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The Arcetri atlas of H_2O maser sources

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Abstract. — We report the results of a 22.2 GHz H_2O line survey of all the known maser sources north of − 30 deg. Of the 509 sources observed, 203 were detected with an average detection limit of 9 Jy. The data are presented in an atlas and a table form and are intended to constitute an homogeneous reference data base for further study of the source variability. A brief description of the instrumentation is given. Comparison of the present results with those given in the literature indicates that most of the masers vary, with only 20% of the sources remaining constant, within the observational uncertainty.

Key words : atlases — masers — radio lines : molecular.

1. Introduction.

Radio emission from galactic H_2O maser sources at 22.2 GHz (the rotational transition between the 6_{16}–5_{23} levels) was found 20 years ago, the first detection of the line being attributed to Cheung *et al.* (1969). Much observational and theoretical work has been done since then, as documented by the many excellent review papers on the subject (see e.g. Reid and Moran, 1981 ; Downes, 1985 ; Cohen, 1989). Soon after the discovery it was realized that H_2O maser sources were associated with two distinct classes of objects which also represent two different phases of stellar evolution : 1) regions of star formation (namely H II regions in their earlier phases) and 2) late-type stars (usually later than M5), either long period regular variables (Mira giants) or irregular variables (supergiants). Similarly, already with observations spanning only over few years, it was immediately clear that the radio emission was highly variable, both in intensity and velocity, with lines appearing and disappearing with time scales of years and, occasionally, showing more rapid outbursts (see e.g. Rowland and Cohen, 1986 ; Garay *et al.,* 1989). The number of detected masers has increased steadily in these 20 years as well as the type of associated object (T Tauri, IRAS sources, Herbig-Haro objects, etc.) bringing the present number of known masers in the range of several hundreds.

To create a useful reference catalogue of all the detections scattered throughout the literature and in selected lists (see e.g. Braz and Epchtein, 1983 for non stellar masers and Engels, 1979 for stellar ones) our group compiled an up-dated list of all the maser sources north of −30 deg, inclusive of all the possible sub-species (stellar, non-stellar or other). The list contains 526 objects, which are tentatively subdivided into 250 HII, 180 stellar, 15 HH, 2 TTauri and 79 IRAS (Cesaroni *et al.,* 1988a, hereinafter called Paper 1).

Despite this bounty of information, many aspect of the maser emission are still far from being clear. For instance : 1) there is ample debate on the possible pumping mechanism(s), 2) the variability has been studied in a systematic fashion only for a very limited sample of objects and over limited time intervals, 3) the manifestation and duration of the maser phase in the lifetime of the associated object (star forming region or late-type stars) is only vaguely known.

In this paper we present the results of observations of all galactic masers listed in Paper 1, made with the Medicina 32 m radiotelescope. The basic motivation of the present work is to provide an "instantaneous photograph" at a given epoch of all the known masers north of −30 deg, to be used as an homogeneous reference data base and as a starting list to select interesting candidates for future studies of variability. The fact that all the spectra are taken with the same instrument (i.e. same beamwidth, sensitivity, etc.) offers a unique opportunity to implement statistical studies of the properties of the entire sample.

However, although composed of homogeneous data, the present catalogue is not unbiased, in the sense that it reflects

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the selection criteria used originally, which were based on lists of H II regions and late-type stars or sub-samples from the IRAS Point Source Catalogue.

Given the small beam size at this frequency, systematic, and possibly unbiased searches in the galactic plane have not been carried out so far, with the exception of one small strip of two square degrees in the galactic plane (Matthews *et al.*, 1985).

The present project is the first carried out by the Arcetri Radio Astronomy Group in this field and was made possible by the availability of ample time on the Medicina 32 m *VLBI* radiotelescope of the Istituto di Radioastronomia-C.N.R., Bologna, Italy (see Sect. 2.1) and the Digital Autocorrelator built by the Arcetri Radio Astronomy Group (see Sect. 2.2). While this telescope, due to its limited aperture, cannot compete in sensitivity with larger ones (e.g. the Bonn 100 m telescope), it has the advantage that, given the ample available time, it can approach large, time consuming projects which would not be possible with larger radiotelescopes.

While planning the observations, it was impossible to get all the time needed to reach the observed flux density for the weakest sources in the reference catalogue. An integration time of 5 minutes, corresponding to a detection limit of 9 Jy, gave a good compromise between the detection of a significant fraction of the reference catalogue and a reasonable total observing time.

The completion of the survey took several observing runs in 1987 and 1988. During this period we begun also to patrol the emission of strong masers, to survey new lists of sources and to search for H_2O masers in selected extended areas in an unbiased way. Results for the maser associated to the Serpens molecular cloud has been given elsewhere (Palla and Giovanardi, 1989). Here, in addition to the results of the survey, we give a complete description of the instrument and of the observational procedures. Cross correlation of the data of the survey with IRAS data and other statistical analysis, as well as studies of the variability of selected sources and the results of new surveys will be the subject of future publications.

2. Observations.

In the following we give a brief technical description of the telescope and of the observational procedures.

2.1 THE TELESCOPE. — The radiotelescope is primarily devoted to *VLBI* observations. Consequently the front-end is typical of such work (Comoretto, 1987 ; Palagi, 1987). The feed provides two outputs of circular polarization. For technical reasons only one polarization channel is available at 22.2 GHz, namely the right hand sense. The front-end amplifier is a criogenically cooled (17 K) three stage GaAsFET. In good weather conditions the system temperature is 160 K with a receiver contribution of 100 K. Down conversion to the IF bandwidths is provided according to *VLBI* configurations, namely the first local oscillator is a synthesizer with a multiplication chain locked to the hydrogen maser frequency standard. The IF output is fed to the input of a SSB mixer whose output bandwidth can be selected from 50 MHz down to 0.78 MHz, in binary steps. The LO of the SSB is a synthesizer driven by the acquisition and control computer (HP 1000). The signal from the SSB mixer is amplified and sent to the Digital Autocorrelator.

At the water maser frequency (we used for the rest frequency of the line the value of 22.23507985 GHz), the HPBW of the telescope is 1.9′ and its efficiency ranges from 10% to 17% depending on elevation. The low efficiency was due to a deviation of the main dish from the theoretical surface, as shown by holography measurements (Comoretto *et al.*, 1988). It has been improved to 35% by resurfacing the antenna in August 1989. The gain-zenith angle curve has been determined with accurate observations of the continuum calibration sources DR 21, NGC 7027, 3C 123 and 3C 286, whose adopted flux densities are 19.0, 5.86, 3.71 and 2.55 Jy respectively (Baars, 1977).

The pointing parameters of the telescope are determined at the beginning of each observing session, by 24 hour measurements of the four intense maser sources W3OH, W51M, W49N and Orion-KL. The required signal to noise ratio is achieved using a 2 MHz bandwidth centered on the strongest maser line for each source. Residual pointing uncertainties are usually 20 arcsec rms.

2.2 THE DIGITAL AUTOCORRELATOR. — The Arcetri Autocorrelator (Comoretto, 1983 ; Catarzi *et al.*, 1985) is used in a configuration of two quadrants of 256 channels connected in a single section for a total amount of 512 channels. Sampling and digitizing is made at two bits, three levels. Sampling rate is maintained fixed at 100 MHz, while bandwidth changes are obtained by the delay clock which is set at the Nyquist rate (2 × bandwidth). A summary of the relevant autocorrelator parameters is reported in Table I.

TABLE I. — *Autocorrelator characteristics.*

Parameter	Options
IF input	Up to 4 quadrants
Type of correlation	Auto/Cross
Quantization	1/2 bit
Bandwidths	7 from 50 to 0.78 MHz
Observing mode	Total Power, Freq-switch

2.3 DATA ACQUISITION AND CALIBRATION. — All the observations were made in the total power observing mode with the same integration time (usually 5 minutes) in the ON and OFF positions.

The autocorrelation function (ACF) can be edited to delete defective channels or to smooth it before the Fourier transform is applied to get the power spectrum.

The receiver noise and the passband effects are removed using the standard relation : $T_a(\nu) = T_{off}(P_{on}(\nu) - P_{off}(\nu))/P_{off}(\nu)$, where T_{off} is the average system temperature in the reference spectrum and P_{on}, P_{off} are the calibrated power spectra.

The spectrum is then converted to flux density using an average gain curve for the observing period. No daily calibration has been attempted. Therefore the final error in the flux scale is about 20% .

Since it is not possible at the moment to measure the total power at the sampler input, the absolute scale of each spectrum is calibrated with a total-power integrator in a 2 MHz band at a fixed frequency adjacent to the observed bandwidth. If the receiver band is flat to a few percent, this procedure does not introduce significant errors. For very strong sources ($F_\nu > 10^4$ Jy), the line contribution to the total power received is not measured, and the flux density scale is underestimated for the P_{on}. However the P_{off} is still correctly calibrated, and its scale can be applied to the P_{on}, assuming that the receiver noise remains unchanged.

Both the measured ACF and the computed spectra are stored on files in a format conforming to the TOOLBOX package specifications. TOOLBOX is the line reduction package developed at the Max-Planck-Institut für Radioastronomie, Bonn (von Kap-herr, 1980 ; Cesaroni *et al.*, 1988b) and kindly made available to our group.

3. The catalogue and the atlas of spectra.

The spectra, recorded on tape at the Medicina station, are analysed with a SUN3 workstation under UNIX operating system.

The data reduction with TOOLBOX consists essentially of 3 steps. First a polynomial fit to the baseline is removed in each spectrum and the rms noise is computed. Second, a suitable number of gaussians is fitted to the lines to evaluate their intensity, central velocity and width. For some sources with multiple blended components only the strongest components have been fitted. Finally the integral over the whole emission interval is computed using the Simpson approximation.

For a consistent number of sources several observations at different times were taken. We report here only the spectrum with the maximum spectral resolution (i.e. the smaller bandwidth). An exception to this rule is given by those spectra which have at some epochs one or more lines out of the velocity range covered by the smallest bandwidth used : in these cases we choose the bandwidth containing also this "high velocity" components. For spectra with the same bandwidth, the first one in time is reported.

The results of this analysis are contained in Table II and Figure 1. Since our aim was to re-observe all the sources in the catalogue of Paper 1 we tried to maintain a one to one correspondence with it. Few positions from Paper 1 are missing in the present list, because they would be undistinguishable in our observations, given the resolution of the Medicina antenna. To set a boundary to this effect, we have followed the general rule to consider positions with a separation less than ~ 1 arcmin as a single source. As a result we observed 509 different positions out of 526 listed sources.

For one source, BFS 31, the coordinates are mistaken in Paper 1. The true coordinates are $\alpha = 03^h21^m11.8^s$, $\delta = 54°46'51''$.

Owing to the complexity of the H_2O spectra, only the most significant parameters have been included in Table II. They are :

Columns 1 and 2 : Right ascension and declination (1950),

Columns 3 and 4 : name and class of the source, identical to the ones used in Paper 1. When no name is available we form it using the first digits of the galactic coordinates (e.g. 12782-0002 for a source at $l_{II} = 127.817$ and $b_{II} = -0.021$),

Columns 5 and 6 : galactic coordinates in degrees,

Column 7 : the flux density (Jy) of the strongest component in the spectrum. Sources exhibiting a single component are marked with an asterisk. Upper limits (3σ) are given for undetected sources. Note that, even though only the strongest component is given here, all components in each spectrum have been fitted and can be provided upon request. Since the flux density comes from a multiple gaussian fitting of the profile, in the case of narrow peaks sitting on top of broader features, the peak value given in Table II may be considerably smaller than the peak of the profile in Figure 1,

Column 8 : the noise level σ (Jy). For strong sources like W3 OH, KL IRC 2, W49 N, etc., the fit error is much greater than the noise level and therefore the former value is given,

Column 9 : velocity (km s^{-1}) with respect to the LSR of the peak given in column 6,

Column 10 : spectral resolution (km s^{-1}) of the reported spectrum,

Columns 11 and 12 : minimum and maximum velocity of the emission range (km s^{-1}) of the spectrum shown in Figure 1. For non-detections the limits of the observed range are reported,

Column 13 : integrated flux (Jy km s^{-1}) computed over a velocity interval which includes all the detected components. For a few sources the integrated flux is slightly lower than the product of the peak flux density (column 7) and the line width. However, this inconsistency is removed if the errors in the fitted parameters and the noise level of the spectrum are taken into account.

Column 14 : maximum observed bandwidth (MHz),

Column 15 : the date (yymmdd) on which the spectrum described in columns 6-12 was observed.

Column 16 : Reference codes to previous single dish measurements (See the list appended to this table). No attempt is made to list all the references dealing with each source.

The atlas of spectra of Figure 1 (flux density in Jy *versus* velocity in km s^{-1}) contains only sources where at least one line was detected.

Notes to Table II:

- For very intense sources (W3 OH, KL IRC 2, W49 N, W51 N, W51 S) our spectra cover only the central portion of the emission range and the parameters listed in Table II have been corrected as described in Section 2.3.
- The maser in SERPENS is reported as an upper limit in Table II. In fact the source detected by Palla and Giovanardi (1989) is about 1.4′ away from the nominal position given in Paper 1.

4. Discussion.

We now analyze the main statistical properties derived from the comparison of the present survey and the literature data contained in Paper 1, excluding three sources for which no flux density is reported in Paper 1 and which are not detected in the present survey.

The detected sources are 203. Their flux density distribution (full line) is given in Figure 2, which shows a cut-off at $\simeq 9$ Jy, which is equal to the average 3σ level computed from Table II, column 8, excluding the fit error values. For comparison we report the distribution of the 301 sources from the reference catalogue having a flux density > 9 Jy (dotted line).

The two distributions have almost the same shape, while the number of sources is significantly decreased in our survey. However, we want to remark that our 203 detections are not a subsample of the 301 reference sources with flux density > 9 Jy.

To have an indication of the flux density variability we have plotted the peak flux of the detected sources S_A (Fig. 3a) and *upper limits* (Fig. 3b), versus the peak flux of the reference catalogue S_R. Figure 3a shows that there is a large scatter around the solid line, representing the $S_A = S_R$ relationship and that several sources with $S_R < 9$ Jy have now a higher peak flux density. In figure 3b our average detection limit ($S_A < 9$ Jy) shows up clearly together with the fact that even very strong sources were not detected.

If we divide the reference catalogue sources into two groups, below and above the 9 Jy limit (Tab. III), we find that 19 have increased their flux and became observable (crosses to the left of the vertical line in Fig. 3a), while 117 sources above our average detection limit were not detected (circles to the right of the vertical line in Fig. 3b). This difference in the two numbers may partly be due to the fact that the flux densities reported in Paper 1 are the *maximum* ever observed.

TABLE III. — *Source counts.*

	Reference Catalogue Fluxes		
	< 9 Jy	≥ 9 Jy	Total
det.	19	184	203
und.	186	117	303
tot.	205	301	506

The distribution of the S_A/S_R ratios for detected sources is shown in Figure 4. From the comparison of Figures 3 and 4, it is clear that variations in the peak flux density is a dominant characteristic of the maser emission. Moreover, in Figure 4 the asymmetry of the distribution shows that the number of sources with a decrease in the peak flux density is higher than those exhibiting an increase, an effect similar to the difference found above between the number of sources becoming fainter or more intense than 9 Jy. Only 38 sources (20% of the detected ones) do not show variations within our 20% measurement error.

Velocity variations are also present, but are less frequent than peak flux variations. Figures 5 and 6 report respectively the radial velocity of our survey *versus* the reference catalogue values and the distribution of the differences. The latter is highly peaked around zero, but there also are isolated large variations, which may be better interpreted as onset of new components at different radial velocity.

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TABLE II. — *Parameters of the H_2O maser spectra.*

α	δ	Name	Class	l_{II}	b_{II}	f_ν(Jy)	Δf_ν	v(km/s)	δv	v_{min}	v_{max}	$f_{(Jy\ km/s)}$	$\Delta\nu$	date	References
00 00 45.0	55 24 21.0	Y CAS	STAR	116.144	-6.552	* 16.1	1.7	-18.9	0.165	-19.5	-18.2	25.3	6.25	880908	55,56,64,72
00 05 03.4	-25 46 20.9	SY SCL	STAR	39.914	-80.045	10.3	2.9	19.4	0.165	19.1	24.1	18.2	6.25	890129	60
00 11 44.6	64 12 04.0	IRAS00117+6412	HII	118.961	1.893	< 10.4	3.5		0.165	-80.1	12.1		6.25	880908	43
00 21 09.6	65 49 26.0	IRAS00211+6549	HII	120.153	3.378	* 7.3	1.3	-71.1	0.165	-72.0	-70.1	13.0	6.25	880205	43
00 33 53.3	63 12 32.0	IRAS00338+6312	HII	121.301	0.659	< 10.9	3.6		0.165	-42.1	42.1		6.25	870905	43
00 34 05.4	62 51 31.9	TY CAS	STAR	121.303	0.308	* 28.4	5.6	-59.0	0.082	-59.2	-58.7	21.7	6.25	870613	50,60
00 34 16.1	63 47 30.0	IRAS00342+6347	HII	121.377	1.238	< 10.7	3.6		0.165	-62.1	22.1		6.25	880908	43
00 37 58.7	62 48 21.0	IRAS00379+6248	HII	121.744	0.233	< 10.7	3.6		0.165	-60.1	24.1		6.25	880908	43
00 42 50.0	68 54 36.0	IRC+70012	STAR	122.445	6.317	8.9	1.6	-13.8	0.165	-25.7	-13.4	17.0	6.25	880908	55
00 46 51.2	65 27 19.0	IRAS00468+6527	HII	122.779	2.856	< 11.6	3.9		0.165	-93.1	-8.9		6.25	880908	43
00 49 29.2	56 17 37.0	NGC 281	HII	123.071	-6.306	22.6	1.5	-28.7	0.165	-43.0	-13.9	94.1	12.50	880714	14
01 03 49.0	12 18 42.0	CIT 3	STAR	128.653	-50.126	* 8.3	1.7	-2.8	0.165	-3.6	-2.0	18.7	6.25	890127	55,56,64,72
01 04 35.7	65 05 21.0	IRAS01045+6505	HII	124.645	2.539	< 11.5	3.8		0.165	-126.1	-41.9		6.25	880908	43
01 08 30.4	30 22 10.0	IRC+30021	STAR	127.966	-32.043	< 9.6	3.2		0.165	-81.4	2.8		6.25	890127	60
01 12 24.4	64 30 48.0	IRAS01123+6430	HII	125.519	2.027	< 6.5	2.2		0.165	-95.1	-10.9		6.25	880425	43
01 13 15.9	64 34 44.0	0113+645 P09	IRAS	125.604	2.101	< 12.7	4.2		0.165	-95.3	-11.1		6.25	880908	48
01 13 28.1	64 29 54.0	IRAS01134+6429	HII	125.634	2.023	* 17.9	2.7	-46.9	0.165	-47.3	-46.5	18.7	6.25	880908	43
01 19 58.0	61 33 08.0	S187	HII	126.682	-0.827	< 11.3	3.8		0.165	-56.1	28.1		6.25	870612	40
01 30 27.6	62 11 31.0	12782-0002	STAR	127.817	-0.021	< 9.0	3.0		0.165	-106.4	-22.2		6.25	880908	49
01 55 35.0	45 11 41.9	HD 11979	STAR	135.115	-15.837	< 14.9	5.0		0.165	-37.7	46.5		6.25	880430	25,50,64,72
02 16 49.0	-03 12 13.0	O CET	STAR	167.752	-57.980	< 12.6	4.2		0.329	-84.3	84.3		12.50	870904	55,56,64,72
02 19 15.1	58 21 34.0	S PER	STAR	134.623	-2.195	41.9	2.0	-37.0	0.165	-47.3	-30.9	258.9	12.50	870327	50,56,64,72
02 21 40.8	61 53 26.0	W3 (1)	HII	133.688	1.224	90.7	3.5	-34.3	0.329	-52.7	-33.8	553.9	12.50	870322	2
02 21 53.3	61 52 20.0	W3 (2)	HII	133.718	1.215	427.9	7.6	-40.5	0.165	-52.0	-33.4	1473.0	6.25	870612	2,5,18
02 22 06.1	61 50 40.0	W3 (3)	HII	133.751	1.198	69.7	3.4	-39.3	0.165	-49.4	-30.7	114.3	6.25	870612	2,24
02 23 17.3	61 38 58.0	W3 OH	HII	133.951	1.065	14090.0	57.2	-48.8	0.082	-62.0	-31.2	31750.0	12.50	870322	2,5
02 30 55.9	61 33 15.0	IRAS02310+6133	HII	134.831	1.312	< 9.7	3.2		0.165	-97.1	-12.9		6.25	880205	43
02 31 19.6	-13 22 02.0	U CET	STAR	187.701	-62.311	< 13.8	4.6		0.165	-83.5	0.7		6.25	880504	47
02 31 43.0	64 56 36.0	CIT 4	STAR	133.610	4.475	< 6.3	2.1		0.165	-19.0	65.2		6.25	880425	60
02 33 20.5	59 30 36.9	IRAS02333+5930	HII	135.894	-0.459	< 10.0	3.3		0.165	-72.1	12.1		6.25	880430	43

TABLE II (continued)

α	δ	Name	Class	l_{II}	b_{II}		f_ν(Jy)	Δf_ν	v(km/s)	δv	v_{min}	v_{max}	f(Jy km/s)	$\Delta\nu$	date	References
02 34 00.0	34 02 50.0	R TRI	STAR	146.596	-23.710	<	5.5	1.8		0.165	16.7	100.9		6.25	870331	47
02 39 31.0	62 44 16.0	IRAS02395+6244	HII	135.282	2.796		20.2	2.4	-67.1	0.165	-72.2	-66.9	36.8	6.25	890127	43,51
02 46 11.7	61 47 34.0	IRAS02461+6147	HII	136.387	2.269	<	11.0	3.7		0.165	-86.1	-1.9		6.25	880714	43
02 54 11.1	62 08 29.0	IRAS02541+6208	HII	137.070	3.002	<	6.3	2.1		0.165	-93.1	-8.9		6.25	880204	43
02 58 42.1	21 36 24.0	IRC+20052	STAR	158.926	-31.822	<	7.7	2.6		0.165	-78.6	5.6		6.25	880421	50,60
02 59 22.4	60 16 12.0	S201	HII	138.503	1.644	<	5.9	2.0		0.329	-117.3	51.3		12.50	870327	27,43
03 03 07.0	55 32 06.0	IO PER	STAR	141.232	-2.258	<	8.8	2.9		0.165	-72.2	12.0		6.25	880205	60
03 03 33.2	58 19 21.0	HHL-5	HH	139.914	0.200	*	10.3	2.0	-28.1	0.329	-29.1	-27.2	20.0	12.50	870913	43,53
03 10 11.7	58 22 00.0	IRAS03101+5821	HII	140.645	0.676	*	8.2	1.4	-39.1	0.165	-39.6	-38.6	13.6	6.25	880205	43
03 13 25.4	59 58 44.0	BFS 31	HII	143.831	-1.561	<	3.2	1.1		0.165	-75.2	11.2		6.25	891128	42
03 22 31.0	30 34 50.0	IRAS03225+3034	HII	158.041	-21.411	*	12.6	1.6	2.6	0.165	2.3	3.0	8.2	6.25	70618	3
03 23 38.6	58 36 38.0	GL 490	HII	142.001	1.820	<	9.0	3.0		0.165	-57.1	27.1		6.25	880422	40,43,70
03 24 34.0	30 02 36.0	IRAS03245+3002	HII	158.767	-21.579	*	140.5	1.6	2.2	0.082	1.8	2.5	92.9	12.50	870619	43
03 25 56.6	31 05 19.0	HH 7-11(B)	HH	158.349	-20.564		32.2	1.8	2.8	0.165	-15.2	7.2	60.5	6.25	890127	36,40
03 25 58.0	31 05 45.0	HH 7-11(A)	HH	158.349	-20.556	<	8.2	2.7		0.082	-33.7	9.1		3.13	870320	35,36,40,69
03 26 05.6	31 08 13.0	HH 6	HH	158.345	-20.506	<	7.9	2.6		0.329	-74.3	94.3		12.50	870322	40
03 26 05.9	31 03 00.0	HH 7-11(C)	HH	158.402	-20.575	<	10.4	3.5		0.165	-36.7	47.5		6.25	880908	36,40,69
03 35 20.5	55 49 52.0	IRAS03353+5550	HII	144.890	0.447	<	6.3	2.1		0.165	-75.1	9.1		6.25	880422	43
03 50 46.0	11 15 42.0	IK TAU	STAR	177.961	-31.403		20.9	1.2	30.4	0.165	30.0	46.9	24.3	6.25	880216	56,60,64,72
03 53 26.9	54 02 02.9	IRAS03534+5402	HII	148.045	0.630	<	9.9	3.3		0.165	-95.1	-10.9		6.25	880430	43
03 54 24.0	58 19 20.9	IRAS03544+5431	HII	145.392	4.004	<	10.1	3.3		0.165	-110.1	-25.9		6.25	880430	43
04 06 24.3	33 21 48.0	IRC+30072	STAR	163.628	-13.294	*	11.4	1.3	5.1	0.165	4.6	5.7	12.4	6.25	880908	50,60
04 06 24.7	50 52 08.0	S209	HII	151.612	-0.458	<	10.2	3.4		0.165	-96.1	-11.9		6.25	880430	42,43
04 07 00.6	54 11 43.0	IRAS04070+5411	HII	149.436	2.059	<	12.1	4.0		0.165	-84.1	0.1		6.25	880503	43
04 07 20.0	37 59 59.0	IRAS04073+3800	HII	160.508	-9.803	<	5.4	1.8		0.165	-72.1	12.1		6.25	870619	43
04 09 25.7	-25 15 37.0	W ERI	STAR	222.164	-45.344	*	52.1	1.8	-0.3	0.165	-0.7	0.2	58.4	6.25	880208	55,56,64,72
04 14 38.4	53 18 45.0	IRAS04146+5318	HII	150.863	2.189	<	10.3	3.4		0.165	-86.1	-1.9		6.25	880430	43
04 16 09.0	19 17 55.0	T TAU(1)	TT	175.840	-21.483	<	8.6	2.9		0.165	-30.1	54.1		6.25	870619	46
04 19 07.0	19 25 45.0	T TAU(2)	TT	176.230	-20.871	<	5.7	1.9		0.165	-40.1	44.1		6.25	870330	7
04 25 33.3	10 03 16.0	R TAU	STAR	185.217	-25.580	*	7.9	1.4	15.3	0.165	14.9	15.7	5.1	6.25	880206	55,56,64,72

TABLE II (*continued*)

α	δ	Name	Class	l_{II}	b_{II}	f_ν(Jy)	Δf_ν	v(km/s)	δv	v_{min}	v_{max}	$f_{(Jy\ km/s)}$	$\Delta\nu$	date	References
04 28 01.5	27 23 01.0	IRC+30087	STAR	171.388	-14.078	< 10.5	3.5		0.165	-47.5	36.7		6.25	880206	60
04 32 24.0	51 06 00.0	S211	HII	154.349	2.590	< 8.2	2.7		0.165	-83.1	1.1		6.25	890127	42
04 35 30.0	08 13 36.0	RX TAU	STAR	188.447	-24.679	< 11.7	3.9		0.165	-86.1	-1.9		6.25	880207	64,72
04 36 09.8	25 47 41.0	IRAS04361+2547	IRAS	173.853	-13.742	< 6.9	2.3		0.329	-75.3	93.3		12.50	870324	43,51
04 48 00.0	45 30 31.0	BFS 44	HII	160.263	0.851	< 8.5	2.8		0.165	-69.1	15.1		6.25	890127	42
05 02 43.2	-21 58 19.0	T LEP	STAR	222.668	-32.715	< 14.2	4.7		0.165	-72.3	11.9		6.25	890126	47
05 07 19.6	52 48 54.0	IRC+50137	STAR	156.439	7.835	* 7.8	1.8	-11.1	0.165	-11.3	-10.8	4.2	6.25	870331	50,55,64,72
05 15 05.0	63 12 54.0	IRC+60154	STAR	148.283	14.562	< 10.0	3.3		0.165	-0.1	84.1		6.25	880204	55,60
05 32 47.0	-05 24 23.0	KL IRC 2	HII	208.994	-19.385	200900.0	534.1	7.5	0.165	-10.0	25.0	165400.0	6.25	870330	2
05 32 58.2	-05 07 36.0	OMC(2)2	HII	208.753	-19.215	44.2	2.9	7.4	0.165	7.0	10.9	69.8	6.25	880908	70
05 32 59.8	-05 11 28.9	OMC 2	HII	208.817	-19.239	152.7	3.8	7.5	0.082	6.6	10.6	112.1	3.12	870401	14,24,70
05 33 53.2	-06 46 50.0	HH 1	HH	210.426	-19.763	< 8.6	2.9		0.165	-34.1	50.1		6.25	880208	35
05 35 51.3	35 44 16.0	S231	HII	173.482	2.446	238.3	7.7	-17.2	0.082	-18.1	-16.4	237.3	3.12	870401	42
05 36 06.3	35 39 21.0	17358+0244	HII	173.579	2.445	* 5.4	0.5	-16.5	0.329	-17.3	-15.7	8.5	12.50	870323	42
05 36 35.6	-14 04 03.0	RW LEP	STAR	217.781	-22.299	* 9.0	0.9	-60.7	0.165	-61.8	-59.7	19.5	6.25	870330	50,60
05 37 21.8	23 49 24.0	HH 4	HH	183.722	-3.662	< 8.7	2.9		0.165	-44.1	40.1		6.25	880709	37
05 37 30.9	-07 31 51.0	21157-1929	IRAS	211.565	-19.294	< 9.4	3.1		0.165	-36.1	48.1		6.25	890126	41
05 37 31.8	35 40 18.0	S235	HII	173.718	2.698	6.8	0.3	0.9	0.329	-71.4	1.5	34.9	12.50	891204	2,26,28,37,40,42
05 38 55.0	32 01 06.0	U AUR	STAR	176.967	0.995	< 9.1	3.0		0.165	-36.1	48.1		6.25	890126	64,72
05 39 13.7	-01 57 30.0	NGC 2024	HII	206.566	-16.362	* 28.1	2.6	10.2	0.165	9.8	10.7	27.1	6.25	880503	2,69
05 41 07.6	69 57 15.0	IRC+70066	STAR	143.434	20.091	< 10.7	3.6		0.165	-50.3	33.9		6.25	870331	50,60
05 41 18.6	-01 04 17.0	20601-1548	IRAS	206.008	-15.485	* 39.2	3.5	2.4	0.329	2.0	2.8	38.1	12.50	870618	41
05 43 35.9	-00 09 25.9	HH 19-27	HH	205.455	-14.548	< 13.5	4.5		0.165	-17.1	67.1		6.25	880908	35
05 44 19.6	27 06 32.0	AW TAU	STAR	181.759	-0.593	16.5	1.6	-12.3	0.165	-12.9	-9.6	41.2	6.25	880713	47,55,64
05 44 31.3	00 20 48.0	NGC 2071	HII	205.110	-14.105	598.7	39.6	15.9	0.082	-8.0	19.4	971.7	3.12	880908	14,69
05 50 41.0	24 14 11.0	AFGL5171	IRAS	184.958	-0.852	< 17.9	6.0		0.165	-35.5	48.7		6.25	880713	51
05 52 51.0	20 10 06.0	U ORI	STAR	188.717	-2.492	* 10.2	2.3	-37.2	0.165	-37.8	-36.7	11.4	6.25	870904	21,56,64,72
05 55 58.0	74 30 24.0	V CAM	STAR	139.397	22.898	< 10.9	3.6		0.165	-42.1	42.1		6.25	890126	64,72
06 00 40.9	30 14 53.9	S241	HII	180.875	4.090	< 5.5	1.8		0.165	-49.1	35.1		6.25	880423	42
06 03 41.9	-24 11 24.0	S LEP	STAR	230.462	-20.341	< 15.2	5.1		0.165	-51.6	32.6		6.25	880908	71

TABLE II (continued)

α	δ	Name	Class	l_{II}	b_{II}	f_ν(Jy)	Δf_ν	v(km/s)	δv	v_{min}	v_{max}	f(Jy km/s)	$\Delta\nu$	date	References
06 05 16.9	-06 22 47.9	MON R2	HII	213.702	-12.617	* 38.2	2.3	11.8	0.041	11.5	12.0	27.4	1.56	870401	2,34,70
06 05 21.7	-06 22 35.0	MON R2 IRS3	HII	213.708	-12.597	* 173.8	2.6	18.1	0.165	17.8	18.3	95.8	6.25	880430	2,34
06 05 36.6	20 39 44.0	S252 A	HII	189.778	0.347	89.3	1.3	9.2	0.082	8.8	22.1	90.9	3.12	870612	14,21,32
06 05 53.7	21 39 09.0	18895+0089	HII	188.947	0.889	39.2	2.8	8.3	0.165	-3.7	8.5	53.8	6.25	870330	6
06 08 01.0	12 33 25.0	S270	HII	197.139	-3.101	< 6.6	2.2		0.165	-17.1	67.1		6.25	880423	42
06 08 25.6	-06 10 49.0	HH 12-15	HH	213.879	-11.829	< 11.9	4.0		0.329	-96.3	72.3		12.50	870617	37,70
06 09 31.4	17 56 24.9	S256	HII	192.605	-0.173	< 10.1	3.4		0.329	-79.3	89.3		12.50	870617	40
06 09 58.2	18 00 17.0	S255/7	HII	192.600	-0.049	31.0	1.2	7.1	0.165	-0.2	15.0	60.8	6.25	870320	2,6,18,26,28,33,40
06 10 23.0	-06 12 54.9	HH 16-17	HH	214.134	-11.410	< 11.3	3.8		0.165	-35.1	49.1		6.25	890126	37
06 11 29.0	17 46 09.9	S255 B	HII	192.980	0.153	< 11.1	3.7		0.329	-73.2	95.4		12.50	870617	40
06 11 46.3	13 50 31.0	S269	HII	196.455	-1.680	150.4	61.1	19.4	0.041	16.0	20.9	127.5	6.25	880909	2,6,14,18,26,33,40,42
06 12 43.9	14 18 12.0	S269 B	HII	196.162	-1.254	* 6.6	1.4	11.3	0.165	11.1	11.6	5.5	6.25	870612	42
06 14 32.8	14 55 47.0	S266	HII	195.823	-0.568	< 8.2	2.7		0.165	-7.1	77.1		6.25	870331	42
06 15 50.0	15 06 09.0	19582-0021	HII	195.820	-0.212	< 8.7	2.9		0.165	-21.1	63.1		6.25	870331	42
06 29 45.0	40 45 07.0	IRC+40156	STAR	174.115	14.122	< 7.3	2.4		0.165	-48.8	35.4		6.25	870331	50
06 30 00.6	60 58 50.0	IRC+60169	STAR	154.311	21.517	30.9	0.4	-33.2	0.082	-33.9	-18.5	86.2	3.12	880204	50,60,64,72,74
06 31 58.4	-05 01 13.0	AFGL 5202	IRAS	215.517	-6.080	< 9.9	3.3		0.165	-101.3	-17.1		6.25	881014	51
06 35 54.6	00 47 20.0	S283	HII	210.793	-2.541	< 12.7	4.2		0.165	14.9	99.1		6.25	870331	42
06 36 19.2	59 54 49.0	U LYN	STAR	155.659	21.937	48.3	1.7	-14.4	0.165	-17.7	-8.7	115.7	6.25	870401	50,60,64,72
06 38 25.5	09 32 12.0	NGC 2264	HII	203.322	2.055	< 11.2	3.7		0.329	-74.3	94.3		12.50	870322	2,24,69
06 42 36.0	00 25 00.0	S284	HII	211.894	-1.229	< 0.6	0.2		0.329	-41.3	127.3		12.50	880907	42
06 43 41.7	00 09 34.0	21225-0110	HII	212.249	-1.104	* 11.1	1.7	33.6	0.165	32.8	34.4	25.4	6.25	881015	42
06 50 02.0	08 29 03.0	GX MON	STAR	205.574	4.121	< 7.4	2.5		0.165	-62.1	22.1		6.25	880426	55
06 52 06.1	-04 28 22.0	S286	HII	217.329	-1.370	< 14.9	5.0		0.165	6.9	91.1		6.25	881016	42
07 05 28.5	-10 39 17.9	CRL 1074	HII	224.344	-1.285	< 6.0	2.0		0.165	0.9	85.1		6.25	881015	22,60
07 20 54.6	-25 40 11.9	VY CMA	STAR	239.352	-5.066	244.3	9.7	20.9	0.165	-4.0	30.3	2434.0	6.25	870904	16,56,64,72
07 22 33.4	-24 28 58.0	HHL-50	HH	238.479	-4.177	* 33.0	2.4	6.5	0.329	6.3	6.8	11.5	12.50	871106	53
07 23 13.1	-05 45 00.9	TT MON	STAR	222.070	4.893	< 10.8	3.6		0.165	0.2	84.4		6.25	880420	47
07 27 43.1	-18 21 41.0	S305	HII	233.678	-0.189	< 8.5	2.8		0.329	-48.3	120.3		12.50	870613	42
07 27 54.9	-20 37 45.1	BBW 33	HII	235.685	-1.245	* 5.4	1.3	72.9	0.165	72.2	73.6	10.0	6.25	881015	42

TABLE II (continued)

α	δ	Name	Class	l_{II}	b_{II}	f_ν(Jy)	Δf_ν	v(km/s)	δv	v_{min}	v_{max}	$f_{(Jy\ km/s)}$	$\Delta\nu$	date	References
07 30 27.6	-20 32 58.8	Z PUP	STAR	235.905	-0.686	* 12.8	1.1	-1.9	0.165	-2.7	-1.0	29.2	6.25	880205	55,56,64,72
07 30 47.6	30 37 13.0	AFGL 1141	IRAS	188.799	21.898	* 7.9	1.5	-5.2	0.329	-5.5	-4.8	9.7	12.50	871108	51
07 39 58.9	-14 35 43.0	23184+0422	STAR	231.836	4.220	< 5.5	1.8		0.329	-63.2	105.4		12.50	870326	2,50
07 40 02.5	23 34 07.0	S GEM	STAR	196.676	21.331	< 8.0	2.7		0.165	50.2	134.4		6.25	870331	50
08 13 48.5	11 52 50.0	R CNC	STAR	211.751	24.139	< 9.7	3.2		0.165	-26.5	57.7		6.25	870331	47,50
08 35 43.8	-10 13 41.8	CRL 1274	STAR	235.322	18.096	< 11.9	4.0		0.165	2.9	87.1		6.25	880420	64,74
08 53 26.7	-19 01 53.9	IRC-20176	STAR	245.433	16.475	* 2.6	0.5	5.0	0.329	2.7	7.4	23.5	12.50	870622	50,60
09 06 56.9	25 27 12.0	W CNC	STAR	201.881	40.669	< 7.6	2.5		0.329	-55.2	113.4		12.50	870612	47
09 23 35.8	-23 47 37.9	IRC-20188	STAR	253.999	18.765	< 14.5	4.8		0.165	-30.0	54.2		6.25	880205	60
09 33 06.0	-14 28 01.9	X HYA	STAR	248.146	26.699	* 5.1	1.0	27.2	0.165	26.4	28.0	9.9	6.25	870330	50,56,64,72
09 42 35.0	34 44 18.0	R LMI	STAR	190.603	49.772	* 11.4	1.2	-0.8	0.165	-1.5	-0.1	16.1	6.25	880502	55,56,64,72
09 42 55.8	-21 48 05.8	IRC-20197	STAR	255.796	23.348	< 7.8	2.6		0.165	3.5	87.7		6.25	880426	55,60,64,72
09 44 52.6	11 39 44.0	R LEO	STAR	223.721	44.162	< 7.7	2.6		0.165	-43.1	41.1		6.25	880205	55,56,64,72
09 57 18.0	21 31 42.0	V LEO	STAR	211.886	50.680	< 10.0	3.3		0.165	-69.1	15.1		6.25	880206	64,72
10 41 07.5	69 02 22.0	R UMA	STAR	138.364	44.361	< 4.8	1.6		0.329	-46.6	122.0		12.50	870621	47,50
10 50 59.0	13 58 54.0	W LEO	STAR	233.022	59.427	< 7.0	2.3		0.165	3.5	87.7		6.25	870330	47,50
10 52 08.0	72 08 13.0	VX UMA	STAR	134.721	42.509	* 27.6	1.4	-50.7	0.082	-51.1	-50.2	29.9	12.50	870616	50,60
10 58 06.0	-18 03 21.0	R CRT	STAR	269.269	37.196	398.0	3.2	3.7	0.082	3.2	15.7	846.0	6.25	870401	50,56,64,72
11 25 16.4	15 25 19.9	AF LEO	STAR	240.366	67.183	< 5.1	1.7		0.165	-38.3	45.9		6.25	880423	60,71
11 46 13.0	-26 28 47.9	IRC-30182	STAR	286.011	34.045	< 13.6	4.5		0.165	-22.1	62.1		6.25	880206	57,64
11 50 12.0	-07 18 59.9	S CRT	STAR	278.593	52.481	* 19.9	1.4	40.5	0.165	39.3	41.7	68.6	6.25	880207	64,72
11 57 47.2	-09 54 24.9	SV VIR	STAR	282.850	50.683	< 7.7	2.6		0.329	-86.8	81.8		12.50	870612	47
12 01 41.7	19 03 42.0	R COM	STAR	248.030	76.316	< 5.8	1.9		0.329	-88.2	80.3		12.50	870612	47,50,60
12 12 02.5	-05 45 29.0	T VIR	STAR	286.552	55.660	* 12.7	1.4	7.2	0.165	6.9	7.6	10.9	12.50	870330	47,50,55
12 34 07.2	59 45 42.0	T UMA	STAR	126.492	57.538	< 7.1	2.4		0.165	-130.2	-46.0		6.25	870401	47,50
12 36 42.0	58 45 29.0	RS UMA	STAR	126.061	58.569	< 4.9	1.6		0.329	-103.8	64.8		12.50	870612	50
12 44 56.7	38 38 53.0	U CVN	STAR	127.053	78.720	* 6.7	1.2	-22.5	0.165	-22.8	-22.3	4.1	6.25	880207	55,56,64,72
12 56 12.0	23 24 36.0	T COM	STAR	325.565	85.692	* 4.1	1.1	27.6	0.165	26.9	28.3	5.8	6.25	880207	64,72
13 00 05.7	05 27 22.1	RT VIR	STAR	310.358	67.898	106.9	2.3	13.6	0.082	8.4	25.0	391.5	6.25	870401	45,56,64,72,74
13 06 54.5	-09 27 29.0	IRC-10278	STAR	310.334	52.887	< 1.6	0.5		0.329	9.5	178.1		12.50	891202	50,60

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TABLE II (continued)

α	δ	Name	Class	l_{II}	b_{II}		f_ν(Jy)	Δf_ν	v(km/s)	δv	v_{min}	v_{max}	$f_{(Jy\ km/s)}$	$\Delta\nu$	date	References
13 17 17.0	45 47 24.0	V CVN	STAR	107.894	70.773	<	6.3	2.1		0.165	-43.0	41.2		6.25	880206	64,72
13 26 59.0	-23 01 30.0	R HYA	STAR	314.228	38.748	<	5.5	1.8		0.165	-51.1	33.1		6.25	880207	60
13 30 23.0	-06 56 24.0	S VIR	STAR	320.760	54.231	<	11.4	3.8		0.165	-27.1	57.1		6.25	880207	64,72
13 33 38.0	73 41 05.0	T UMI	STAR	118.716	43.343	<	7.3	2.4		0.329	-84.1	84.5		12.50	870613	50
13 46 12.2	-28 07 06.0	W HYA	STAR	318.026	32.812		21.5	1.8	42.7	0.082	39.8	43.1	107.4	6.25	870401	45,56,72
13 49 16.0	03 25 48.0	AY VIR	STAR	336.607	62.042	<	4.8	1.6		0.329	-124.9	43.7		12.50	870326	50
14 04 04.0	13 43 18.0	Z BOO	STAR	358.763	67.787	*	7.2	1.5	48.4	0.165	48.0	48.7	5.3	6.25	880206	64,72
14 08 42.0	-28 38 24.0	RU HYA	STAR	323.379	30.795	*	15.2	2.5	-3.6	0.165	-4.1	-3.1	11.9	6.25	880207	56,64,72
14 21 56.6	25 55 48.0	RX BOO	STAR	34.279	69.213		173.0	1.8	2.4	0.041	1.7	4.7	301.1	12.50	870402	45,64,56,50,72,73
14 24 46.0	04 54 09.0	RS VIR	STAR	352.677	57.972		23.6	7.0	-13.8	0.165	-16.4	-13.3	53.4	6.25	880205	60,64,56,72
14 34 59.3	26 57 09.0	R BOO	STAR	38.070	66.468	<	6.8	2.3		0.329	-128.2	40.4		12.50	870613	47
15 06 00.2	09 47 43.0	IRAS15060+0947	IRAS	11.025	53.268		15.7	1.5	-13.5	0.165	-13.8	3.0	42.2	6.25	880708	73
15 09 02.4	-05 49 18.9	Y LIB	STAR	353.829	42.589		31.2	1.6	11.4	0.165	11.0	14.8	35.6	12.50	870331	47,50
15 16 59.0	14 40 24.0	S SER	STAR	20.349	53.372	<	6.9	2.3		0.165	-19.9	64.3		6.25	880206	25
15 19 20.0	14 29 12.0	S SER	STAR	20.493	52.780	*	7.5	1.0	21.2	0.165	20.3	22.2	17.2	6.25	880206	64,72
15 19 21.3	31 32 46.0	S CRB	STAR	49.473	57.174		34.8	3.1	1.7	0.082	0.1	4.5	57.0	12.50	870402	55,64,50,72,73
15 19 28.2	-18 29 19.0	IRC-20285	STAR	345.705	31.400	<	8.1	2.7		0.165	-44.7	39.5		6.25	880205	60
15 25 32.0	19 44 06.0	WX SER	STAR	29.512	53.476	*	11.1	1.4	8.2	0.165	7.6	8.8	20.7	6.25	880502	55,56,64,72
15 26 13.6	04 00 02.0	IRAS15262+0400	IRAS	8.105	45.840	<	10.7	3.6		0.165	3.3	87.5		6.25	880713	73
15 29 54.3	03 48 32.0	WW SER	STAR	8.652	44.985	<	7.1	2.4		0.329	-63.0	105.6		12.50	870617	50,60,73
15 48 23.0	15 17 06.0	R SER	STAR	26.236	46.762	<	9.6	3.2		0.165	-18.1	66.1		6.25	880205	64,72
15 52 46.7	-12 42 22.0	SW LIB	STAR	357.104	30.067	<	4.5	1.5		0.329	-102.2	66.4		12.50	870617	50,60
15 57 37.0	-12 12 30.0	FS LIB	STAR	358.441	29.523	*	7.5	0.7	-4.4	0.329	-6.4	-2.3	39.7	12.50	870617	50,60
16 21 07.7	30 57 56.0	IRAS16211+3057	IRAS	50.765	43.995	<	15.0	5.0		0.165	-2.4	81.8		6.25	880713	73
16 23 34.9	19 00 18.0	U HER	STAR	35.346	40.350		26.1	1.5	-14.5	0.165	-18.1	-14.1	37.4	12.50	870331	50,56,64,72,73
16 24 26.0	-24 32 52.9	YLW 16	IRAS	353.031	16.565	*	365.6	3.8	-15.2	0.165	-15.5	-14.9	268.3	6.25	880205	52
16 26 00.0	34 54 43.0	IRC+30292	STAR	56.374	43.530	<	9.1	3.0		0.165	2.5	86.7		6.25	880205	60,56,64,72,73
16 29 20.9	-24 22 15.9	IRAS16293-2422	IRAS	353.937	15.840		2270.0	7.8	6.8	0.165	-1.9	7.2	1808.0	6.25	880205	52
16 30 38.1	72 23 08.0	R UMI	STAR	105.013	36.238	<	6.6	2.2		0.165	-49.0	35.2		6.25	870611	50,60
16 32 31.2	66 51 28.0	R DRA	STAR	98.533	38.235	<	3.9	1.3		0.329	-203.8	-35.2		12.50	870615	47

TABLE II (*continued*)

α	δ	Name	Class	l_{II}	b_{II}	f_ν(Jy)	Δf_ν	v(km/s)	δv	v_{min}	v_{max}	$f_{(Jy\ km/s)}$	$\Delta\nu$	date	References
16 50 20.0	05 29 24.0	RX OPH	STAR	23.691	28.779	* 25.4	2.9	-47.5	0.165	-47.9	-47.1	18.7	6.25	880503	60
16 56 05.8	22 52 19.0	IRAS16560+2252	IRAS	43.095	34.454	< 14.9	5.0		0.165	-47.7	36.5		6.25	880713	73
17 05 03.8	17 14 14.0	IRAS17050+1714	IRAS	37.696	30.522	< 5.0	1.7		0.165	-119.3	-35.1		6.25	880709	73
17 11 55.8	08 59 25.0	IRC+10322	STAR	29.944	25.615	28.1	1.3	7.3	0.165	6.9	11.4	36.3	6.25	880209	60,64,72
17 12 18.9	11 07 30.0	V438 OPH	STAR	32.131	26.455	< 12.9	4.3		0.165	-33.4	50.8		6.25	880907	71,73
17 15 03.0	-11 56 21.0	RV SER	STAR	10.970	14.536	< 7.6	2.5		0.165	-42.3	41.9		6.25	880205	60
17 22 58.4	-03 01 21.9	AH OPH	STAR	19.954	17.503	< 11.9	4.0		0.165	10.5	94.7		6.25	880206	60
17 23 04.0	01 13 39.0	IRAS17230+0113	IRAS	23.873	19.568	* 9.5	1.4	-30.5	0.165	-30.9	-30.1	41.5	6.25	880708	73
17 25 39.9	05 04 42.0	1725+050 P08	STAR	27.818	20.809	< 7.6	2.5		0.329	-58.3	110.3		12.50	870616	50,73
17 40 15.4	-29 38 07.9	35914+0003	HII	359.139	0.026	138.7	3.2	-1.8	0.165	-11.0	6.1	472.6	6.25	880206	1
17 41 29.7	-29 27 13.1	35944-0011	HII	359.436	-0.107	< 8.5	2.8		0.165	-100.0	-18.0		6.25	880503	1
17 42 27.2	-29 04 38.9	35987-0009	HII	359.866	-0.086	< 19.2	6.4		0.165	-29.1	55.1		6.25	880504	38
17 42 29.9	-29 22 25.1	35962-0025	HII	359.619	-0.250	< 12.2	4.1		0.165	-29.1	55.1		6.25	880501	1
17 42 56.9	-28 44 04.9	00021+0000	HII	0.214	0.002	< 9.9	3.3		0.165	-18.6	65.7		6.25	880501	38
17 43 11.0	-28 34 40.0	00038+0004	HII	0.375	0.040	82.4	6.2	37.9	0.165	37.4	40.1	120.0	6.25	870331	1
17 43 19.2	-28 55 09.8	00010-0017	HII	0.100	-0.165	< 14.7	4.9		0.165	-42.1	42.1		6.25	880501	38
17 44 09.9	-28 21 59.9	SGR B2M	HII	0.668	-0.033	3422.0	35.2	65.8	0.165	21.7	74.9	6105.0	6.25	870616	2,3,4,5
17 44 10.3	-29 11 02.9	35997-0046	HII	359.972	-0.462	* 52.5	3.3	20.1	0.165	19.5	20.7	66.8	6.25	880503	1
17 47 03.4	-28 53 38.9	RCW 142	HII	0.547	-0.850	208.8	7.6	17.0	0.329	-5.0	81.8	1440.0	12.50	870322	7
17 47 28.3	-27 05 12.0	00214+0001	HII	2.142	0.007	< 15.4	5.1		0.165	19.9	104.1		6.25	870331	1
17 48 28.0	-08 00 41.9	IRC-10381	STAR	18.754	9.519	< 13.8	4.6		0.165	-61.8	22.4		6.25	880504	55,60
17 50 10.8	-26 56 00.0	00258-0043	STAR	2.584	-0.431	< 15.2	5.1		0.165	-48.2	36.0		6.25	880504	49
17 51 35.6	-25 34 19.0	00392-0001	HII	3.916	-0.008	< 14.6	4.9		0.165	-34.1	50.1		6.25	870331	8
17 52 53.7	11 44 12.0	IRAS17528+1144	IRAS	37.299	17.715	< 11.9	4.0		0.165	46.9	131.1		6.25	880907	73
17 54 05.9	-19 19 54.0	VV SGR	STAR	9.588	2.661	< 11.9	4.0		0.165	14.2	98.4		6.25	880504	60
17 54 11.3	11 10 30.0	RT OPH	STAR	36.909	17.188	< 11.0	3.7		0.165	-59.6	24.6		6.25	880504	60
17 57 26.8	-24 04 12.1	W28 A2(2)	HII	5.883	-0.394	101.8	3.8	8.8	0.165	8.6	20.8	95.2	12.50	870331	2,8,10,11,12
17 57 59.2	23 35 40.0	IRAS17579+2355	IRAS	49.353	21.334	* 14.2	0.8	2.6	0.165	1.8	3.3	27.8	6.25	880708	73
17 59 11.7	-22 28 13.0	00747+0006	HII	7.469	0.057	10.7	2.1	-16.6	0.165	-17.3	-13.4	36.6	6.25	870331	2
17 59 25.7	08 26 58.0	IRAS17594+0826	IRAS	34.943	14.838	< 13.0	4.3		0.165	-26.8	57.4		6.25	880907	73

TABLE II (*continued*)

α	δ	Name	Class	l_{II}	b_{II}		f_ν(Jy)	Δf_ν	v(km/s)	δv	v_{min}	v_{max}	f (Jy km/s)	$\Delta\nu$	date	References
18 00 00.2	-21 48 29.1	00814+0022	HII	8.137	0.224	<	19.7	6.6		0.082	-7.1	35.1		3.13	870402	2
18 00 57.9	-20 19 11.9	IRC-20424	STAR	9.540	0.769		6.8	1.4	-1.0	0.165	-1.5	21.0	23.9	6.25	880708	55,56,57,64,72
18 01 02.0	-24 27 49.9	M8	HII	5.949	-1.299	<	11.1	3.7		0.165	-31.1	53.1		6.25	870331	13
18 02 37.9	-21 13 59.9	IRC-20427	STAR	8.939	-0.022		14.8	2.0	-1.0	0.165	-1.5	20.9	68.7	6.25	880708	64,72
18 03 16.0	-20 32 01.0	00962+0019	HII	9.620	0.194	*	8.9	1.7	5.2	0.329	4.6	5.8	23.5	12.50	870322	8,14
18 03 21.5	-21 37 39.9	00868-0036	HII	8.679	-0.363	*	259.0	2.7	33.2	0.165	32.7	33.7	290.8	6.25	870402	8,14
18 03 59.3	-08 13 35.9	IRC-10395	STAR	20.460	6.063	*	21.3	1.2	20.1	0.165	19.6	20.6	28.7	6.25	890127	60
18 05 03.2	-22 14 05.9	VX SGR	STAR	8.343	-1.004		126.4	2.9	-1.3	0.165	-4.3	19.4	596.4	12.50	870328	50,56,64,72
18 05 18.0	-20 16 40.0	01008-0009	STAR	10.077	-0.095	<	6.6	2.2		0.329	-53.1	115.5		12.50	870621	49
18 05 40.0	-19 55 24.9	01043+0000	STAR	10.428	0.003	<	17.2	5.7		0.165	22.1	106.3		6.25	880907	49
18 05 40.4	-19 52 23.0	W31 (1)	HII	10.473	0.027		146.3	3.7	60.2	0.165	56.4	70.5	782.1	6.25	870402	2
18 06 42.2	-19 21 55.9	01103+0006	HII	11.034	0.063	*	22.3	1.7	11.8	0.329	10.5	13.1	68.1	12.50	870328	14,8
18 06 56.0	09 11 42.0	1806+091 P08	STAR	36.476	13.503	<	10.6	3.5		0.329	-110.4	58.2		12.50	870326	50,73
18 07 30.7	-19 56 37.9	W31 (2)	HII	10.622	-0.385		147.2	2.8	-0.5	0.165	-15.4	3.9	902.8	6.25	870331	2,8,15,16,18
18 07 37.0	34 45 45.0	1807+347 P08	STAR	61.473	23.165	<	10.1	3.4		0.165	-26.5	57.7		6.25	880504	50,73
18 07 56.3	-17 56 37.0	01242+0050	HII	12.419	0.501	<	12.4	4.1		0.165	-32.1	52.1		6.25	870402	19
18 08 56.2	-17 32 16.0	01289+0049	HII	12.889	0.490		41.7	4.1	31.6	0.165	29.6	31.8	61.9	6.25	870402	19
18 09 15.2	-18 42 25.0	01190-0014	HII	11.903	-0.143	<	11.6	3.9		0.165	-2.1	82.1		6.25	870402	8
18 09 15.6	-17 43 34.9	S40	HII	12.761	0.331	<	11.3	3.8		0.082	0.9	43.1		3.13	870619	19
18 09 43.7	-18 25 08.9	01221-0010	HII	12.209	-0.102		65.4	2.1	22.6	0.329	-7.7	33.9	768.0	12.50	870620	2,19,20
18 09 48.5	-18 25 24.9	01222-0012	HII	12.215	-0.120		69.9	3.2	26.7	0.165	-0.1	27.0	271.5	6.25	880504	2,8,59
18 10 59.2	-18 02 40.9	W33 B	HII	12.682	-0.182		92.7	5.0	61.1	0.165	55.6	61.5	251.9	12.50	870620	2,8,10,12,18,19
18 11 11.5	-17 29 12.9	01319+0005	HII	13.194	0.045	<	11.8	3.9		0.165	-63.0	21.3		6.25	870402	2,19
18 11 18.3	-17 56 21.1	W33 CONT.	HII	12.811	-0.197	*	7.1	1.6	33.7	0.165	32.6	34.7	24.3	6.25	870402	2,19
18 11 41.5	-16 46 33.9	01387+0028	HII	13.874	0.283		16.5	0.7	-26.3	0.165	-47.5	-25.8	94.2	6.25	891204	2,19
18 11 44.0	-17 53 09.1	W33 A	HII	12.906	-0.261	<	10.7	3.6		0.165	-4.1	80.1		6.25	870331	2,8,19,59
18 12 52.5	-16 39 58.9	01411+0009	HII	14.106	0.087	<	11.2	3.7		0.165	-34.1	50.1		6.25	870402	19
18 13 31.9	-16 41 03.0	01417-0006	HII	14.166	-0.059		88.2	3.2	48.2	0.165	34.1	62.3	362.0	6.25	870401	8,19
18 13 33.7	-14 56 10.9	01570+0077	STAR	15.703	0.774	<	5.4	1.8		0.329	-82.3	85.3		12.50	870621	49
18 13 53.2	-18 16 07.0	01282-0089	STAR	12.817	-0.894		15.3	2.0	-76.4	0.165	-76.9	-72.5	8.3	6.25	870617	49

TABLE II (*continued*)

α	δ	Name	Class	l_{II}	b_{II}	f_ν(Jy)	Δf_ν	v(km/s)	δv	v_{min}	v_{max}	f (Jy km/s)	$\Delta\nu$	date	References
18 13 55.5	-16 21 46.0	01449+0001	HII	14.494	0.012	< 12.6	4.2		0.165	-24.1	60.1		6.25	870402	19
18 13 56.1	-18 42 56.9	S39	HII	12.430	-1.118	* 18.5	1.5	-35.5	0.165	-36.7	-34.3	55.3	6.25	870402	19
18 14 08.0	-16 15 46.0	01460+0002	HII	14.605	0.016	41.6	2.4	20.8	0.329	17.9	25.2	102.2	12.50	870618	2,19
18 14 16.4	-16 27 20.0	01445-0010	HII	14.452	-0.105	* 11.0	1.9	37.0	0.329	36.4	37.6	39.6	12.50	870618	19
18 14 30.3	-17 23 21.9	01366-0060	HII	13.659	-0.602	49.2	2.7	51.2	0.329	43.5	51.6	135.0	12.50	870618	19
18 15 18.8	-16 50 47.1	01423-0051	HII	14.228	-0.511	* 11.0	1.3	33.6	0.329	32.5	34.7	17.7	12.50	870620	19
18 15 19.4	-13 46 30.0	M16 A	HII	16.927	0.955	77.4	2.1	-64.1	0.165	-65.2	-61.0	297.2	6.25	870402	22
18 15 59.9	-13 47 59.9	W37	HII	16.983	0.799	< 12.8	4.2		0.165	-17.1	67.1		6.25	870402	17
18 15 59.9	-16 49 05.9	01433-0064	HII	14.331	-0.642	* 12.1	3.6	22.8	0.165	22.4	23.2	13.2	6.25	870620	19
18 16 14.6	-20 48 40.9	HH 27-28	HH	10.847	-2.596	< 8.0	2.7		0.165	-115.1	-30.9		6.25	880708	37
18 16 21.2	-16 31 23.9	01463-0058	HII	14.631	-0.576	< 8.8	2.9		0.329	-58.3	110.3		12.50	870323	19
18 16 33.8	-13 42 23.9	M16 B	HII	17.131	0.723	< 5.4	1.8		0.165	-24.1	60.1		6.25	880708	22
18 17 29.2	-16 12 40.9	M17 (2,3,4)	HII	15.035	-0.666	* 11.1	2.2	14.3	0.165	13.8	14.9	14.4	6.25	870402	2,8,10,12,16,18,19,23
18 17 30.0	-16 16 02.9	M17 (1)	HII	14.987	-0.696	11.4	2.5	-0.3	0.165	-3.7	0.3	50.8	6.25	870611	2,19,23
18 17 35.1	-18 45 46.0	OH 12.8-1.9	STAR	12.801	-1.900	< 4.5	1.5		0.165	-52.1	32.1		6.25	880709	75
18 17 37.0	-16 03 39.9	M17 (5)	HII	15.182	-0.622	< 11.0	3.7		0.165	-10.2	60.5		6.25	870612	24
18 17 40.0	-16 03 01.0	M17 (6)	HII	15.197	-0.627	< 6.8	2.3		0.165	4.9	89.1		6.25	870615	19
18 18 17.7	-14 33 19.0	01658-0005	HII	16.584	-0.050	* 27.2	2.5	60.3	0.165	59.6	60.9	39.2	6.25	880907	8
18 18 21.3	-14 32 11.0	01661-0005	HII	16.608	-0.054	< 3.9	1.3		0.165	5.0	85.0		6.25	880907	8
18 20 27.9	-13 44 22.0	IRC-10414	HII	17.552	-0.126	46.5	2.6	41.0	0.165	32.2	48.7	132.6	6.25	870402	21,64,72
18 23 10.4	08 55 02.0	IRAS18231+0855	IRAS	38.036	9.786	< 12.4	4.1		0.165	-56.7	27.5		6.25	880907	73
18 24 28.4	-11 55 29.0	01961-0013	HII	19.613	-0.132	< 11.1	3.7		0.165	7.9	92.1		6.25	870402	14,39
18 24 50.0	-11 58 21.9	01961-0023	HII	19.612	-0.232	116.1	2.2	27.3	0.165	26.6	56.1	476.6	6.25	870331	2,8.10
18 25 09.8	-10 48 53.9	02067+0024	STAR	20.672	0.240	< 5.6	1.9		0.329	-10.7	157.9		12.50	870621	49
18 25 22.2	-11 30 29.9	02008-0013	HII	20.084	-0.130	< 8.4	2.8		0.165	-0.1	84.1		6.25	880907	39,43
18 25 26.2	-11 18 05.0	OH 20.2-0.1	STAR	20.274	-0.048	< 12.2	4.1		0.165	-29.1	55.1		6.25	880907	49,55
18 26 18.2	-10 54 14.9	02073-0005	HII	20.725	-0.049	< 12.4	4.1		0.165	-12.1	72.1		6.25	880907	39
18 26 24.2	-10 51 35.0	02078-0005	HII	20.776	-0.050	< 12.8	4.3		0.165	16.9	101.1		6.25	880907	39
18 26 56.9	-10 37 49.0	02104-0006	HII	21.041	-0.061	* 7.6	1.7	36.3	0.329	35.4	37.2	18.3	12.50	870613	39
18 27 04.6	03 26 08.0	IRAS18270+0326	IRAS	33.538	6.443	< 12.3	4.1		0.165	-80.5	3.7		6.25	880907	73

TABLE II (continued)

α	δ	Name	Class	l_{II}	b_{II}	f_ν(Jy)	Δf_ν	v(km/s)	δv	v_{min}	v_{max}	$f_{(Jy\ km/s)}$	$\Delta\nu$	date	References
18 27 21.5	01 13 20.0	SERPENS	HH	31.594	5.365	< 6.2	2.1		0.165	-2.1	82.1		6.25	890127	35,37
18 27 39.0	-14 31 03.9	01768-0203	STAR	17.684	-2.029	< 11.6	3.9		0.165	15.5	99.7		6.25	870401	49,74
18 28 16.1	-09 51 01.0	RCW 169	HII	21.882	0.017	* 11.8	1.9	25.1	0.329	24.2	26.0	74.1	12.50	870323	14,39
18 28 59.6	-09 24 31.0	02236+0006	HII,	22.356	0.065	22.2	5.2	89.0	0.165	85.6	89.6	114.4	6.25	870401	39
18 29 33.0	-10 35 52.9	02137-0061	HII	21.368	-0.611	< 11.3	3.8		0.165	10.9	95.1		6.25	870402	14
18 30 46.4	-11 59 08.0	02028-0152	STAR	20.280	-1.523	< 12.6	4.2		0.165	-62.4	21.8		6.25	880907	49
18 31 40.8	-07 57 16.9	02395+0016	HII	23.952	0.155	< 11.8	3.9		0.165	39.9	124.1		6.25	870402	2
18 31 55.5	-08 33 54.0	02344-0018	HII	23.440	-0.183	22.0	3.1	101.3	0.165	101.0	103.7	17.4	6.25	870402	8
18 31 56.2	-09 03 03.9	02301-0041	HII	23.011	-0.411	33.3	2.0	77.2	0.165	75.4	82.3	129.4	6.25	870331	8
18 33 22.7	-07 33 54.0	02449-0004	HII	24.493	-0.037	< 11.2	3.8		0.165	73.9	158.1		6.25	870402	14
18 33 25.4	-07 47 40.0	02429-0015	HII	24.294	-0.153	< 12.9	4.3		0.165	62.9	147.1		6.25	880907	14
18 33 30.2	-07 14 41.9	W42	HII	24.790	0.084	35.7	1.1	107.5	0.329	44.3	112.9	555.9	12.50	870322	2,8,10,14
18 34 51.3	-05 26 28.9	OH 26.5+0.6	STAR	26.544	0.623	< 12.5	4.2		0.165	-7.1	77.1		6.25	880907	49,55,74
18 34 59.0	10 23 00.0	IRC+10365	STAR	40.678	7.835	44.7	2.7	-42.7	0.165	-43.2	-40.6	50.6	6.25	880907	56,64,72
18 35 37.0	-06 52 24.0	W42(3A)	HII	25.363	-0.208	< 12.6	4.2		0.165	-35.5	48.7		6.25	880907	61
18 35 57.4	08 47 20.0	X OPH	STAR	39.350	6.905	< 11.9	4.0		0.165	-99.5	-15.3		6.25	880504	47
18 35 58.3	-05 51 51.0	02630+0018	STAR	26.298	0.181	< 13.1	4.4		0.165	-58.0	26.2		6.25	880907	49
18 37 32.0	05 10 23.0	IRAS18375+0510	IRAS	36.288	4.917	< 14.2	4.7		0.165	26.8	111.0		6.25	880907	73
18 38 33.0	-06 17 55.0	02621-0059	STAR	26.209	-0.588	< 6.1	2.0		0.329	-28.9	139.7		12.50	870621	49
18 39 31.2	-02 48 12.9	IRC+00364	STAR	29.421	0.811	* 14.8	1.5	63.7	0.165	62.1	65.2	48.1	6.25	880504	60
18 41 07.9	-03 38 40.9	02886+0007	HII	28.860	0.066	89.8	3.1	91.9	0.329	91.5	106.8	177.7	12.50	870322	8,14
18 41 17.0	13 54 30.0	IRC+10374	STAR	44.557	8.026	16.2	1.6	-20.5	0.165	-28.1	-19.5	40.0	6.25	880907	27
18 42 12.5	-03 49 12.9	02883-0025	HII	28.828	-0.253	< 12.9	4.3		0.165	42.9	127.1		6.25	880907	43
18 43 04.3	-02 38 20.0	02998+0010	HII	29.976	0.100	< 13.0	4.3		0.165	-93.1	-8.9		6.25	880907	39
18 43 09.8	-04 04 02.0	02872-0058	STAR	28.719	-0.578	8.4	1.0	57.8	0.165	30.2	59.1	49.5	6.25	880907	49,74
18 43 17.3	-01 49 59.9	OH 30.7+0.4	STAR	30.716	0.423	< 12.5	4.2		0.165	12.9	97.1		6.25	880907	55
18 43 24.6	-02 42 48.0	W43 S	HII	29.949	-0.009	* 65.2	2.5	96.7	0.165	96.0	97.3	94.4	6.25	870401	2,39
18 43 29.0	-02 45 42.0	02991-0005	HII	29.914	-0.048	* 10.8	1.4	35.0	0.329	34.2	35.8	28.1	12.50	870613	39
18 43 39.2	43 34 51.0	RW LYR	STAR	72.841	19.406	* 18.7	2.1	-21.3	0.165	-21.7	-20.9	16.8	6.25	880504	55,74
18 44 06.0	22 16 52.0	IRAS18441+2216	IRAS	52.495	11.072	< 13.6	4.5		0.165	-53.5	30.7		6.25	880907	73

TABLE II (*continued*)

α	δ	Name	Class	l_{II}	b_{II}	f_ν(Jy)	Δf_ν	v(km/s)	δv	v_{min}	v_{max}	$f_{(Jy\ km/s)}$	$\Delta\nu$	date	References
18 44 21.2	-02 01 14.9	03067+0010	HII	30.672	0.101	< 12.4	4.1		0.165	-94.1	-9.9		6.25	880907	39
18 44 24.9	-02 31 19.9	03023-0014	HII	30.234	-0.144	< 14.1	4.7		0.165	-39.1	45.1		6.25	880908	39
18 44 32.8	-02 39 00.0	03014-0023	STAR	30.136	-0.232	< 12.0	4.0		0.165	19.0	103.2		6.25	880908	49,64,72
18 44 38.7	-01 49 39.9	03088+0013	HII	30.877	0.125	< 12.0	4.0		0.165	-2.1	82.1		6.25	880908	39
18 44 43.7	-02 09 17.0	03060-0004	HII	30.596	-0.044	< 12.0	4.0		0.165	-2.1	82.1		6.25	880908	43
18 44 46.7	-01 49 04.9	03090+0010	HII	30.901	0.100	< 12.9	4.3		0.165	-18.1	66.1		6.25	880908	39
18 44 57.5	-01 46 19.0	03096+0008	HII	30.963	0.081	< 6.9	2.3		0.165	-5.0	85.0		6.25	880908	39
18 44 59.5	-01 16 07.0	03141+0031	HII	31.413	0.306	64.6	3.8	98.8	0.329	94.9	102.3	263.2	12.50	870322	2
18 45 02.8	-02 01 49.9	W43 (M2)	HII	30.743	-0.057	7.6	0.9	48.0	0.165	42.5	50.1	49.8	6.25	880908	2
18 45 03.3	-02 00 34.9	W43 (M1)	HII	30.763	-0.050	< 11.3	3.8		0.329	-24.3	144.3		12.50	870613	2,11,17,39
18 45 06.0	-01 40 48.0	03106+0009	HII	31.061	0.092	< 7.8	2.6		0.329	-87.3	81.3		12.50	870613	39
18 45 06.3	-01 48 31.0	W43 OH	HII	30.947	0.032	27.3	2.7	117.6	0.658	-59.0	128.2	73.4	25.00	881015	2,39
18 45 11.0	-01 57 57.0	W43 (M3)	HII	30.816	-0.058	207.2	3.2	99.5	0.165	78.3	120.5	793.8	6.25	870331	2,10,39
18 45 32.8	-02 00 17.0	W43 (M4)	HII	30.824	-0.156	* 6.2	0.8	94.8	0.165	92.2	97.3	33.5	6.25	880908	2,11,39,60
18 45 34.9	-01 48 35.0	03100-0007	HII	31.001	-0.074	< 3.6	1.2		0.165	31.9	116.1		6.25	891130	39
18 45 36.7	-01 29 12.0	03129+0007	HII	31.291	0.068	< 10.8	3.6		0.329	21.7	190.3		12.50	870322	8,14,39
18 46 03.9	-02 53 54.0	03009-0068	STAR	30.090	-0.683	< 12.5	4.2		0.165	44.9	129.1		6.25	880908	25,56,64,72
18 46 09.7	-01 36 38.0	03124-0011	HII	31.244	-0.111	3405.0	25.7	18.6	0.165	15.4	21.1	2444.0	6.25	870401	8,39
18 46 20.7	-01 40 10.0	03121-0018	HII	31.213	-0.179	< 13.0	4.3		0.165	-81.1	3.1		6.25	880908	6,8
18 46 20.7	-01 45 24.0	03114-0022	HII	31.136	-0.219	< 12.4	4.1		0.165	-77.1	7.1		6.25	880909	25
18 46 57.4	-01 32 32.9	03140-0026	HII	31.396	-0.256	* 24.6	2.1	93.6	0.165	93.0	94.2	30.5	6.25	880909	2
18 46 57.7	-00 41 29.9	03215+0013	HII	32.152	0.134	16.3	1.9	92.5	0.165	89.6	92.8	18.2	6.25	880908	14
18 47 02.0	-00 49 18.9	03204+0006	HII	32.045	0.058	52.6	3.9	95.3	0.165	92.6	95.5	142.8	6.25	870401	39
18 47 36.8	-00 49 52.9	03210-0008	HII	32.103	-0.075	< 8.0	2.7		0.329	-38.3	130.3		12.50	870613	39
18 47 57.2	-00 05 27.9	03280+0019	HII	32.799	0.190	10.4	1.6	16.4	0.165	11.7	16.9	23.0	6.25	880909	2
18 48 47.9	-00 15 45.9	03274-0008	HII	32.744	-0.076	* 83.2	3.7	32.9	0.165	32.5	33.2	66.2	6.25	870612	8,39
18 49 26.4	-01 30 17.9	03172-0079	STAR	31.715	-0.790	< 11.8	3.9		0.165	27.8	112.0		6.25	880908	49
18 49 33.7	00 07 18.0	OH 33.2-0.1	STAR	33.173	-0.069	< 12.8	4.3		0.165	34.4	118.6		6.25	880909	25,64,72
18 49 34.0	00 04 30.0	03313-0009	HII	33.132	-0.091	< 12.0	4.0		0.165	32.9	117.1		6.25	870331	2,8,12.25
18 49 48.0	-00 17 47.9	OH 32.8-0.3	STAR	32.829	-0.314	< 11.2	3.7		0.165	5.9	90.1		6.25	880908	25,40,56,64,72.74

TABLE II (*continued*)

α	δ	Name	Class	l_{II}	b_{II}	f_ν(Jy)	Δf_ν	v(km/s)	δv	v_{min}	v_{max}	f(Jy km/s)	$\Delta\nu$	date	References
18 50 16.3	00 51 45.0	03391+0012	HII	33.913	0.115	< 12.1	4.0		0.165	66.9	151.1		6.25	880909	2
18 50 46.4	01 11 10.0	W44	HII	34.258	0.152	671.8	14.1	54.1	0.329	39.2	64.5	2413.0	12.50	870322	2,8,16,17,59
18 51 09.0	00 37 59.0	03381-0019	HII	33.810	-0.186	< 10.5	3.5		0.165	-4.1	80.1		6.25	870622	14
18 51 29.5	01 57 43.0	03503+0035	HII	35.029	0.350	< 6.9	2.3		0.165	25.0	105.0		6.25	880908	8
18 52 03.5	10 14 09.0	IRAS18520+1014	IRAS	42.452	4.021	< 10.8	3.6		0.165	-13.1	71.1		6.25	880909	73
18 53 31.4	07 26 31.0	IRAS18535+0726	IRAS	40.130	2.420	< 12.6	4.2		0.165	-7.1	77.1		6.25	880908	73
18 53 33.9	07 49 45.0	S76 W	HII	40.479	2.589	15.2	3.9	-3.6	0.165	-5.3	-3.2	30.0	12.50	870622	27,40
18 53 47.0	07 49 26.0	S76 E	HII	40.499	2.538	101.7	3.5	31.7	0.165	24.1	39.3	301.5	6.25	880909	27,40
18 53 51.0	02 16 27.0	03558-0003	HII	35.577	-0.029	85.7	3.5	49.7	0.329	49.3	59.4	200.9	12.50	870322	2,8,12,59
18 54 04.4	03 02 46.0	IRAS18540+0302	IRAS	36.288	0.277	< 11.7	3.9		0.165	43.7	127.9		6.25	880908	73
18 54 57.5	09 05 37.0	IRAS18549+0905	IRAS	41.762	2.863	< 11.0	3.7		0.165	-32.7	51.5		6.25	880909	73
18 55 37.0	01 33 40.0	03515-0075	HII	35.148	-0.750	< 14.8	4.9		0.165	-7.1	77.1		6.25	880713	63
18 55 39.6	08 11 22.0	IRAS18556+0811	IRAS	41.038	2.294	< 12.2	4.1		0.165	1.8	86.0		6.25	880908	73
18 55 40.7	01 36 30.0	03520-0074	HII	35.197	-0.741	241.1	3.0	36.1	0.165	27.1	36.4	197.2	6.25	870401	6,8,63
18 56 03.9	06 38 49.0	03971+0150	STAR	39.713	1.495	< 12.0	4.0		0.165	-35.1	49.1		6.25	870331	49,74
18 56 47.2	00 03 14.0	IRAS18567+0003	IRAS	33.945	-1.703	< 8.6	2.9		0.165	-4.9	79.3		6.25	880909	73
18 59 12.7	01 09 13.0	W48	HII	35.201	-1.735	13.7	2.9	43.8	0.165	43.5	44.8	12.2	6.25	870331	2,8,59
19 01 45.7	04 12 27.0	IRAS19017+0412	IRAS	38.204	-0.889	< 13.2	4.4		0.165	56.5	140.7		6.25	880907	73
19 03 34.9	06 41 55.0	04062-0014	HII	40.622	-0.137	< 12.4	4.1		0.165	-7.1	77.1		6.25	870401	8,59
19 03 47.3	08 24 27.0	IRAS19037+0824	IRAS	42.159	0.610	< 13.5	4.5		0.165	-46.5	37.7		6.25	880907	73
19 03 57.5	08 09 10.0	R AQL	STAR	41.953	0.455	* 40.7	1.8	47.2	0.329	46.4	48.0	70.5	25.00	870622	45,56,72
19 04 21.0	10 09 51.0	IRAS19043+1009	IRAS	43.780	1.302	< 13.1	4.4		0.165	-7.3	76.9		6.25	880907	73
19 05 56.0	-22 19 12.0	IRC-20540	STAR	14.665	-13.615	< 9.9	3.3		0.165	-31.2	53.0		6.25	880712	56,64,72
19 06 08.5	10 41 53.0	IRAS19061+1041	IRAS	44.458	1.160	< 12.6	4.2		0.165	-7.1	77.1		6.25	880907	73
19 06 43.7	08 11 48.0	OH 42.3-0.2	STAR	42.311	-0.132	< 12.1	4.0		0.165	34.9	119.1		6.25	880907	49,55,73,74
19 06 55.8	09 16 16.0	IRAS19069+0916	IRAS	43.285	0.324	< 13.6	4.5		0.165	-30.9	53.3		6.25	880907	73
19 07 08.4	09 47 00.0	04376+0052	STAR	43.762	0.517	< 6.0	2.0		0.329	-85.3	83.3		12.50	870622	49,73
19 07 49.8	09 01 17.0	W49 N	HII	43.167	0.011	29980.0	534.1	10.2	0.165	-32.0	52.0	111000.0	6.25	880712	5,8
19 07 58.2	09 00 03.0	W49 S	HII	43.165	-0.029	1794.0	79.8	11.2	0.165	-32.0	52.0	14960.0	6.25	870331	2,8,12
19 08 47.0	03 23 21.0	IRAS19087+0323	IRAS	38.291	-2.820	< 12.7	4.2		0.165	-32.5	51.7		6.25	880907	73

TABLE II (*continued*)

α	δ	Name	Class	l_{II}	b_{II}	f_ν(Jy)	Δf_ν	v(km/s)	δv	v_{min}	v_{max}	$f_{(Jy\ km/s)}$	$\Delta\nu$	date	References
19 08 50.0	11 29 35.0	IRAS19088+1129	IRAS	45.469	0.945	< 12.8	4.3		0.165	-11.2	73.0		6.25	880907	73
19 09 31.2	09 30 51.0	OH 43.8-0.1	HII	43.798	-0.128	2199.0	8.3	42.3	0.082	34.2	49.1	2756.0	6.25	880910	2,8,25,59
19 10 40.7	41 12 56.0	RU LYR	STAR	72.516	13.895	< 8.8	2.9		0.165	-26.4	57.8		6.25	890127	47
19 11 00.2	10 45 42.0	04507+0013	HII	45.071	0.133	41.0	5.4	60.1	0.165	53.3	64.0	909.2	6.25	870401	2,8,26
19 11 41.8	15 11 42.0	IRAS19116+1511	IRAS	49.069	2.058	< 12.2	4.1		0.165	27.7	111.9		6.25	880908	73
19 11 46.0	11 07 03.0	K 47	HII	45.473	0.134	< 12.9	4.3		0.165	2.9	87.1		6.25	870401	2,8
19 11 50.0	11 07 47.0	04549+0013	HII	45.492	0.125	< 12.6	4.2		0.165	20.9	105.1		6.25	870401	14
19 11 56.8	11 03 33.0	04544+0007	HII	45.442	0.068	< 13.2	4.4		0.165	15.9	100.1		6.25	870401	2,8,26
19 12 02.6	11 04 23.0	04547+0005	HII	45.466	0.053	< 12.0	4.0		0.165	15.9	100.1		6.25	870401	8,9
19 13 26.0	21 31 12.0	1913+215 P09	STAR	54.867	4.642	< 1.6	0.6		0.329	-100.0	70.2		12.50	870622	48,50,73
19 16 01.9	07 55 04.0	IRAS19160+0755	IRAS	43.142	-2.297	< 12.4	4.1		0.165	9.9	94.1		6.25	880909	73
19 16 08.6	23 43 55.0	IRAS19161+2343	IRAS	57.124	5.116	< 11.1	3.7		0.165	-27.7	56.5		6.25	880908	73
19 18 13.0	13 49 44.0	04861+0002	HII	48.606	0.023	32.8	1.9	34.1	0.165	10.2	38.5	127.2	6.25	870401	2,8,12,59
19 18 40.9	03 15 12.0	IRAS19186+0315	IRAS	39.325	-5.069	< 12.4	4.1		0.165	-75.8	8.4		6.25	880909	73
19 19 13.2	09 22 12.0	04479-0231	STAR	44.795	-2.307	< 5.4	1.8		0.329	-169.0	-0.4		12.50	870623	49
19 20 53.2	14 20 47.0	W51 W	HII	49.369	-0.301	11.9	1.3	52.1	0.165	51.5	59.8	77.5	6.25	870620	2
19 21 22.4	14 25 13.0	W51 N	HII	49.490	-0.370	1398.0	56.4	55.7	0.658	-30.0	170.0	16590.0	25.00	870620	2,10,12
19 21 26.2	14 24 44.0	W51 M	HII	49.491	-0.387	2460.0	201.7	55.6	0.658	-30.0	170.0	18240.0	25.00	870621	2,4,5,8,10,12,14
19 24 19.5	71 35 15.0	YZ DRA	STAR	103.156	23.178	7.4	3.4	12.2	0.165	11.9	13.7	14.4	6.25	880502	60
19 25 34.0	21 23 53.0	K3-35	HII	56.095	2.096	< 7.3	2.4		0.165	-18.4	65.8		6.25	890127	58
19 28 51.4	29 23 34.0	IRAS19288+2923	IRAS	63.482	5.280	< 13.7	4.6		0.165	-65.1	19.1		6.25	880907	73
19 30 19.6	15 53 09.0	IRAS19303+1553	IRAS	51.815	-1.557	< 12.9	4.3		0.165	-47.9	36.3		6.25	880907	73
19 33 29.2	-00 33 32.9	IRC+00446	STAR	37.668	-10.122	* 15.5	1.8	-25.0	0.165	-25.5	-24.6	15.5	6.25	880909	60
19 34 25.9	00 16 22.0	IRAS19344+0016	IRAS	38.527	-9.942	< 19.6	6.5		0.165	90.4	174.6		6.25	880908	73
19 35 36.0	11 36 18.0	RT AQL	STAR	48.698	-4.763	* 21.8	1.3	-29.8	0.165	-30.2	-29.3	20.4	6.25	880708	56,64,72
19 38 00.0	15 12 00.0	1938+152 P09	IRAS	52.124	-3.504	< 12.3	4.1		0.165	-49.5	34.7		6.25	880908	48
19 38 00.0	15 24 00.0	1938+154 P09	IRAS	52.299	-3.406	< 12.4	4.2		0.165	11.0	95.2		6.25	880909	48
19 38 38.0	15 13 16.0	1938+152 P09	STAR	52.219	-3.627	< 12.1	4.0		0.165	-47.2	37.0		6.25	890128	50,73
19 38 46.0	15 27 12.0	1938+154 P09	STAR	52.437	-3.540	< 10.9	3.6		0.165	11.8	96.0		6.25	890128	50
19 41 04.2	23 36 42.0	05978+0006	HII	59.781	0.062	432.4	3.3	26.4	0.165	18.1	30.3	623.9	6.25	870401	21

TABLE II (*continued*)

α	δ	Name	Class	l_{II}	b_{II}	f_ν(Jy)	Δf_ν	v(km/s)	δv	v_{min}	v_{max}	$f_{(Jy\ km/s)}$	$\Delta\nu$	date	References
19 44 14.0	24 27 58.0	S87	HII	60.883	-0.131	< 7.9	2.6		0.329	-58.3	110.3		12.50	870323	27,40
19 44 40.0	25 05 00.0	S88	HII	61.465	0.098	< 10.4	3.5		0.082	8.9	51.1		3.13	880713	28
19 44 41.9	25 05 30.0	S88 B	HII	61.476	0.096	< 6.8	2.3		0.329	-74.2	94.4		12.50	870326	40
19 45 36.5	19 27 50.0	IRAS19456+1927	IRAS	56.731	-2.942	< 12.7	4.2		0.165	-120.3	-36.1		6.25	880908	73
19 46 00.0	22 12 00.0	1946+222 P09	IRAS	59.137	-1.631	< 11.8	3.9		0.165	-87.1	-2.9		6.25	880909	48
19 46 16.7	22 32 23.0	IRAS19462+2232	IRAS	59.462	-1.513	< 11.9	4.0		0.165	-37.6	46.6		6.25	880908	73
19 49 20.6	29 05 15.0	06544+0125	STAR	65.439	1.249	< 4.0	1.3		0.165	-72.1	12.1		6.25	870331	49,73
19 49 33.1	08 35 10.0	IRAS19495+0835	IRAS	47.755	-9.238	< 12.6	4.2		0.165	0.3	84.5		6.25	880909	73
19 49 57.7	21 41 43.0	IRAS19499+2141	IRAS	59.173	-2.678	< 11.6	3.9		0.165	-41.7	42.5		6.25	880908	73
19 50 53.9	26 59 52.0	IRAS19508+2659	IRAS	63.826	-0.123	< 12.9	4.3		0.165	-47.5	36.7		6.25	880909	73
19 52 00.0	27 54 00.0	1952+279 P09	IRAS	64.724	0.135	< 11.6	3.9		0.165	-55.7	28.5		6.25	880908	48
19 52 15.4	19 35 44.9	IRAS19522+1935	IRAS	57.648	-4.220	< 12.5	4.2		0.165	12.3	96.5		6.25	880909	73
19 52 49.9	-29 19 23.9	RR SGR	STAR	11.840	-25.988	< 17.7	5.9		0.165	42.9	127.1		6.25	890128	64,72
19 53 41.7	32 37 32.9	V468 CYG	STAR	68.951	2.283	* 15.2	2.2	-45.3	0.165	-45.5	-45.1	8.5	6.25	890127	60
19 55 00.1	-02 01 33.9	RR AQL	STAR	38.913	-15.561	61.7	3.7	31.3	0.165	27.7	31.6	139.1	6.25	870612	45,56,64,72
19 56 38.0	34 23 20.0	IRAS1956+3423	IRAS	70.775	2.685	* 23.1	2.4	-41.3	0.165	-41.5	-41.1	11.1	6.25	880713	51
19 59 50.0	33 24 17.0	K3-50	HII	70.292	1.600	11.2	0.8	-19.4	0.165	-35.7	-18.3	23.4	6.25	870614	2
19 59 58.4	33 25 47.0	ON 3	HII	70.329	1.589	< 8.5	2.8		0.082	-40.1	2.1		3.13	870614	2
20 00 02.0	49 54 10.0	Z CYG	STAR	84.441	10.231	* 26.8	1.9	-147.8	0.165	-148.2	-147.5	21.6	6.25	880713	55,56,64,72
20 04 44.7	12 48 18.0	SY AQL	STAR	53.366	-10.309	* 29.8	2.4	-47.9	0.165	-48.3	-47.4	30.7	6.25	880713	55,56,64,72
20 08 09.9	31 22 42.0	ON 1	HII	69.540	-0.975	104.6	3.6	15.1	0.329	-70.5	16.9	318.5	25.00	870904	2,4,5,18
20 09 46.3	11 07 48.0	IRAS20097+1107	IRAS	52.563	-12.231	< 12.7	4.2		0.165	-70.3	13.9		6.25	880908	73
20 11 21.0	49 17 54.0	AC CYG	STAR	84.900	8.355	< 9.3	3.1		0.165	-83.6	0.6		6.25	880910	71
20 13 44.0	28 38 36.0	IRAS20137+2838	IRAS	67.931	-3.495	< 11.8	3.9		0.165	-110.0	-25.8		6.25	880908	73
20 14 27.5	35 26 47.0	IRAS2014+3526	IRAS	73.652	0.195	* 13.2	2.4	-76.6	0.329	-76.9	-76.2	9.9	12.50	871106	51
20 17 05.9	27 32 42.0	IRAS20171+2732	IRAS	67.437	-4.725	< 12.9	4.3		0.165	7.1	91.3		6.25	880909	73
20 19 48.9	37 15 52.0	ON 2 S	HII	75.760	0.340	86.3	2.6	2.7	0.082	-9.4	3.2	81.0	6.25	870904	2,4,11,18
20 19 51.8	37 17 01.0	ON 2 N	HII	75.782	0.343	266.1	2.3	2.4	0.329	-1.0	2.8	316.9	12.50	870322	2,4,11,12
20 24 06.0	38 11 17.9	KY CYG	STAR	77.004	0.183	* 48.5	2.5	-12.0	0.165	-12.3	-11.7	28.8	6.25	880504	64,72
20 24 41.0	28 13 58.0	IRAS20246+2813	IRAS	68.965	-5.708	< 12.0	4.0		0.165	-35.1	49.1		6.25	880908	73

TABLE II (*continued*)

α	δ	Name	Class	l_{II}	b_{II}	f_ν(Jy)	Δf_ν	v(km/s)	δv	v_{min}	v_{max}	$f_{(Jy\ km/s)}$	$\Delta\nu$	date	References
20 25 32.8	37 12 54.0	S106	HII	76.382	-0.618	< 12.2	4.1		0.165	-54.1	30.1		6.25	890127	22,24,28,29,70
20 27 36.0	40 01 16.0	GL 2591	HII	78.887	0.709	28.4	1.7	-8.8	0.165	-25.5	4.5	158.8	6.25	870331	18,26,30
20 35 04.0	59 54 56.0	V778CYG	STAR	95.762	11.509	< 8.8	2.9		0.165	-59.0	25.2		6.25	880908	67
20 36 21.0	34 01 46.0	IRAS20363+3401	IRAS	75.136	-4.280	< 12.8	4.3		0.165	-27.9	56.3		6.25	880908	73
20 36 50.5	42 27 01.0	W75 N	HII	81.872	0.780	792.4	8.9	12.3	0.082	-3.4	25.4	759.8	12.50	870322	2,11,12,17
20 37 13.3	42 13 57.0	W75 S(1)	HII	81.743	0.591	22.5	1.7	0.5	0.082	-8.0	0.9	60.8	3.12	880714	2,11
20 37 13.7	42 08 52.0	DR 21 S	HII	81.677	0.538	< 5.8	1.6		0.165	-45.0	35.0		6.25	870331	2
20 37 13.7	42 12 11.0	W75 OH	HII	81.720	0.572	133.9	3.8	-2.3	0.329	-14.2	6.6	303.6	12.50	870322	2,4,11,18
20 37 16.6	42 15 15.0	W75 S(3)	HII	81.766	0.596	107.7	10.9	-1.3	0.082	-2.2	-0.5	134.2	3.12	870614	2
20 40 18.2	31 43 41.0	IRAS20403+3143	IRAS	73.813	-6.343	< 11.5	3.8		0.165	-68.1	16.1		6.25	880908	73
20 44 18.0	02 15 12.0	V AQR	STAR	49.338	-24.181	< 11.5	3.8		0.165	-70.3	13.9		6.25	880908	71
20 44 33.8	39 55 57.0	NML CYG	STAR	80.798	-1.921	32.2	1.2	-18.5	0.329	-21.1	5.1	217.5	12.50	870326	50,56,64,72
20 45 23.0	67 46 36.1	PV CEPHEI	HII	102.973	15.232	< 12.3	4.1		0.165	-47.1	37.1		6.25	870612	44,68
20 48 17.1	33 25 17.0	IRAS20482+3325	IRAS	76.200	-6.605	< 12.2	4.1		0.165	3.8	88.0		6.25	880909	73
20 48 54.0	44 11 15.0	PELICAN	HII	84.599	0.154	< 9.6	3.2		0.165	-45.7	38.5		6.25	890130	65
20 49 08.4	42 35 27.0	08340-0090	STAR	83.399	-0.900	< 5.2	1.7		0.165	-97.1	-12.9		6.25	880709	74
20 53 00.2	30 13 20.0	UX CYG	STAR	74.344	-9.409	24.8	1.4	-2.7	0.165	-6.8	7.8	94.2	6.25	880504	55,56,64,72,74
20 54 44.9	02 47 10.0	U EQU	IRAS	51.364	-26.112	< 8.3	2.8		0.165	-117.1	-32.9		6.25	890130	51
20 57 06.2	44 03 45.7	V1057CYG	STAR	85.459	-1.047	< 7.8	2.6		0.165	-40.1	44.1		6.25	870330	68
21 12 01.4	07 36 05.0	IRAS21120+0736	IRAS	58.518	-26.958	< 13.0	4.3		0.165	-17.6	66.6		6.25	880908	73
21 17 25.4	17 47 49.0	IRAS21174+1747	IRAS	68.202	-21.674	< 12.3	4.1		0.165	-121.1	-36.9		6.25	880908	73
21 28 38.0	10 56 18.0	UU PEG	STAR	64.324	-28.159	< 11.9	4.0		0.165	-20.1	64.1		6.25	880504	64,72
21 29 01.2	55 35 57.0	S128	HII	97.315	3.283	< 8.1	2.7		0.329	-151.3	17.3		12.50	870613	42
21 29 18.7	55 35 40.0	09734+0325	HII	97.342	3.251	< 5.9	2.0		0.329	-154.3	14.3		12.50	870613	42
21 30 37.0	55 40 36.0	09753+0319	HII	97.533	3.186	187.8	3.2	-70.8	0.082	-88.7	-68.3	564.5	12.50	880714	42,66
21 30 38.5	55 39 37.0	09753+0317	HII	97.525	3.172	69.7	1.9	-71.0	0.165	-75.2	-70.5	151.4	6.25	890128	42,66
21 38 10.6	50 00 42.0	GL 2789	HII	94.606	-1.796	43.5	1.0	-46.1	0.165	-50.5	-43.0	75.5	6.25	890129	21,68
21 41 28.9	76 09 27.0	AM CEP	STAR	112.449	17.556	* 59.5	2.3	-50.3	0.165	-50.7	-49.9	60.9	6.25	890129	60
21 41 48.7	65 52 02.0	BFS 11-A	HII	105.395	9.874	< 6.0	2.0		0.329	-92.3	76.3		12.50	870613	42
21 41 51.0	65 49 39.0	HH 32-35[1]	HH	105.371	9.842	* 15.1	1.4	-2.5	0.165	-3.0	-2.0	15.4	6.25	880503	37,69

TABLE II (continued)

α	δ	Name	Class	l_{II}	b_{II}	f_ν(Jy)	Δf_ν	v(km/s)	δv	v_{min}	v_{max}	$f_{(Jy\ km/s)}$	$\Delta\nu$	date	References
21 41 54.9	65 52 10.0	BS40[2]	HII	105.404	9.869	31.1	1.5	-31.2	0.165	-31.5	-16.6	32.9	6.25	880503	69
21 41 57.0	65 53 10.0	BFS 11-B	HII	105.418	9.879	* 10.1	1.9	-14.9	0.329	-15.3	-14.6	3.8	12.50	870613	37,42,68,69,70
21 43 14.0	47 19 15.0	HHL-73	HH	93.486	-4.382	< 5.8	1.9		0.329	-86.3	82.3		12.50	871106	53
21 51 16.7	56 25 41.0	IRAS21512+5625	HII	100.215	1.882	< 8.1	2.7		0.165	-92.1	-7.9		6.25	880501	43
21 51 57.7	56 13 41.0	IRAS21519+5613	HII	100.165	1.667	< 7.2	2.4		0.165	-105.1	-20.9		6.25	880503	43
21 52 42.9	57 27 00.0	BFS 10	HII	101.003	2.563	* 8.9	1.9	-70.3	0.329	-70.6	-70.0	6.3	12.50	870613	42
21 54 11.9	55 58 41.9	IRAS21542+5558	HII	100.257	1.278	< 7.6	2.5		0.165	-89.1	-4.9		6.25	880501	43
21 55 48.4	59 07 35.9	IRAS21558+5907	HII	102.355	3.637	* 18.5	1.9	-89.6	0.165	-89.8	-89.3	8.8	6.25	880503	43
21 56 05.9	58 06 44.9	IRAS21561+5806	HII	101.767	2.809	< 7.4	2.5		0.165	-112.1	-27.9		6.25	880501	43
22 01 41.0	28 06 30.0	TW PEG	STAR	83.779	-21.512	< 10.3	3.4		0.165	-49.9	34.3		6.25	880504	56,64,72
22 03 31.0	35 06 17.0	SV PEG	STAR	88.714	-16.285	< 6.7	2.2		0.329	-79.3	89.3		12.50	870614	50,64,72
22 13 22.7	58 34 13.0	IRAS22134+5834	HII	103.876	1.858	< 7.8	2.6		0.165	-54.1	30.1		6.25	880502	43
22 14 14.5	52 06 32.9	IRAS22142+5206	HII	100.381	-3.579	61.5	1.4	-20.5	0.165	-38.7	-19.9	146.8	6.25	880503	43
22 14 31.0	35 06 39.0	SV PEG	STAR	90.610	-17.622	< 10.2	3.4		0.165	-40.2	44.0		6.25	880504	56
22 17 17.7	55 49 40.0	IRAS22172+5549	HII	102.805	-0.722	< 9.4	3.1		0.165	-87.1	-2.9		6.25	880909	43
22 17 41.2	63 03 43.0	S140	HII	106.800	5.312	27.4	1.4	5.4	0.165	-15.5	5.7	25.8	12.50	870327	14,18,24,70
22 17 42.8	59 36 16.0	10491+0241	STAR	104.912	2.413	< 6.5	2.2		0.329	-100.2	68.4		12.50	870614	49,74
22 18 07.0	57 16 35.0	IRAS22181+5716	HII	103.689	0.431	< 10.0	3.3		0.165	-103.1	-18.9		6.25	880909	43
22 18 57.0	57 19 09.0	IRAS22189+5719	HII	103.807	0.406	< 10.7	3.6		0.165	-102.1	-17.9		6.25	880909	43
22 27 46.3	45 34 46.0	IRC+50434	STAR	98.728	-10.278	< 6.8	2.3		0.165	18.4	102.6		6.25	880504	60
22 30 31.1	58 03 30.0	IRAS22305+5803	HII	105.511	0.228	* 26.2	2.2	-53.0	0.165	-53.5	-52.6	20.0	6.25	880909	43
22 30 52.9	58 12 53.0	IRAS22308+5812	HII	105.631	0.339	< 11.2	3.7		0.165	-91.1	-6.9		6.25	880909	43
22 36 29.1	58 18 42.0	IRAS22365+5818	HII	106.319	0.059	< 11.0	3.7		0.165	-96.1	-11.9		6.25	880909	43
22 40 17.3	10 45 07.0	IRAS22402+1045	IRAS	79.341	-40.723	< 12.8	4.3		0.165	-147.2	-63.0		6.25	880908	73
22 47 31.0	59 39 43.0	S146	HII	108.206	0.589	* 11.4	1.4	-54.4	0.165	-54.7	-54.0	10.9	6.25	870331	28,40
22 50 37.0	59 44 50.0	10860+0049	IRAS	108.595	0.492	288.8	1.6	-48.3	0.082	-60.6	-41.8	433.7	6.25	880205	41
22 51 40.4	08 38 10.0	IRC+10523	STAR	80.577	-44.116	< 12.4	4.1		0.165	-43.9	40.3		6.25	880504	27,60,73
22 52 31.0	60 33 18.0	MY CEP	STAR	109.159	1.116	7.4	1.5	-47.0	0.165	-63.6	-46.6	38.8	6.25	880909	25,64,72
22 52 49.6	59 36 40.0	10879+0025	IRAS	108.787	0.248	< 5.6	1.9		0.329	-131.3	37.3		12.50	870613	41
22 53 56.0	57 58 48.0	10822-0129	IRAS	108.216	-1.287	< 11.9	4.0		0.165	-78.1	6.1		6.25	880909	41

TABLE II (*continued*)

α	δ	Name	Class	l_{II}	b_{II}	f_ν(Jy)	Δf_ν	v(km/s)	δv	v_{min}	v_{max}	f(Jy km/s)	$\Delta\nu$	date	References
22 54 18.9	61 45 44.0	CEP A	HII	109.873	2.114	327.1	4.7	-10.8	0.165	-11.3	13.9	534.3	12.50	880205	21,22,37,70
22 55 38.2	58 33 08.0	S152 (AS501)	STAR	108.662	-0.863	16.9	1.4	-52.4	0.165	-58.3	-51.6	43.9	6.25	870331	14,18,26,40,46
22 56 38.3	58 31 40.0	10877-0094	IRAS	108.770	-0.941	29.8	2.4	-46.6	0.329	-59.3	-46.3	57.4	12.50	870613	41
22 56 42.7	58 29 06.0	10876-0098	IRAS	108.761	-0.983	* 9.4	1.8	-59.6	0.165	-60.1	-59.2	9.2	12.50	870331	41
23 00 23.6	56 41 14.0	IRAS23004+5642	HII	108.470	-2.825	32.5	2.9	-50.4	0.165	-52.3	-50.1	29.5	6.25	880207	43
23 01 10.0	61 26 11.0	11048+0148	IRAS	110.480	1.480	< 11.4	3.8		0.165	-38.1	46.1		6.25	880909	41
23 03 16.9	59 37 40.0	11000-0028	IRAS	109.997	-0.283	< 6.3	2.1		0.329	-136.3	32.3		12.50	870613	41
23 03 19.7	59 51 55.0	11010-0007	IRAS	110.096	-0.067	< 4.4	1.5		0.329	-137.3	31.3		12.50	870617	41
23 03 46.7	62 13 59.0	11108+0209	IRAS	111.080	2.088	< 6.7	2.2		0.329	-98.3	70.3		12.50	870614	41
23 04 08.0	10 16 24.0	R PEG	STAR	85.405	-44.559	< 13.3	4.4		0.165	-18.1	66.1		6.25	880207	56,64,72
23 11 36.0	61 11 49.0	S158	HII	111.544	0.777	126.4	1.8	-60.0	0.165	-81.8	-46.2	208.7	6.25	881013	2,4,17
23 11 36.1	61 10 30.0	S158	HII	111.536	0.757	52.4	2.6	-54.9	0.329	-68.8	-54.2	162.1	12.50	870322	2,4,11,12,18,31
23 13 53.0	59 45 18.0	S157	HII	111.284	-0.669	6.8	0.8	-44.0	0.165	-45.6	-43.6	7.1	6.25	870401	2
23 13 58.3	59 39 06.0	11126-0077	IRAS	111.257	-0.769	55.5	2.4	-55.1	0.165	-55.4	-39.3	189.4	6.25	870612	41
23 15 08.6	59 12 25.0	IRAS2315+5912	IRAS	111.238	-1.238	* 28.3	2.0	-53.7	0.165	-54.3	-53.1	37.0	6.25	880909	41,51
23 17 22.0	26 00 18.0	W PEG	STAR	98.576	-32.223	< 6.5	2.2		0.329	-100.3	67.3		12.50	870614	47,50
23 17 41.0	46 58 00.0	EU AND	STAR	107.247	-12.828	< 6.6	2.2		0.165	-71.5	12.7		6.25	880909	62
23 18 13.0	39 20 48.0	RY AND	STAR	104.493	-19.976	< 11.4	3.8		0.165	-41.1	43.1		6.25	880207	60
23 21 15.0	39 27 12.0	BU AND	STAR	105.115	-20.087	< 10.2	3.4		0.165	-45.8	38.4		6.25	890127	60
23 25 00.9	58 38 13.0	11225-0220	IRAS	112.247	-2.203	< 6.2	2.1		0.329	-110.3	58.3		12.50	870613	41
23 31 14.0	06 01 22.0	IRC+10537	STAR	90.758	-51.655	< 16.7	5.6		0.082	-40.0	2.2		3.13	880205	60
23 31 24.8	60 33 55.0	IRAS23314+6033	HII	113.609	-0.615	< 11.8	3.9		0.165	-92.1	-7.9		6.25	880909	43
23 38 30.2	60 53 41.0	IRAS23385+6053	HII	114.534	-0.544	< 11.3	3.8		0.165	-96.1	-11.9		6.25	880909	43
23 41 40.9	61 31 00.0	PZ CAS	STAR	115.066	-0.044	< 12.6	4.2		0.165	-88.7	-4.5		6.25	880909	56,64,72
23 42 33.0	43 38 47.0	EY AND	STAR	110.486	-17.337	< 10.1	3.4		0.165	-84.8	-0.6		6.25	880908	60
23 49 36.0	61 31 31.0	IRC+60427	STAR	115.984	-0.265	< 12.2	4.1		0.165	-63.2	21.0		6.25	880909	60
23 49 41.6	66 18 09.1	IRC+70202	STAR	117.082	4.385	< 12.9	4.3		0.165	-102.6	-18.4		6.25	880207	60
23 52 50.0	48 21 36.0	RS AND	STAR	113.471	-13.200	< 7.5	2.5		0.165	-39.6	44.6		6.25	880908	71
23 55 53.0	51 06 36.0	R CAS	STAR	114.566	-10.620	* 66.2	2.6	27.3	0.165	27.0	27.7	53.9	6.25	870910	55,64,72

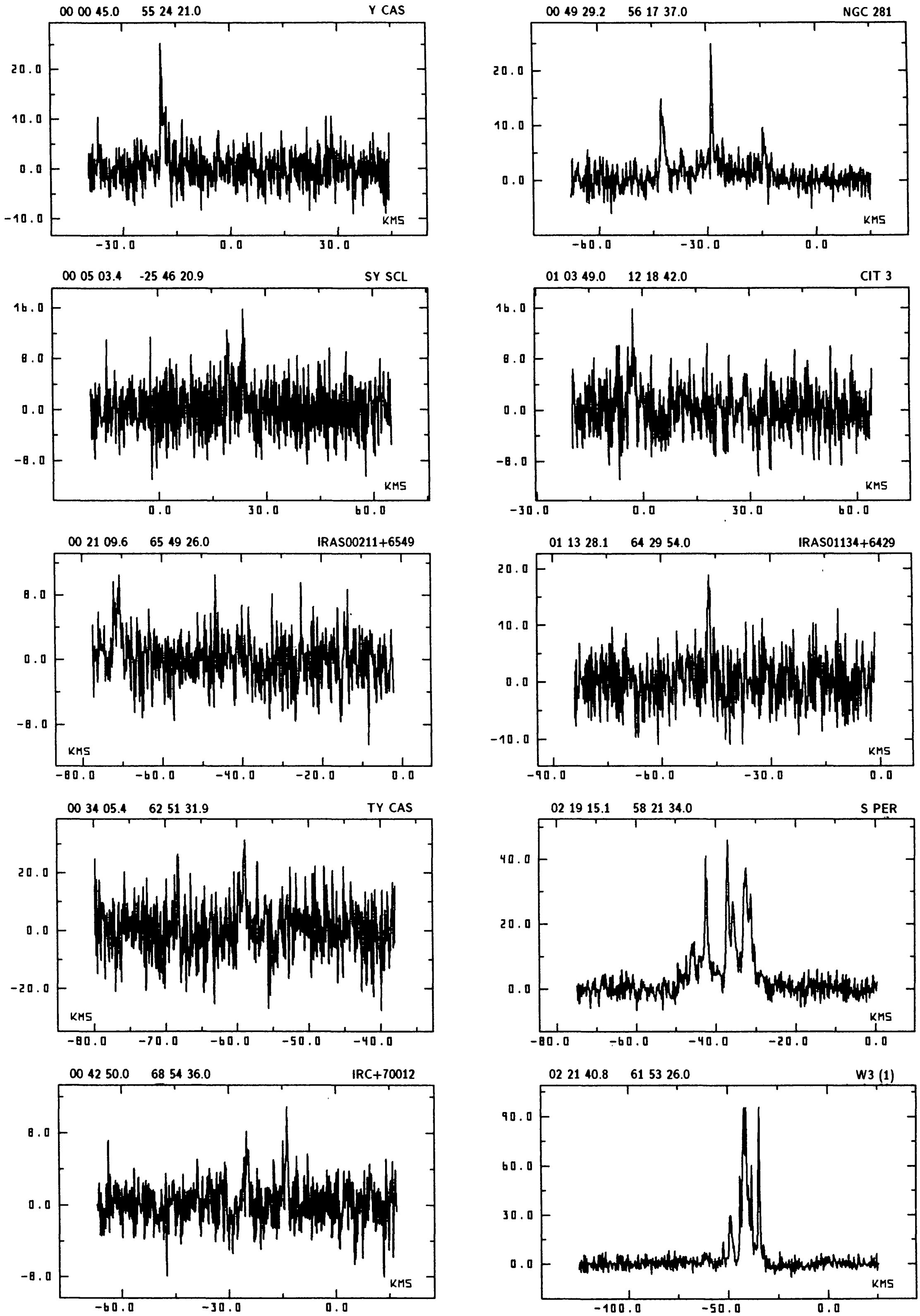


FIGURE 1. — Spectra of all the detected sources. The horizontal scale is the velocity with respect to the LSR in km s^{-1}. The vertical scale is the flux density in Jy. The coordinates and the names given on top of each spectrum are those of columns 1, 2 and 3 of Table II.

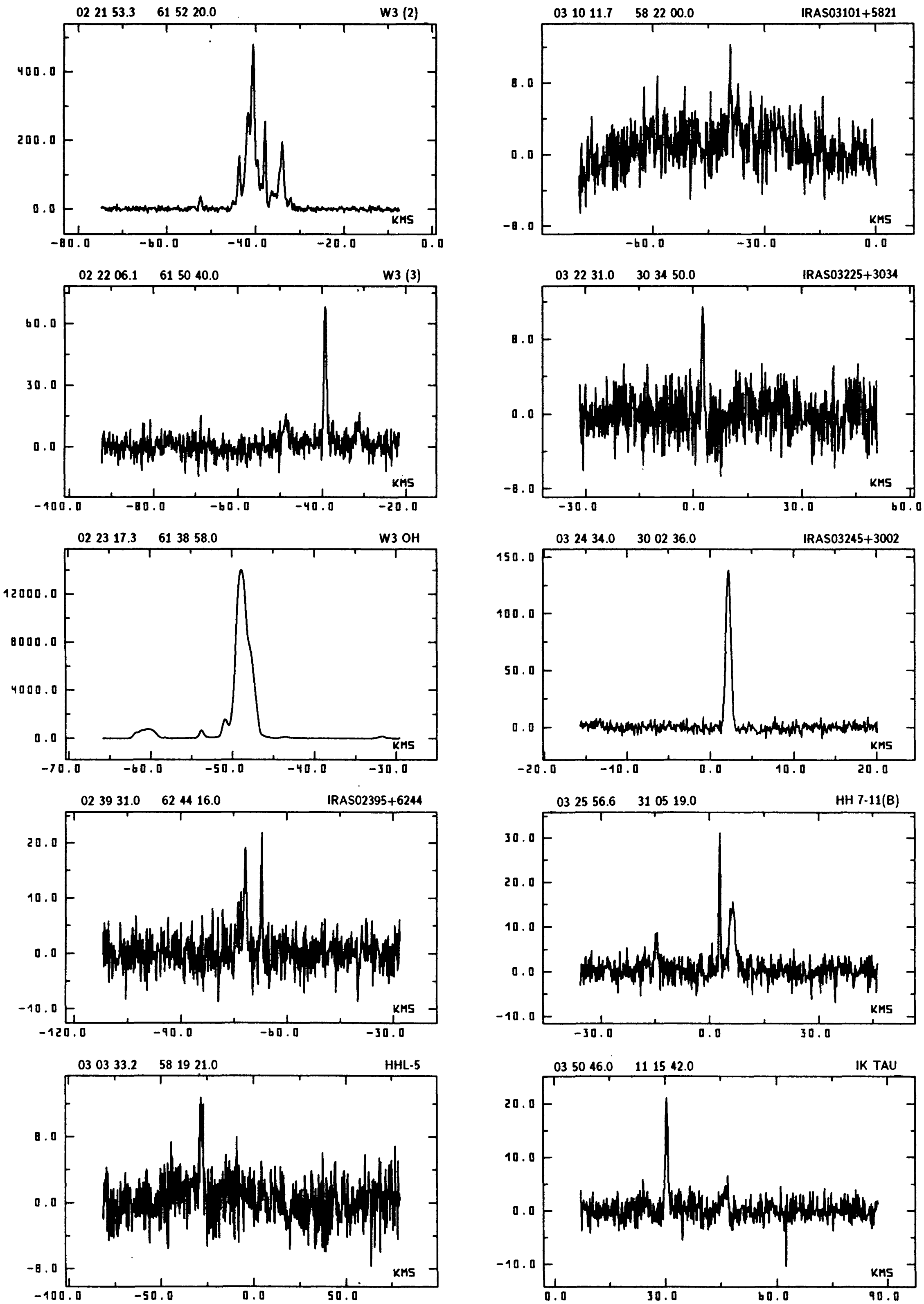


FIGURE 1 (*continued*)

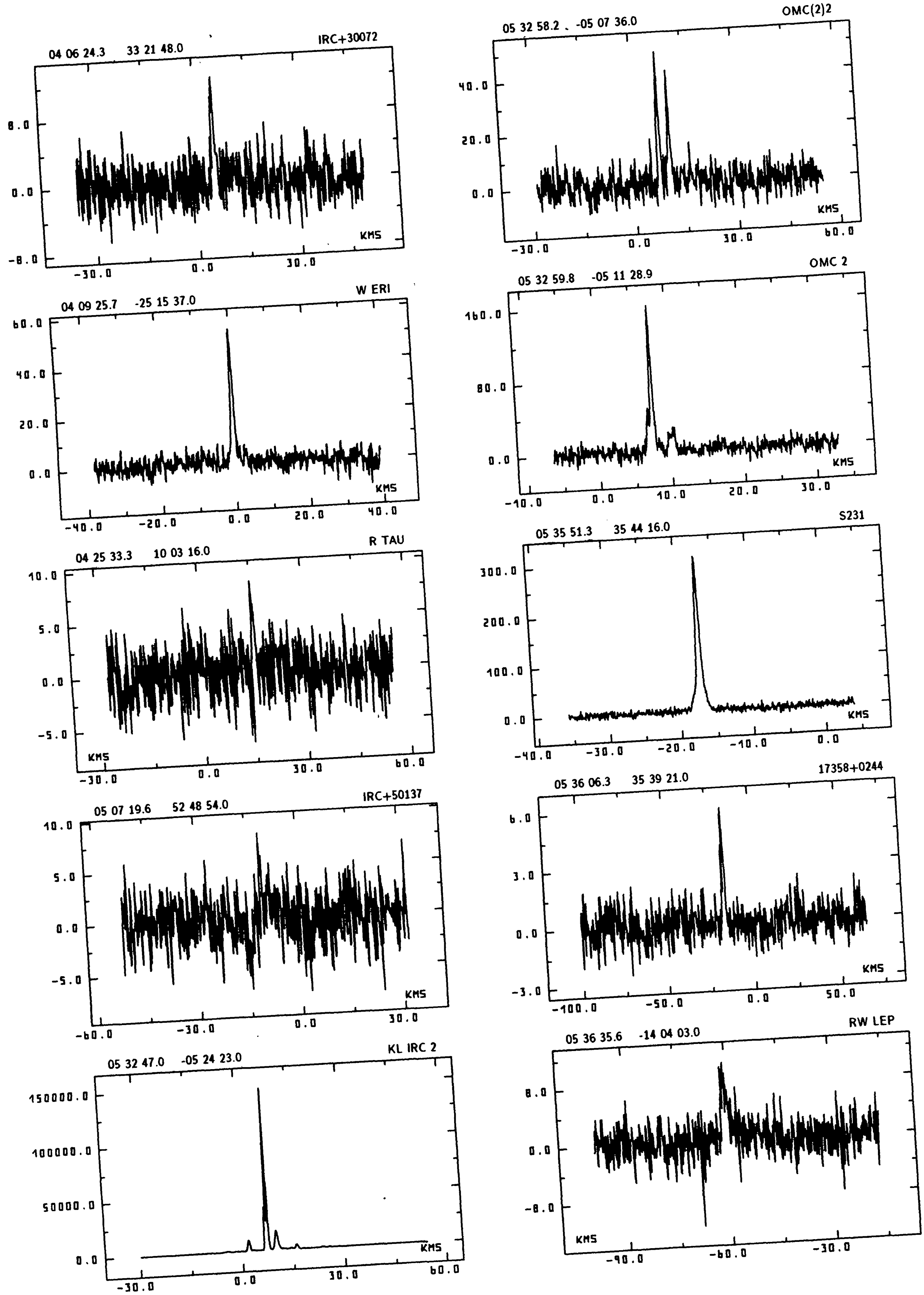


FIGURE 1 (continued)

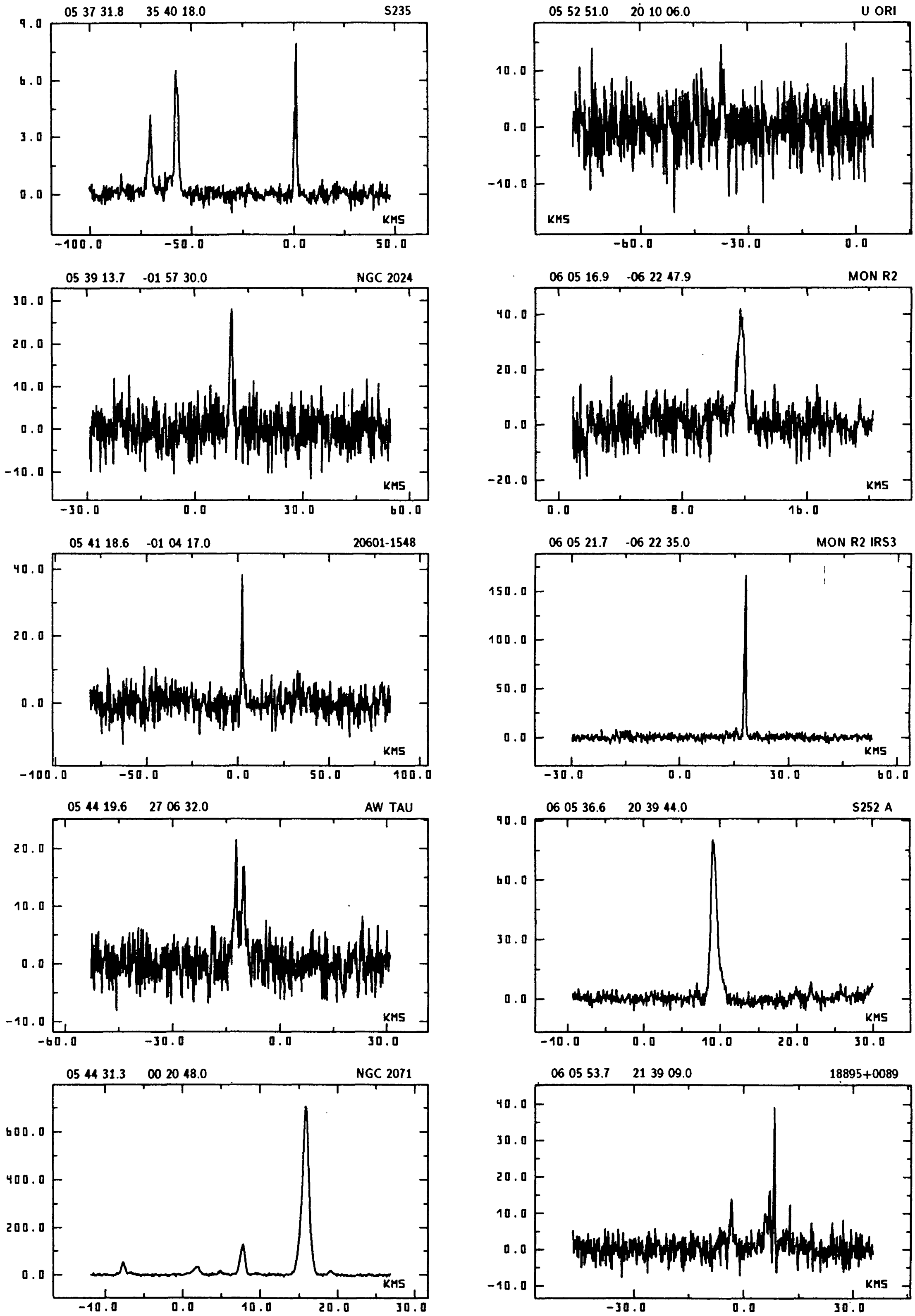


FIGURE 1 *(continued)*

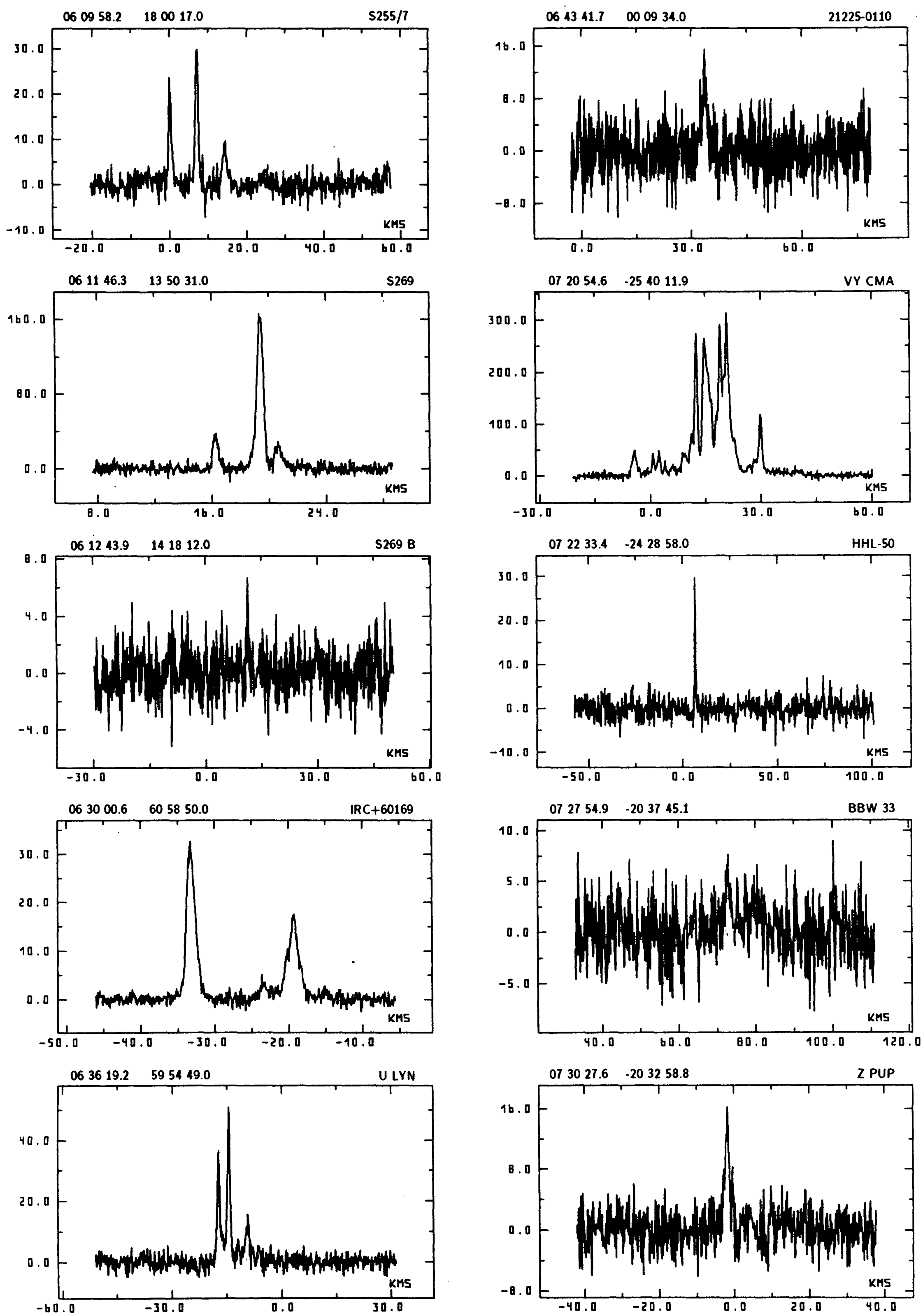


FIGURE 1 (*continued*)

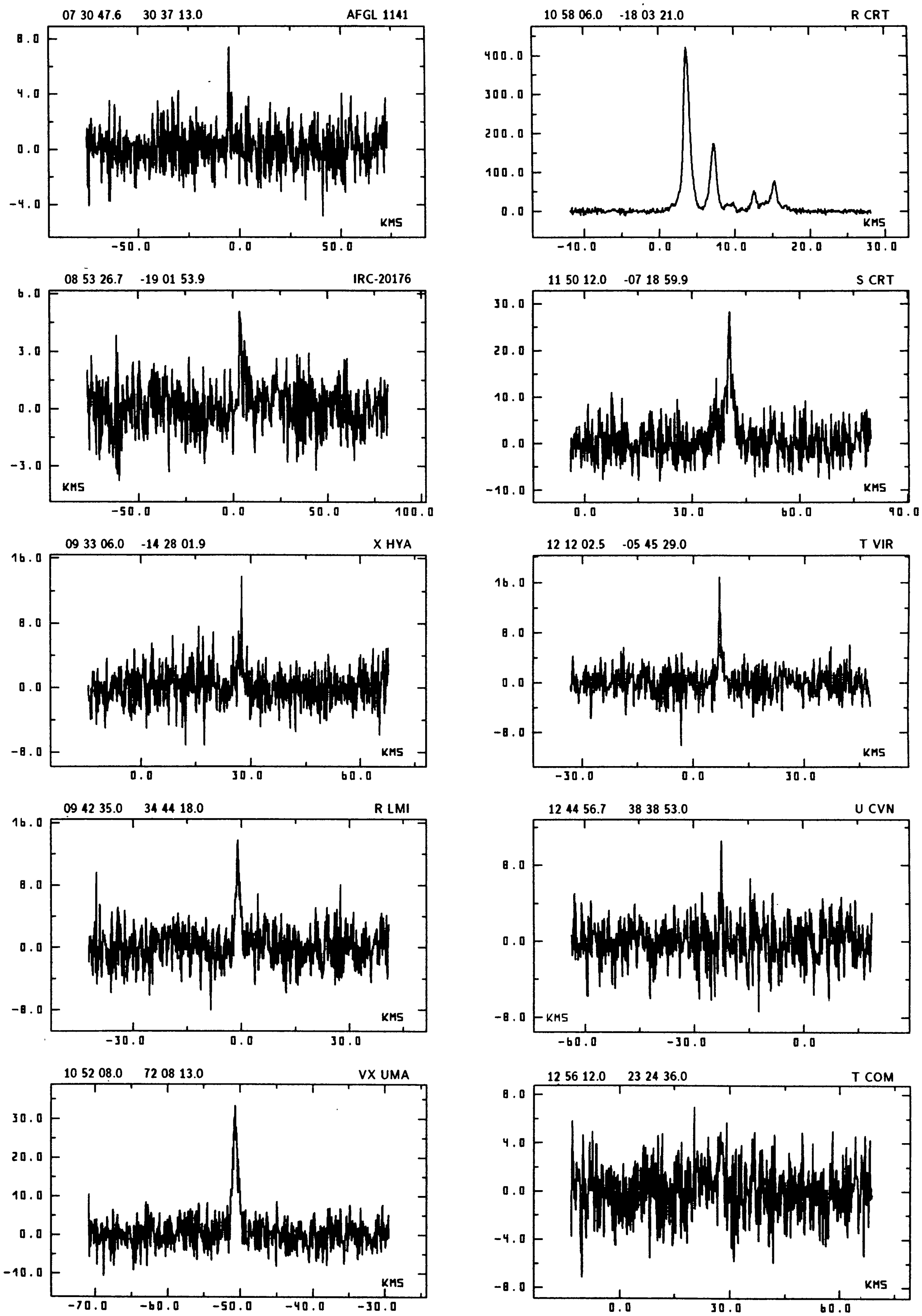


FIGURE 1 *(continued)*

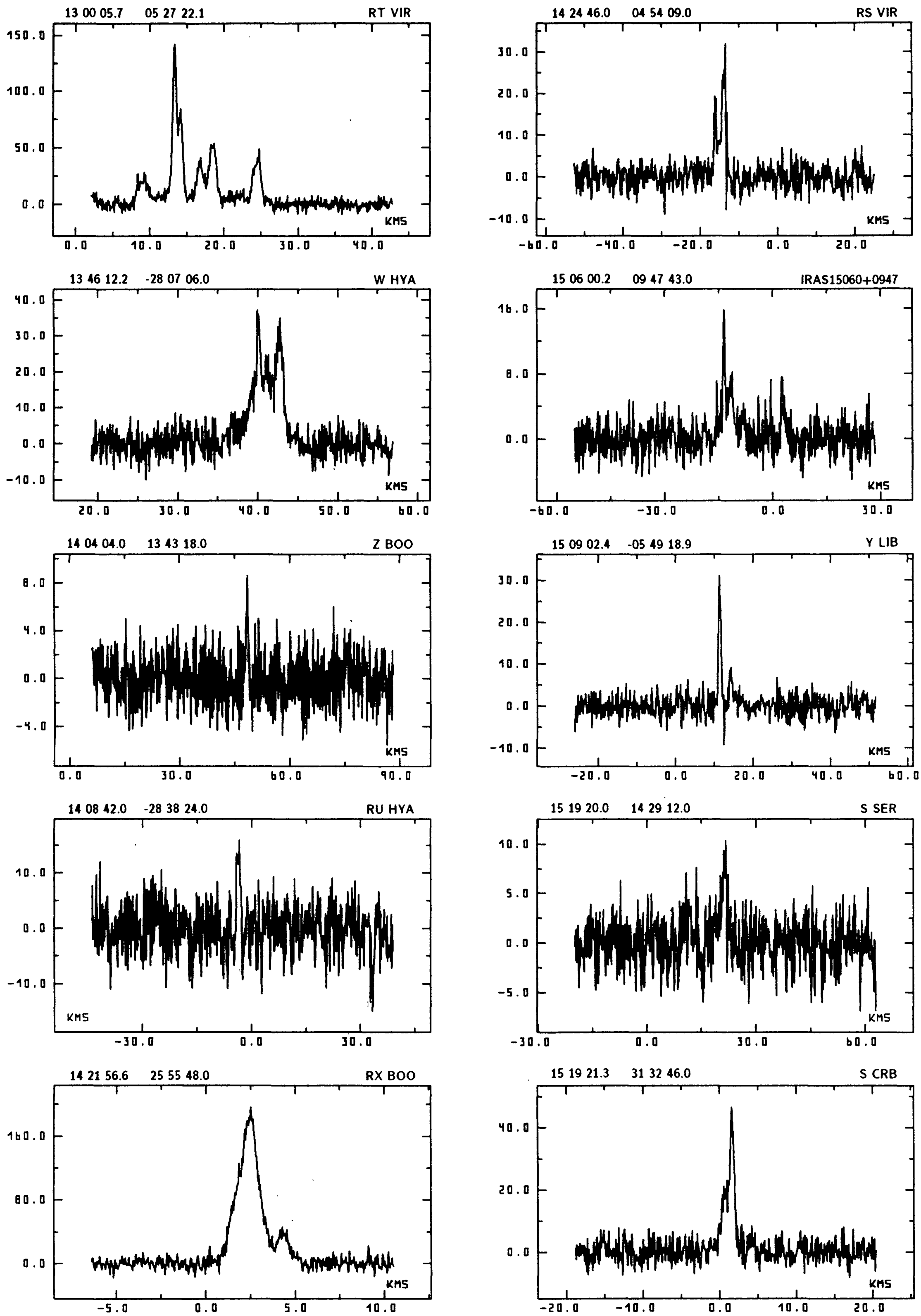


FIGURE 1 (*continued*)

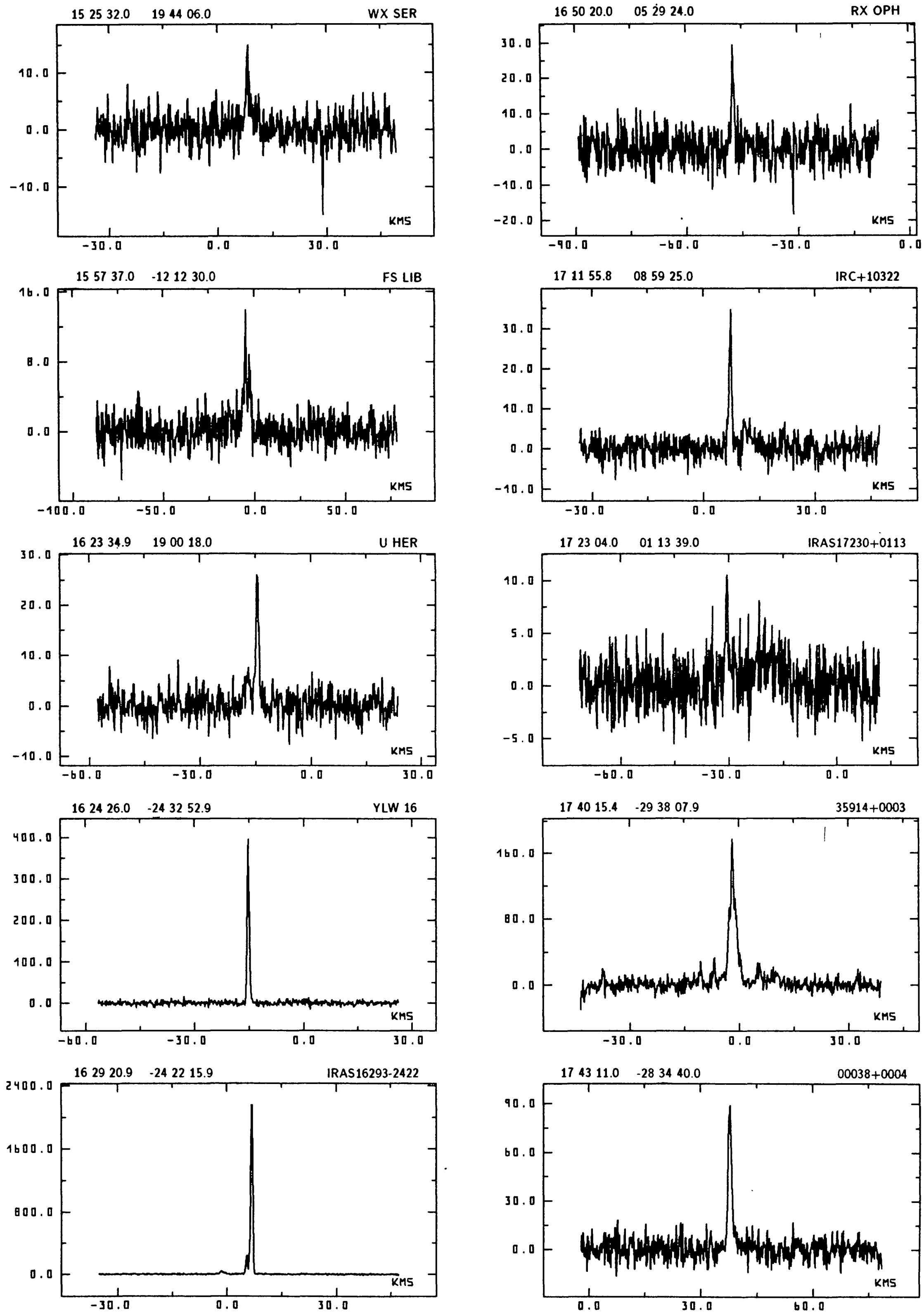


FIGURE 1 (*continued*)

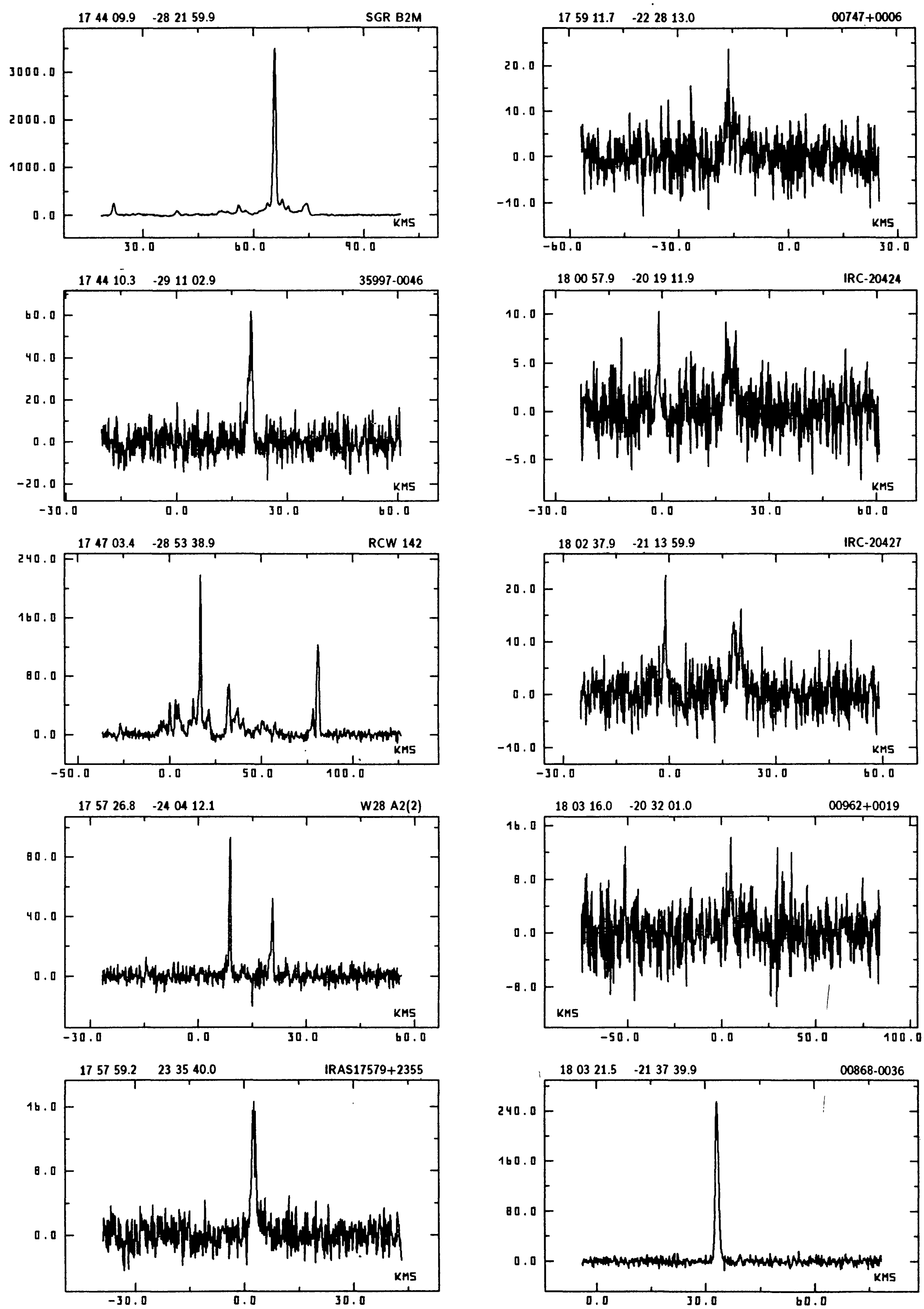


FIGURE 1 *(continued)*

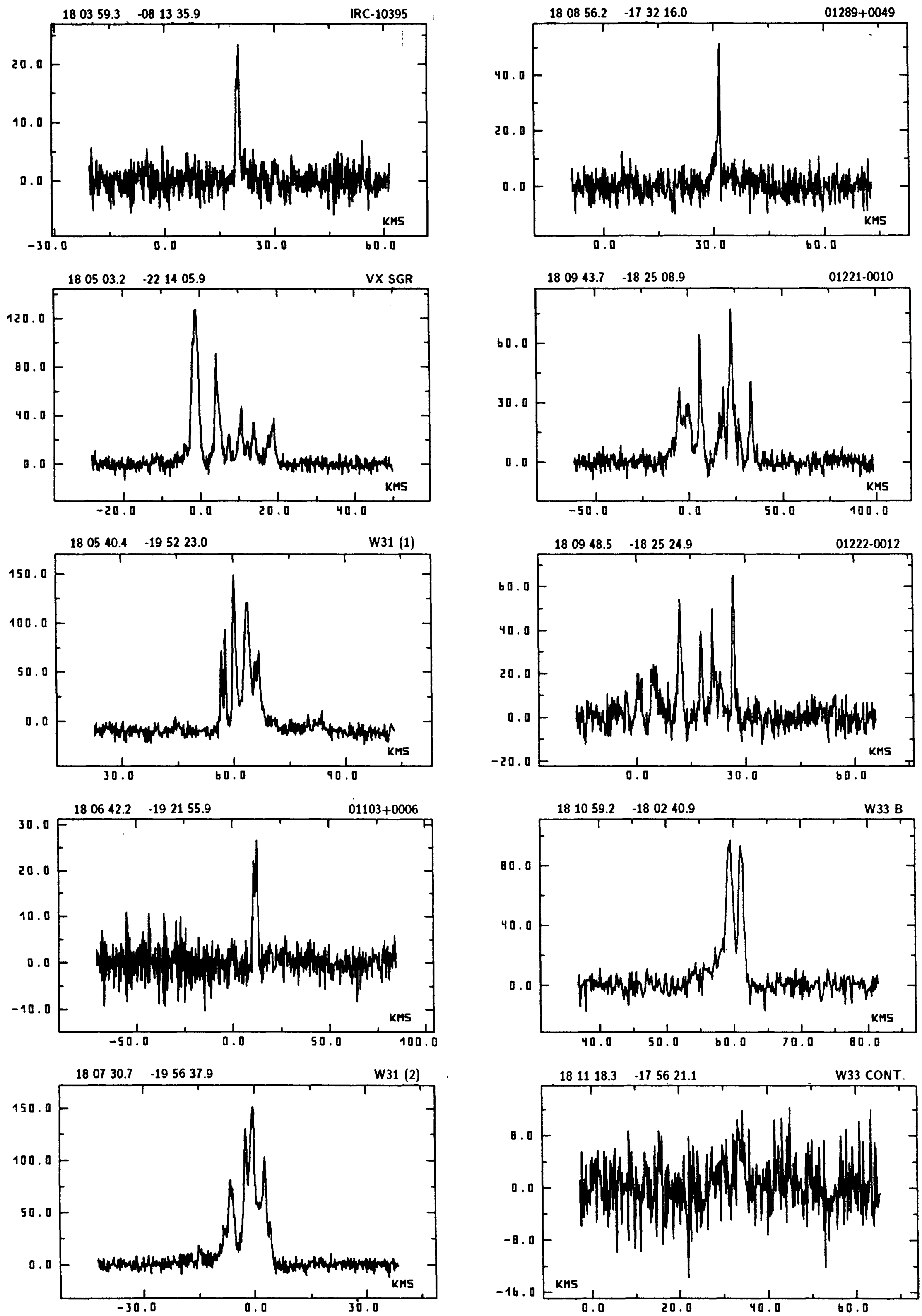


FIGURE 1 *(continued)*

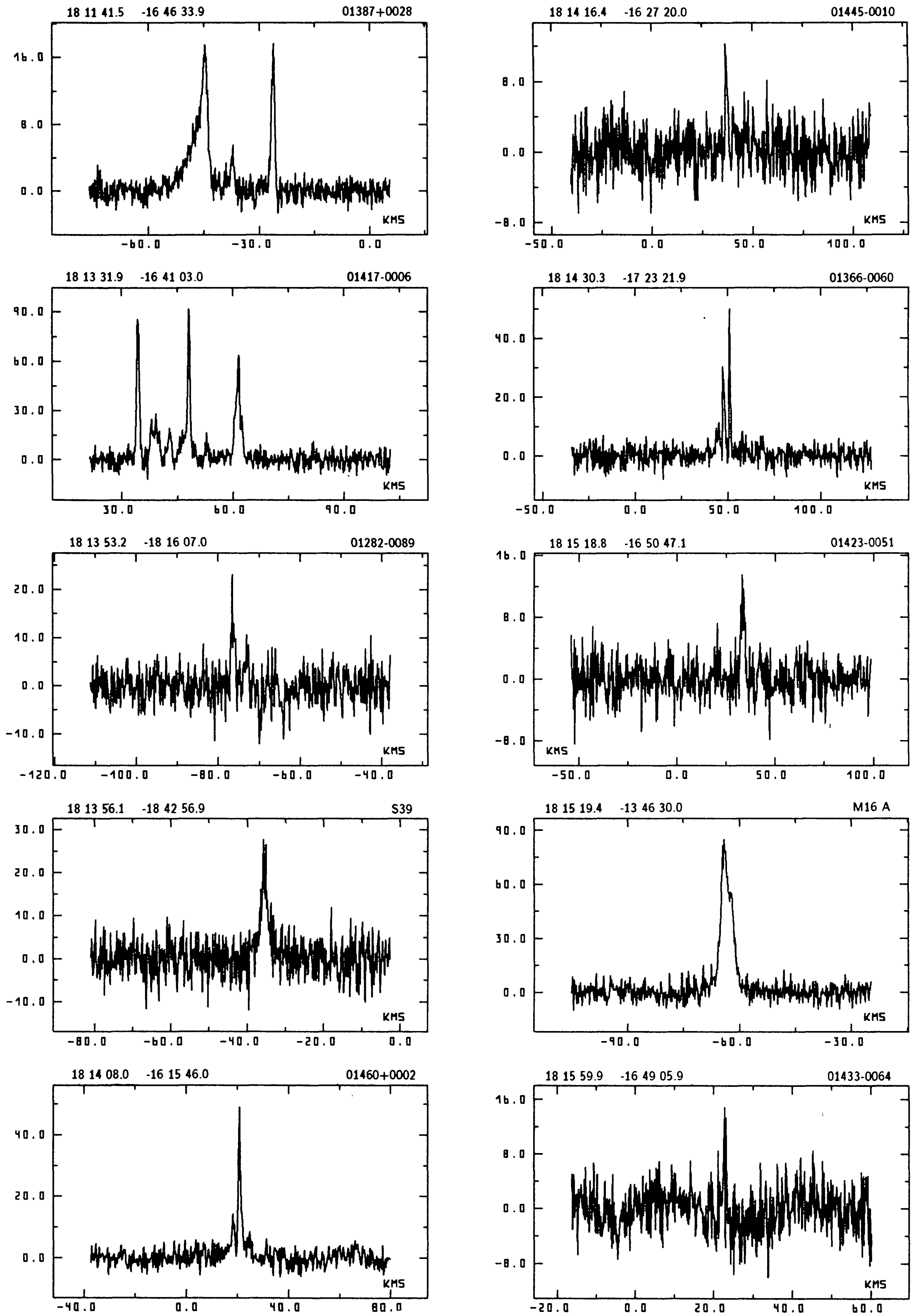


FIGURE 1 (*continued*)

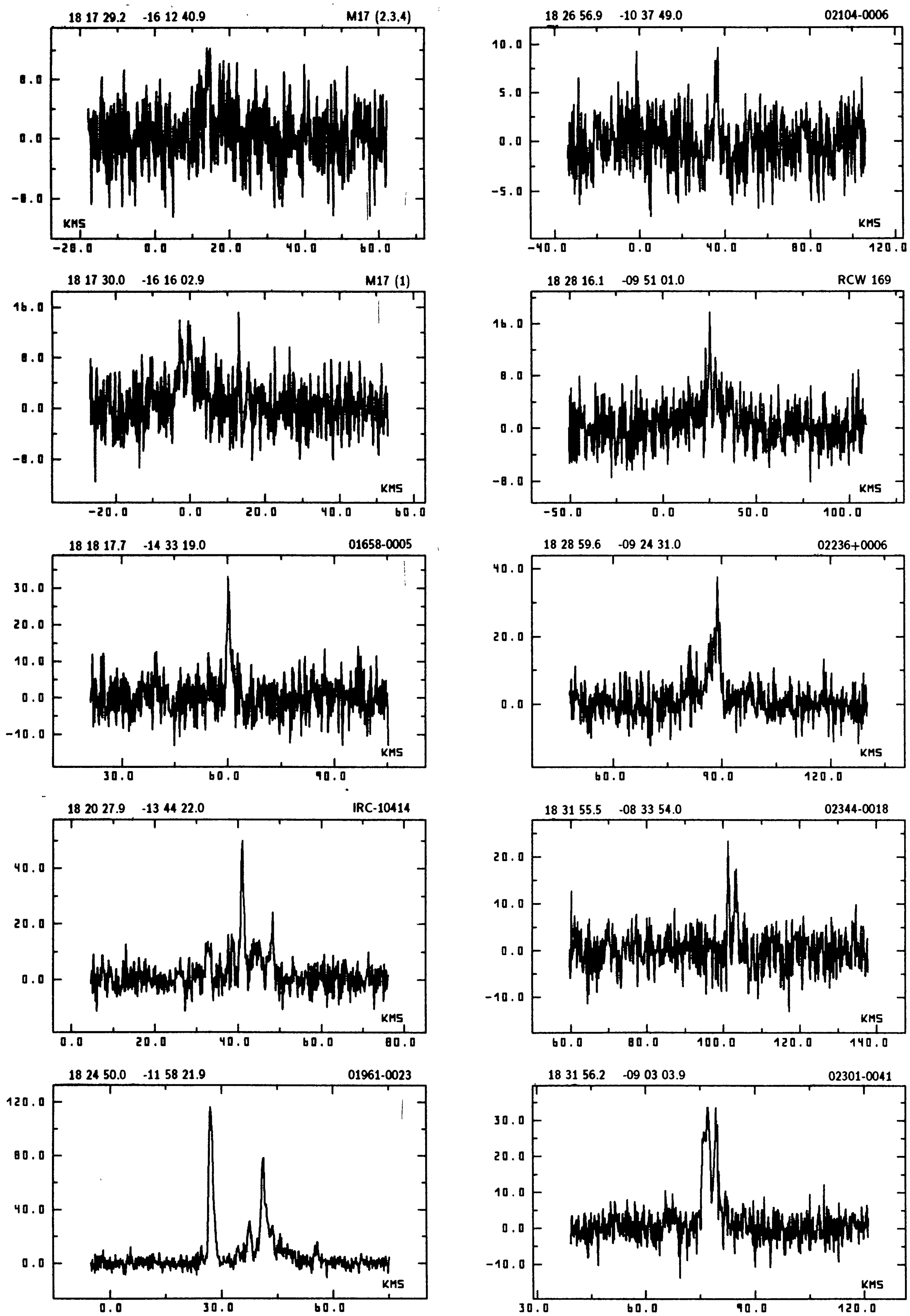


FIGURE 1 *(continued)*

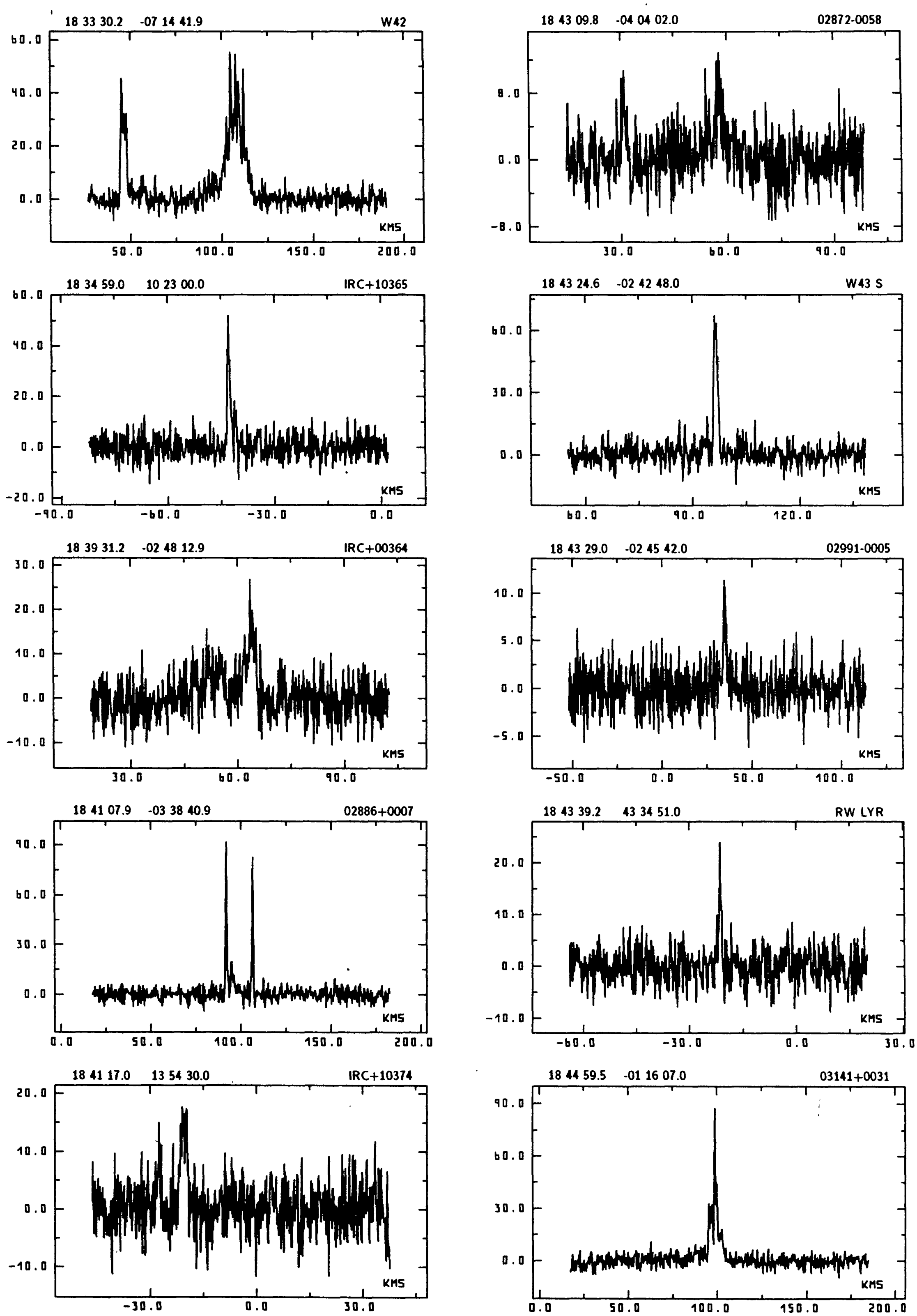


FIGURE 1 (*continued*)

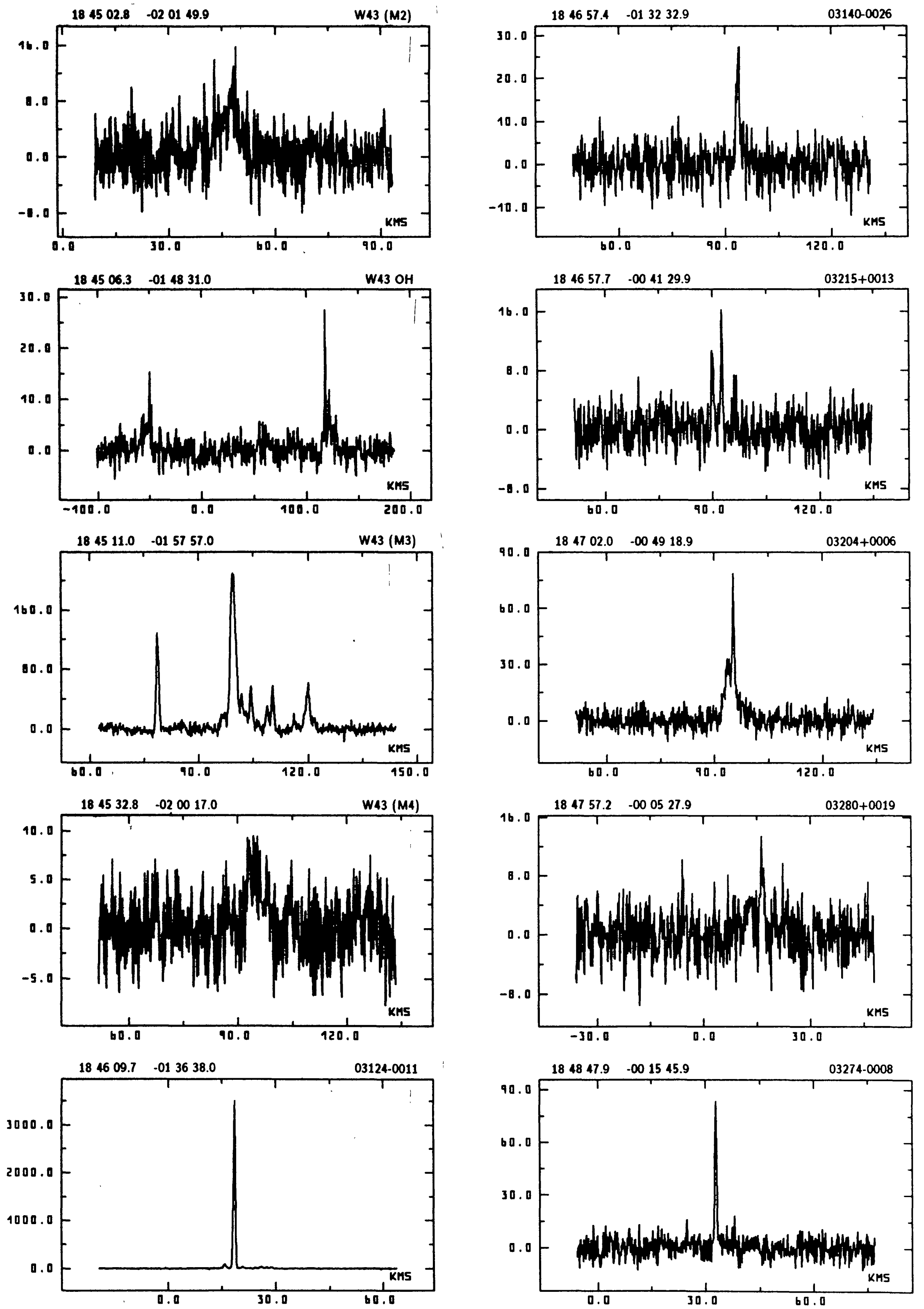


FIGURE 1 (*continued*)

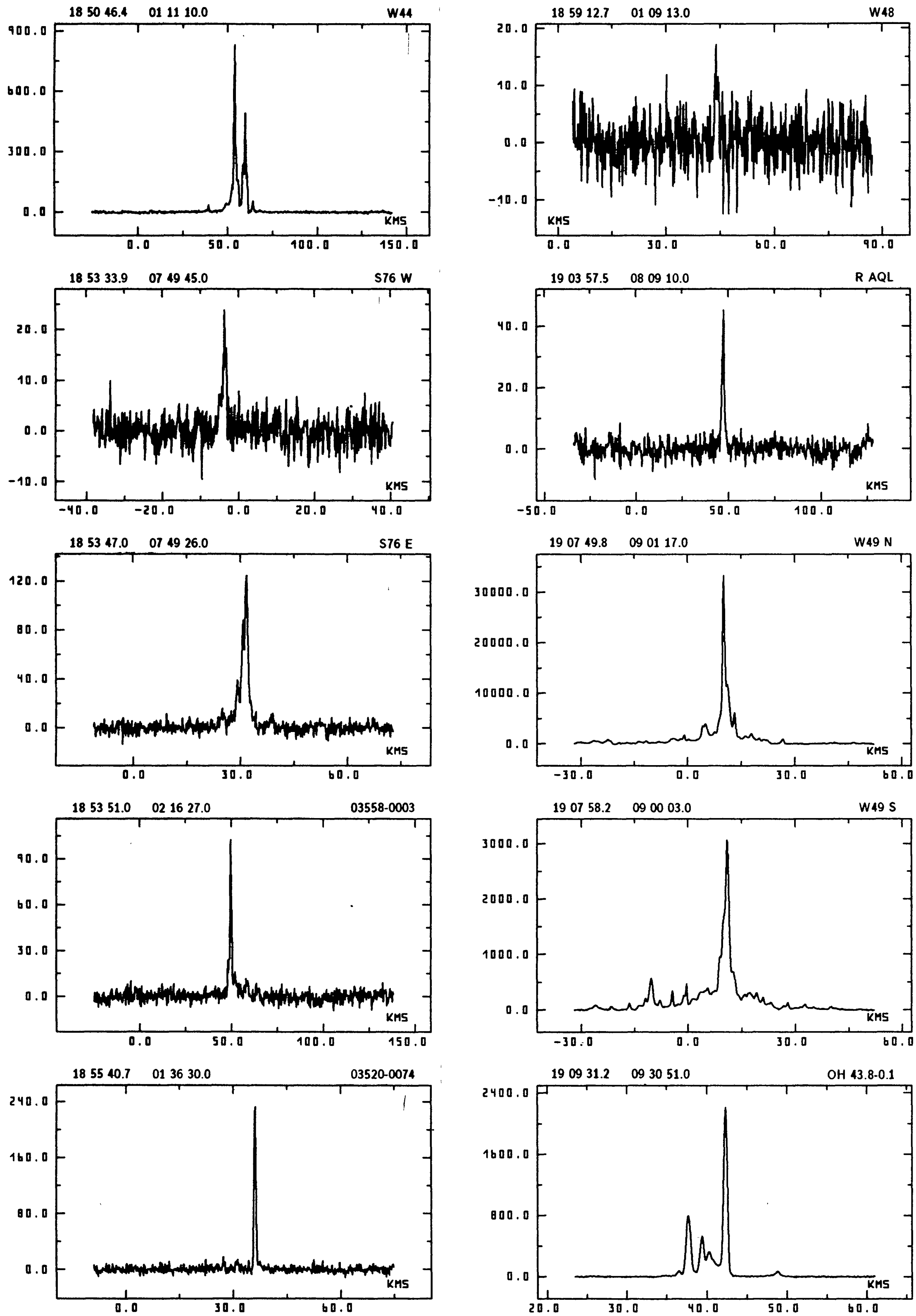


FIGURE 1 (*continued*)

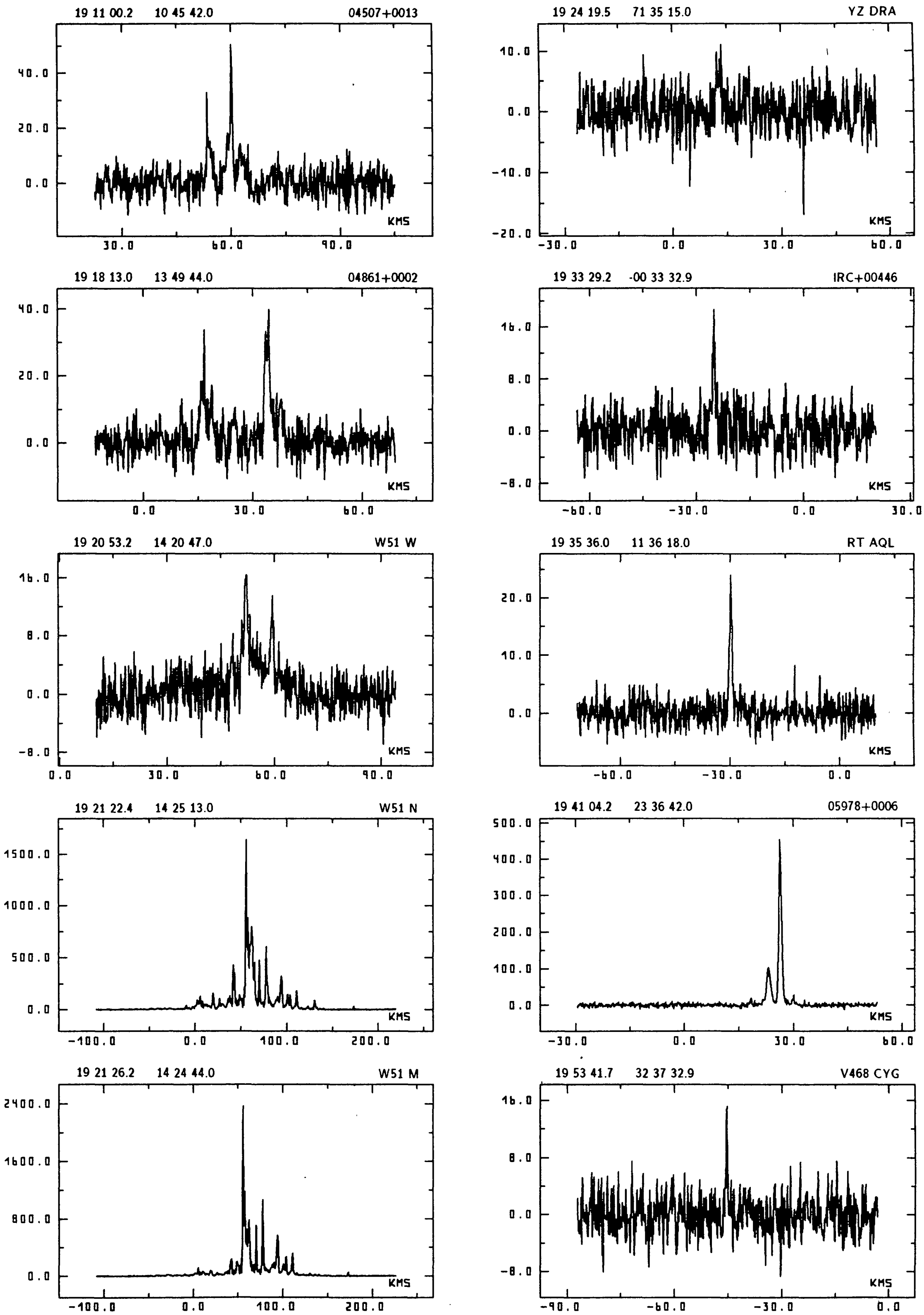


FIGURE 1 (*continued*)

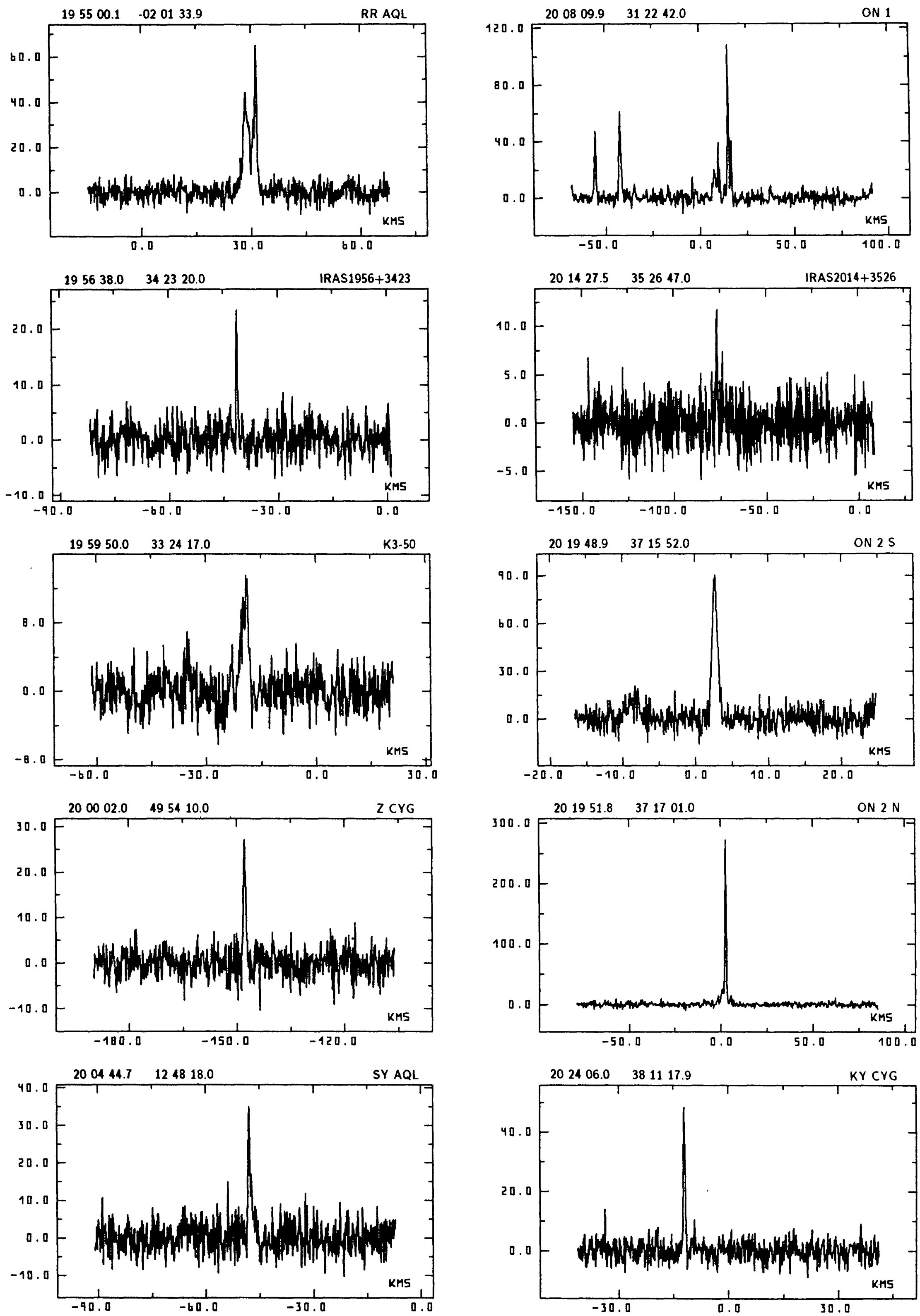


FIGURE 1 *(continued)*

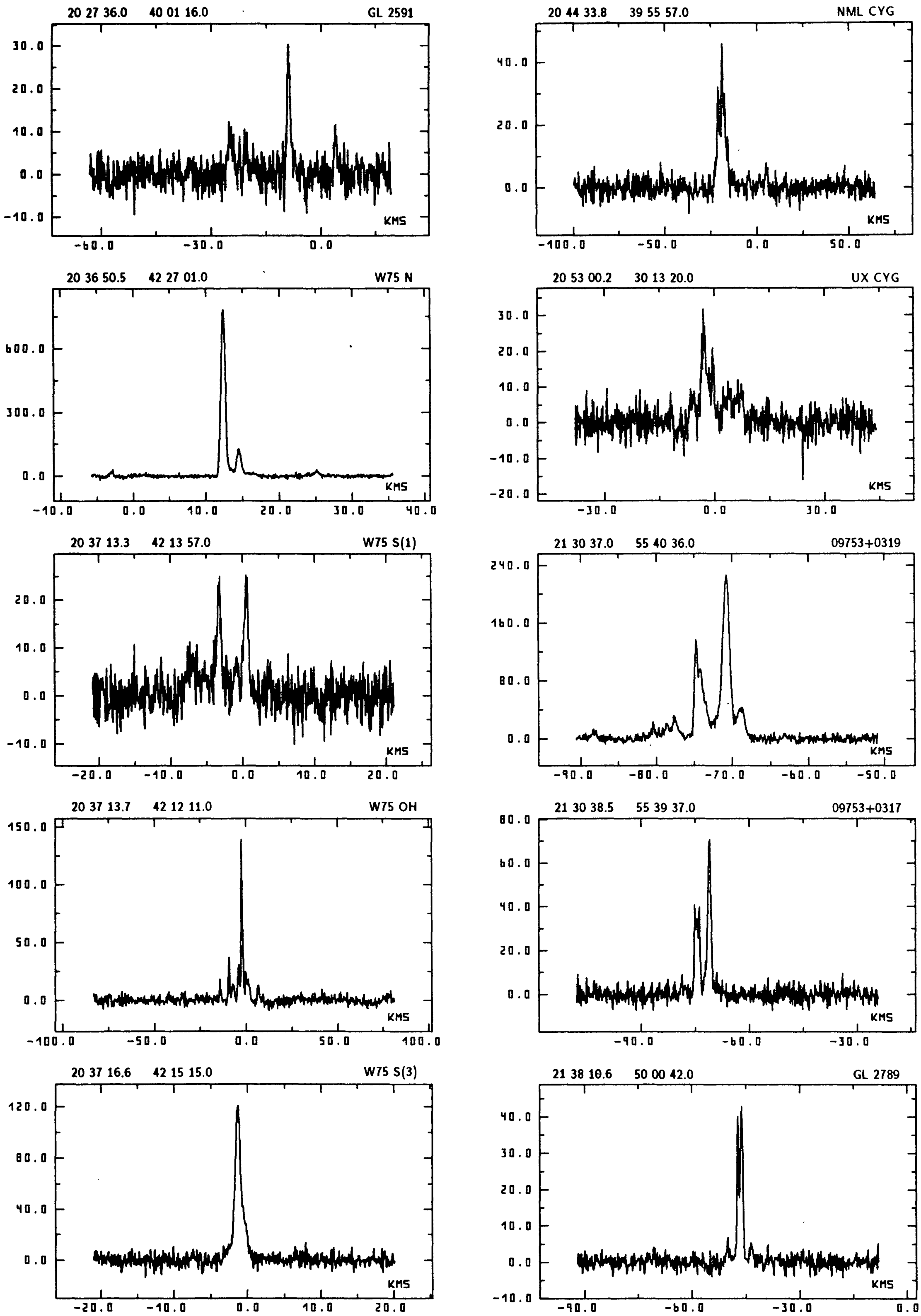


FIGURE 1 *(continued)*

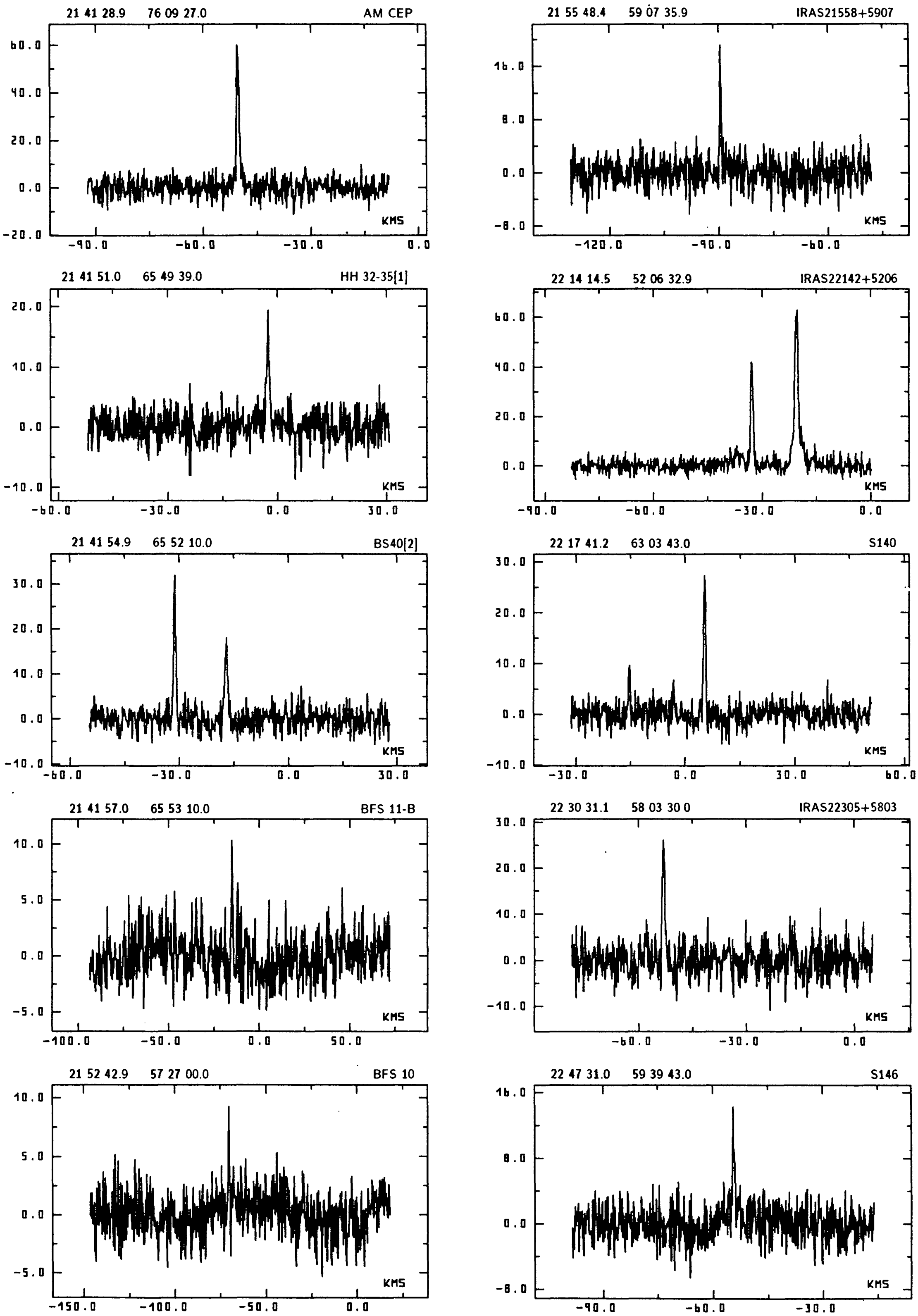


FIGURE 1 (*continued*)

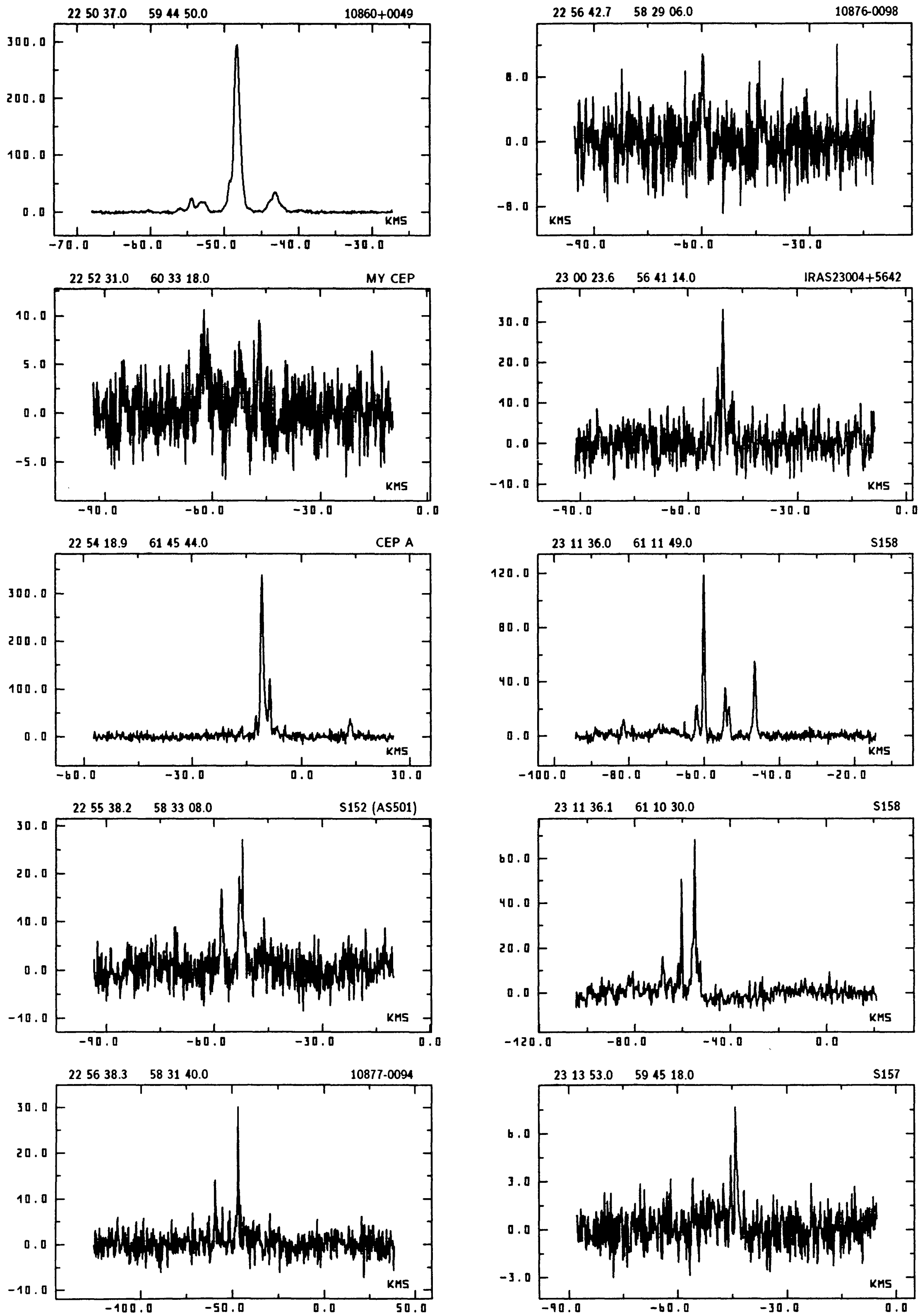


FIGURE 1 *(continued)*

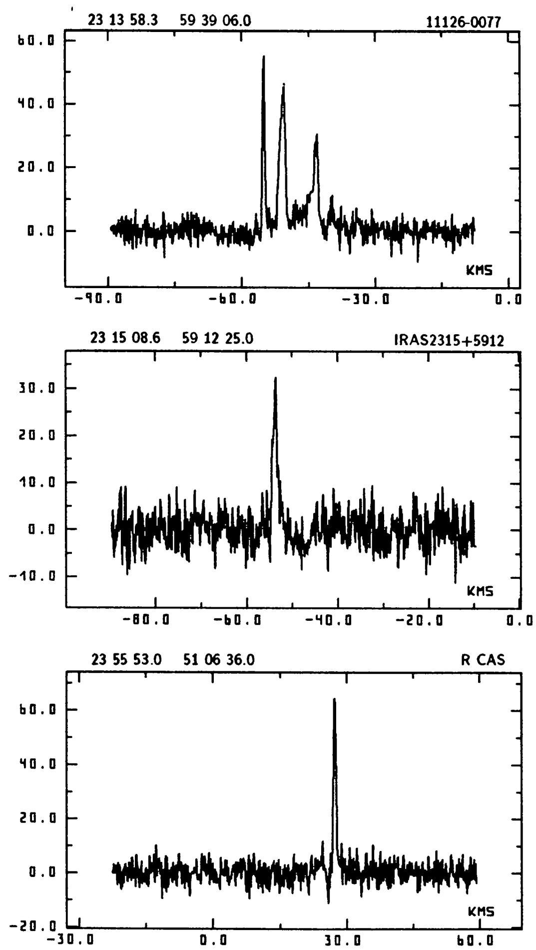


FIGURE 1 (*continued*)

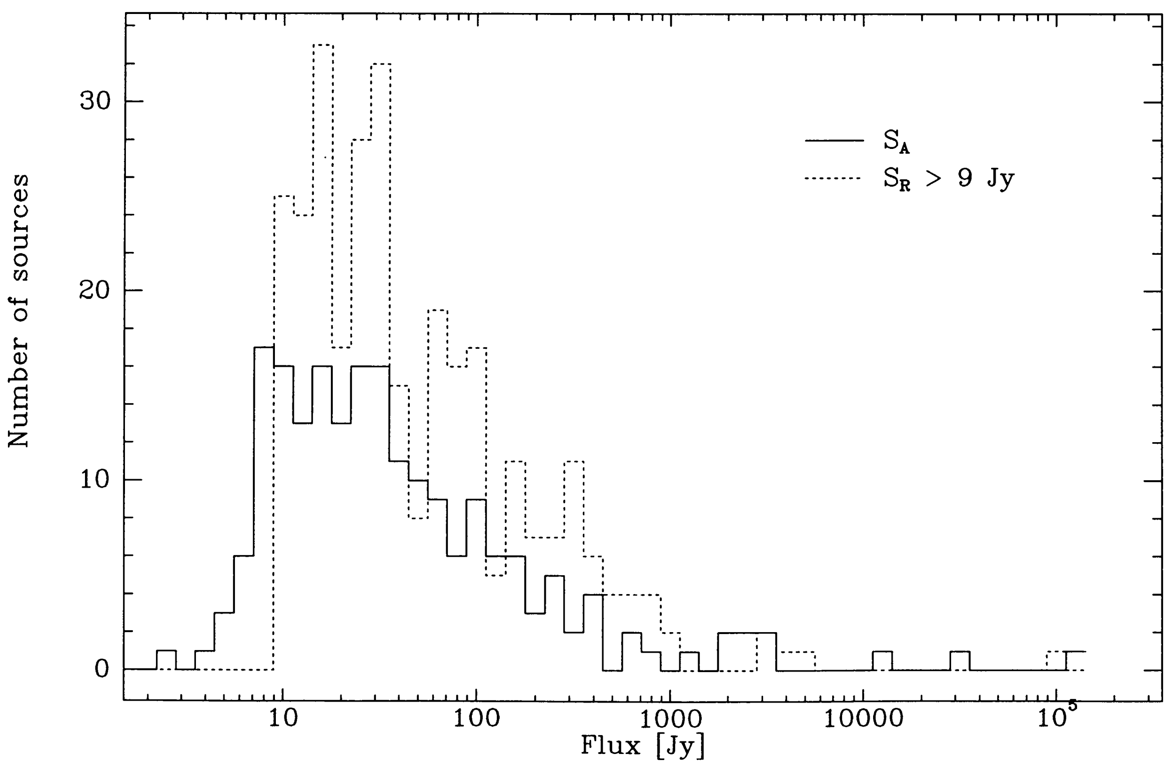
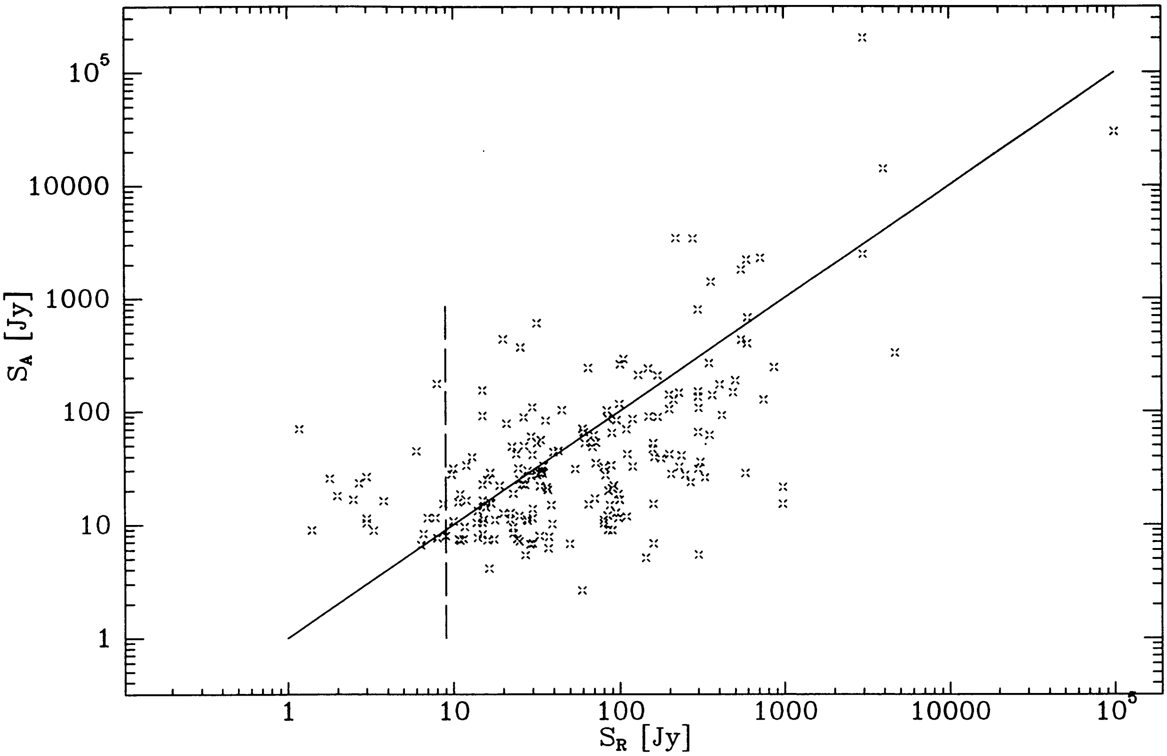
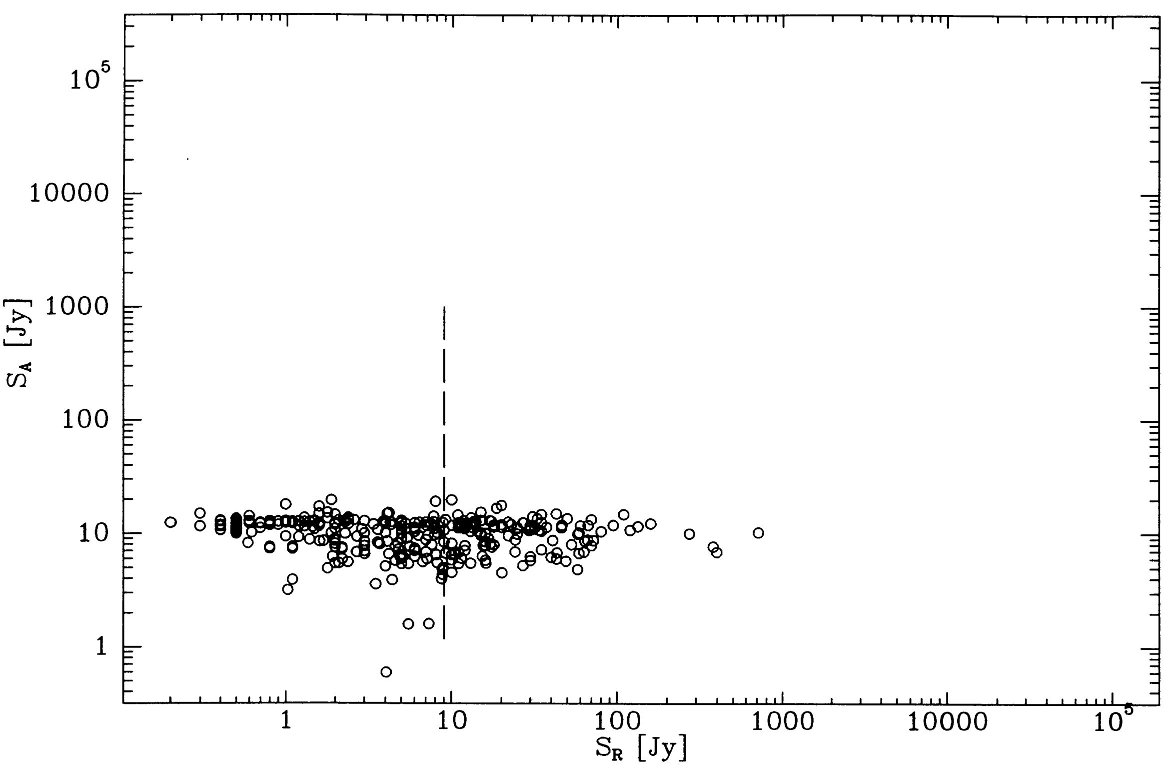


FIGURE 2. — Peak flux density distribution for detected sources S_A (solid line), compared with the same distribution for sources in Paper 1 having flux density $S_R > 9$ Jy (dashed line).



a)



b)

FIGURE 3. — Observed peak flux density S_A vs. catalogue flux density S_R for the detected (Fig. 3a) and not detected (Fig. 3b) sources. S_R is derived from Paper 1. The vertical line marks our detection limit of 9 Jy.

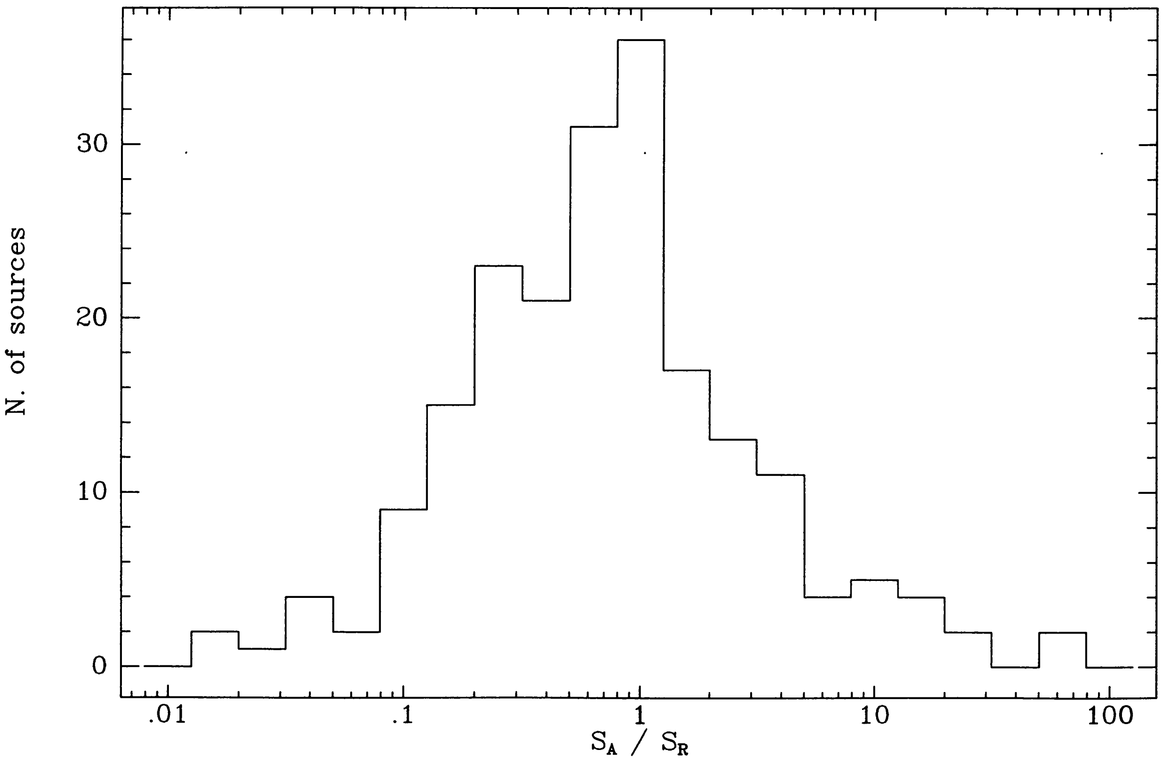


FIGURE 4. — Distribution of the ratios S_A/S_R, for the detected sources. The bin value equals the relative error of the present survey.

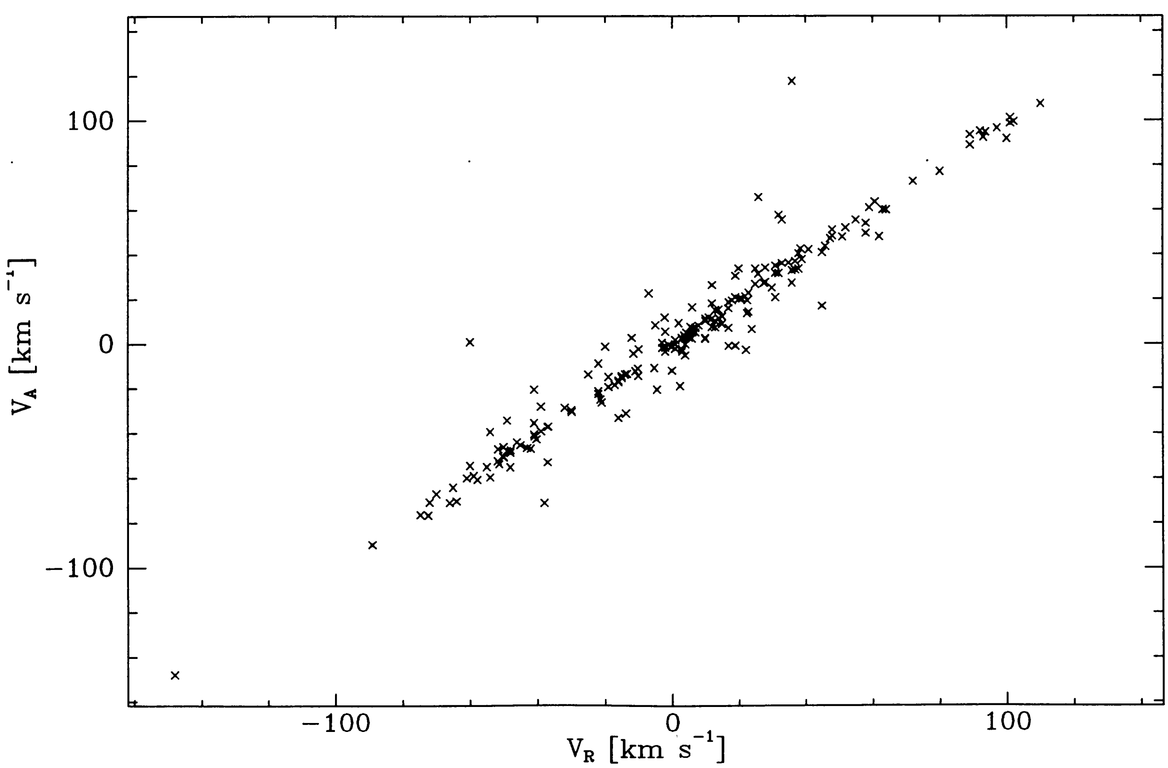


FIGURE 5. — Observed peak velocities V_A vs. catalogue velocities V_R.

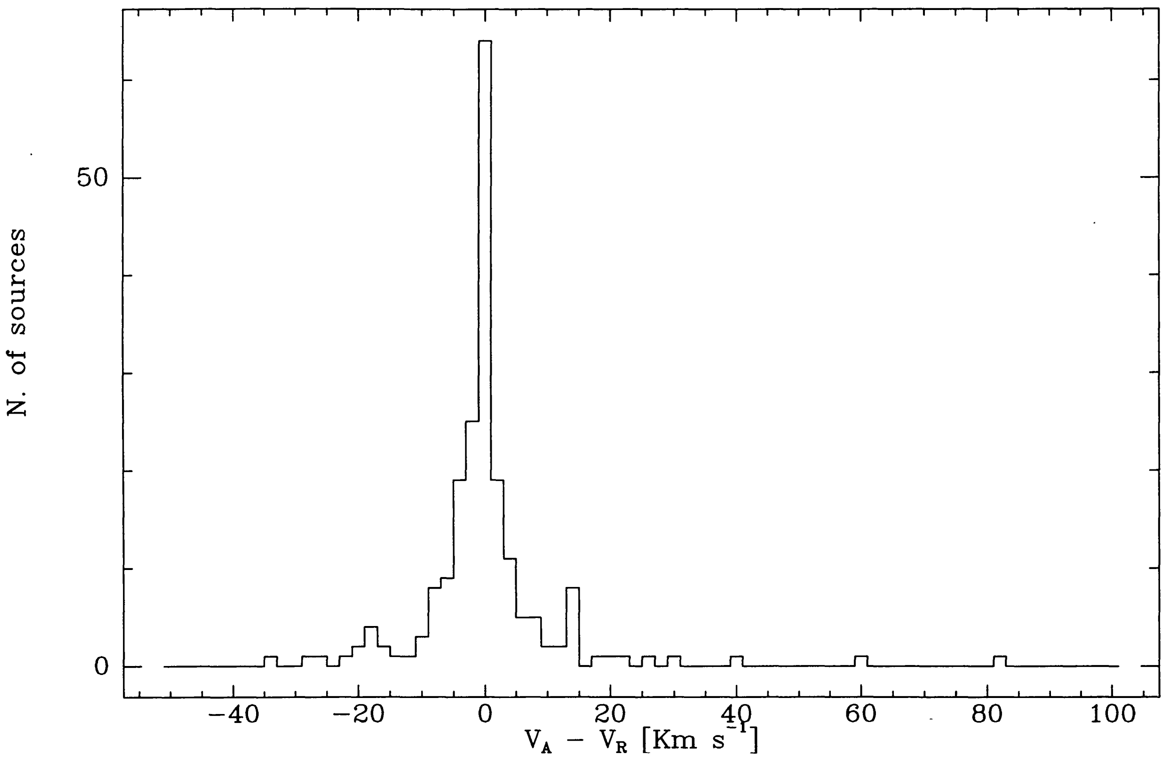


FIGURE 6. — Distribution of peak velocity variations between this work, V_A, and Paper 1, V_R.