 | 11 38 40.3 | +36 49 25 | 49.2 | 87.9 | 1.0 × 0.5 | 86 | |
| NGC 3917 | 0.8 | −3 | (2.1) | (20.04) | | | | | | | * |
| NGC 3936 | 0.8 | −3 | 4.5 | 20.81 | 11 49 47.5 | −26 37 36 | 1.6 | 5.3 | 1.6 × 0.8 | 70 | * |
| NGC 3956 | 0.9 | −3 | 10.1 | 20.97 | 11 51 27.8 | −20 17 19 | 6.6 | 10.1 | 0.7 × 0.6 | | * |
| NGC 4094 | 0.8 | −3 | 7.1 | 20.68 | 12 03 19.7 | −14 14 55 | 3.6 | | | | * |
| NGC 4102 | 0.9 | −3 | 261.0 | 22.05 | 12 03 51.3 | +52 59 22 | 243.0 | 260.0 | 0.3 × 0.2 | 36 | * |
| NGC 4116 | 0.9 | −3 | 14.7 | 20.96 | 12 05 03.3 | +02 58 14 | 6.3 | 15.0 | 1.1 × 1.0 | 123 | * |
| IC 0764 | 0.8 | −3 | 3.5 | 20.76 | 12 07 38.2 | −29 27 39 | 1.6 | | | | * |
| NGC 4183 | 0.9 | −3 | 1.9 | 19.93 | 12 10 46.2 | +43 58 22 | 1.4 | | | | * |
| NGC 4206 | 0.9 | −3 | < 1.0 | < 19.76 | | | | | | | * |
| NGC 4294 | 0.9 | −3 | 24.1 | 21.14 | 12 18 45.3 | +11 47 18 | 14.8 | 24.2 | 0.9 × 0.5 | 151 | |
| NGC 4380 | 0.9 | −3 | (0.2) | (19.06) | | | | | | | * |
| NGC 4519 | 0.9 | −3 | 9.1 | 20.72 | 12 30 57.8 | +08 55 47 | 3.7 | 9.5 | 1.5 × 0.8 | 126 | * |
| NGC 4522 | 0.9 | −3 | 22.1 | 21.10 | 12 31 07.2 | +09 27 05 | 13.7 | 21.4 | 0.8 × 0.6 | 40 | |
| NGC 4532 | 0.9 | −3 | 117.0 | 21.83 | 12 31 46.8 | +06 44 41 | 63.8 | 114.0 | 1.0 × 0.6 | 152 | |
| NGC 4592 | 1.0 | −3 | 5.7 | 20.35 | 12 36 43.5 | −00 15 21 | .1.0 | 1.1 | < 1.0 | | |
| | | | | | 12 36 45.6 | −00 15 32 | 2.3 | 4.8 | 1.7 × 0.4 | 97 | |
| NGC 4713 | 0.9 | −3 | 37.8 | 21.34 | 12 47 25.6 | +05 34 58 | 15.0 | 36.8 | 1.3 × 0.9 | 95 | * |
| NGC 4808 | 0.9 | −3 | 44.8 | 20.93 | 12 53 16.4 | +04 34 29 | 23.8 | 44.2 | 1.1 × 0.5 | 132 | |
| NGC 4951 | 1.0 | −3 | 13.8 | 20.81 | 13 02 32.0 | −06 13 35 | 10.2 | 13.5 | 0.7 × 0.4 | 88 | |
| NGC 5480 | 0.9 | −3 | 26.8 | 21.69 | 14 04 30.8 | +50 57 46 | 21.2 | 26.8 | 0.5 × 0.4 | | |
| NGC 5496 | 0.9 | −3 | 4.3 | 20.60 | 14 09 04.2 | −00 55 16 | 2.0 | 4.4 | 1.4 × 0.6 | 3 | |
| NGC 5523 | 1.0 | −3 | 1.0 | 19.71 | 14 12 33.2 | +25 32 49 | 0.7 | | | | |
| NGC 5690 | 0.9 | −3 | 70.2 | 21.96 | 14 35 09.2 | +02 30 21 | 33.9 | 67.3 | 1.2 × 0.6 | 148 | |
| NGC 5806 | 0.9 | −3 | 10.3 | 20.90 | 14 57 28.0 | +02 05 24 | 6.4 | 10.0 | 0.7 × 0.5 | 179 | |
| NGC 5879 | 0.9 | −3 | 16.4 | 20.83 | 15 08 28.8 | +57 11 20 | 11.0 | 16.0 | 0.8 × 0.4 | 3 | |
| NGC 5949 | 0.9 | −3 | 2.9 | 19.73 | 15 27 18.9 | +64 55 58 | 2.0 | 2.9 | 0.7 × 0.5 | 130 | |
| NGC 5984 | 1.0 | −3 | 4.1 | 20.39 | 15 40 33.7 | +14 23 03 | 2.2 | | | | * |
| NGC 6106 | 0.9 | −3 | 8.0 | 20.91 | 16 16 21.4 | +07 31 49 | 4.0 | 7.3 | 0.9 × 0.8 | | |
| NGC 7307 | 1.0 | −2 | 4.8 | 20.90 | 22 30 57.3 | −41 11 25 | 3.2 | 4.9 | < 1.4 | | |
| NGC 7361 | 0.8 | −3 | 4.3 | 20.53 | 22 39 31.1 | −30 19 27 | 1.3 | 2.3 | 1.0 × 0.3 | 6 | * |
| NGC 7456 | 0.9 | −3 | (1.3) | (19.95) | | | | | | | * |
| NGC 7462 | 0.9 | −2 | 22.5 | 21.05 | 22 59 59.2 | −41 06 18 | 9.5 | 22.2 | 1.2 × 0.9 | 69 | |
| NGC 7531 | 1.0 | 0 | 9.0 | 21.05 | 23 12 01.2 | −43 52 19 | 5.9 | 9.2 | 0.8 × 0.7 | | |
| NGC 7537 | 0.8 | −2 | 18.2 | 21.85 | 23 12 01.9 | +04 13 33 | 13.7 | 17.8 | 0.6 × 0.3 | 68 | |
| NGC 7541 | 0.8 | −2 | 150.0 | 22.78 | 23 12 11.3 | +04 15 40 | 83.1 | 147.0 | 1.0 × 0.4 | 96 | |
| NGC 7721 | 0.9 | −2 | 25.1 | 21.76 | 23 36 14.1 | −06 47 42 | 11.6 | 25.4 | 1.4 × 0.6 | 10 | * |

*Column (10).*—FWHM major- and minor-axis diameters.

*Column (11).*—Major-axis position angle.

*Column (12).*—Notes.

*a) Notes to Individual Galaxies Listed in Table 2*

*NGC 0701.*—$S$ does not include the $S_I = 11.6$ mJy source at $\alpha = 01^h48^m41^s.8$, $\delta = -09°57'57''$.

*NGC 1090.*—$S$ includes the western extension.

*NGC 1292.*—$S$ does not include the $S_P = 8.8$ mJy source at $\alpha = 03^h16^m05^s.7$, $\delta = -27°45'30''$.

*NGC 1325.*—Not detected.

*IC 0529.*—$S$ does not include the southwestern extension or the $S_P = 1.2$ mJy source at $\alpha = 09^h13^m53^s.1$, $\delta = +73°55'56''$.

*NGC 3003.*—[1.465 GHz VLA C-array map in Hummel *et al.* (1985).]

TABLE 3

STELLAR POPULATION DATA

| GALAXY NAME | TYPE | $A_B$ (mag) | $B_T^0$ (mag) | $H_{-0.5}$ (mag) | $B_T^0 - H_{-0.5}$ (mag) | log $D_{25}$ | *HSB* | $S_{1.49}$ (mJy) | *CSB* | $\delta CSB$ | log($\Delta V/2$) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| NGC 0024 | 5 | 0.03 | 11.06 | 9.45 | 1.61 | 1.74 | 21.80 | 1.9 | 11.63 | 1.64 | 2.06 |
| NGC 0045 | 8 | 0.04 | 10.77 | 9.55 | 1.22 | 1.92 | 22.76 | (1.9) | 12.53 | 0.31 | 2.12 |
| NGC 0134 | 4 | 0.00 | 10.05 | 7.31 | 2.74 | 1.91 | 20.49 | 191.0 | 7.48 | 0.54 | 2.41 |
| NGC 0150 | 3 | 0.07 | 11.19 | 8.95 | 2.24 | 1.63 | 20.73 | 51.9 | 7.49 | −0.01 | 2.27 |
| NGC 0224 | 3 | 0.32 | 3.19 | 0.61 | 2.58 | 3.29 | 20.71 | [8400.0] | 10.27 | 2.82 | 2.44 |
| NGC 0247 | 7 | 0.06 | 8.52 | 7.43 | 1.09 | 2.31 | 22.60 | (24.0) | 11.73 | −0.13 | 2.06 |
| NGC 0253 | 5 | 0.00 | 7.03 | 4.45 | 2.58 | 2.40 | 20.08 | 5594.0 | 6.26 | 0.28 | 2.34 |
| NGC 0493 | 6 | 0.07 | 12.07 | 10.62 | 1.45 | 1.59 | 22.19 | 11.6 | 8.92 | −1.98 | 2.18 |
| NGC 0578 | 5 | 0.02 | 11.14 | 9.49 | 1.65 | 1.68 | 21.53 | 35.0 | 8.17 | −1.19 | 2.27 |
| NGC 0598 | 6 | 0.18 | 5.70 | 4.23 | 1.47 | 2.81 | 21.93 | [3300.0] | 8.88 | −1.41 | 2.10 |
| NGC 0613 | 4 | 0.02 | 10.58 | 7.84 | 2.74 | 1.76 | 20.28 | 220.0 | 6.57 | 0.13 | 2.42 |
| NGC 0701 | 5 | 0.02 | 12.33 | 9.90 | 2.43 | 1.40 | 20.54 | 39.7 | 6.63 | −0.42 | 2.20 |
| NGC 0772 | 3 | 0.16 | 10.56 | 7.84 | 2.72 | 1.87 | 20.83 | 71.4 | 8.34 | 0.62 | 2.51 |
| NGC 0784 | 7 | 0.22 | 10.96 | 10.58 | 0.37 | 1.82 | 23.31 | (1.0) | 12.73 | −0.78 | 1.80 |
| NGC 0891 | 3 | 0.30 | 9.31 | 6.48 | 2.83 | 2.17 | 20.96 | 701.0 | 7.36 | −0.67 | 2.38 |
| NGC 0908 | 5 | 0.00 | 10.28 | 8.17 | 2.11 | 1.74 | 20.50 | 178.0 | 6.70 | −0.26 | 2.36 |
| NGC 0925 | 7 | 0.26 | 9.94 | 8.57 | 1.38 | 2.02 | 22.32 | (46.0) | 9.57 | −1.63 | 2.13 |
| NGC 1035 | 5 | 0.03 | 12.24 | 10.02 | 2.22 | 1.35 | 20.42 | 27.1 | 6.80 | 0.02 | 2.17 |
| NGC 1055 | 3 | 0.07 | 10.57 | 7.75 | 2.82 | 1.89 | 20.82 | 213.0 | 7.26 | −0.45 | 2.32 |
| NGC 1090 | 4 | 0.11 | 11.87 | 9.73 | 2.14 | 1.59 | 21.33 | 3.8 | 10.13 | 1.24 | 2.29 |
| NGC 1255 | 4 | 0.00 | 11.30 | 9.76 | 1.53 | 1.61 | 21.44 | 32.5 | 7.90 | −1.25 | 2.22 |
| NGC 1292 | 5 | 0.00 | 12.06 | 10.31 | 1.75 | 1.50 | 21.44 | 5.5 | 9.28 | 0.13 | 2.17 |
| NGC 1300 | 4 | 0.08 | 10.68 | 8.68 | 2.00 | 1.82 | 21.41 | 35.2 | 8.86 | −0.22 | 2.28 |
| NGC 1325 | 4 | 0.03 | 11.51 | 9.36 | 2.14 | 1.66 | 21.32 | (0.5) | 12.68 | 3.81 | 2.26 |
| NGC 1337 | 6 | 0.15 | 11.06 | 9.64 | 1.42 | 1.85 | 22.52 | 6.2 | 10.90 | −0.77 | 2.14 |
| NGC 1350 | 2 | 0.00 | 10.92 | 8.18 | 2.75 | 1.63 | 19.96 | 1.1 | 11.67 | 5.97 | 2.38 |
| NGC 1365 | 3 | 0.00 | 9.66 | 7.08 | 2.59 | 1.99 | 20.66 | 530.0 | 6.77 | −0.57 | 2.36 |
| NGC 1385 | 6 | 0.00 | 11.31 | 9.39 | 1.92 | 1.48 | 20.42 | 172.0 | 5.44 | −1.33 | 2.15 |
| NGC 1406 | 4 | 0.00 | 11.43 | 9.07 | 2.36 | 1.59 | 20.65 | 131.0 | 6.29 | −1.02 | 2.24 |
| NGC 1421 | 4 | 0.10 | 10.82 | 9.31 | 1.51 | 1.57 | 20.81 | 102.0 | 6.46 | −1.23 | 2.29 |
| NGC 1425 | 3 | 0.00 | 11.03 | 8.73 | 2.30 | 1.73 | 21.01 | 12.7 | 9.52 | 1.37 | 2.31 |
| NGC 1448 | 6 | 0.00 | 10.07 | 8.05 | 2.02 | 1.91 | 21.23 | 95.5 | 8.23 | −0.43 | 2.32 |
| NGC 1560 | 7 | 0.63 | 10.32 | 8.79 | 1.54 | 2.08 | 22.82 | 9.4 | 11.60 | −0.77 | 1.93 |
| NGC 1744 | 7 | 0.00 | 11.28 | 9.85 | 1.43 | 1.83 | 22.63 | 6.4 | 10.76 | −1.16 | 2.12 |
| NGC 1792 | 4 | 0.04 | 10.28 | 8.12 | 2.16 | 1.60 | 19.78 | 276.0 | 5.53 | 0.24 | 2.25 |
| NGC 1964 | 3 | 0.03 | 10.73 | 7.96 | 2.77 | 1.79 | 20.56 | 47.8 | 8.38 | 1.28 | 2.35 |
| NGC 2090 | 5 | 0.00 | 11.46 | 8.52 | 2.94 | 1.65 | 20.40 | 8.6 | 9.54 | 2.82 | 2.23 |
| NGC 2336 | 4 | 0.13 | 10.57 | 8.48 | 2.09 | 1.86 | 21.39 | 17.7 | 9.81 | 0.77 | 2.43 |
| NGC 2366 | 10 | 0.17 | 10.61 | 10.61 | 0.00 | 1.90 | 23.75 | 25.0 | 9.63 | −4.90 | 1.80 |
| NGC 2403 | 6 | 0.16 | 8.29 | 6.31 | 1.98 | 2.27 | 21.30 | [330.0] | 8.68 | −0.14 | 2.18 |
| NGC 2541 | 6 | 0.17 | 11.57 | 10.12 | 1.45 | 1.84 | 22.96 | (3.2) | 11.57 | −1.13 | 2.08 |
| NGC 2613 | 3 | 0.34 | 10.00 | 7.35 | 2.65 | 1.91 | 20.52 | 50.6 | 8.92 | 1.91 | 2.51 |
| NGC 2683 | 3 | 0.08 | 9.39 | 6.65 | 2.74 | 1.98 | 20.18 | 65.9 | 8.98 | 2.77 | 2.36 |
| NGC 2701 | 5 | 0.05 | 12.44 | 10.86 | 1.58 | 1.33 | 21.13 | 19.7 | 7.04 | −1.39 | 2.22 |
| IC 0529 | 5 | 0.03 | 12.04 | 10.39 | 1.65 | 1.57 | 21.89 | 8.0 | 9.22 | −0.98 | 2.25 |
| NGC 2835 | 5 | 0.41 | 10.24 | 8.81 | 1.43 | 1.86 | 21.72 | (18.2) | 9.78 | −0.02 | 2.20 |
| NGC 2841 | 3 | 0.00 | 9.47 | 6.74 | 2.73 | 1.91 | 19.92 | 83.8 | 8.37 | 2.76 | 2.52 |
| NGC 2903 | 4 | 0.07 | 8.90 | 6.40 | 2.50 | 2.11 | 20.57 | 407.0 | 7.65 | 0.53 | 2.37 |
| NGC 3003 | 4 | 0.00 | 11.14 | 10.01 | 1.14 | 1.77 | 22.49 | 31.2 | 8.74 | −2.85 | 2.19 |
| NGC 3027 | 7 | 0.04 | 11.84 | 10.86 | 0.98 | 1.68 | 22.87 | 4.5 | 10.40 | −2.09 | 2.10 |
| NGC 3031 | 2 | 0.15 | 7.11 | 4.20 | 2.91 | 2.43 | 19.98 | (380.0) | 9.33 | 3.58 | 2.42 |
| NGC 3079 | 5 | 0.00 | 9.97 | 7.80 | 2.17 | 1.88 | 20.83 | 849.0 | 5.71 | −2.02 | 2.38 |
| NGC 3198 | 5 | 0.00 | 10.27 | 8.53 | 1.75 | 1.92 | 21.76 | 27.6 | 9.63 | −0.27 | 2.23 |
| IC 2574 | 9 | 0.06 | 10.36 | 9.88 | 0.47 | 2.10 | 24.01 | (10.7) | 11.56 | −3.58 | 1.84 |
| NGC 3319 | 6 | 0.00 | 11.32 | 10.28 | 1.05 | 1.83 | 23.06 | (11.5) | 10.13 | −2.80 | 2.12 |
| NGC 3320 | 6 | 0.01 | 12.41 | 10.71 | 1.70 | 1.35 | 21.09 | 13.3 | 7.57 | −0.77 | 2.24 |
| NGC 3338 | 5 | 0.06 | 10.92 | 8.94 | 1.98 | 1.75 | 21.31 | 28.1 | 8.76 | −0.09 | 2.34 |
| NGC 3359 | 5 | 0.00 | 10.62 | 9.17 | 1.45 | 1.83 | 21.95 | 50.1 | 8.53 | −1.81 | 2.21 |
| NGC 3430 | 5 | 0.00 | 11.73 | 9.49 | 2.24 | 1.59 | 21.07 | 28.9 | 7.93 | −0.36 | 2.29 |
| NGC 3432 | 9 | 0.00 | 10.59 | 9.88 | 0.71 | 1.79 | 22.46 | 86.1 | 7.74 | −3.79 | 2.14 |
| NGC 3455 | 3 | 0.02 | 12.45 | 10.88 | 1.57 | 1.44 | 21.72 | 7.0 | 8.72 | −1.09 | 2.14 |
| NGC 3495 | 7 | 0.80 | 10.59 | 9.46 | 1.13 | 1.78 | 21.99 | 17.4 | 9.43 | −1.00 | 2.23 |
| NGC 3510 | 9 | 0.01 | 12.13 | 11.26 | 0.87 | 1.58 | 22.80 | 3.1 | 10.30 | −2.02 | 2.01 |
| NGC 3521 | 4 | 0.06 | 9.11 | 6.35 | 2.76 | 1.99 | 19.91 | (357.0) | 7.20 | 1.61 | 2.41 |
| NGC 3621 | 7 | 0.40 | 9.27 | 7.18 | 2.10 | 2.05 | 21.08 | 198.0 | 8.14 | −0.17 | 2.22 |
| NGC 3623 | 1 | 0.03 | 9.22 | 6.49 | 2.73 | 2.00 | 20.14 | (9.2) | 11.22 | 5.10 | 2.42 |
| NGC 3627 | 3 | 0.05 | 9.08 | 6.52 | 2.56 | 1.95 | 19.88 | 458.0 | 6.73 | 1.21 | 2.34 |
| NGC 3628 | 3 | 0.01 | 8.98 | 6.64 | 2.34 | 2.17 | 21.13 | 525.0 | 7.68 | −0.75 | 2.38 |
| NGC 3666 | 5 | 0.12 | 11.33 | 9.54 | 1.79 | 1.64 | 21.34 | 17.7 | 8.71 | −0.21 | 2.17 |
| NGC 3675 | 3 | 0.01 | 10.40 | 7.60 | 2.80 | 1.77 | 20.09 | 43.7 | 8.38 | 2.37 | 2.39 |
| NGC 3705 | 2 | 0.13 | 11.00 | 8.32 | 2.68 | 1.72 | 20.53 | 20.4 | 8.95 | 1.92 | 2.29 |
| NGC 3726 | 5 | 0.00 | 10.70 | 8.81 | 1.89 | 1.78 | 21.34 | (27.4) | 8.93 | 0.02 | 2.28 |
| NGC 3756 | 4 | 0.00 | 11.66 | 9.54 | 2.12 | 1.64 | 21.37 | 4.2 | 10.27 | 1.28 | 2.26 |
| NGC 3813 | 3 | 0.00 | 11.78 | 9.75 | 2.04 | 1.36 | 20.18 | 88.3 | 5.56 | −0.65 | 2.26 |
| NGC 3877 | 5 | 0.01 | 10.73 | 8.40 | 2.33 | 1.73 | 20.69 | 37.0 | 8.36 | 0.96 | 2.25 |
| NGC 3893 | 5 | 0.01 | 10.73 | 8.69 | 2.04 | 1.64 | 20.52 | 134.0 | 6.51 | −0.50 | 2.31 |
| NGC 3898 | 2 | 0.00 | 11.26 | 8.23 | 3.03 | 1.64 | 20.06 | (6.3) | 9.83 | 3.90 | 2.44 |
| NGC 3917 | 6 | 0.00 | 11.37 | 9.75 | 1.62 | 1.69 | 21.83 | (2.1) | 11.27 | 1.21 | 2.17 |
| NGC 3936 | 3 | 0.38 | 11.12 | 9.59 | 1.53 | 1.65 | 21.48 | 4.5 | 10.25 | 1.00 | 2.23 |
| NGC 3949 | 4 | 0.02 | 10.98 | 9.34 | 1.64 | 1.47 | 20.34 | 112.0 | 5.86 | −0.73 | 2.24 |
| NGC 3953 | 4 | 0.00 | 10.25 | 7.81 | 2.44 | 1.82 | 20.55 | 41.1 | 8.69 | 1.62 | 2.38 |
| NGC 3956 | 5 | 0.07 | 11.61 | 10.47 | 1.14 | 1.55 | 21.85 | 10.1 | 8.87 | −1.24 | 2.22 |
| NGC 3992 | 4 | 0.01 | 10.23 | 7.88 | 2.35 | 1.88 | 20.91 | 21.3 | 9.71 | 1.79 | 2.45 |
| NGC 4013 | 3 | 0.00 | 10.82 | 8.22 | 2.60 | 1.72 | 20.45 | 34.6 | 8.38 | 1.54 | 2.30 |
| NGC 4062 | 5 | 0.00 | 11.37 | 9.12 | 2.25 | 1.63 | 20.90 | 11.6 | 9.12 | 1.23 | 2.22 |
| NGC 4088 | 4 | 0.01 | 10.40 | 8.26 | 2.14 | 1.76 | 20.70 | 212.0 | 6.61 | −0.81 | 2.31 |
| NGC 4094 | 5 | 0.09 | 11.75 | 10.02 | 1.73 | 1.63 | 21.81 | 7.1 | 9.65 | −0.36 | 2.16 |
| NGC 4096 | 5 | 0.00 | 10.07 | 8.59 | 1.48 | 1.81 | 21.27 | 52.2 | 8.38 | −0.37 | 2.25 |
| NGC 4100 | 4 | 0.00 | 10.80 | 8.64 | 2.16 | 1.72 | 20.87 | 52.7 | 7.92 | 0.10 | 2.34 |
| NGC 4102 | 3 | 0.00 | 11.90 | 8.34 | 3.56 | 1.50 | 19.47 | 261.0 | 5.09 | 0.53 | 2.26 |

TABLE 3—*Continued*

| Galaxy Name | Type | $A_B$ (mag) | $B_T^0$ (mag) | $H_{-0.5}$ (mag) | $B_T^0 - H_{-0.5}$ (mag) | log $D_{25}$ | *HSB* | $S_{1.49}$ (mJy) | *CSB* | $\delta CSB$ | log($\Delta V/2$) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| NGC 4116 | 8 | 0.00 | 12.02 | 10.55 | 1.47 | 1.58 | 22.08 | 14.7 | 8.61 | −2.03 | 2.16 |
| NGC 4145 | 7 | 0.00 | 11.27 | 9.65 | 1.63 | 1.76 | 22.08 | (2.8) | 11.31 | 0.67 | 2.23 |
| IC 0764 | 5 | 0.25 | 11.30 | 10.23 | 1.07 | 1.71 | 22.43 | 3.5 | 10.82 | −0.64 | 2.21 |
| NGC 4157 | 3 | 0.00 | 10.38 | 8.02 | 2.36 | 1.84 | 20.85 | 180.0 | 7.19 | −0.59 | 2.34 |
| NGC 4178 | 8 | 0.00 | 11.13 | 9.93 | 1.20 | 1.70 | 22.06 | 23.3 | 8.71 | −1.88 | 2.17 |
| NGC 4183 | 6 | 0.00 | 10.99 | 10.33 | 0.67 | 1.70 | 22.46 | 1.9 | 11.43 | −0.10 | 2.11 |
| NGC 4192 | 2 | 0.14 | 9.81 | 7.45 | 2.35 | 2.00 | 21.08 | 73.9 | 8.96 | 0.65 | 2.38 |
| NGC 4206 | 4 | 0.02 | 11.58 | 9.99 | 1.58 | 1.72 | 22.24 | < 1.0 | 12.23 | 1.21 | 2.20 |
| NGC 4216 | 3 | 0.02 | 9.79 | 7.01 | 2.78 | 1.92 | 20.25 | 13.4 | 10.41 | 4.03 | 2.44 |
| NGC 4217 | 3 | 0.00 | 10.37 | 8.39 | 1.98 | 1.74 | 20.72 | 109.0 | 7.23 | −0.24 | 2.32 |
| NGC 4236 | 8 | 0.06 | 9.07 | 8.84 | 0.24 | 2.28 | 23.85 | (28.1) | 11.41 | −3.36 | 2.00 |
| NGC 4244 | 6 | 0.00 | 8.96 | 8.41 | 0.56 | 2.21 | 23.09 | (8.8) | 12.32 | −0.68 | 2.04 |
| NGC 4294 | 6 | 0.02 | 11.87 | 10.56 | 1.30 | 1.49 | 21.66 | 24.1 | 7.62 | −2.04 | 2.10 |
| NGC 4380 | 3 | 0.00 | 11.96 | 9.65 | 2.31 | 1.57 | 21.13 | (0.2) | 13.23 | 4.80 | 2.22 |
| NGC 4388 | 3 | 0.10 | 10.66 | 8.50 | 2.17 | 1.72 | 20.74 | 146.0 | 6.82 | −0.70 | 2.30 |
| NGC 4414 | 5 | 0.01 | 10.52 | 7.71 | 2.81 | 1.56 | 19.14 | 231.0 | 5.52 | 1.73 | 2.41 |
| NGC 4450 | 2 | 0.00 | 10.67 | 7.98 | 2.70 | 1.68 | 20.01 | 8.3 | 9.73 | 3.91 | 2.29 |
| NGC 4501 | 3 | 0.09 | 9.71 | 6.97 | 2.74 | 1.85 | 19.86 | 278.0 | 6.77 | 1.30 | 2.47 |
| NGC 4519 | 7 | 0.00 | 12.08 | 10.67 | 1.42 | 1.49 | 21.75 | 9.1 | 8.68 | −1.19 | 2.18 |
| NGC 4522 | 6 | 0.00 | 11.73 | 10.32 | 1.41 | 1.57 | 21.80 | 22.1 | 8.12 | −1.87 | 2.10 |
| NGC 4532 | 10 | 0.00 | 11.64 | 10.25 | 1.39 | 1.46 | 21.18 | 117.0 | 5.76 | −2.79 | 2.13 |
| NGC 4535 | 5 | 0.00 | 10.41 | 8.38 | 2.03 | 1.83 | 21.16 | (64.5) | 8.25 | −0.24 | 2.33 |
| NGC 4536 | 4 | 0.00 | 10.36 | 8.13 | 2.24 | 1.87 | 21.11 | 203.0 | 7.21 | −1.17 | 2.29 |
| NGC 4559 | 6 | 0.07 | 9.61 | 8.13 | 1.47 | 2.03 | 21.91 | 65.4 | 9.24 | −1.01 | 2.14 |
| NGC 4565 | 3 | 0.04 | 8.80 | 6.34 | 2.46 | 2.21 | 21.04 | 131.0 | 9.39 | 1.17 | 2.42 |
| NGC 4592 | 8 | 0.02 | 11.23 | 10.29 | 0.94 | 1.66 | 22.23 | 5.7 | 10.04 | −0.95 | 2.04 |
| NGC 4651 | 5 | 0.02 | 10.99 | 8.56 | 2.43 | 1.58 | 20.11 | 24.0 | 8.08 | 2.03 | 2.36 |
| NGC 4654 | 6 | 0.04 | 10.68 | 8.67 | 2.01 | 1.68 | 20.67 | 117.0 | 6.86 | −0.50 | 2.28 |
| NGC 4698 | 2 | 0.00 | 10.93 | 8.26 | 2.67 | 1.63 | 20.04 | (0.6) | 12.33 | 6.44 | 2.36 |
| NGC 4713 | 7 | 0.00 | 11.88 | 10.35 | 1.53 | 1.45 | 21.23 | 37.8 | 6.93 | −1.73 | 2.11 |
| NGC 4725 | 2 | 0.03 | 9.66 | 6.97 | 2.68 | 2.04 | 20.82 | (28.2) | 10.20 | 2.50 | 2.41 |
| NGC 4808 | 6 | 0.00 | 11.93 | 9.78 | 2.15 | 1.43 | 20.56 | 44.8 | 6.65 | −0.45 | 2.19 |
| NGC 4826 | 2 | 0.14 | 8.75 | 5.91 | 2.84 | 1.99 | 19.49 | 103.0 | 8.55 | 3.94 | 2.26 |
| NGC 4939 | 4 | 0.11 | 10.96 | 8.88 | 2.08 | 1.77 | 21.38 | 24.2 | 9.02 | 0.01 | 2.41 |
| NGC 4951 | 6 | 0.06 | 11.78 | 9.44 | 2.34 | 1.53 | 20.71 | 13.8 | 8.43 | 0.98 | 2.15 |
| NGC 5033 | 5 | 0.00 | 10.09 | 7.35 | 2.73 | 2.02 | 21.08 | 178.0 | 8.10 | −0.21 | 2.40 |
| NGC 5055 | 4 | 0.00 | 8.90 | 6.19 | 2.71 | 2.09 | 20.27 | [390.0] | 7.60 | 1.18 | 2.39 |
| NGC 5161 | 5 | 0.17 | 11.09 | 8.97 | 2.13 | 1.75 | 21.36 | 7.5 | 10.19 | 1.23 | 2.28 |
| NGC 5170 | 5 | 0.21 | 10.22 | 7.96 | 2.25 | 1.94 | 21.29 | 4.8 | 11.63 | 2.82 | 2.50 |
| NGC 5204 | 9 | 0.01 | 11.36 | 10.19 | 1.17 | 1.68 | 22.23 | 5.0 | 10.28 | −0.71 | 1.89 |
| NGC 5300 | 5 | 0.01 | 11.61 | 10.29 | 1.32 | 1.59 | 21.88 | 2.5 | 10.58 | 0.41 | 2.19 |
| NGC 5480 | 5 | 0.05 | 12.54 | 10.65 | 1.89 | 1.27 | 20.61 | 26.8 | 6.41 | −0.81 | 2.21 |
| NGC 5496 | 7 | 0.16 | 11.23 | 10.85 | 0.38 | 1.66 | 22.79 | 4.3 | 10.34 | −1.95 | 2.12 |
| NGC 5523 | 6 | 0.00 | 11.54 | 10.15 | 1.39 | 1.65 | 22.03 | 1.0 | 11.88 | 1.35 | 2.16 |
| NGC 5585 | 7 | 0.00 | 11.08 | 10.07 | 1.01 | 1.74 | 22.40 | (1.0) | 12.33 | 0.94 | 2.02 |
| NGC 5676 | 4 | 0.03 | 11.04 | 8.69 | 2.35 | 1.59 | 20.29 | 96.7 | 6.61 | 0.14 | 2.42 |
| NGC 5690 | 5 | 0.12 | 11.49 | 9.51 | 1.98 | 1.57 | 20.97 | 70.2 | 6.86 | −1.19 | 2.21 |
| NGC 5746 | 3 | 0.12 | 10.03 | 7.36 | 2.67 | 1.92 | 20.57 | (10.9) | 10.63 | 3.51 | 2.52 |
| NGC 5792 | 3 | 0.16 | 10.56 | 7.89 | 2.66 | 1.88 | 20.93 | 51.8 | 8.74 | 0.78 | 2.38 |
| NGC 5806 | 3 | 0.15 | 11.66 | 9.17 | 2.49 | 1.51 | 20.35 | 10.3 | 8.65 | 2.04 | 2.30 |
| NGC 5879 | 4 | 0.02 | 11.28 | 9.07 | 2.21 | 1.64 | 20.91 | 16.4 | 8.79 | 0.88 | 2.17 |
| NGC 5907 | 5 | 0.01 | 9.39 | 7.24 | 2.15 | 2.09 | 21.33 | 89.5 | 9.20 | 0.31 | 2.39 |
| NGC 5949 | 4 | 0.07 | 12.30 | 10.18 | 2.12 | 1.39 | 20.75 | 2.9 | 9.42 | 1.88 | 2.06 |
| NGC 5984 | 7 | 0.07 | 11.90 | 10.66 | 1.24 | 1.48 | 21.68 | 4.1 | 9.50 | −0.21 | 2.08 |
| NGC 6015 | 6 | 0.03 | 10.94 | 8.96 | 1.98 | 1.73 | 21.26 | 14.4 | 9.38 | 0.65 | 2.22 |
| NGC 6106 | 5 | 0.22 | 12.15 | 10.13 | 2.01 | 1.44 | 20.96 | 8.0 | 8.57 | 0.54 | 2.18 |
| NGC 6118 | 6 | 0.46 | 10.86 | 9.11 | 1.75 | 1.73 | 21.41 | 14.2 | 9.40 | 0.32 | 2.29 |
| NGC 6384 | 4 | 0.41 | 10.60 | 8.24 | 2.36 | 1.84 | 21.06 | 34.9 | 8.97 | 0.71 | 2.41 |
| NGC 6643 | 5 | 0.22 | 11.02 | 8.81 | 2.21 | 1.62 | 20.53 | 92.2 | 6.82 | −0.21 | 2.30 |
| NGC 7184 | 5 | 0.06 | 10.66 | 8.41 | 2.25 | 1.77 | 20.88 | 13.4 | 9.66 | 1.82 | 2.44 |
| NGC 7307 | 5 | 0.00 | 11.66 | 11.02 | 0.64 | 1.62 | 22.75 | 4.8 | 10.03 | −2.18 | 2.15 |
| NGC 7314 | 4 | 0.02 | 11.01 | 8.99 | 2.02 | 1.66 | 20.93 | 33.8 | 8.11 | 0.14 | 2.23 |
| NGC 7331 | 4 | 0.33 | 9.20 | 6.15 | 3.06 | 2.07 | 20.15 | 373.0 | 7.55 | 1.40 | 2.43 |
| NGC 7361 | 5 | 0.00 | 11.96 | 10.68 | 1.28 | 1.54 | 22.01 | 4.3 | 9.74 | −0.73 | 2.08 |
| NGC 7456 | 6 | 0.00 | 11.09 | 10.02 | 1.07 | 1.77 | 22.50 | (1.3) | 12.19 | 0.57 | 2.10 |
| NGC 7462 | 5 | 0.00 | 11.31 | 9.97 | 1.34 | 1.57 | 21.45 | 22.5 | 8.10 | −1.08 | 2.03 |
| NGC 7531 | 4 | 0.00 | 11.27 | 8.87 | 2.39 | 1.54 | 20.20 | 9.0 | 8.94 | 2.68 | 2.27 |
| NGC 7537 | 4 | 0.19 | 12.57 | 10.40 | 2.17 | 1.39 | 21.00 | 18.2 | 7.43 | −0.70 | 2.25 |
| NGC 7541 | 4 | 0.21 | 11.48 | 8.79 | 2.69 | 1.57 | 20.26 | 150.0 | 6.04 | −0.36 | 2.39 |
| NGC 7640 | 5 | 0.43 | 9.72 | 8.53 | 1.19 | 2.09 | 22.61 | 29.3 | 10.41 | −1.46 | 2.13 |
| NGC 7721 | 5 | 0.06 | 11.59 | 9.54 | 2.06 | 1.54 | 20.86 | 25.1 | 7.83 | 0.03 | 2.25 |

*NGC 3027.*—The $S_P = 1.8$ mJy peak at $\alpha = 09^h51^m33^s.5$, $\delta = +72°25'35''$ coincides with the hook of an optically bright arm. $S$ does not include the $S_P = 0.7$ mJy source at $\alpha = 09^h51^m54^s.7$, $\delta = +72°25'47''$.

*NGC 3430.*—$S$ does not include the $S_P = 27.0$ mJy confusing source at $\alpha = 10^h49^m12^s.6$, $\delta = +33°13'10''$.

*NGC 3495.*—The $S_P = 6.1$ mJy southern peak at $\alpha = 10^h58^m39^s.5$, $\delta = +03°52'51''$ coincides with an optically bright H II (?) region.

*NGC 3666.*—$S$ does not include the $S_P = 0.6$ mJy source at $\alpha = 11^h21^m48^s.8$, $\delta = +11°34'45''$.

*NGC 3917.*—$S$ includes the two components straddling the optical position but not the $S_P = 1.8$ mJy source at $\alpha = 11^h47^m52^s.3$, $\delta = +52°06'52''$.

*NGC 3936.*—$S$ does not include the $S_P = 0.9$ mJy source at $\alpha = 11^h49^m47^s.5$, $\delta = -26°36'31''$.

*NGC 3956.*—$S$ does not include the $S_P = 0.9$ mJy source at $\alpha = 11^h51^m26^s.4$, $\delta = -20°18'54''$.

*NGC 4094.*—$S$ does not include the $S_P \approx 0.7$ mJy northern extension.

*NGC 4102.*—[VLA D-array maps at 1.49 and 4.86 GHz in Gioia and Fabbiano (1987); 1.465 GHz VLA C-array map in Condon (1983); 4885 MHz VLA A-array map of the central region in Condon *et al.* (1982).]

*NGC 4116.*—$S$ does not include the $S_P = 1.3$ mJy source at $\alpha = 12^h05^m03^s.2$, $\delta = +02°56'37''$ or the $S_P = 4.0$ mJy source at $\alpha = 12^h05^m12^s.6$, $\delta = +02°57'30''$.

*IC 0764.*—$S$ includes the northern extension.

*NGC 4183.*—$S$ includes the $S_P = 0.5$ mJy component at $\alpha = 12^h10^m43^s.9$, $\delta = +44°00'06''$ but not the $S_P = 2.9$ mJy source at $\alpha = 12^h10^m44^s.2$, $\delta = +43°56'14''$.

*NGC 4206.*—Not detected? $S_P = 1.4$ mJy confusing (?) source at $\alpha = 12^h12^m40^s.4$, $\delta = +13°17'55''$.

*NGC 4380.*—Not detected.

*NGC 4519.*—$S$ does not include the $S_I = 2.1$ mJy confusing source at $\alpha = 12^h30^m53^s.6$, $\delta = +08°54'40''$.

*NGC 4713.*—$S$ does not include the faint northern extension.

*NGC 5984.*—$S$ does not include the southwestern extension.

*NGC 7361.*—The $S_P = 1.5$ mJy northern peak at $\alpha = 22^h39^m32^s.3$, $\delta = -30°18'35''$ coincides with an optically bright H II (?) region.

*NGC 7456.*—Low $T_B$, uncertain $S$.

*NGC 7721.*—$S$ does not include the $S_P = 1.4$ mJy source at $\alpha = 23^h36^m11^s.2$, $\delta = -06°45'35''$.

Finally, we summarize the optical, radio, and infrared data for all of the Aaronson *et al.* (1982) galaxies mapped with the VLA and used to study the relationship between stellar population and radio continuum emission in spiral galaxies (Burstein, Condon, and Yin 1987). Table 3 lists these galaxies as follows:

*Column (1).*—Galaxy name.

*Column (2).*—Spiral-type index (RC2).

*Column (3).*—$B$-band extinction (Burstein and Heiles 1984).

*Column (4).*—Blue magnitude $B_T^0$ corrected for Galactic extinction and internal absorption by the methods of Burstein (1982) and Rubin *et al.* (1982).

*Column (5).*—Infrared magnitude $H_{-0.5}$ (Aaronson *et al.* 1982), also corrected for Galactic extinction and internal absorption.

*Column (6).*—Optical-infrared color index $B_T^0 - H_{-0.5}$.

*Column (7).*—Values of $\log D_{25}$, the optical major diameter $D_{25}$ expressed in units of 0.1 (RC2).

*Column (8).*—Hybrid near-infrared surface brightness (HSB) $\equiv H_{-0.5} + 5 \log D_{25} + 5 \log 6 + 2.5 \log (\pi/4)$, in units of mag arcsec$^{-2}$. The values of HSB listed in Table 3 are all 1.5 mag arcsec$^{-2}$ higher than those (incorrectly) plotted in Figure 2 of Burstein, Condon, and Yin (1987).

*Column (9).*—1.49 GHz total flux density $S$.

*Column (10).*—Continuum surface brightness (CSB) $\equiv -2.5 \log S + 5 \log D_{25} + 5 \log 6 + 2.5 \log (\pi/4)$, in units of mag arcsec$^{-2}$.

*Column (11).*—"Residual" continuum surface brightness, now $\delta$(CSB) $\equiv$ CSB + 40.81 − 2.33HSB (cf. Burstein, Condon, and Yin 1987).

*Column (12).*—Values of $\log (\Delta V/2)$, the maximum rotation velocity ($\Delta V/2$) expressed in km s$^{-1}$ (Aaronson *et al.* 1982).

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