

## DISTRIBUTION AND STUDIES OF THE INFRARED STELLAR POPULATION IN THE GALAXY. II. THE DATA BASE

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### RESUMEN

Se utiliza el modelo galáctico desarrollado en Ruelas-Mayorga (1991a) para predecir las funciones de cuentas acumuladas (CCF) (logaritmo del número acumulado de fuentes galácticas hasta una magnitud  $K$  por unidad de área) en 39 direcciones del cielo. Se presentan observaciones de conteos estelares en estas direcciones y se comparan los resultados observacionales con los predichos por el modelo. Se concluye que la descripción global de la componente estelar responsable de la radiación infrarroja a  $2.2 \mu\text{m}$  en nuestra galaxia se encuentra representada de una forma altamente adecuada por el modelo. Existen algunas regiones para las cuales la descripción global no es satisfactoria. Se piensa, y en algunos casos se presenta evidencia, de que excesos en concentración estelar o regiones de absorción anómala son responsables de algunas inconsistencias con las predicciones del modelo.

En el apéndice se dan tablas con las posiciones y magnitudes de todas la fuentes encontradas en las 29 regiones observadas por el autor.

### ABSTRACT

In this paper we utilised the galactic model developed in Ruelas-Mayorga (1991a) in order to predict the Cumulative Counts Function (CCF) (log. of the number of sources down to a given  $K$ -magnitude per unit of area) in 39 directions of the sky. We present stellar-counts observations for these directions and compare the observational results with the predictions of the model. We conclude that the global description of the distribution of the stellar population responsible for the  $2.2 \mu\text{m}$  radiation in our galaxy is very well represented by the model's predictions. There are a few regions for which the global description is not satisfactory. We present evidence for some cases that this is due to anomalous stellar concentrations or to excess or deficiency of absorption.

In the Appendix we present tables for positions and magnitudes for all the sources found in the 29 regions observed by the author.

*Key words:* GALAXY-STELLAR CONTENT – GALAXY-STRUCTURE – INTERSTELLAR-DUST

### I. INTRODUCTION

An Infrared (IR) model of the galaxy is described thoroughly in Ruelas-Mayorga (1991a). In this paper it is illustrated that the  $2.4 \mu\text{m}$  brightness distribution along the galactic plane may be very well reproduced by that model which consists of three individual entities represented by a spheroidal component, a dense circular ring and a thin exponential disk.

In this paper we present the positions and  $K$ -magnitudes of more than 5000 sources found in selected areas along the galactic plane and we apply the IR galactic model in order to predict the Cumulative Counts Function (CCFs) (number

of stars per sq. deg. up to a given  $K$ -magnitude versus  $K$ -magnitude) in different directions along the galaxy so that direct comparison with the observational results is possible.

The observations were collected by means of a scanning procedure and have, in some cases, been supplemented at bright magnitudes ( $K \leq +3.0$ ) with the results derived from the Two-Micron Sky Survey (IRC) (Neugebauer and Leighton 1969). One square degree areas around the nominal central position of our scans were searched in the IRC for IR sources. Once found, the sources were binned according to their  $K$ -magnitude. In other cases, observations at intermediate magnitudes have been

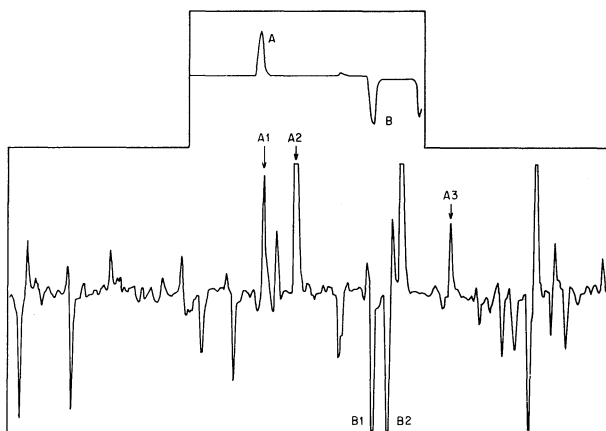


Fig. 1. a) Shows a scan across the standard star Y3958 ( $K = 4.87$ ) at a relative gain of 1. b) Shows part of a scan across the Baade's Window region at a relative gain of 100. The straight lines correspond to the signal level for a star with  $K = 11.0$  more than  $3\sigma$  times the noise. Stars brighter than  $K = 8.7$  are saturated at this gain. A1, B1, A2, B2, A3 and B3 represent the first and second showings of 3 different sources. The heights of showing A and B are not exactly equal due to the large surface density of stars in this region. For regions with lower surface densities, both showings have the same intensity.

utilised to supplement our own; these results were taken from papers by Kawara *et al.* (1982) and Eaton, Adams and Giles (1984). For a few regions for which we **do not** have observations, we have fitted our model to published counts when they were available (see Mikami *et al.* 1982; Kawara *et al.* 1982; Eaton *et al.* 1984; Danks *et al.* 1984).

In section II of this paper we describe the observational technique and the instrument used to obtain the stellar counts. Section III contains a detailed discussion of the fitting procedure between theoretical predictions and the observational results, in section IV we discuss the possible reasons for discrepancies between theoretical and observed CCF's, section V is dedicated to discussing the results of detailed *JHK* photometry and spectroscopy performed on a few of the sources found in the scans of selected galactic areas. Finally, in section VI we outline our conclusions.

## II. OBSERVATIONS

The observations were collected with the 1.9-m telescope at Mt. Stromlo Observatory (MSO). The MSO IR photometer was attached to the Cassegrain focus of the telescope. The photometer has a series of broad (*JHK*) and narrow band (2.1, 2.2, and 2.3  $\mu\text{m}$ ) filters in a standard dewar, which is cooled down to the temperature of liquid nitrogen (77 K) and subsequently, before and during the

observations, is pumped to solid nitrogen achieving a further temperature decrease of the order of  $\sim 20$  K. Background discrimination is achieved by means of a chopping technique that uses a focal plane blade chopper with a chopping frequency of 20 Hz. The chop throw was chosen to be a fraction of the aperture size which, in most of the cases, was equal to  $12''$ . The direction of the chop may be varied at will but for the present observations it was made to coincide with either North-South (DEC) or East-West (RA) directions.

The scanning was performed at sidereal rate this was achieved by stopping the tracking motor of the telescope for a predetermined length of time. A pointing star located on the offset guider usually one with known accurate coordinates such as an SAO catalogue star, was used as an indicator of the beginning of each individual scan row. The observations were recorded in an analogue manner on paper charts which were later measured to obtain the position and  $K$ -magnitudes of each source. The magnitude calibration was performed by scanning a standard star located as near as possible to the region under study every five scan rows.

The way in which the chop throw was directed (North-South or East-West) provided a means of confirming the presence of each source observed. Most of the sources for which positions are given in the Appendix were confirmed by a second show-up on the same row for the RA chopping case or, on a later row for the DEC chopping case.

The paper charts represent an adequate way of recording the observations, however this method does not provide a large dynamic range, hence the information for stars brighter than  $K \sim +8.5$  is lost due to saturation. At the faint level it was found that the peak-to-peak noise was of the order  $K \sim +12.0$  hence putting sources with  $K \sim +11.0$  at about 2.5 $\sigma$  above the noise. This fact assured that information down to this magnitude level was free from noise confusion and hence essentially complete.  $K = +11.0$  was considered the faint magnitude limit.

As an illustration of the adequacy of the information obtained from the paper charts, one such scan is presented in Figure 1. This scan was taken at the crowded Baade's Window region (hereinafter BW). It is clear how sources are well differentiated from the noise, and also how our RA chopping technique allowed us to confirm the presence of sources by means of a second show-up.

As we proceed to fainter magnitudes the number of sources increases quite rapidly, as it will be apparent in section III of this paper. This rapid increase of the surface density of sources will produce confusion due to the fact that more than one star may fall within the main beam area, hence causing an undercounting of sources; it may also happen that the

TABLE 1  
LIST OF STUDIED REGIONS

Region CCF	Longitude	Latitude	Source
27	0	-3.5	1,2
5	0	-4.0	1,2
10	0	-4.0 <sup>a</sup>	1,2
24	0	-4.5	1,2
30	10	-5.0	1,2
38	15	0.0	3
3	20	0.0	1,2,4
29	20	-5.0	1,2
35	26.5	0.0	5
39	27	0.0	3
26	30	0.0	1,2,4
31	40	0.0	2,4
40	40	0.0	3
32	50	0.0	2,4
33	60	0.0	2,4
15	220	0.0	1,2
20	220	-1.0	1,2
18	220	+1.0	1,2
6	230	0.0	1
8	240	0.0	1,2
9	250	0.0	1,2
11	260	0.0	1
7	270	0.0	1
12	280	0.0	1
13	290	0.0	1
14	290	+1.0	1
16	300	0.0	1
34	305	0.0	6
19	310	0.0	1
25	311.2	-3.8 <sup>b</sup>	1
2	320	0.0	1
14	320	-0.5	1
17	320	-1.0	1
21	320	+1.0	1
23	330	0.0	1
4	340	0.0	1
1	350	0.0	1
37	355	0.0	3
36	359.5	0.0	3

a. BW; b. Circinus.

Sources: 1) This work; 2) Neugebauer and Leighton 1969; 3) Kawara *et al.* 1982; 4) Eaton *et al.* 1983; 5) Mikami *et al.* 1982; 6) Danks *et al.* 1984.

magnitude of a star is apparently altered due to the presence, at the same time, of another star in the reference beam, hence confusing the magnitude distribution information. For regions with low or intermediate star surface densities, a simple application of the Poisson statistical distribution shows that no confusion effects should be expected for magnitu-

des brighter than  $K \leq +10.5$ . For fainter magnitudes ( $10.5 \leq K \leq 11.0$ ) a marginal confusion effect is present, but for the purpose of our study this effect is not important; moreover it is dramatically masked by other errors such as the magnitude uncertainties.

For regions with a large surface density of stars, a simple application of the Poisson distribution is not possible, and the confusion effects are very complicated in this case. It was decided to make a numerical simulation of our scanning and recording technique to study, in an empirical way, the effects of confusion due to crowding of sources. Those regions close to the galactic centre turned out to require the application of correction factors. For more detailed information on these regions see the following papers Ruelas-Mayorga (1991d, 1991e) and Ruelas-Mayorga and Teague (1991).

In Table 1 we give a list of all the regions for which we have been able to get IR stellar counts. The first column gives the name of the region in our files, the second and third columns give the galactic longitude and latitude of each region and column four indicates the source from which the observations have been obtained.

We also obtained spectroscopic observations (CO and H<sub>2</sub>O) of some sources in selected areas; these observations were taken using the Infrared Photometer Spectrometer (IRPS) attached to the Cassegrain focus of the Anglo Australian Telescope (AAT). The spectroscopic mode of this instrument works by means of a Circular Variable Filter (CVF) which scans a predetermined spectral region (2.1 to 2.3  $\mu\text{m}$  for our observations).

### III. PREDICTED CCF'S AND FITS TO THE OBSERVATIONAL DATA

Table 1 shows the positions of the regions for which we have information on IR stellar counts. The coverage is principally along the galactic plane in the longitude range  $-140 \leq l \leq 60$ . A few attempts at obtaining observation in the range  $60 \leq l \leq 220$  were made, however our location in the southern hemisphere and the low stellar surface density in this longitude range impeded the acquisition of significant data.

The parameters used in the model have been those which were found to be appropriate to predict the overall 2.4  $\mu\text{m}$  brightness distribution along the galactic plane (see Ruelas-Mayorga 1991a). The fact that the 2.4  $\mu\text{m}$  observations were obtained with a large beam indicates that the galactic brightness observed represents a global distribution, which is not subject to local inhomogeneities or peculiar stellar distributions. It is important to bear this point in mind, because in what follows, there will be occasions in which slight variations of the model parameters will yield better fits. In such cases, no al-

teration of parameters has been made because it is our aim to compare the individual count information with the theoretical predictions that represent the global  $2.4 \mu\text{m}$  flux observations. Deviations from these theoretical expectations may be interpreted as local effects such as: (1) the inhomogeneous distribution of the absorbing matter, (2) the presence of stellar concentrations, (3) localised deviations of the geometry of the galaxy with respect to the model. Contrary to our discussion of galactic plane regions, for those regions located in the clear windows towards the galactic centre (BW, calibration regions and other clear windows) see Ruelas-Mayorga (1991d, 1991e) and Ruelas-Mayorga and Teague (1991), the parameters utilised have indeed been different from the canonical set. The very detailed photometric and spectroscopic studies that we have made of these regions justify our assertion that the new parameters represent more appropriately the galactic characteristics in those directions.

Figures 2, 3, 4 and 5 [(0, -3.5), (0, -4), (0, -4) (BW), (0, -4.5)] show the observed CCF's for four regions in the direction of the clear windows towards the galactic centre. The photometric studies performed for these areas have permitted us to find values for the absorption parameter which represents the distribution of the absorbing material in these directions.

In Figures 2 to 40, the crosses stand for the observational points. Vertical error bars that correspond to the statistical uncertainties ( $n^{1/2}$ ) for each observational point have been plotted. At faint levels the error bars are typically smaller than the size of the symbol. The horizontal error bars represent a magnitude uncertainty which has been estimated to be of the order  $\pm 0.3$  magnitudes. The solid line represents the theoretical CCF predicted by the model in the direction under study. For the four clear window cases, Figures 2 to 5, the IRC observations at the bright end agree remarkably well with the model; we do not have intermediate magnitude information except for the BW region (Fig. 4). For this magnitude range the model agrees well with the observations except at  $+8.5 \leq K \leq +9.0$  where a slight enhancement with respect to the model is observed. At faint levels the model agrees well with the observations at (0, -4.5). For the other regions however, the observations show a constant enhancement over the model predictions for the two regions around (0, -4.0). For the region at (0, -3.5), there appears to be a difference of slope between the model and the observed CCF at the faint magnitude level.

It is interesting to comment that even if the model predicts very well the  $2.4 \mu\text{m}$  brightness in the direction of the galactic centre, it does not seem to be so successful in predicting the number of

faint sources in these areas. It is obvious that the brightness distribution must be dominated by the brighter stars and hence the underestimation of the number of faint sources does not significantly affect the flux predictions. As mentioned in Ruelas-Mayorga (1991a) there is no a priori reason to expect that the Luminosity Function (LF) of the stars in the central region of the galaxy be the same as the LF around the solar neighbourhood. Computer calculations using different LF's (e.g., globular Cluster LF) for the bulge should be carried out to see if better agreement is obtained between the observations and the model predictions. In Ruelas-Mayorga and Teague (1991), we determine empirically the bulge CCF alone in the region of Baade's Window by subtracting the predicted disk contribution from the observed CCF. The bulge CCF so determined is considerably steeper than that of the disk, and resembles a CCF formed from globular cluster data.

Figures 6 and 7 [(10, -5), (15,0)] show that the model agrees well with the observations at faint magnitudes. At brighter magnitudes there is a tendency for the model to be above the observational points. Golisch (1983) on the basis of two regions only, notes that the Jones *et al.* (1981) model also tends to predict more sources at brighter magnitudes than there are observed. Golisch proposes a revised disk model in which the early M giant stars have brighter absolute  $K$  magnitudes, and the later M giants have fainter absolute  $K$  magnitudes. With this revised model he is successful in fitting the observations at  $l = 10$ ,  $b = +1$  at the bright and faint magnitude levels, however his revised model is not appropriate for the intermediate magnitude range, for which the predictions turn out to be deficient with respect to the observations. The revised Golisch's model might be helpful in fitting the data for  $l = 10$ ,  $b = -5$  (Fig. 6) for which no intermediate magnitudes are present. However, the mainly intermediate magnitude nature of the data in Figure 7, and the remarkable agreement between the model and the observations in the range  $5.0 \leq K \leq 7.0$ , suggests that the bright magnitude discrepancy may be due to a different effect which we do not presently understand.

Figures 8 and 9 show observations for the points at  $l = 20$ ,  $b = 0$  and  $l = 20$ ,  $b = -5$ . For the region along the galactic plane, there is again an enhancement of the model predictions over the observations at the bright magnitude end. For the range  $K \geq +7.0$ , there are two sets of data; those from Eaton *et al.* (1984) (lower values) and those by the author (higher values). The Eaton *et al.* points show a good agreement with the model, whereas our data lie above the model prediction. Since the

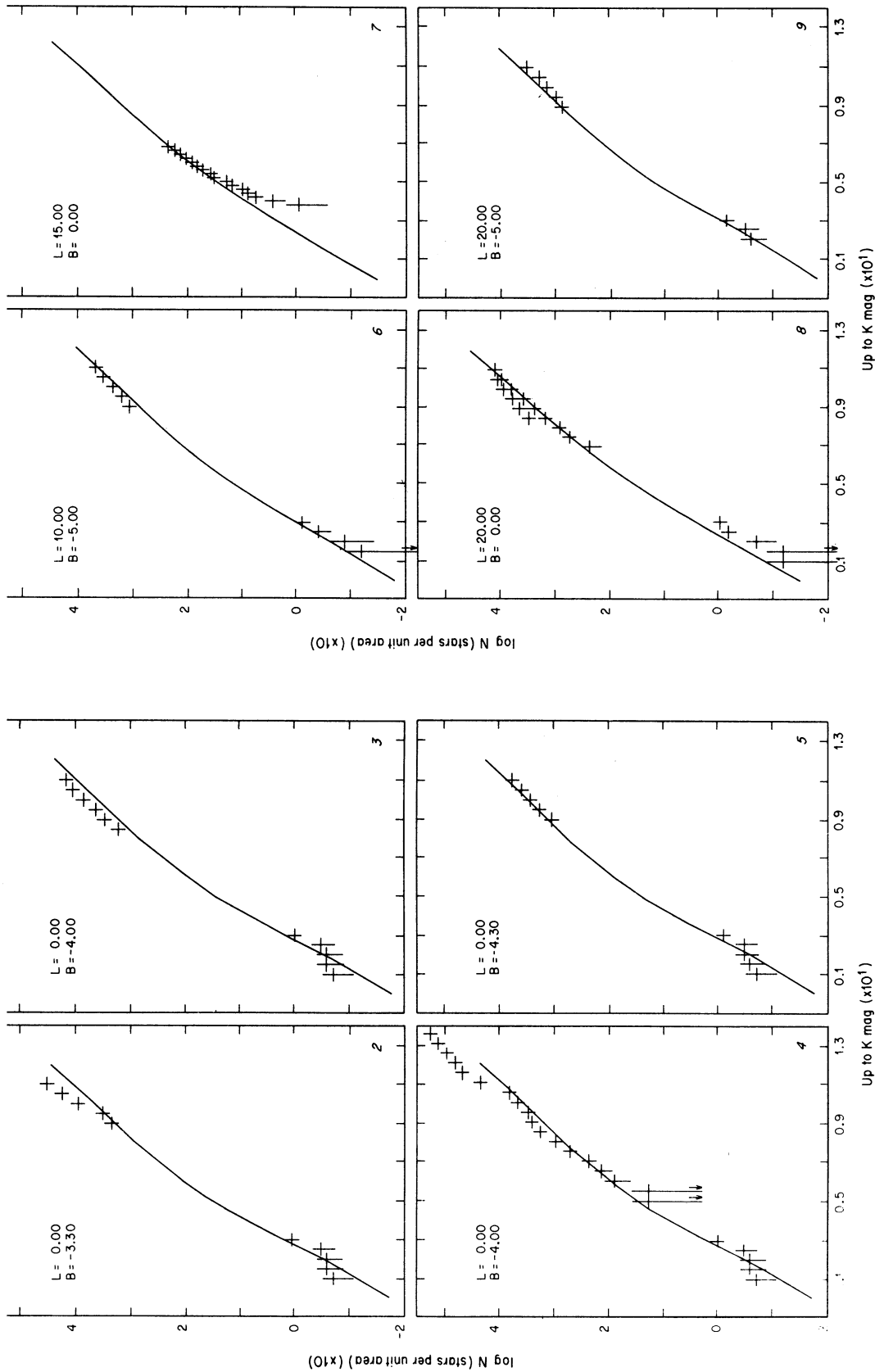


Fig. 2 to 9. Observed Cumulative Counts Functions (CCF's) for selected galactic areas. The crosses indicate the observational points which have been collected from different sources (see Table 1). The galactic coordinates of each region are indicated as follows. Longitude = DD.MM, Latitude =  $\pm$  DD.MM. The solid line represents the IR galactic model prediction for the CCF of the region in question. The values of the parameters used in the model were: distance from the sun to the centre = 8.75 kpc. Stellar radial scale length = 2.5 kpc except for Figures 2 to 6 and 9 for which we used 3.1 kpc (see Ruelas-Mayorga and Teague 1991 and Ruelas-Mayorga 1991d). Local absorption parameter =  $0.08 \text{ mag kpc}^{-1}$  except for Figures 2 to 6 and 9 for which we used  $0.05 \text{ mag kpc}^{-1}$  (see Ruelas-Mayorga and Teague 1991 and Ruelas-Mayorga 1991d).

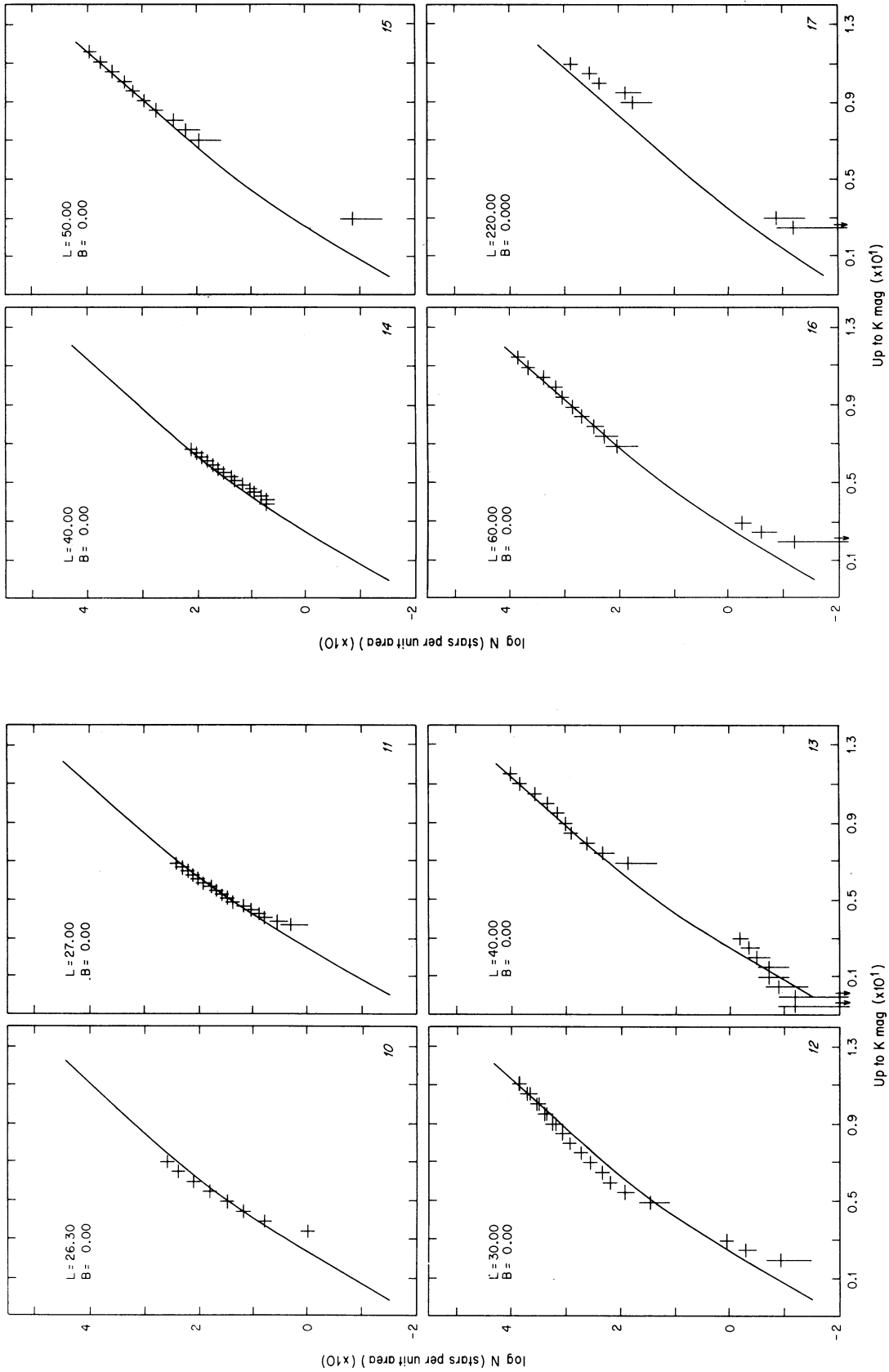


Fig. 10 to 17. Same as Figure 2.

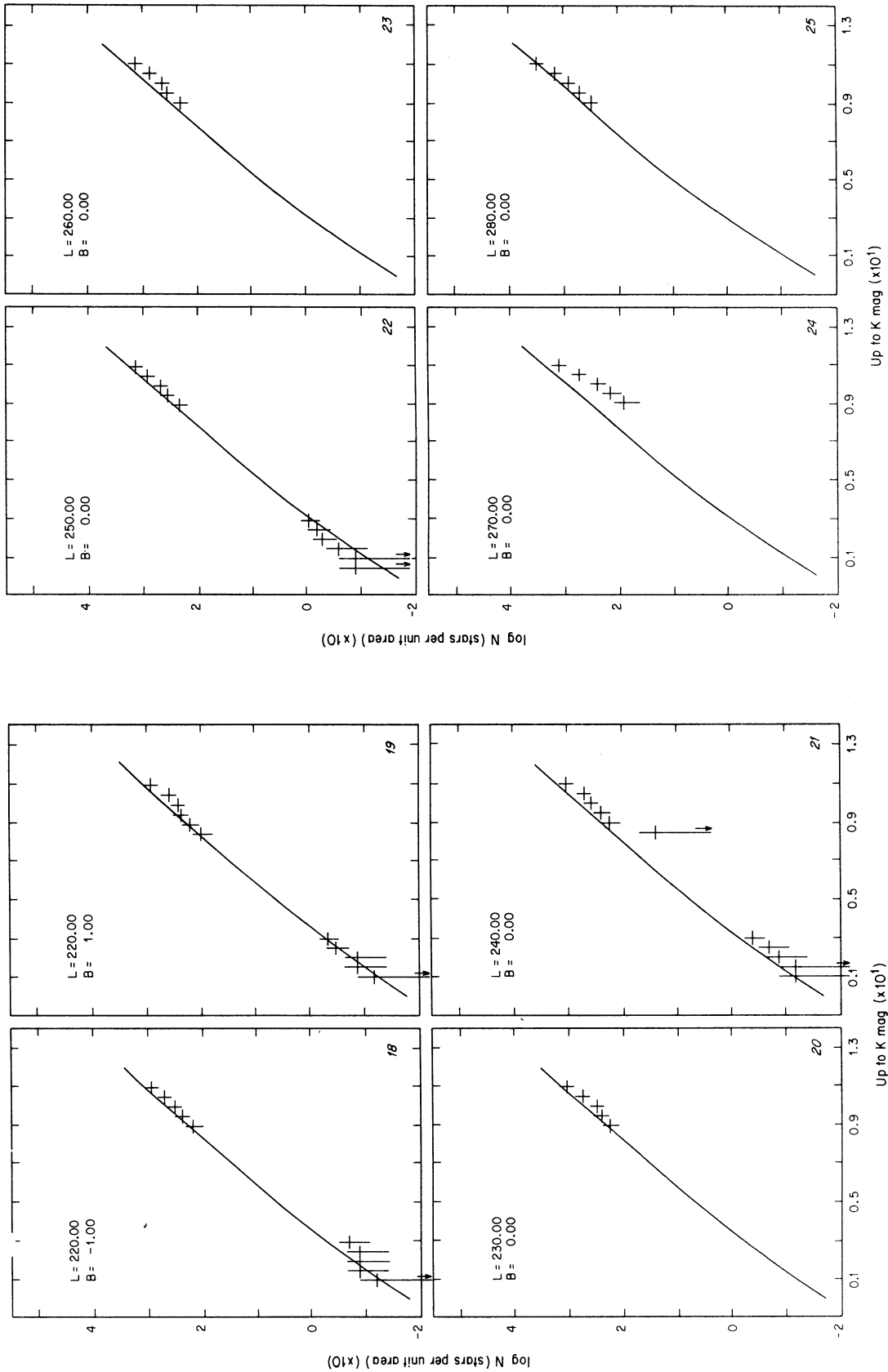


Fig. 18 to 25. Same as Figure 2.

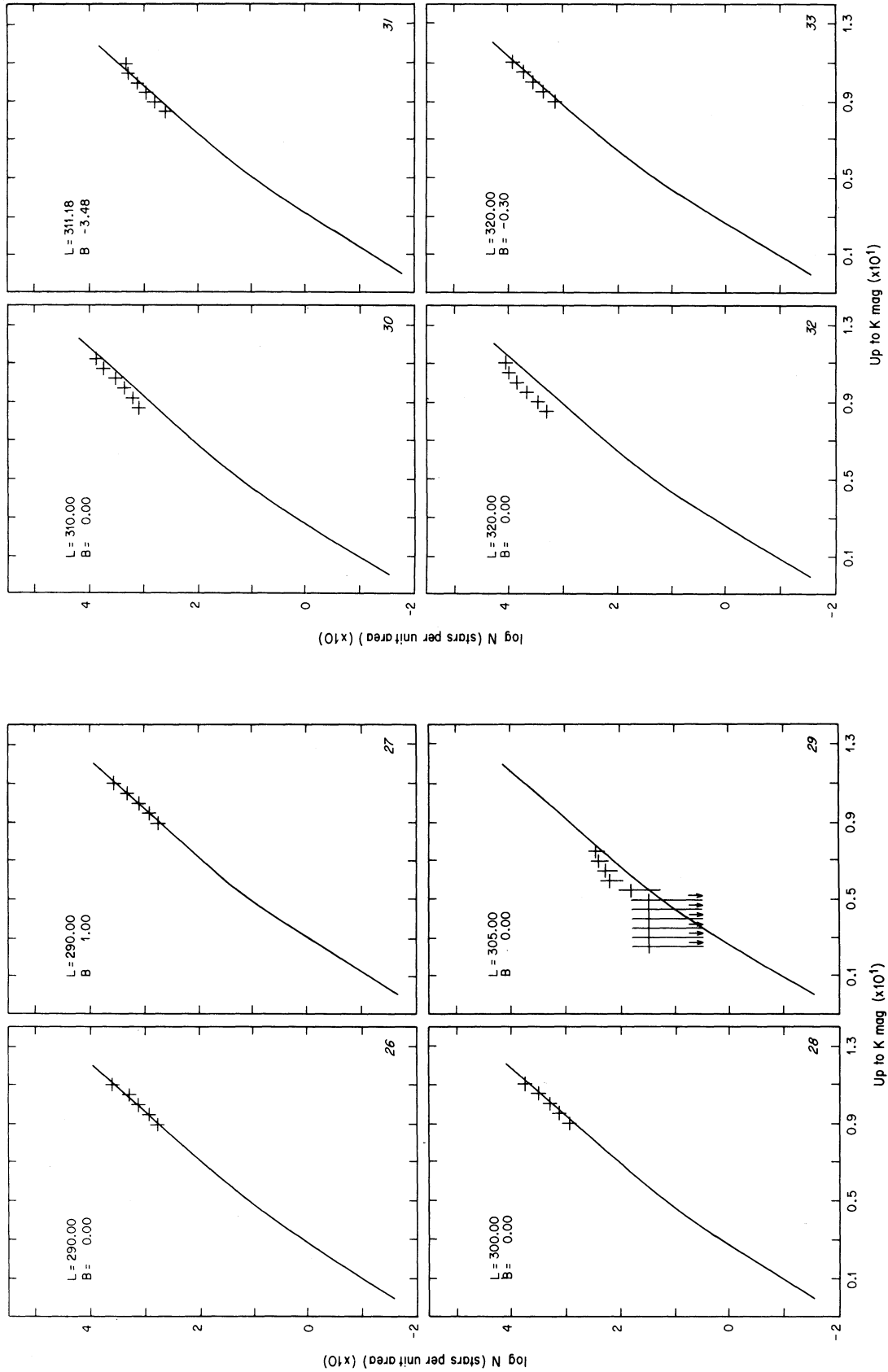


Fig. 26 to 33. Same as Figure 2.



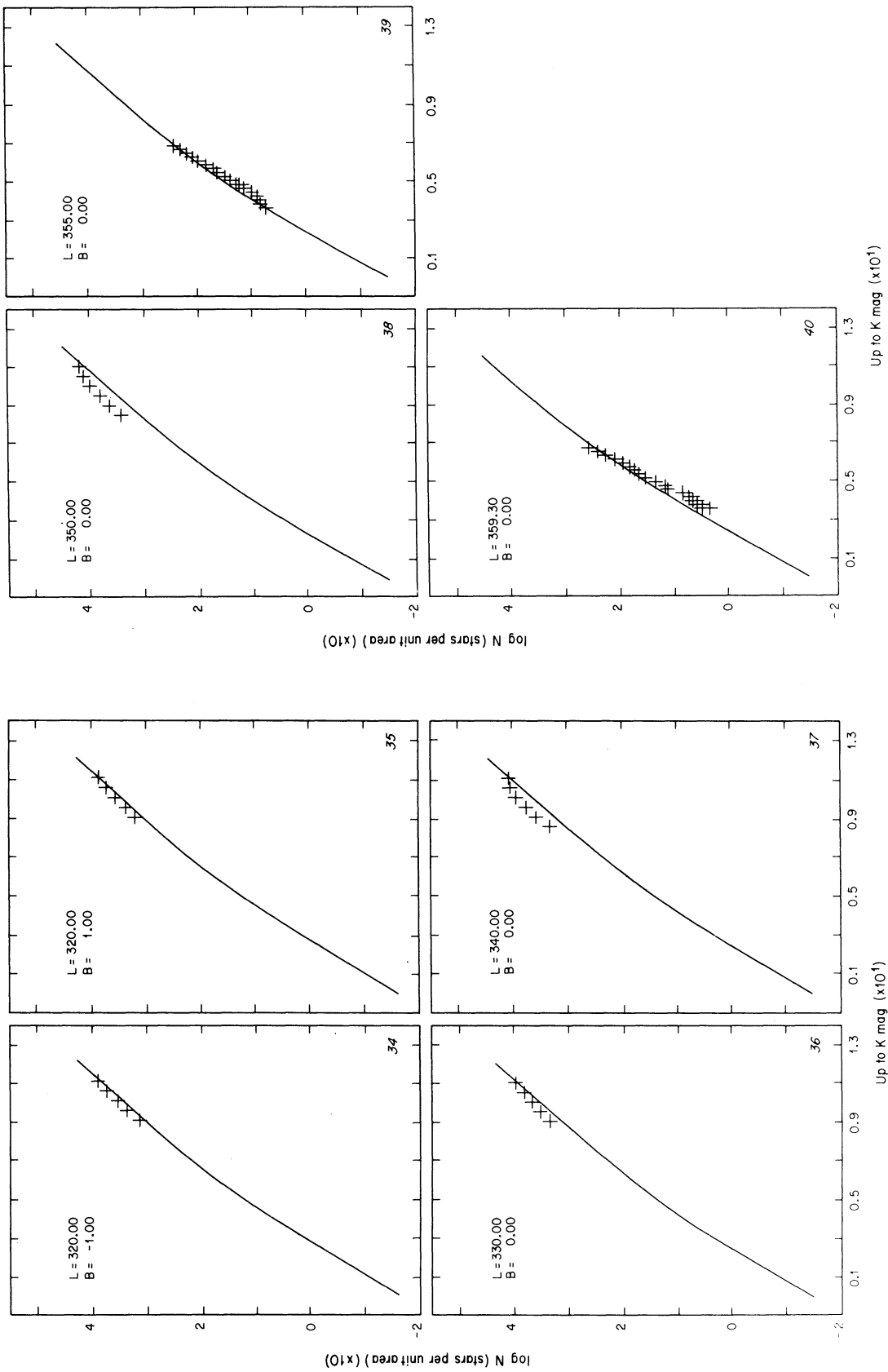


Fig. 34 to 40. Same as Figure 2.

regions observed in order to acquire these data are very small ( $\sim 200$ - $300$  sq. min.), they are likely to be affected by local deviations from the average galactic behaviour. The discrepancy observed between our points and those of Eaton *et al.* may be due to patchy absorption, which resulted in our observations being taken on a region deficient in absorbing material hence shifting the observed points towards brighter magnitudes. We could also have encountered an anomalous concentration of sources which has resulted in an increase of the number of sources detected.

The model fit to the observed points at  $l = 20$ ,  $b = -5$  (Fig. 9) is very good. A slight decrease in the model predictions would produce a better fit. This change may be achieved in a variety of ways, of which the most straight forward consists in a slight increase of the absorption parameter. The observations shown in Figures 10 and 11 [(26.5,0), (27,0)] agree well with the model, except for a very small discrepancy, where the model predicts slightly more sources at the bright end than are observed. From now on we shall refer to this problem as the 'bright magnitude theoretical excess' (BMTE).

Figure 12 shows the results for  $l = 30$ ,  $b = 0$ . The data in this figure are from the IRC, Eaton *et al.* (1984), and the author's in order of increasing  $K$ -magnitude. Our data and those of Eaton's agree very well. The model agrees well with the observations at faint magnitudes, but it is slightly deficient in the range  $5.0 \leq K \leq 9.0$ . At the bright magnitudes the BMTE is present; it is interesting to notice that this position is just where the molecular ring effects are observed in the  $2.4 \mu\text{m}$  brightness distribution. The slight discrepancy between the model and the observations may be attributed to the molecular ring contribution. This contribution has been modelled to fit the overall  $2.4 \mu\text{m}$  distribution, but it is not clear that fitting the brightness profiles guarantees also an agreement with the counts data, for we do not have any evidence that the LF of the stars in the ring is the same as that in the Solar neighbourhood. Different LF's may serve to fit the brightness profiles whereas a more restricted number will reproduce the stellar counts. Numerical experiments are in progress to try to determine what type of LF will produce better agreement between the flux and counts predictions with the observations.

Figure 13, 14, 15 and 16 illustrate the model predictions for the regions at  $l = 40, 50$  and  $60$ ,  $b = 0$ . The agreement between the model and the observations at the faint end is very good. At the bright magnitudes of  $l = 50$  and  $60$ , however, the BMTE is present.

Figure 17, 18 and 19 show the observations for the regions at  $l = 220, b = -1, 0, +1$ . The area on the galactic plane is distinctively deficient with respect

to the model predictions. We propose that this region suffers from anomalously high absorption which makes the observations shift towards fainter magnitudes. Comparisons of the observations at the galactic plane with those outside the plane indicate that the number of sources for the region at  $b = 0$  is smaller than that for the regions at  $b = -1, +1$ , hence confirming the presence of anomalously high absorption in this direction. The data for  $l = 220, b = -1, +1$ , displayed in Figures 17 and 19, show a very good agreement with the model predictions. Comparison between the data in both regions reveals that the stellar distribution is symmetrical with respect to the galactic plane in this directions; no BMTE is observed here.

Figures 20, 21 22 and 23 illustrate the observations along the galactic plane for  $l = 230, 240, 250$  and  $260$ . The model predictions for these regions are in good agreement with the observations; however, a slight increase in the model's absorption would yield a better fit to the observations for those regions with data at bright magnitudes (Figs. 22 and 23). The BMTE is present at  $l = 240$ . At  $l = 250$  we observe a significant excess of sources over the model prediction. This is the first time this effect has been noted, we feel that a revision of the model in the opposite sense to that made by Golisch (1983) would improve the fit, however, since this is the only region at which a significant excess has been noted. We tend to believe it to be the product of statistical fluctuations and therefore its presence does not warrant the revision of the model.

Figure 24 illustrates the data for  $l = 270, b = 0$ . It is clear that the model predictions are well above the observational points, hence suggesting that this area suffers from anomalously high absorption. We should also note that the general slope of the observed CCF is steeper than that of the model-predicted CCF.

The observations presented in Figures 25, 26, 27 and 28 [(280,0), (290,0), (290,+1), (300,0)] agree very well with the predictions of the model. Slight adjustments of the absorption parameter could improve the fits for  $l = 280$  and  $l = 300$ . The observational points presented in Figure 29 for  $l = 305$  have been taken from a recent paper by Danks *et al.* (1984). It is clear that the model predictions are deficient with respect to the observations. The work of Danks *et al.* indicates that two new clusters of stars have been discovered in this area; therefore it is probable that this local concentration of objects is responsible for the difference between the observed and predicted CCF's (see the figures in Danks *et al.* 1984). Figures 30 and 31 depict the data obtained for  $l = 310, b = 0$  and for the clear region called Circinus Window ( $311.2, -3.8$ ) (Freeman *et al.* 1977). The model predictions are slightly below the observations, indicating that a

decrease of the value of the absorption parameter would reconcile the observations with the theory. It is comforting to establish the need for a lower absorption in these directions, especially in that for the Circinus Window, because the paper by Freeman *et al.* (1977) also indicates this need from a completely different set of arguments.

The diagrams presented in Figures 32, 33, 34 and 35 illustrate the observations and the theoretical predictions for the regions at  $l = 320$ ,  $b = 0, -0.5, -1.0$  and  $+1.0$ . The observational points for  $l = 320, b = 0$  appear displaced well above the theoretical CCF, probably indicating that this region suffers from a smaller amount of absorption than that predicted by the model. The model predictions for the regions outside the galactic plane ( $l = 320, b = -0.5, -1.0$  and  $+1.0$ ) agree quite well with the observations. However, a slight decrement in the value of the absorption parameter would yield an even better fit. Comparisons between the data at  $b = -1.0$  and  $b = +1.0$  indicate that our galaxy shows a symmetrical stellar distribution with respect to the galactic plane at this galactic longitude. It is interesting to note that the  $2.4 \mu\text{m}$  observations of the galaxy (see Hayakawa *et al.* 1981) also indicate an excess of radiation at this position on the galactic plane.

Figures 36, 37 and 38 illustrate the data obtained for  $l = 330, b = 0$ ,  $l = 340, b = 0$  and  $l = 350, b = 0$ . For these three cases the model predictions are deficient with respect to the observations. This fact may also indicate the need for a lower value of the absorption in the model calculations. However, it is precisely around these positions (330–340) that the southern manifestation of the molecular ring is expected. It may be, as has been mentioned previously, that the LF appropriate to describe the molecular ring stellar population is richer compared with the solar neighbourhood LF, thereby contributing a larger number of stars to the observations than the model. Further studies of these regions and of the bright ends of their CCF's will help establish which one of the explanations given above is the valid one.

Finally, data for  $l = 355, b = 0$  and  $l = 359.5, b = 0$ , taken from Kawara *et al.* (1982), are illustrated in Figures 39 and 40. The agreement of the model with the observations is remarkable for both regions. Note that the observed CCF in Figure 40 appears to have a slightly steeper slope than that predicted by the model.

#### IV. REASONS FOR DISCREPANCIES BETWEEN THEORETICAL AND OBSERVED CCF's

It has been pointed out that the galactic model described in Ruelas-Mayorga (1991a) was used to predict the CCF's for regions at different longitudes

on the galactic plane with a single set of parameters which represent the global characteristics of the galaxy. Slight and moderate discrepancies between the theoretical predictions of the model and observations were seen at a number of points. As mentioned in section III, they were attributed to three possible effects: (1) anomalous absorption, (2) concentrations or deficiencies of stars and (3) deviations of the geometry of the galaxy from its global structure. On the basis of the large number of studies indicating patchy and inhomogeneous absorptions (see Johnson 1968) the author feels that slight variations of the local absorption parameter would be sufficient to produce a perfect fit between theory and observations. This, however, is not proof that absorption differences are responsible for the observed discrepancies. In order to be positive, one would need to perform complete *JHK* photometry of the sources located in the deviant regions to establish the value of the colour excess, and hence of the smoothed absorption in the relevant directions.

An extensive literature search was conducted to see whether the observed discrepancies could possibly be explained as absorption inhomogeneities, or as due to one of the alternative effects mentioned above. Our search was based on the galactic distribution and possible effects on the value of the integrated absorption along the line of sight of the following elements: near Infrared emission ( $2.4 \mu\text{m}$ ) (see Ruelas-Mayorga 1991a), H I (see McGee, Milton and Wolfe 1966; Muller and Westerhout 1957), CO (see Robinson *et al.* 1984; Israel *et al.* 1984), Far Infrared emission (FIR) (114–196  $\mu\text{m}$ ) (see Caux *et al.* 1984), interstellar extinction derived from early spectral type stars (see Lucke 1978; Neckel and Klare 1980) and interstellar dust distribution obtained from polarisation studies (see Krautter's 1980).

While the model, with a single value of the local absorption ( $a_K = 0.08 \text{ mag kpc}^{-1}$ ), apparently represents both the  $2.4 \mu\text{m}$  flux distribution and the stellar number counts extremely well for a wide range of galactic longitudes and latitudes (see section III), there are several regions for which the model predictions do not agree with the observations. These regions, which were interpreted in section III in terms of anomalous absorption, are located at  $b = 0$  and 20, 220, 270, 310, 320, 330, 340 and 355 and at  $l = 311.2$  and  $l = -3.8$ . For three of these regions, extra evidence is available to support the contention that variable absorption is responsible for differences between observed and predict CCF's. These are: (1) (220,0), (2) (311.2, -3.8) and (3) (320,0). Comparison of the count values at  $l = 220$  with values above ( $b = +1$ ) and below ( $b = -1$ ) the galactic plane ( $b = 0$ ) at the same longitude ( $l = 220$ ), support the idea of higher integrated absorption. Region (311.2, -3.8)

is known as Circinus window; Freeman *et al.* (1977) established that a lower value of the absorption is necessary in order to explain the sighting of an external galaxy in this region. Figure 43 shows the *JHK* diagram for seven stars in (320,0). As indicated in section V, a mean reddening of  $E(J-K) = 1.29 \pm 0.25$  may be derived from this figure. The value  $a_K = 0.03 \text{ mag kpc}^{-1}$  was derived using the galactic model described in Ruelas-Mayorga (1991a) by requiring that  $E(J-K) = 1.29$ . It is clear that this value for the local absorption parameter ( $a_K$ ) implies a lower integrated absorption in this region.

Since the  $2.4 \mu\text{m}$  flux is produced by the same stellar component which makes up our CCF observational results (taken at  $2.2 \mu\text{m}$ ), its distribution may give an indication of whether absorption, or other factors are responsible for the CCF discrepancies. In the range  $300 \leq l \leq 330$  the observed flux is higher than the predicted flux which indicates a correlation with the CCF results for  $l = 310, 320$  and  $330$ . Whether the  $2.4 \mu\text{m}$  flux excess is produced by a lower value of the absorption, or an excess of stars, or simply by the asymmetry shown by the disk between north and south is not clear; although the acceptable CCF fits for  $l = 30, 40, 50$  and  $60$  rule out the possibility of the asymmetry being the cause of the CCF discrepancies.

Integrated H I observations for the southern hemisphere (McGee *et al.* 1966) and H I profiles for the norther hemisphere (Muller and Westerhout 1957) were utilised to find the H I column density ( $N_{HI}$ ) along the galactic plane in the longitude range  $-140 \leq l \leq 60$ . A dust to gas ratio expressed as a relation between  $N_{HI}$  and  $E(B-V)$  (Mirabel and Gergely 1979) was used to calculate a representative visual absorption ( $A_V$ ) expected along the galactic plane from dust associated with H I. The value obtained from this calculation illustrates an upper limit to the representative values of  $A_V$  since it uses all the H I seen along the line of sight, on the assumption that the dust to gas ratio on the galactic plane is the same as that found in the direction of globular clusters (see Mirabel and Gergely 1979 and references therein). However, the value of  $A_V$  derived in this way must only be regarded as representative of the 'run' of visual absorption along the galactic plane, rather than being the true quantitative value. That this is so, can be inferred from the fact that towards the galactic centre, the commonly determined value for  $A_V \sim 27$ , whereas from the H I the above relation gives  $A_V \sim 4.5$ . A smaller difference is noted at ( $l = 320, b = 0$ ) where the integrated absorption obtained from *JHK* measurements is  $\sim 7.5$  and the H I-derived absorption is  $\sim 4$ .

It would appear that in the galactic plane the value of  $A_V$  derived from H I is about a factor of

2-5 too low compared with other determinations. The reasons for this are not clear, but may be related to significant variation in gas/dust ratio, and/or the relative amounts of hydrogen in atomic or molecular forms. We therefore take the H I results merely as an indicator of probable variations of  $A_V$  with longitude. The results then tend to corroborate the need for lower relative absorption for  $l = 310, 320, 330, 340$  and  $350$ . They are inconclusive for  $l = 220$  and  $270$  and indicate the need for a possible high value of the absorption at  $l = 20$  which contradicts the suggestion that the higher value of the CCF in this region compared with the model, is due to anomalous low absorption. We may speculate at this point that (20,0) is a region with an anomalously large stellar concentration. Figure 41 illustrates the relationship between the absorption obtained from the H I-column density and galactic longitude ( $l$ ).

The CO emissivity of the galactic plane derived from its rotation transition (1-0) at 2.6-mm (see Robinson *et al.* 1984) reveals broad maxima in the ranges  $15 \leq l \leq 35$  and  $330 \leq l \leq 345$ , which are interpreted as a molecular ring in our galaxy. If a close association between CO and dust is assumed, higher values of the absorption instead of lower values might be expected for  $l = 20, 330$ , and  $340$ . However, the molecular ring, considered to be a concentration of dense molecular clouds, may contain regions of active star formation, and may therefore be associated with an extra stellar component which could explain the CCF discrepancies observed in these regions. It is interesting to note the apparent anticorrelation

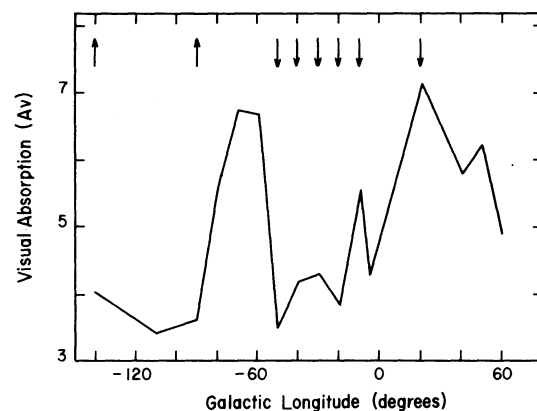


Fig. 41. Run of the visual absorption ( $A_V$ ) derived from H I column-density observations. The arrows indicate the longitudes at which it is necessary to increase ( $\uparrow$ ) or decrease ( $\downarrow$ ) the absorption to make the model-predicted CCF's coincide with the observed ones. The visual absorption ( $A_V$ ) obtained from H I is a representative absorption not an absolute one.

between CO and H I in the longitude range  $330 \leq l \leq 345$ . At  $l = 310$  there is a moderate maximum in CO which could only be interpreted as an enhancement in the absorption, contrary to the CCF indication. Relative CO depressions are seen at  $l = 320$  and  $l = 350$  which corroborate the need for lower absorption values in these directions.

Israel *et al.* (1984) have published CO results for the longitude range  $270 \leq l \leq 350$  obtained from observations of the CO rotational transition (2-1) at a wavelength of 1.3-mm. Relative maxima at  $l \sim 270, 306,$  and  $312$  may imply excessive absorption in these directions accounting partially for the need for higher absorption at  $l \sim 270$  derived from CCF results and for which the H I results were inconclusive. Relative minima at  $l \sim 298, 308, 317-320$  and  $329$  are observed, corroborating the need for lower absorption towards  $l \sim 310, 320$  and  $330$ . Notice the anticorrelation between CO (2.6-mm) and CO (1-mm) around  $l \sim 330$ .

Caux *et al.* (1984) published a survey of the galactic plane at far infrared (FIR) wavelengths (114–196  $\mu\text{m}$ ). This radiation is produced by dust heated by star light produced in regions of active stellar formation in the galaxy. Therefore, the FIR distribution indicates the distribution of such regions. Relative bumps (probable stellar density enhancements) are seen at  $l = 285, 310, 330, 0, 25, 30$  and  $55-60$  which seem to indicate the need for extra numbers of stars for two of our anomalous regions:  $l = 310$  and  $l = 330$ , which agrees with our expectation for CCF model fittings.

Interstellar extinction results from photometric studies of bright stars have been published by Lucke (1978) and Neckel and Klare (1980). They are useful only out to distances of 2 kpc; and show no major enhancements of  $A_V$  in the regions under consideration. Neckel and Klare's study reveal

an average value of the extinction  $A_V \sim 1.5$  mag in the range  $-140 \leq l \leq 330$  which increases to  $A_V \sim 3.0$  mag for  $330 \leq l \leq 60$ , indicating a value for  $l = 20$  in excess of  $A_V \sim 3.3$  mag. Krautter's (1980) dust distribution out to 3 kpc clearly shows that the dust distribution out to  $\sim 3$  kpc is clumpy. The model distribution of the absorption material (exponential disk, see Ruelas-Mayorga 1991a) is clearly an idealization of the real dust distribution; however, it gives reasonable results for total integrated absorption, indicating that the dust may be assumed to have a smooth distribution over the galaxy. For a significant fraction of the regions the hypothesis of variable absorption seems to be confirmed. For a few others it is necessary to invoke the presence of increase star density possibly due to previous underestimations of the ring component. Table 2 gives a list of the discrepant regions studied, and of the direction the absorption would be altered due to the effects of the different factors taken into consideration. Column 1 gives galactic longitude, Columns 2, 3, 4, 5 and 6 give the absorption requirements from the CCF, H I, CO (dust), CO (star formation) and other studies respectively.

Table 2 indicates that even though anomalous values of the absorption are likely candidates to explain the discrepancy between predicted and observed CCF's, it is rather difficult to establish this with certainty from nonphotometric studies. Detailed *JHK* photometry observations of statistically significant samples of the stellar population in each of the deviant regions should be performed to obtain  $E(J-K)$  and to establish whether the absorption is anomalous or some other factor should be invoked to explain the discrepancy between predicted and observed CCF's.

TABLE 2

DISCREPANT REGIONS AND ABSORPTION CHARACTERISTICS					
l (deg)	CCF	H I	CO Dust	Star Form.	Other
20	low	high	high	low	
220	high	inconclusive	....	....	CCF comparisons at $b = \pm 11$
270	high	inconclusive	high		
310	low	low	high	low	
320	low	low	....	low	<i>JHK</i> diagram: low
330	low	low	high	low	
340	low	low	high	low	
350	low	low	....	....	low absorption
311.2	low	....	....	....	Circinus

V. MISCELLANEOUS PHOTOMETRIC AND  
SPECTROSCOPIC STUDIES OF SEVERAL  
SOURCES IN SELECTED AREAS  
OF THE GALACTIC PLANE

In this section we shall discuss the *JHK* photometric and spectroscopic (CO) studies made on some of the sources found in several of our scans of selected galactic regions. These regions are located at (280,0), (320,+5), (320,10), (0,-90) (South Galactic Pole (SGP)), and (36,-51.1) (Savage Region). The positions of sources were obtained from scans of these areas.

In Table 3, the photometric and spectroscopic data for each one of the regions studied in this section are given. Column 1 gives the source name

TABLE 3

PHOTOMETRIC AND SPECTROSCOPIC DATA  
FOR EACH OF THE REGIONS STUDIED <sup>a</sup>

Source	<i>J-H</i>	<i>H-K</i>	<i>K</i> <sub>0</sub>	<i>(J-K)</i> <sub>0</sub>	CO <sub>0</sub>
(323,+5), <i>E(J-K)</i> = 0.27					
19/6	0.91	0.21	8.51	0.85	0.10
20/4	0.99	0.25	8.93	0.97	0.12
27/2	0.49	0.07	1.16	0.29	0.02
30/1	1.09	0.29	4.73	1.11	0.19
30/3	0.51	0.05	1.19	0.29	0.04
32/3	0.28	0.05	5.36	0.06	-0.02
44/2	0.95	0.25	8.07	0.93	0.15
52/3	0.72	0.09	9.14	0.54	0.04
55/3	1.01	0.24	9.08	0.98	0.12
59/1	0.55	0.12	7.98	0.40	0.02
59/5	0.37	0.06	8.69	0.16	0.01
69/4	0.62	0.12	8.04	0.47	0.06
71/2	1.16	0.42	7.31	1.31	0.23
72/1	0.93	0.23	8.51	0.89	0.11
73/3	0.94	0.23	8.51	0.90	0.12
79/1	1.05	0.29	9.02	1.07	0.15
81/2	1.10	0.30	7.91	1.13	0.12
83/1	0.75	0.18	9.29	0.66	0.07
83/3	1.09	0.29	8.82	1.11	0.16
(320,0), <i>E(J-K)</i> = 1.29					
1/1	0.88	0.28	4.75	-0.13	....
1/3	1.50	0.59	7.70	0.80	....
1/4	2.34	1.08	7.68	2.12	....
9/1	1.82	0.74	8.66	1.27	....
9/2	1.95	0.80	7.92	1.46	....
9/3	1.85	0.72	8.37	1.28	....
10/1	1.90	1.00	8.52	1.61	....
(280,0), <i>E(J-K)</i> = 0.33					
1/2	0.40	0.13	8.37	0.20	....
19/1	1.13	0.34	8.81	1.14	....

TABLE 3 (CONTINUED)

Source	<i>J-H</i>	<i>H-K</i>	<i>K</i> <sub>0</sub>	<i>(J-K)</i> <sub>0</sub>	CO <sub>0</sub>
21/9	0.96	0.31	8.28	0.84	....
26/8	1.44	0.53	5.79	1.64	....
28/8	1.01	0.33	8.71	1.11	....
SAVAGE REGION (36, -51.1), <i>E(J-K)</i> = 0.0					
SAV 1	0.61	0.12	9.50	0.73	....
SAV 2	0.26	0.09	10.64	0.35	....
SAV 3	0.31	0.07	9.78	0.38	....
SAV 4	0.71	0.14	8.99	0.85	....
SAV 5	0.60	0.12	8.37	0.72	....
SAV 6	0.36	0.14	10.80	0.50	....
SAV 7	0.55	0.05	11.16	0.60	....
SAV 8	0.68	0.16	11.22	0.84	....
SAV 9	0.28	0.11	8.53	0.38	....
SAV 10	0.26	0.07	11.55	0.33	....
SAV 11	0.31	0.06	11.10	0.47	....
SAV 12	0.81	0.15	7.76	0.96	....
SOUTH GALACTIC POLE, <i>E(J-K)</i> = 0.0					
SP 1	0.33	0.08	9.39	0.41	....
SP 2	0.39	0.10	9.47	0.48	....
SP 3	0.70	0.17	10.51	0.86	....
SP 7	0.53	0.11	8.08	0.64	....
SP 8	0.57	0.12	7.91	0.69	....
SP 9	0.61	0.13	10.04	0.74	....
SP 11	0.22	0.08	8.88	0.30	....
SP 12	0.49	0.15	10.56	0.64	....
SP 14	0.32	0.14	11.30	0.46	....
SP 15	0.37	0.10	9.81	0.47	....
SP 16	0.58	0.11	7.05	0.69	....
SP 17	0.33	0.06	10.56	0.39	....
SP 19	0.27	0.14	11.21	0.41	....
SP 20	0.32	0.11	10.12	0.43	....
SP 21	0.34	0.08	11.25	0.42	....
SP 22	0.58	0.16	10.04	0.74	....
SP 23	0.47	0.13	11.35	0.60	....
(320, +10), <i>E(J-K)</i> = 0.0 except for 20/4 for which <i>E(J-K)</i> = 0.36					
3/1	0.84	0.15	11.14	0.99	0.11
10/1	0.56	0.10	10.97	0.66	....
13/2	0.65	0.10	8.41	0.75	0.12
18/1	0.41	0.08	12.83	0.49	....
19/1	0.51	0.10	10.70	0.61	....
19/2	0.58	0.10	10.98	0.68	....
20/4	1.05	0.30	8.20	0.99	0.17
28/4	0.06	0.01	4.52	-0.05	0.02
38/1	0.71	0.11	10.65	0.82	0.07
38/2	0.35	0.07	11.27	0.42	0.02
40/2	0.36	0.07	8.31	0.43	0.03
45/1	0.77	0.17	8.65	0.94	0.03
53/1	0.62	0.12	10.81	0.74	0.07
55/1	0.92	0.18	9.35	1.10	0.15

a.  $A(K) = 0.58E(J-K)$

which follows our convention (ROW/SOURCE), column 2 and 3 give the observed  $J-H$  and  $H-K$  colours, column 4 illustrates the values of the dereddened  $K_0$  magnitude, column 5 gives the values of the dereddened  $(J-K)_0$  colour, and finally in column 6 the values of the dereddened  $CO_0$  in the Frogel's system (see Ruelas-Mayorga and Teague 1991, and Ruelas-Mayorga 1991d) are given. The observational uncertainties for these quantities are of the order  $\pm 0.03$  or smaller. The excess in  $(J-K)$  [ $E(J-K)$ ] is obtained directly from the diagrams by simply measuring the reddening amount necessary to bring the observed values onto the intrinsic giant sequence (Lee 1970). The relation between  $a_K$  and  $E(J-K)$  is taken from the literature (Lee 1970).

#### a) $JHK$ Diagram

$l = 280, b = 0$ : Five sources have been observed in this area. Figure 42 illustrates their position on the  $JHK$  diagram. From this figure we may see that one of the sources must be an unreddened dwarf due to its position well below the Lee's (1970) giant sequence. The other four sources lie along the Jones and Hyland (1980) reddening line. If we assume that these sources belong to the intrinsic giant sequence, a mean value for the reddening in this direction may be found. The mean reddening turns out to be  $E(J-K) = 0.33 \pm 0.17$ . The magnitude of these sources is for all cases brighter than  $K \sim$

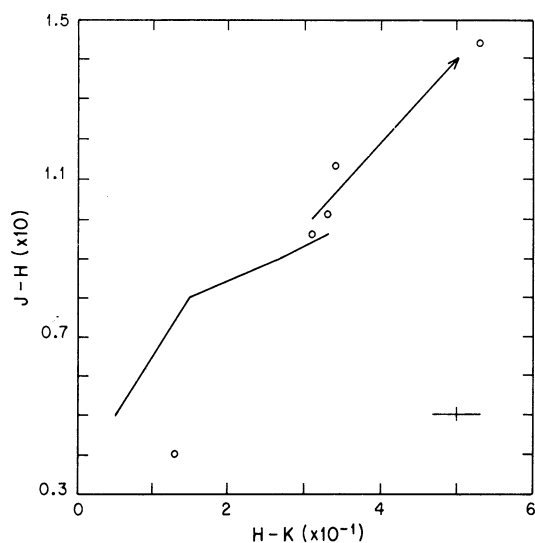


Fig. 42.  $JHK$  diagram for the sources in the region at  $l = 280, b = 0$ . The Lee's (1970) Giant intrinsic sequence is shown, as well as the Jones and Hyland (1980) reddening line. The cross at the lower right indicates the size of the observational uncertainties.

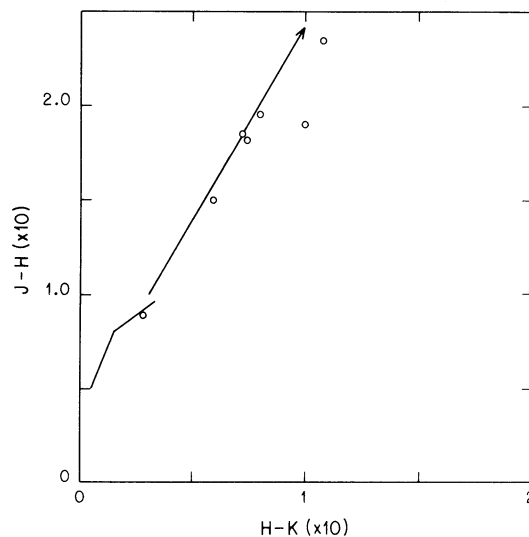


Fig. 43.  $JHK$  diagram for the sources in the region at  $l = 320, b = 0$ . The intrinsic solar neighbourhood giant sequence (Lee 1970) and the Jones and Hyland (1980) reddening line are shown. The size of the observational uncertainties are typically smaller than the symbols.

$+9.0$ . Thereby putting them below the brightest point on the observed CCF for this region (Fig. 25).

$l = 320, b = 0$ : Seven sources were observed in this area (see Fig. 43). All of these lie along the reddening line and yield a mean reddening for this region of  $E(J-K) = 1.29 \pm 0.25$ . Using an absorption parameter which yields this value for the total colour excess, we predicted the CCF for this region (see Fig. 44). The agreement between theory and observations is better, however, it is not complete. The observations still present an enhancement over the modelled CCF; further alterations of the model parameters will allow the achievement of a better fit. The author feels that the amount of information available at this point does not warrant further changes to the model. We prefer to leave this discrepancy partially explained and posing an interesting subject matter for future research.

$l = 323, b = +5$ : Nineteen sources have been observed in this area; their  $JHK$  diagram (Fig. 45) shows that at least eight of them are foreground giant or dwarf stars. The rest lie along the reddening line, and their reddening is small, as was expected from their position outside the galactic plane. Their mean reddening value is  $E(J-K) = 0.27 \pm 0.04$ . Comparing this results with the value 1.29 found for the region at  $l = 320, b = 0$  indicates how concentrated the absorbing material is towards the galactic plane.

$l = 320, b = +10$ : Fourteen sources were measured in this area and their  $JHK$  diagram may

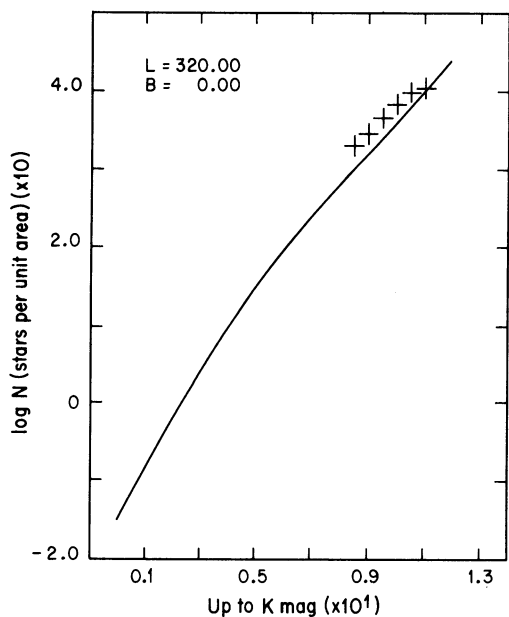


Fig. 44. Cumulative Counts Function for the region at  $l = 320$ ,  $b = 0$ . The crosses represent the observational points, and the solid line indicates the model predicted CCF for this region with the corrected value for the absorption parameter. See text for full details.

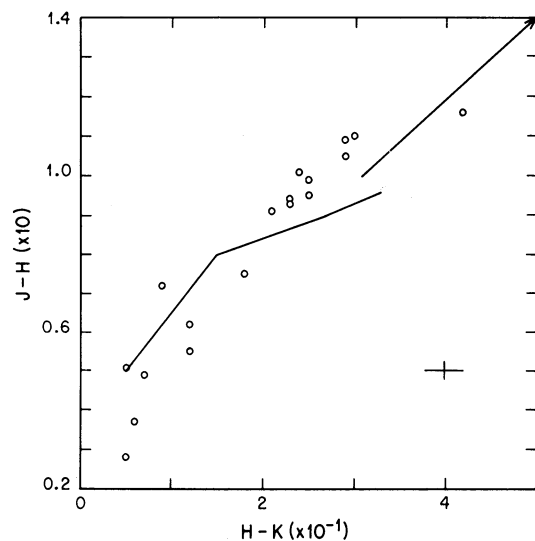


Fig. 45.  $JHK$  diagram for the sources in the region at  $l = 323$ ,  $b = +5$ . The Lee (1970) solar neighbourhood giant sequence and the Jones and Hyland (1980) reddening line are shown. The cross at the lower right indicates the size of the observational uncertainties.

be seen on Figure 46. This diagram indicates that all the sources observed are unreddened objects. Most of them lie close to the intrinsic giant sequence. This fact indicates their possible nature as foreground

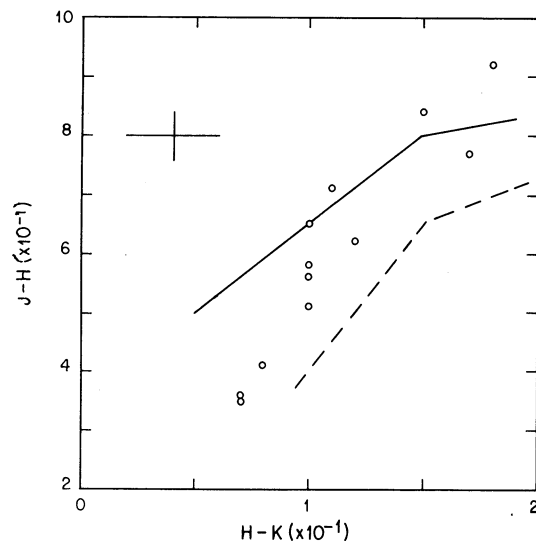


Fig. 46.  $JHK$  diagram for the sources in the region  $l = 320$ ,  $b = +10$ . The Lee (1970) (solid line) solar-neighbourhood giant sequence and the Mould (1976) (dashed line) sequence for dwarfs are shown in this figure. The cross at the upper left indicates the size of the observational uncertainties.

giant stars. Source 20/4 appears reddened with respect to the giant sequence by  $E(J-K) \sim 0.36$ . The large reddening value of this source, compared to the others in this region, suggests that a pocket of anomalously high absorption has been encountered toward this star. The colours of this star are not red enough to make it a possible Mira variable.

*South Galactic Pole:* Seventeen sources have been observed in this direction of the South Galactic Pole. Their  $JHK$  diagram (Fig. 47) indicates that all these objects are located well below the Lee's intrinsic giant sequence, suggesting that they are unreddened foreground dwarf stars.

$l = 36$ ,  $b = -51.1$ : *Savage Region:* Twelve sources have been observed in this region. Figure 48 illustrates their  $JHK$  diagram. There are two sources that lie along the intrinsic giant sequence, and probably are unreddened giant stars. However, most of the sources lie well below the giant sequence thereby being identified with dwarf foreground stars. This region is contained within a larger area which is believed to be free from galactic obscuration (see Savage and Bolton 1979). They have studied this area in search of QSO's which they selected based on their ultraviolet excesses and on their emission line characteristics. The  $K$  survey that we have conducted of this region, due to its absorption free characteristics, allowed us to study the distribution of the IR stellar population at larger distances and would also clearly indicate the presence of objects with IR excesses which could



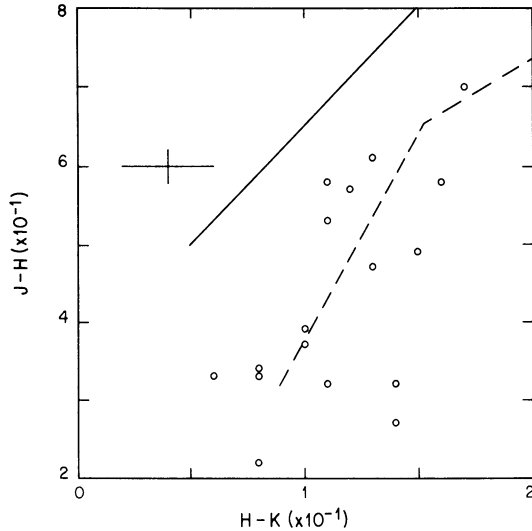


Fig. 47. *JHK* diagram for the sources in the region  $l = 0$ ,  $b = -90$  (South Galactic Pole). The solid line represents the Lee (1970) solar neighbourhood intrinsic giant sequence, and the dashed line represents the Mould (1976) sequence for dwarfs. The cross indicates the size of the observational uncertainties.

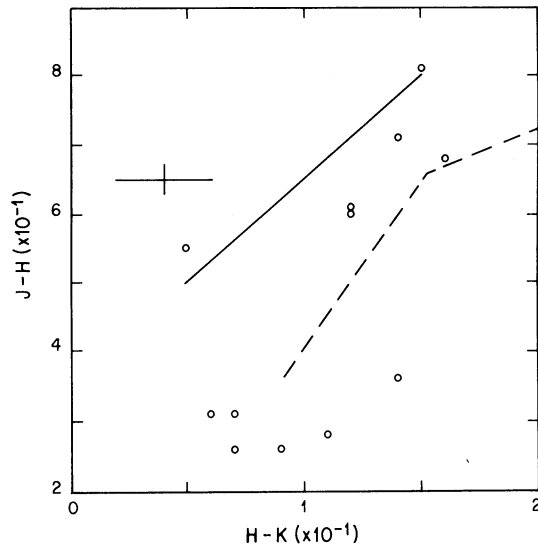


Fig. 48. *JHK* diagram for the sources in the region  $l = 36$ ,  $b = -51.1$ . The solid line represents the solar neighbourhood intrinsic giant sequence (Lee 1970), and the dashed line represents the Mould (1976) dwarf sequence. The cross indicates the size of the observational uncertainties.

be identified with QSO's. No sources with such IR excesses have been detected in our survey.

#### b) The $K$ versus $J-K$ Diagram

Figure 49 illustrates the observed  $K$ -magnitude versus observed  $J-K$  colour diagram for the sources

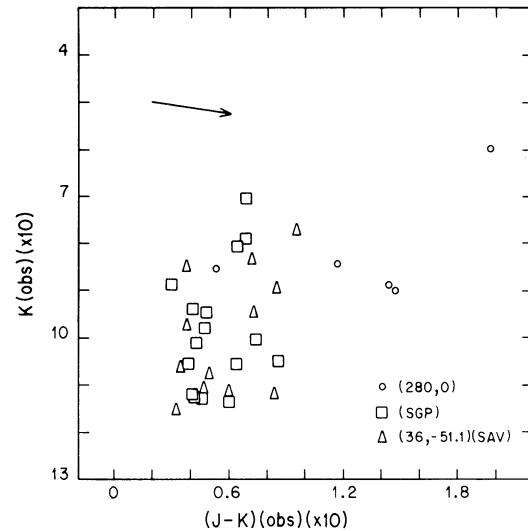


Fig. 49.  $K$  versus  $J-K$  diagram for the sources in three galactic regions: (dots)  $l = 280$ ,  $b = 0$ ; (squares)  $l = 0$ ,  $b = -90$  (South Galactic Pole); (triangles)  $l = 36$ ,  $b = -51.1$  (Savage Region). The arrow at the upper left indicates the reddening line on this diagram. The size of the observational uncertainties is typically smaller than the size of the symbols.

in the regions at (280,0), SGP, and (36,-51.1). The mean  $J-K$  colour for the sources in the SGP is  $(J-K)_{SGP} = 0.55 \pm 0.04$  and at the Savage Region  $(J-K)_{SAV} = 0.59 \pm 0.06$ . The positions of these regions in the galaxy make it very probable that their sources suffer from very little reddening (The model predicts  $E(J-K)_{SGP} = 0.025$ ,  $E(J-K)_{SAV} = 0.033$ ). We shall assume that these values are the intrinsic mean  $J-K$  colours for the stars in the SGP and in the Savage Region and based on the calibration by Johnson (1966), we find that these values correspond to spectral type K1-K2 V. The stars in these regions are located in a range of distances from  $\sim 20$  pc to  $\sim 200$  pc from the Sun. It is interesting to notice that in regions far away from the galactic plane the IR stellar population detected in our survey is predominantly formed of main sequence stars with spectral types K or earlier (in accordance with the model), if the slight reddening effects are taken into account.

Figure 50 shows the  $K_0$  versus  $(J-K)_0$  diagram for the areas at (320,0), (323,+5) and (320,+10). The observed values have been dereddened by the mean  $E(J-K)$  obtained in subsection V.a).

Most of the sources seem to be concentrated within the ranges  $0.2 \leq (J-K)_0 \leq 1.6$  and  $7.0 \leq K \leq 9.5$ . When compared to the 47 Tuc and M92 Giant Branch (GB), it is obvious that no clear GB is obtained in these areas. The stars in the three regions seem to be distributed homogeneously within the ranges mentioned above, indicating that no strong

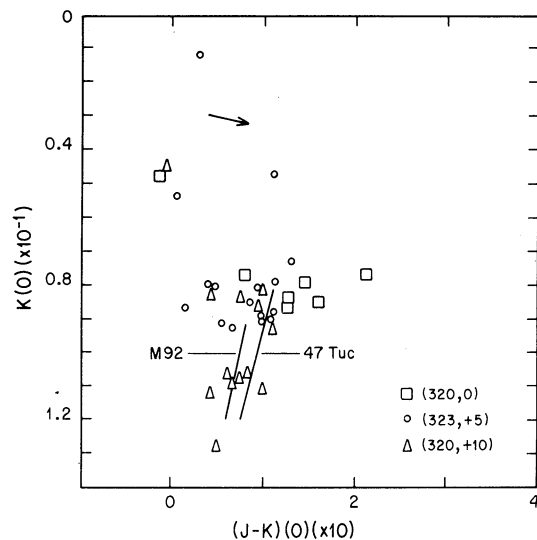


Fig. 50.  $K_0$  versus  $(J-K)_0$  diagram for the sources in the following selected galactic regions: (squares)  $l = 320$ ,  $b = 0$ ; (dots)  $l = 323$ ,  $b = +5$ ; (triangles)  $l = 320$ ,  $b = +10$ . The giant branches (GB) of the globular clusters 47 Tuc and M92 are shown for comparison. The arrow at the upper left indicates the reddening direction on this diagram. The size of the observational uncertainties is typically smaller than the size of the symbols.

difference exists between the stars in the galactic plane and those outside up to  $b = +10$ .

### c) The $CO_0$ versus $(J-K)_0$ Diagram

In Figure 51  $CO_0$  is plotted versus  $(J-K)_0$  (for absorption and dereddening of CO see Ruelas-Mayorga 1991d) for sources in the regions at  $(323, +5)$  and  $(320, +10)$ . At higher values of CO, there is a mild agreement with the giant (III) intrinsic sequence. However the most remarkable feature of this diagram is the clearly delineated correlation between CO and  $J-K$ . There is a slight hint in this diagram that the stars at  $b = +5$  have higher values of CO than those at  $b = +10$ . Even though the difference in CO between  $b = +5$  and  $b = +10$  is contained within the observational uncertainty. It is interesting to contemplate the possibility of stratification of the CO distribution in stars with respect to the galactic plane. Further studies at still higher galactic latitudes will help clarify this possibility.

## VI. CONCLUSIONS

The IR galactic model developed in Ruelas-Mayorga (1991a) has been used to predict the CCF's in different regions at or near the galactic plane. The agreement between the theory and the observational results is very good in most of the cases. However, the slight discrepancies which have arisen between the theory and the observations have

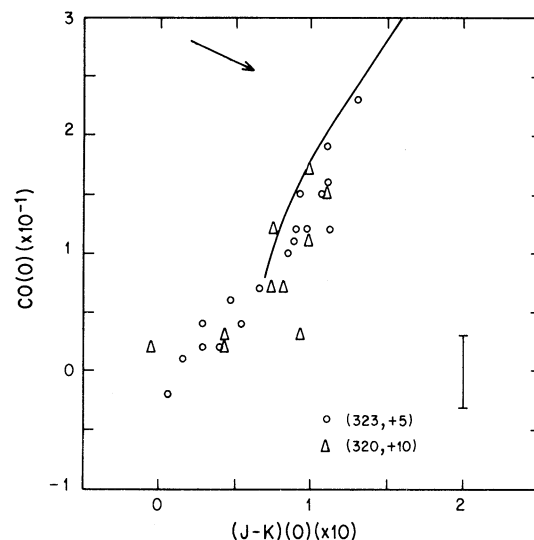


Fig. 51.  $CO_0$  versus  $(J-K)_0$  diagram for the sources in the following selected galactic regions: (dots)  $l = 323$ ,  $b = +5$ ; (triangles)  $l = 320$ ,  $b = +10$ . The solid line represents the solar neighbourhood intrinsic sequence for giants (III) stars. The arrow at the upper left indicates the reddening direction on this diagram. The line at the lower right indicates the size of the observational uncertainties.

been interpreted, in most cases, as inhomogeneities in the absorbing material. In at least one case  $(305, 0)$  (Fig. 29), we are confident in suggesting that the observational excess is due to the presence of a local concentration of stars which Danks *et al.* (1984) identify with two newly discovered stellar clusters.

For some regions with observational data at the bright magnitude end ( $K \leq +3.0$ ), there appears to be an excess in the theoretical model over the observations. This effect has been named as the 'bright magnitude theoretical excess' (BMTE) and it has been suggested, following Golisch (1983), that a revision of the LF used in the model might be necessary to eliminate this discrepancy. This revision suggests that early type M giants should have brighter absolute  $K$  magnitudes, whereas late-type M giants should be given fainter absolute  $K$  magnitudes compared with the standard LF used. By doing this he is successful in fitting the observations at the bright and faint magnitude ends, but the fit for the intermediate magnitude range becomes worse. In the light of this evidence, it appears that a carefully chosen alteration of the absolute  $K$  magnitudes of all the stars in the LF is necessary to produce a perfect fit between predicted and observational CCF's. Numerical experiments aimed to this effect are under way.

Discrepancies at critical points such as the clear windows toward the galactic centre, and the regions close to the molecular ring, suggest that a fundamental difference between bulge and ring LF's and

that for the solar neighbourhood exists, and needs to be implemented in the model to achieve better agreement between theory and observation.

Detailed photometry and spectroscopy of several sources at selected areas have permitted us to obtain approximate values for the absorption in those directions. The large ratio ( $\sim 4$ ) between the absorption value at the galactic plane and that at  $b = +5$  indicates how concentrated the absorbing material is along the galactic plane. This ratio is consistent with the model predictions for a scale height for the absorbing matter of 0.1 kpc. At high latitudes ( $|b| \geq 50$ ), the IR CCF for stars brighter than  $K \leq +11.0$  is dominated by foreground intrinsically faint dwarf stars.

Spectroscopic CO observations of stars at (323, +5) and (320, +10) reveal a very tight correlation between the intrinsic CO<sub>0</sub> index and the intrinsic  $(J-K)_0$  colour, which corresponds to the intrinsic giant sequence on the CO<sub>0</sub> versus  $(J-K)_0$  diagram. A mild agreement, at the higher CO values, between the observations and the intrinsic giant (III) sequence seems apparent.

There is a hint that the stellar population closer to the galactic plane has, on the average, a higher CO index than the stars located at higher galactic latitudes. Further spectroscopic studies at even higher latitudes are necessary to establish whether there really is a CO-stratification effect present in our galaxy.

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#### APPENDIX

##### COORDINATES AND SCAN $K$ -MAGNITUDES FOR SCAN SOURCES

In this Appendix we illustrate the positions of the sources found on the scans of the selected galactic areas studied in this paper. In Table A1 the order in which the different areas have been placed is indicated.

TABLE A1

ORDER OF THE DIFFERENT AREAS STUDIED

$l$	$b$	$l$	$b$
0	-3.5	270	0
0	-4.0	280	0
0	-4.0 <sup>a</sup>	290	0
0	-4.5	290	+1.0
10	-5.0	300	0
20	0	310	0
20	-5.0	311.3	-3.8 <sup>b</sup>
30	0	320	-1.0
220	+1.0	320	-0.5
220	0	320	0
220	-1.0	320	+1.0
230	0	330	0
240	0	340	0
250	0	350	0
260	0	....	....

a. BW; b. Circinus.

In Tables A2 to A30 the 1950 positions ( $\alpha$ ,  $\delta$ ) of the sources are listed. Each table correspond to a new region; the galactic longitude and latitude,  $l$  and  $b$  of the centre of the field is given for each case. Every table is set in four columns. Column 1 indicates the ROW number in the scan and the SOURCE number along that particular scan-line (e.g., 1/3 means SOURCE number 3 in SCAN-LINE number 1); column 2 gives the source's

right ascension; column 3 indicates the source's declination, and finally column 4 gives the  $K$ -magnitude for the sources measured directly from the strip-chart records of the observations. Sources brighter than  $K \sim +8.5$  appear saturated in the scans (and are marked SAT.)

The data presented in these tables are available by request on IBM-compatible 5.25" disks on ASCII files.

TABLE A2  
INFRARED SOURCES

Loc.	$l = 0 \quad b = -3.5$		$K$ (mag)
	$\alpha$ (1950)	$\delta$	
	h m s	d m s	
1/1	17 55 43.4	-30 45 40.3	SAT.
1/2	17 55 49.2	-30 45 40.3	8.98
1/3	17 55 52.8	-30 45 40.3	9.29
1/4	17 55 57.9	-30 45 40.3	10.98
1/5	17 56 39.6	-30 45 40.3	9.11
1/6	17 56 47.3	-30 45 40.3	10.61
1/7	17 56 48.8	-30 45 40.3	9.55
1/8	17 57 9.8	-30 45 40.3	9.91
1/9	17 57 14.5	-30 45 40.3	SAT.
1/10	17 57 19.9	-30 45 40.3	10.32
1/11	17 57 35.9	-30 45 40.3	8.88
1/12	17 58 2.8	-30 45 40.3	10.19
1/13	17 58 33.9	-30 45 40.3	8.96
2/1	17 55 52.5	-30 45 46.2	9.38
2/2	17 56 25.4	-30 45 46.2	9.57
2/3	17 56 29.0	-30 45 46.2	9.95
2/4	17 55 48.7	-30 45 46.2	10.14
2/5	17 57 8.0	-30 45 46.2	9.65
2/6	17 57 17.5	-30 45 46.2	10.75
2/7	17 57 38.2	-30 45 46.2	8.91
2/8	17 58 4.3	-30 45 46.2	9.78
2/9	17 58 19.7	-30 45 46.2	10.75
2/10	17 58 22.7	-30 45 46.2	8.90
2/11	17 58 37.7	-30 45 46.2	10.81
3/1	17 55 54.0	-30 45 52.2	10.12
3/2	17 56 10.9	-30 45 52.2	10.42
3/3	17 56 38.4	-30 45 52.2	10.98
3/4	17 56 44.9	-30 45 52.2	SAT.
3/5	17 56 50.3	-30 45 52.2	9.85
3/6	17 56 58.2	-30 45 52.2	9.31
3/7	17 57 5.4	-30 45 52.2	10.42
3/8	17 57 10.4	-30 45 52.2	SAT.
3/9	17 57 26.4	-30 45 52.2	SAT.
3/10	17 57 35.9	-30 45 52.2	SAT.
3/11	17 58 7.2	-30 45 52.2	10.06
3/12	17 58 8.4	-30 45 52.2	9.67
4/1	17 55 56.9	-30 45 58.3	10.32
4/2	17 56 6.4	-30 45 58.3	8.86
4/3	17 56 9.4	-30 45 58.3	10.38
4/4	17 56 43.1	-30 45 58.3	10.56
4/5	17 56 46.7	-30 45 58.3	10.06
4/6	17 56 56.7	-30 45 58.3	10.61
4/7	17 57 22.2	-30 45 58.3	9.78
4/8	17 57 41.8	-30 45 58.3	SAT.
4/9	17 57 48.3	-30 45 58.3	10.17
4/10	17 58 30.4	-30 45 58.3	10.38
4/11	17 58 36.2	-30 45 58.3	8.90
5/1	17 55 56.0	-30 46 4.2	SAT.
5/2	17 55 59.9	-30 46 4.2	10.75
5/3	17 56 21.2	-30 46 4.2	9.56

TABLE A2  
(CONTINUED)

Loc.	$l = 0 \quad b = -3.5$		$K$ (mag)
	$\alpha$ (1950)	$\delta$	
	h m s	d m s	
5/4	17 56 23.9	-30 46 4.2	10.51
5/5	17 56 31.9	-30 46 4.2	SAT.
5/6	17 56 36.9	-30 46 4.2	9.31
5/7	17 56 44.9	-30 46 4.2	SAT.
5/8	17 56 62.0	-30 46 4.2	10.67
5/9	17 57 1.5	-30 46 4.2	10.19
5/10	17 57 28.7	-30 46 4.2	10.04
5/11	17 57 34.1	-30 46 4.2	9.05
5/12	17 57 58.9	-30 46 4.2	SAT.
5/13	17 58 11.4	-30 46 4.2	10.61
5/14	17 58 12.9	-30 46 4.2	9.24
5/15	17 58 22.3	-30 46 4.2	10.98
6/1	17 55 50.1	-30 46 10.3	10.84
6/2	17 56 30.4	-30 46 10.3	10.69
6/3	17 56 34.3	-30 46 10.3	9.98
6/4	17 56 38.7	-30 46 10.3	9.87
6/5	17 56 50.9	-30 46 10.3	9.11
6/6	17 57 56.0	-30 46 10.3	9.70
6/7	17 58 4.9	-30 46 10.3	9.90
6/8	17 58 28.3	-30 46 10.3	10.04
6/9	17 58 37.4	-30 46 10.3	8.68
6/10	17 58 42.8	-30 46 10.3	10.19
7/1	17 55 43.9	-30 46 16.2	10.42
7/2	17 55 46.9	-30 46 16.2	9.76
7/3	17 55 58.7	-30 46 16.2	SAT.
7/4	17 56 2.3	-30 46 16.2	9.87
7/5	17 56 3.5	-30 46 16.2	10.12
7/6	17 56 11.8	-30 46 16.2	SAT.
7/7	17 56 16.5	-30 46 16.2	10.51
7/8	17 56 19.4	-30 46 16.2	10.67
7/9	17 56 26.0	-30 46 16.2	10.51
7/10	17 56 51.7	-30 46 16.2	10.69
7/11	17 56 54.4	-30 46 16.2	10.72
7/12	17 57 2.1	-30 46 16.2	9.70
7/13	17 57 13.9	-30 46 16.2	9.17
7/14	17 57 20.5	-30 46 16.2	9.97
7/15	17 57 35.3	-30 46 16.2	10.40
7/16	17 57 43.3	-30 46 16.2	9.62
7/17	17 58 9.9	-30 46 16.2	10.49
7/18	17 58 13.8	-30 46 16.2	9.45
7/19	17 58 14.9	-30 46 16.2	SAT.
7/20	17 58 17.9	-30 46 16.2	9.67
7/21	17 58 23.2	-30 46 16.2	SAT.
7/22	17 58 25.3	-30 46 16.2	10.12
7/23	17 58 32.1	-30 46 16.2	10.00
7/24	17 58 34.5	-30 46 16.2	10.17
7/25	17 58 35.7	-30 46 16.2	10.49
8/1	17 55 53.1	-30 46 22.2	SAT.
8/2	17 55 52.2	-30 46 22.2	SAT.
8/3	17 56 22.4	-30 46 22.2	10.42

TABLE A2  
(CONTINUED)

Loc.	$l = 0 \quad b = -3.5$		$K$ (mag)
	$\alpha$ (1950)	$\delta$	
	h m s	d m s	
8/4	17 56 28.6	-30 46 22.2	SAT.
8/5	17 57 27.6	-30 46 22.2	SAT.
8/6	17 57 44.2	-30 46 22.2	10.19
8/7	17 57 53.6	-30 46 22.2	8.72
8/8	17 58 33.0	-30 46 22.2	9.57
9/1	17 55 46.6	-30 46 28.3	8.92
9/2	17 55 59.3	-30 46 28.3	10.84
9/3	17 56 4.7	-30 46 28.3	9.61
9/4	17 56 6.7	-30 46 28.3	9.06
9/5	17 56 19.8	-30 46 28.3	SAT.
9/6	17 56 26.5	-30 46 28.3	10.59
9/7	17 56 43.7	-30 46 28.3	SAT.
9/8	17 57 19.9	-30 46 28.3	9.75
9/9	17 57 24.0	-30 46 28.3	9.40
9/10	17 57 29.9	-30 46 28.3	10.69
9/11	17 57 33.5	-30 46 28.3	8.85
9/12	17 57 38.2	-30 46 28.3	10.98
9/13	17 57 53.0	-30 46 28.3	SAT.
9/14	17 57 56.0	-30 46 28.3	8.84
9/15	17 57 57.2	-30 46 28.3	9.52
9/16	17 57 58.9	-30 46 28.3	10.34
9/17	17 58 6.6	-30 46 28.3	10.49
9/18	17 58 23.8	-30 46 28.3	10.42
9/19	17 58 26.8	-30 46 28.3	9.91
9/20	17 58 41.0	-30 46 28.3	10.40
9/21	17 58 42.2	-30 46 28.3	10.49
10/1	17 55 48.7	-30 46 34.2	10.75
10/2	17 56 2.9	-30 46 34.2	SAT.
10/3	17 56 25.4	-30 46 34.2	9.00
10/4	17 56 36.0	-30 46 34.2	10.94
10/5	17 56 59.1	-30 46 34.2	9.13
10/6	17 57 8.6	-30 46 34.2	10.19
10/7	17 57 17.8	-30 46 34.2	10.42
10/8	17 57 39.4	-30 46 34.2	10.23
10/9	17 57 42.9	-30 46 34.2	9.30
10/10	17 58 1.3	-30 46 34.2	10.67
10/11	17 58 8.4	-30 46 34.2	8.90
11/1	17 55 54.6	-30 46 40.2	10.23
11/2	17 56 7.6	-30 46 40.2	10.01
11/3	17 56 30.7	-30 46 40.2	9.50
11/4	17 56 34.0	-30 46 40.2	10.44
11/5	17 56 45.8	-30 46 40.2	10.98
11/6	17 56 53.5	-30 46 40.2	10.42
11/7	17 57 12.7	-30 46 40.2	10.19
11/8	17 57 14.5	-30 46 40.2	10.98
11/9	17 57 37.6	-30 46 40.2	SAT.
11/10	17 57 48.9	-30 46 40.2	SAT.
11/11	17 57 50.1	-30 46 40.2	9.78
12/1	17 55 46.6	-30 46 46.3	10.87
12/2	17 56 5.2	-30 46 46.3	10.49



TABLE A2 (CONTINUED)

Loc.	$l = 0 \quad b = -3.5$		$K$ (mag)
	h m s	d m s	
27/4	17 56 46.7	-30 48 16.3	10.03
27/5	17 56 52.3	-30 48 16.3	10.09
27/6	17 56 57.4	-30 48 16.3	9.03
27/7	17 57 25.8	-30 48 16.3	SAT.
27/8	17 57 29.7	-30 48 16.3	SAT.
27/9	17 57-31.7	-30 48 16.3	9.58
27/10	17 58 21.5	-30 48 16.3	10.64
27/11	17 58 27.7	-30 48 16.3	9.44
27/12	17 58 35.7	-30 48 16.3	SAT.
28/1	17 55 49.8	-30 48 22.2	8.97
28/2	17 56 14.1	-30 48 22.2	10.32
28/3	17 56 24.8	-30 48 22.2	9.77
28/4	17 56 31.9	-30 48 22.2	9.61
28/5	17 57 3.0	-30 48 22.2	9.39
28/6	17 57 8.6	-30 48 22.2	9.91
28/7	17 57 11.6	-30 48 22.2	10.49
28/8	17 57 18.1	-30 48 22.2	SAT.
28/9	17 57 24.9	-30 48 22.2	SAT.
28/10	17 57 34.1	-30 48 22.2	10.21
28/11	17 57 46.8	-30 48 22.2	SAT.
28/12	17 57 51.6	-30 48 22.2	10.06
28/13	17 58 11.4	-30 48 22.2	10.67
28/14	17 58 13.2	-30 48 22.2	9.98
28/15	17 58 43.8	-30 48 22.2	9.51
29/1	17 55 45.1	-30 48 28.2	10.84
29/2	17 55 51.0	-30 48 28.2	9.81
29/3	17 56 7.6	-30 48 28.2	10.47
29/4	17 56 38.1	-30 48 28.2	SAT.
29/5	17 56 42.0	-30 48 28.2	10.67
29/6	17 57 6.5	-30 48 28.2	9.32
29/7	17 57 12.7	-30 48 28.2	9.91
29/8	17 57 20.8	-30 48 28.2	SAT.
29/9	17 57 31.7	-30 48 28.2	SAT.
29/10	17 57 37.0	-30 48 28.2	SAT.
29/11	17 58 14.9	-30 48 28.2	SAT.
30/1	17 56 21.2	-30 48 34.3	10.72
30/2	17 56 20.1	-30 48 34.3	9.78
30/3	17 56 30.7	-30 48 34.3	9.37
30/4	17 56 56.2	-30 48 34.3	9.01
30/5	17 57 16.3	-30 48 34.3	10.36
30/6	17 57 40.6	-30 48 34.3	9.94
30/7	17 57 49.8	-30 48 34.3	10.21
30/8	17 57 56.3	-30 48 34.3	10.98
30/9	17 58 7.8	-30 48 34.3	10.42
30/10	17 58 14.4	-30 48 34.3	9.87
30/11	17 58 21.5	-30 48 34.3	9.70
30/12	17 58 22.7	-30 48 34.3	9.57
30/13	17 58 34.5	-30 48 34.3	SAT.
31/1	17 55 45.1	-30 48 40.2	10.69
31/2	17 55 46.3	-30 48 40.2	10.23
31/3	17 55 55.2	-30 48 40.2	10.04
31/4	17 56 11.2	-30 48 40.2	10.98
31/5	17 56 15.9	-30 48 40.2	10.94
31/6	17 56 24.2	-30 48 40.2	SAT.
31/7	17 56 26.0	-30 48 40.2	10.04
31/8	17 56 47.3	-30 48 40.2	10.42
31/9	17 56 59.1	-30 48 40.2	10.03
31/10	17 57 29.3	-30 48 40.2	8.97
31/11	17 57 46.8	-30 48 40.2	SAT.
31/12	17 58 18.5	-30 48 40.2	10.24
31/13	17 58 30.4	-30 48 40.2	9.45
31/14	17 58 31.8	-30 48 40.2	9.17
31/15	17 58 40.4	-30 48 40.2	10.72
32/1	17 56 9.4	-30 48 46.2	9.68
32/2	17 56 13.0	-30 48 46.2	10.06

TABLE A2 (CONTINUED)

Loc.	$l = 0 \quad b = -3.5$		$K$ (mag)
	h m s	d m s	
32/3	17 56 35.4	-30 48 46.2	9.74
32/4	17 56 38.4	-30 48 46.2	10.78
32/5	17 56 41.6	-30 48 46.2	9.39
32/6	17 56 52.9	-30 48 46.2	9.40
32/7	17 56 55.0	-30 48 46.2	9.89
32/8	17 56 58.0	-30 48 46.2	10.42
32/9	17 57 13.1	-30 48 46.2	10.98
32/10	17 57 38.2	-30 48 46.2	9.24
32/11	17 58 7.6	-30 48 46.2	10.44
32/12	17 58 42.5	-30 48 46.2	10.75
33/1	17 55 50.1	-30 48 52.3	9.47
33/2	17 56 23.9	-30 48 52.3	8.96
33/3	17 57 17.5	-30 48 52.3	8.96
33/4	17 57 28.7	-30 48 52.3	8.88
33/5	17 57 40.0	-30 48 52.3	10.67
33/6	17 57 50.1	-30 48 52.3	10.47
33/7	17 58 22.3	-30 48 52.3	SAT.
33/8	17 58 35.7	-30 48 52.3	10.98
33/9	17 58 39.8	-30 48 52.3	10.16
34/1	17 55 52.8	-30 48 58.2	10.07
34/2	17 55 56.9	-30 48 58.2	SAT.
34/3	17 56 7.0	-30 48 58.2	10.72
34/4	17 56 10.3	-30 48 58.2	10.32
34/5	17 56 14.7	-30 48 58.2	10.67
34/6	17 56 29.0	-30 48 58.2	10.38
34/7	17 57 16.6	-30 48 58.2	9.87
34/8	17 57 20.1	-30 48 58.2	10.72
34/9	17 57 25.8	-30 48 58.2	8.86
34/10	17 57 41.5	-30 48 58.2	SAT.
34/11	17 57 51.8	-30 48 58.2	8.68
34/12	17 57 56.0	-30 48 58.2	10.30
34/13	17 58 4.3	-30 48 58.2	9.01
34/14	17 58 17.0	-30 48 58.2	10.69
34/15	17 58 29.1	-30 48 58.2	9.06
34/16	17 58 42.5	-30 48 58.2	10.28
35/1	17 55 59.9	-30 49 4.2	9.27
35/2	17 56 2.6	-30 49 4.2	9.49
35/3	17 56 5.8	-30 49 4.2	10.04
35/4	17 56 11.2	-30 49 4.2	10.42
35/5	17 56 20.3	-30 49 4.2	SAT.
35/6	17 56 22.7	-30 49 4.2	10.26
35/7	17 57 38.8	-30 49 4.2	10.04
35/8	17 57 45.6	-30 49 4.2	10.06
35/9	17 57 47.1	-30 49 4.2	9.78
35/10	17 57 58.4	-30 49 4.2	SAT.
36/1	17 55 46.9	-30 49 10.3	9.52
36/2	17 55 52.5	-30 49 10.3	10.44
36/3	17 56 9.4	-30 49 10.3	10.69
36/4	17 56 18.0	-30 49 10.3	SAT.
36/5	17 56 19.4	-30 49 10.3	8.85
36/6	17 56 37.8	-30 49 10.3	10.32
36/7	17 56 45.5	-30 49 10.3	10.42
36/8	17 57 37.9	-30 49 10.3	10.91
36/9	17 58 4.3	-30 49 10.3	SAT.
36/10	17 58 8.1	-30 49 10.3	10.09
36/11	17 58 10.2	-30 49 10.3	9.11
36/12	17 58 17.9	-30 49 10.3	10.81
36/13	17 58 24.4	-30 49 10.3	SAT.
36/14	17 58 27.1	-30 49 10.3	9.76
36/15	17 58 36.2	-30 49 10.3	9.48
36/16	17 58 39.5	-30 49 10.3	10.26

TABLE A3  
INFRARED SOURCES

Loc.	$l = 0 \quad b = -4$		$K$ (mag)
	h m s	d m s	
1/1	17 57 59.5	-30 58 34.0	8.36
1/2	17 58 3.7	-30 58 34.0	9.16
1/3	17 57 57.1	-30 58 34.0	9.66
1/4	17 58 9.6	-30 58 34.0	10.41
1/5	17 58 7.2	-30 58 34.0	9.07
1/6	17 58 18.4	-30 58 34.0	10.26
1/7	17 58 22.0	-30 58 34.0	10.32
1/8	17 58 30.3	-30 58 34.0	SAT.
1/9	17 58 45.4	-30 58 34.0	SAT.
1/10	17 58 47.5	-30 58 34.0	10.26
1/11	17 59 10.8	-30 58 34.0	9.07
1/12	17 59 28.3	-30 58 34.0	9.32
1/13	17 59 33.6	-30 58 34.0	10.02
1/14	17 59 37.8	-30 58 34.0	10.02
2/1	17 57 46.9	-30 58 40.0	8.76
2/2	17 57 50.3	-30 58 40.0	9.82
2/3	17 58 35.6	-30 58 40.0	SAT.
2/4	17 58 56.3	-30 58 40.0	10.26
2/5	17 59 14.1	-30 58 40.0	SAT.
2/6	17 59 24.2	-30 58 40.0	8.36
3/1	17 58 2.4	-30 58 45.9	SAT.
3/2	17 58 3.7	-30 58 45.9	SAT.
3/3	17 58 20.2	-30 58 45.9	9.74
3/4	17 59 20.0	-30 58 45.9	10.02
3/5	17 59 34.8	-30 58 45.9	9.51
4/1	17 57 50.0	-30 58 52.1	8.54
4/2	17 58 6.6	-30 58 52.1	9.07
4/3	17 58 26.7	-30 58 52.1	9.51
4/4	17 58 35.0	-30 58 52.1	8.63
4/5	17 58 38.6	-30 58 52.1	10.02
4/6	17 58 44.5	-30 58 52.1	9.58
4/7	17 59 31.3	-30 58 52.1	9.82
5/1	17 58 49.5	-30 58 58.0	8.60
5/2	17 58 58.7	-30 58 58.0	9.27
5/3	17 59 10.6	-30 58 58.0	9.27
5/4	17 59 23.0	-30 58 58.0	10.26
6/1	17 57 54.5	-30 59 3.9	8.83
6/2	17 58 31.2	-30 59 3.9	10.13
6/3	17 58 49.2	-30 59 3.9	8.52
6/4	17 59 35.4	-30 59 3.9	9.27
7/1	17 58 26.1	-30 59 10.0	10.26
7/2	17 58 46.3	-30 59 10.0	SAT.
7/3	17 58 55.2	-30 59 10.0	8.63
7/4	17 59 8.2	-30 59 10.0	SAT.
7/5	17 59 11.2	-30 59 10.0	8.90
7/6	17 59 36.6	-30 59 10.0	8.83
8/1	17 57 49.2	-30 59 16.0	8.57
8/2	17 57 59.5	-30 59 16.0	SAT.
8/3	17 58 38.0	-30 59 16.0	9.16
8/4	17 58 48.6	-30 59 16.0	SAT.
8/5	17 58 54.3	-30 59 16.0	10.02
8/6	17 58 58.7	-30 59 16.0	10.58
8/7	17 59 28.9	-30 59 16.0	8.76
9/1	17 58 22.0	-30 59 21.9	10.26
9/2	17 58 42.7	-30 59 21.9	10.26
9/3	17 59 33.6	-30 59 21.9	9.16
10/1	17 57 45.3	-30 59 28.0	SAT.
10/2	17 58 10.7	-30 59 28.0	9.82
10/3	17 58 18.4	-30 59 28.0	10.26
10/4	17 58 23.8	-30 59 28.0	8.90
10/5	17 58 39.7	-30 59 28.0	10.26
10/6	17 59 15.9	-30 59 28.0	9.66
10/7	17 59 24.8	-30 59 28.0	9.32
10/8	17 59 32.5	-30 59 28.0	SAT.
10/9	17 59 35.4	-30 59 28.0	10.58

TABLE A3 (CONTINUED)

Loc.	$l = 0 \quad b = -4$		$K$ (mag)
	$\alpha$ (1950) $\delta$ h m s	d m s	
11/1	17 58 27.3	-30 59 34.0	10.41
11/2	17 58 50.4	-30 59 34.0	10.21
11/3	17 58 53.4	-30 59 34.0	SAT.
11/4	17 59 26.8	-30 59 34.0	10.16
12/1	17 57 48.8	-30 59 39.9	SAT.
12/2	17 58 0.7	-30 59 39.9	8.47
12/3	17 58 4.8	-30 59 39.9	9.03
12/4	17 58 13.7	-30 59 39.9	10.02
12/5	17 58 25.6	-30 59 39.9	8.70
12/6	17 58 48.6	-30 59 39.9	8.57
12/7	17 58 59.3	-30 59 39.9	10.54
13/1	17 57 45.6	-30 59 46.0	9.44
13/2	17 58 33.9	-30 59 46.0	9.44
13/3	17 58 52.5	-30 59 46.0	8.36
13/4	17 59 15.3	-30 59 46.0	8.90
13/5	17 59 23.3	-30 59 46.0	8.41
14/1	17 57 51.8	-30 59 52.0	9.80
14/2	17 58 53.4	-30 59 52.0	8.46
14/3	17 59 2.9	-30 59 52.0	9.41
14/4	17 59 21.2	-30 59 52.0	9.44
14/5	17 59 27.2	-30 59 52.0	9.54
14/6	17 59 35.7	-30 59 52.0	8.63
15/1	17 58 15.5	-30 59 57.9	9.24
15/2	17 58 44.5	-30 59 57.9	SAT.
15/3	17 59 5.2	-30 59 57.9	8.97
15/4	17 59 30.4	-30 59 57.9	9.38
16/1	17 57 44.1	-31 0 4.0	10.02
16/2	17 58 7.2	-31 0 4.0	SAT.
16/3	17 58 21.7	-31 0 4.0	8.97
16/4	17 59 37.2	-31 0 4.0	9.51
17/1	17 58 35.9	-31 0 10.1	10.24
17/2	17 58 38.3	-31 0 10.1	9.12
18/1	17 57 47.1	-31 0 16.0	SAT.
18/2	17 58 35.4	-31 0 16.0	9.41
18/3	17 58 48.6	-31 0 16.0	10.58
18/4	17 58 58.7	-31 0 16.0	9.66
18/5	17 59 23.0	-31 0 16.0	SAT.
19/1	17 58 54.0	-31 0 22.0	SAT.
19/2	17 59 14.7	-31 0 22.0	10.21
19/3	17 59 19.1	-31 0 22.0	9.62
19/4	17 59 34.2	-31 0 22.0	9.15
19/5	17 59 40.2	-31 0 22.0	8.41
20/1	17 57 49.7	-31 0 28.1	9.23
20/2	17 57 52.4	-31 0 28.1	8.63
20/3	17 58 24.4	-31 0 28.1	8.63
20/4	17 58 29.1	-31 0 28.1	9.84
20/5	17 58 37.4	-31 0 28.1	10.47
20/6	17 58 39.2	-31 0 28.1	10.21
20/7	17 59 0.2	-31 0 28.1	9.27
20/8	17 59 5.2	-31 0 28.1	10.58
20/9	17 59 16.8	-31 0 28.1	10.26
21/1	17 57 53.3	-31 0 34.0	8.97
21/2	17 58 5.4	-31 0 34.0	8.93
21/3	17 58 22.3	-31 0 34.0	SAT.
21/4	17 58 32.7	-31 0 34.0	10.04
21/5	17 59 2.3	-31 0 34.0	8.93
21/6	17 59 27.8	-31 0 34.0	SAT.
22/1	17 57 53.6	-31 0 40.0	9.16
22/2	17 58 3.7	-31 0 40.0	10.00
22/3	17 58 41.0	-31 0 40.0	10.58
22/4	17 58 43.3	-31 0 40.0	8.86
22/5	17 58 58.7	-31 0 40.0	SAT.
22/6	17 59 9.4	-31 0 40.0	10.21
22/7	17 59 31.3	-31 0 40.0	SAT.
23/1	17 57 49.4	-31 0 45.9	SAT.

TABLE A3 (CONTINUED)

Loc.	$l = 0 \quad b = -4$		$K$ (mag)
	$\alpha$ (1950) $\delta$ h m s	d m s	
23/2	17 57 47.1	-31 0 45.9	9.18
23/3	17 58 6.3	-31 0 45.9	9.52
23/4	17 58 24.4	-31 0 45.9	SAT.
23/5	17 58 27.6	-31 0 45.9	SAT.
23/6	17 58 53.4	-31 0 45.9	8.36
23/7	17 58 56.9	-31 0 45.9	10.21
23/8	17 59 7.0	-31 0 45.9	9.52
24/1	17 57 53.0	-31 0 52.0	10.32
24/2	17 58 4.8	-31 0 52.0	8.72
24/3	17 58 7.8	-31 0 52.0	SAT.
24/4	17 58 21.4	-31 0 52.0	8.72
24/5	17 58 22.0	-31 0 52.0	SAT.
24/6	17 58 45.1	-31 0 52.0	10.58
24/7	17 59 17.1	-31 0 52.0	8.84
24/8	17 59 22.1	-31 0 52.0	10.58
24/9	17 59 33.1	-31 0 52.0	8.71
25/1	17 57 51.2	-31 0 58.0	9.21
25/2	17 57 59.5	-31 0 58.0	9.07
25/3	17 58 4.8	-31 0 58.0	SAT.
25/4	17 58 41.6	-31 0 58.0	10.26
25/5	17 58 47.5	-31 0 58.0	9.92
25/6	17 58 48.0	-31 0 58.0	9.38
25/7	17 59 2.5	-31 0 58.0	9.86
25/8	17 59 25.9	-31 0 58.0	9.92
25/9	17 59 31.9	-31 0 58.0	10.58
25/10	17 59 34.8	-31 0 58.0	9.23
25/11	17 59 39.6	-31 0 58.0	10.00

TABLE A4  
INFRARED SOURCES

Loc.	$l = 0 \quad b = -4$		$K$ (mag)
	$\alpha$ (1950) $\delta$ h m s	d m s	
1/1	18 1 0.9	-29 50 26.4	9.16
1/2	18 1 3.9	-29 50 26.4	10.25
1/3	18 1 12.8	-29 50 26.4	11.04
1/4	18 1 16.3	-29 50 26.4	9.85
1/5	18 1 21.6	-29 50 26.4	10.87
1/6	18 1 25.2	-29 50 26.4	10.51
1/7	18 1 23.4	-29 50 26.4	SAT.
1/8	18 1 40.0	-29 50 26.4	10.97
1/9	18 1 53.3	-29 50 26.4	10.97
1/10	18 2 4.3	-29 50 26.4	10.29
1/11	18 2 7.8	-29 50 26.4	10.32
1/12	18 2 38.0	-29 50 26.4	SAT.
1/13	18 2 49.3	-29 50 26.4	10.29
1/14	18 3 2.3	-29 50 26.4	11.04
1/15	18 3 9.4	-29 50 26.4	10.10
1/16	18 3 14.2	-29 50 26.4	9.99
1/17	18 3 15.9	-29 50 26.4	8.90
1/18	18 3 23.6	-29 50 26.4	11.00
1/19	18 3 36.7	-29 50 26.4	9.85
1/20	18 4 2.1	-29 50 26.4	10.30
1/21	18 4 31.7	-29 50 26.4	SAT.
1/22	18 4 40.6	-29 50 26.4	10.29
1/23	18 4 57.5	-29 50 26.4	SAT.
1/24	18 5 1.6	-29 50 26.4	SAT.
1/25	18 5 23.5	-29 50 26.4	SAT.

TABLE A4 (CONTINUED)

Loc.	$l = 0 \quad b = -4$		$K$ (mag)
	$\alpha$ (1950) $\delta$ h m s	d m s	
2/1	18 0 27.5	-29 50 32.5	SAT.
2/2	18 0 35.8	-29 50 32.5	10.40
2/3	18 2 9.6	-29 50 32.5	SAT.
2/4	18 2 20.3	-29 50 32.5	10.60
2/5	18 2 32.7	-29 50 32.5	8.89
2/6	18 2 48.4	-29 50 32.5	9.70
2/7	18 2 54.6	-29 50 32.5	SAT.
2/8	18 5 22.1	-29 50 32.5	10.75
3/1	18 0 29.6	-29 50 38.5	8.98
3/2	18 0 50.9	-29 50 38.5	SAT.
3/3	18 0 56.2	-29 50 38.5	9.81
3/4	18 0 59.2	-29 50 38.5	SAT.
3/5	18 1 32.9	-29 50 38.5	SAT.
3/6	18 1 55.4	-29 50 38.5	10.67
3/7	18 1 58.4	-29 50 38.5	9.83
3/8	18 2 0.7	-29 50 38.5	10.04
3/9	18 3 48.5	-29 50 38.5	10.75
3/10	18 3 55.3	-29 50 38.5	9.52
4/1	18 0 28.9	-29 50 44.4	9.83
4/2	18 1 24.6	-29 50 44.4	9.55
4/3	18 1 41.2	-29 50 44.4	11.04
4/4	18 1 43.9	-29 50 44.4	8.83
4/5	18 1 56.6	-29 50 44.4	9.22
4/6	18 2 3.7	-29 50 44.4	11.04
4/7	18 2 6.7	-29 50 44.4	9.97
4/8	18 2 33.9	-29 50 44.4	9.22
4/9	18 2 41.0	-29 50 44.4	9.08
4/10	18 2 46.9	-29 50 44.4	10.87
4/11	18 3 19.5	-29 50 44.4	SAT.
4/12	18 3 52.1	-29 50 44.4	9.11
4/13	18 4 19.3	-29 50 44.4	11.04
4/14	18 4 25.5	-29 50 44.4	8.86
4/15	18 4 35.3	-29 50 44.4	9.71
4/16	18 4 41.8	-29 50 44.4	SAT.
5/1	18 0 57.3	-29 50 50.5	9.63
5/2	18 1 30.5	-29 50 50.5	10.90
5/3	18 1 43.3	-29 50 50.5	SAT.
5/4	18 2 7.8	-29 50 50.5	10.81
5/5	18 2 13.2	-29 50 50.5	10.67
5/6	18 2 15.8	-29 50 50.5	10.27
5/7	18 2 28.5	-29 50 50.5	9.17
5/8	18 2 31.5	-29 50 50.5	SAT.
5/9	18 3 13.6	-29 50 50.5	10.81
5/10	18 4 1.5	-29 50 50.5	SAT.
5/11	18 4 12.2	-29 50 50.5	9.19
5/12	18 4 44.2	-29 50 50.5	10.55
5/13	18 4 47.5	-29 50 50.5	10.20
5/14	18 5 1.4	-29 50 50.5	10.73
6/1	18 0 30.1	-29 50 56.5	10.60
6/2	18 0 55.6	-29 50 56.5	9.55
6/3	18 1 37.6	-29 50 56.5	9.97
6/4	18 1 51.6	-29 50 56.5	10.46
6/5	18 2 10.5	-29 50 56.5	10.84
6/6	18 2 45.7	-29 50 56.5	SAT.
6/7	18 3 17.1	-29 50 56.5	10.70
6/8	18 3 22.5	-29 50 56.5	9.58
6/9	18 3 30.7	-29 50 56.5	9.15
6/10	18 3 37.9	-29 50 56.5	10.93
6/11	18 4 0.3	-29 50 56.5	9.51
6/12	18 4 14.3	-29 50 56.5	SAT.
6/13	18 4 46.2	-29 50 56.5	9.52
6/14	18 4 50.7	-29 50 56.5	9.63
6/15	18 4 54.5	-29 50 56.5	SAT.
6/16	18 5 4.9	-29 50 56.5	9.67
7/1	18 0 28.3	-29 51 2.4	10.29











TABLE A5 (CONTINUED)

Loc.	$l = 0 \quad b = -4.5$		$K$ (mag)
	$\alpha$ (1950) $\delta$		
	h m s	d m s	
27/4	18 0 34.1	-31 14 37.4	10.02
27/5	18 0 35.3	-31 14 37.4	9.29
27/6	18 0 41.2	-31 14 37.4	10.92
27/7	18 0 43.6	-31 14 37.4	10.89
27/8	18 1 18.6	-31 14 37.4	10.89
27/9	18 1 33.3	-31 14 37.4	10.92
27/10	18 1 38.7	-31 14 37.4	10.92
27/11	18 2 31.1	-31 14 37.4	SAT.
27/12	18 3 5.7	-31 14 37.4	9.62
27/13	18 3 34.1	-31 14 37.4	10.76
27/14	18 3 41.9	-31 14 37.4	8.81
28/1	18 0 14.6	-31 14 43.5	10.00
28/2	18 0 15.8	-31 14 43.5	9.72
28/3	18 0 31.1	-31 14 43.5	SAT.
28/4	18 0 33.0	-31 14 43.5	10.61
28/5	18 0 49.5	-31 14 43.5	10.17
28/6	18 2 55.1	-31 14 43.5	SAT.
28/7	18 3 51.3	-31 14 43.5	10.37
29/1	18 0 21.7	-31 14 49.4	10.92
29/2	18 0 40.6	-31 14 49.4	9.73
29/3	18 0 48.0	-31 14 49.4	10.15
29/4	18 1 28.3	-31 14 49.4	SAT.
29/5	18 1 32.7	-31 14 49.4	10.51
29/6	18 2 10.6	-31 14 49.4	10.58
29/7	18 2 29.3	-31 14 49.4	10.03
29/8	18 2 39.1	-31 14 49.4	9.05
29/9	18 3 4.5	-31 14 49.4	SAT.
29/10	18 3 14.0	-31 14 49.4	9.71
29/11	18 3 16.4	-31 14 49.4	SAT.
29/12	18 3 24.1	-31 14 49.4	9.62
29/13	18 3 40.9	-31 14 49.4	10.37
30/1	18 0 10.1	-31 14 55.4	10.67
30/2	18 0 32.4	-31 14 55.4	SAT.
30/3	18 1 41.0	-31 14 55.4	8.91
30/4	18 2 8.3	-31 14 55.4	10.89
30/5	18 2 31.4	-31 14 55.4	SAT.
30/6	18 2 33.8	-31 14 55.4	10.07
31/1	18 0 38.3	-31 15 1.5	10.10
31/2	18 0 46.0	-31 15 1.5	10.33
31/3	18 0 57.2	-31 15 1.5	10.58
31/4	18 1 10.3	-31 15 1.5	10.61
31/5	18 1 25.6	-31 15 1.5	9.49
31/6	18 1 38.7	-31 15 1.5	10.35
31/7	18 1 45.2	-31 15 1.5	SAT.
31/8	18 2 28.4	-31 15 1.5	10.85
31/9	18 2 42.0	-31 15 1.5	9.41
31/10	18 2 53.9	-31 15 1.5	10.92
31/11	18 3 34.7	-31 15 1.5	10.61
32/1	18 1 21.2	-31 15 7.4	10.21
32/2	18 1 31.6	-31 15 7.4	SAT.
32/3	18 1 51.4	-31 15 7.4	SAT.
32/4	18 1 58.2	-31 15 7.4	9.73
32/5	18 2 11.2	-31 15 7.4	9.45
32/6	18 2 36.1	-31 15 7.4	9.99
32/7	18 2 46.2	-31 15 7.4	10.76
32/8	18 2 58.6	-31 15 7.4	9.82
32/9	18 3 9.8	-31 15 7.4	9.82
32/10	18 3 21.1	-31 15 7.4	9.78
32/11	18 3 49.6	-31 15 7.4	8.86
32/12	18 3 51.6	-31 15 7.4	10.53
32/13	18 3 59.6	-31 15 7.4	9.01
33/1	18 0 15.2	-31 15 13.5	SAT.
33/2	18 1 10.9	-31 15 13.5	10.37
33/3	18 1 18.8	-31 15 13.5	SAT.
33/4	18 3 54.9	-31 15 13.5	9.36

TABLE A5 (CONTINUED)

Loc.	$l = 0 \quad b = -4.5$		$K$ (mag)
	$\alpha$ (1950) $\delta$		
	h m s	d m s	
34/1	18 0 27.6	-31 15 19.5	10.35
34/2	18 1 2.6	-31 15 19.5	9.33
34/3	18 1 32.2	-31 15 19.5	10.24
34/4	18 1 50.5	-31 15 19.5	9.89
34/5	18 1 59.4	-31 15 19.5	9.73
34/6	18 2 4.7	-31 15 19.5	10.02
34/7	18 2 17.2	-31 15 19.5	9.77
34/8	18 2 36.7	-31 15 19.5	9.62
35/1	18 0 33.0	-31 15 25.4	8.97
35/2	18 1 5.5	-31 15 25.4	SAT.
35/3	18 1 35.1	-31 15 25.4	10.08
35/4	18 2 9.5	-31 15 25.4	9.89
35/5	18 2 49.7	-31 15 25.4	10.51
35/6	18 2 53.3	-31 15 25.4	SAT.
35/7	18 2 56.6	-31 15 25.4	9.96
35/8	18 3 10.4	-31 15 25.4	9.89
35/9	18 3 20.2	-31 15 25.4	SAT.
36/1	18 0 16.4	-31 15 31.5	10.92
36/2	18 0 22.6	-31 15 31.5	10.30
36/3	18 0 40.0	-31 15 31.5	10.39
36/4	18 0 41.2	-31 15 31.5	9.65
36/5	18 1 10.5	-31 15 31.5	10.76
36/6	18 1 49.0	-31 15 31.5	SAT.
36/7	18 1 51.7	-31 15 31.5	10.28
36/8	18 2 55.7	-31 15 31.5	10.30
36/9	18 3 2.8	-31 15 31.5	9.55
36/10	18 3 7.5	-31 15 31.5	9.22
36/11	18 3 30.6	-31 15 31.5	9.16
36/12	18 3 43.6	-31 15 31.5	10.61
36/13	18 3 48.4	-31 15 31.5	9.08
36/14	18 4 2.0	-31 15 31.5	10.37

TABLE A6  
INFRARED SOURCES

Loc.	$l = 10 \quad b = -5.0$		$K$ (mag)
	$\alpha$ (1950) $\delta$		
	h m s	d m s	
1/1	18 23 43.4	-22 56 20.8	SAT.
1/2	18 24 09.0	-22 56 20.8	SAT.
1/3	18 25 15.4	-22 56 20.8	10.55
1/4	18 25 24.8	-22 56 20.8	10.86
1/5	18 25 40.2	-22 56 20.8	SAT.
1/6	18 25 51.5	-22 56 20.8	10.05
1/7	18 26 06.6	-22 56 20.8	9.56
2/1	18 24 01.3	-22 56 26.8	10.86
2/2	18 24 07.8	-22 56 26.8	8.76
2/3	18 25 10.6	-22 56 26.8	10.16
3/1	18 24 03.7	-22 56 32.8	10.55
3/2	18 24 11.7	-22 56 32.8	10.52
4/1	18 23 54.8	-22 56 38.8	10.24
4/2	18 24 49.3	-22 56 38.8	9.52
4/3	18 25 07.1	-22 56 38.8	SAT.
4/4	18 25 21.3	-22 56 38.8	10.82
4/5	18 25 40.2	-22 56 38.8	SAT.
4/6	18 26 43.0	-22 56 38.8	9.97
5/1	18 24 57.0	-22 56 44.8	SAT.
5/2	18 25 09.4	-22 56 44.8	SAT.
5/3	18 25 27.2	-22 56 44.8	10.14
5/4	18 26 24.1	-22 56 44.8	SAT.
5/5	18 26 30.0	-22 56 44.8	9.85
6/1	18 23 48.0	-22 56 50.8	10.10
6/2	18 23 52.4	-22 56 50.8	10.86
6/3	18 23 58.4	-22 56 50.8	10.86
6/4	18 24 20.3	-22 56 50.8	9.66
6/5	18 24 35.7	-22 56 50.8	9.42
6/6	18 24 44.0	-22 56 50.8	SAT.
6/7	18 25 47.9	-22 56 50.8	9.57
7/1	18 25 46.7	-22 56 56.8	8.56
8/1	18 23 50.1	-22 57 02.8	9.37
8/2	18 24 32.7	-22 57 02.8	10.86
8/3	18 24 35.7	-22 57 02.8	10.82
8/4	18 25 10.6	-22 57 02.8	10.72
9/1	18 24 07.3	-22 57 08.8	10.86
9/2	18 24 14.4	-22 57 08.8	10.49
9/3	18 24 24.4	-22 57 08.8	SAT.
9/4	18 24 57.3	-22 57 08.8	10.44
9/5	18 25 02.9	-22 57 08.8	10.12
9/6	18 25 31.9	-22 57 08.8	SAT.
9/7	18 26 12.8	-22 57 08.8	9.75
9/8	18 26 22.9	-22 57 08.8	10.69
10/1	18 23 50.1	-22 57 14.8	SAT.
10/2	18 24 53.4	-22 57 14.8	9.81
10/3	18 25 08.2	-22 57 14.8	10.72
10/4	18 25 36.1	-22 57 14.8	8.76
10/5	18 26 18.7	-22 57 14.8	10.22
10/6	18 26 38.9	-22 57 14.8	10.28
11/1	18 24 01.3	-22 57 20.8	10.47
11/2	18 24 06.7	-22 57 20.8	10.10
11/3	18 26 25.8	-22 57 20.8	9.89
12/1	18 23 43.6	-22 57 26.8	8.97
12/2	18 24 08.4	-22 57 26.8	8.97
12/3	18 24 12.0	-22 57 26.8	8.60
12/4	18 24 22.1	-22 57 26.8	SAT.
12/5	18 25 11.8	-22 57 26.8	10.75
12/6	18 25 34.3	-22 57 26.8	9.10
13/1	18 23 52.2	-22 57 32.8	10.07
13/2	18 24 24.4	-22 57 32.8	10.86
13/3	18 24 33.3	-22 57 32.8	10.10
13/4	18 25 37.9	-22 57 32.8	10.39
13/5	18 25 40.2	-22 57 32.8	SAT.
13/6	18 26 12.8	-22 57 32.8	10.69
13/7	18 26 32.9	-22 57 32.8	10.49
14/1	18 23 54.8	-22 57 38.8	8.98
14/2	18 23 58.1	-22 57 38.8	9.83
14/3	18 24 00.1	-22 57 38.8	8.83
14/4	18 25 09.7	-22 57 38.8	10.60
14/5	18 25 34.9	-22 57 38.8	10.05
15/1	18 23 45.9	-22 57 44.8	9.00
15/2	18 23 54.8	-22 57 44.8	9.28
15/3	18 25 26.3	-22 57 44.8	9.99
16/1	18 24 07.3	-22 57 50.8	10.86
16/2	18 24 15.5	-22 57 50.8	9.25
16/3	18 25 14.2	-22 57 50.8	9.27
16/4	18 26 05.1	-22 57 50.8	10.52
16/5	18 26 21.7	-22 57 50.8	974
17/1	18 23 48.6	-22 57 56.8	10.86
17/2	18 24 10.8	-22 57 56.8	10.82
17/3	18 24 14.4	-22 57 56.8	10.55
17/4	18 24 30.3	-22 57 56.8	SAT.
17/5	18 24 33.9	-22 57 56.8	10.86
17/6	18 25 43.8	-22 57 56.8	10.02
18/1	18 26 33.5	-22 58 02.8	10.79

TABLE A6 (CONTINUED)

Loc.	$l = 10 \quad b = -5.0$		$K$ (mag)
	$\alpha$ (1950) $\delta$		
	h m s	d m s	
19/1	18 23 47.1	-22 58 08.8	10.03
19/2	18 24 55.8	-22 58 08.8	9.01
19/3	18 25 26.0	-22 58 08.8	SAT.
19/4	18 25 51.5	-22 58 08.8	10.32
19/5	18 25 55.6	-22 58 08.8	10.30
19/6	18 26 30.0	-22 58 08.8	SAT.
20/1	18 24 01.7	-22 58 14.8	SAT.
20/2	18 24 29.2	-22 58 14.8	10.86
20/3	18 24 47.8	-22 58 14.8	10.10
20/4	18 24 53.4	-22 58 14.8	9.09
20/5	18 25 17.1	-22 58 14.8	10.86
20/6	18 25 19.5	-22 58 14.8	10.02
20/7	18 25 39.3	-22 58 14.8	9.79
20/8	18 25 40.8	-22 58 14.8	10.42
21/1	18 24 03.1	-22 58 20.8	SAT.
21/2	18 24 06.4	-22 58 20.8	10.02
21/3	18 24 35.1	-22 58 20.8	9.04
21/4	18 25 10.3	-22 58 20.8	9.94
21/5	18 25 11.8	-22 58 20.8	9.50
21/6	18 25 58.0	-22 58 20.8	9.70
21/7	18 26 19.3	-22 58 20.8	SAT.
22/1	18 23 57.8	-22 58 26.8	10.86
22/2	18 24 27.4	-22 58 26.8	10.55
22/3	18 24 36.3	-22 58 26.8	10.39
22/4	18 24 39.2	-22 58 26.8	SAT.
22/5	18 25 22.5	-22 58 26.8	9.22
22/6	18 25 53.3	-22 58 26.8	9.52
23/1	18 24 17.3	-22 58 32.8	10.03
23/2	18 24 44.0	-22 58 32.8	SAT.
23/3	18 25 13.6	-22 58 32.8	9.79
24/1	18 24 52.9	-22 58 38.8	10.24
24/2	18 25 36.1	-22 58 38.8	SAT.
24/3	18 25 39.0	-22 58 38.8	10.26
24/4	18 26 33.8	-22 58 38.8	SAT.
25/1	18 24 05.5	-22 58 44.8	10.79
25/2	18 24 39.2	-22 58 44.8	9.77
25/3	18 25 10.0	-22 58 44.8	10.47
25/4	18 25 21.9	-22 58 44.8	10.86
25/5	18 25 30.8	-22 58 44.8	10.86
25/6	18 25 35.5	-22 58 44.8	SAT.
26/1	18 23 43.6	-22 58 50.8	10.10
26/2	18 23 50.4	-22 58 50.8	10.10
26/3	18 24 22.1	-22 58 50.8	10.86
26/4	18 25 53.3	-22 58 50.8	10.86
26/5	18 26 41.2	-22 58 50.8	10.86
27/1	18 24 29.8	-22 58 56.8	10.55
27/2	18 25 19.2	-22 58 56.8	10.47
28/1	18 23 47.7	-22 59 02.8	9.03
29/1	18 23 59.0	-22 59 08.8	8.85
29/2	18 24 49.9	-22 59 08.8	10.10
29/3	18 25 20.1	-22 59 08.8	9.86
29/4	18 26 05.1	-22 59 08.8	9.65
29/5	18 26 29.4	-22 59 08.8	10.52
30/1	18 24 10.8	-22 59 14.8	10.35
30/2	18 24 35.4	-22 59 14.8	9.66
30/3	18 24 47.5	-22 59 14.8	9.33
30/4	18 25 17.1	-22 59 14.8	10.60
31/1	18 24 03.1	-22 59 20.8	10.60
31/2	18 24 38.6	-22 59 20.8	8.56
31/3	18 24 52.2	-22 59 20.8	9.55
31/4	18 26 26.4	-22 59 20.8	10.69
31/5	18 26 43.6	-22 59 20.8	10.69
32/1	18 24 29.2	-22 59 26.8	9.13
32/2	18 25 54.4	-22 59 26.8	10.52
33/1	18 24 25.0	-22 59 32.8	10.86

TABLE A6 (CONTINUED)

Loc.	$l = 10 \quad b = -5.0$		$K$ (mag)
	$\alpha$ (1950) $\delta$		
	h m s	d m s	
33/2	18 25 15.9	-22 59 32.8	8.66
33/3	18 25 25.4	-22 59 32.8	10.52
33/4	18 26 08.1	-22 59 32.8	SAT.
33/5	18 26 16.9	-22 59 32.8	10.10
33/6	18 26 30.0	-22 59 32.8	9.34
34/1	18 23 57.8	-22 59 38.8	SAT.
35/1	18 23 49.0	-22 59 44.8	9.82
35/2	18 24 04.3	-22 59 44.8	SAT.
35/3	18 24 15.5	-22 59 44.8	10.14
35/4	18 24 16.1	-22 59 44.8	9.74
35/5	18 24 19.1	-22 59 44.8	10.60
35/6	18 24 30.3	-22 59 44.8	10.49

TABLE A7 (CONTINUED)

Loc.	$l = 20 \quad b = 0$		$K$ (mag)
	$\alpha$ (1950) $\delta$		
	h m s	d m s	
6/3	18 25 29.9	-11 26 58.9	10.58
6/4	18 25 42.9	-11 26 58.9	10.58
7/1	18 23 53.9	-11 27 4.9	9.66
7/2	18 24 2.8	-11 27 4.9	10.41
7/3	18 24 34.2	-11 27 4.9	SAT.
7/4	18 25 16.3	-11 27 4.9	9.66
7/5	18 25 55.3	-11 27 4.9	10.02
8/1	18 24 6.4	-11 27 10.9	10.58
8/2	18 24 8.2	-11 27 10.9	9.38
8/3	18 24 13.5	-11 27 10.9	10.26
8/4	18 24 32.4	-11 27 10.9	9.51
8/5	18 24 38.1	-11 27 10.9	10.58
8/6	18 24 47.3	-11 27 10.9	SAT.
8/7	18 25 1.8	-11 27 10.9	9.74
8/8	18 25 10.3	-11 27 10.9	10.58
8/9	18 25 24.6	-11 27 10.9	SAT.
8/10	18 25 34.6	-11 27 10.9	8.69
8/11	18 25 51.8	-11 27 10.9	10.26
9/1	18 24 13.5	-11 27 16.9	9.66
9/2	18 24 17.1	-11 27 16.9	9.51
9/3	18 24 36.9	-11 27 16.9	10.58
9/4	18 25 13.9	-11 27 16.9	9.92
9/5	18 25 28.1	-11 27 16.9	9.58
9/6	18 25 29.9	-11 27 16.9	10.02
10/1	18 24 10.3	-11 27 22.9	8.39
10/2	18 24 38.1	-11 27 22.9	10.58
10/3	18 24 58.8	-11 27 22.9	9.74
10/4	18 25 9.2	-11 27 22.9	10.26
10/5	18 25 37.6	-11 27 22.9	10.06
10/6	18 25 40.0	-11 27 22.9	8.76
10/7	18 25 48.9	-11 27 22.9	10.41
10/8	18 25 50.6	-11 27 22.9	10.58
10/9	18 25 54.2	-11 27 22.9	9.27
11/1	18 24 59.7	-11 27 28.9	9.38
11/2	18 25 3.3	-11 27 28.9	10.02
11/3	18 25 24.8	-11 27 28.9	9.82
11/4	18 25 43.5	-11 27 28.9	8.98
11/5	18 25 48.0	-11 27 28.9	10.58
11/6	18 25 51.8	-11 27 28.9	SAT.
12/1	18 23 58.1	-11 27 34.9	SAT.
12/2	18 24 14.1	-11 27 34.9	10.13
12/3	18 24 22.4	-11 27 34.9	10.06
12/4	18 24 32.4	-11 27 34.9	10.58
12/5	18 25 16.3	-11 27 34.9	SAT.
12/6	18 25 24.0	-11 27 34.9	SAT.
12/7	18 25 35.2	-11 27 34.9	9.66
13/1	18 23 55.1	-11 27 40.9	SAT.
13/2	18 24 8.2	-11 27 40.9	9.82
13/3	18 24 13.5	-11 27 40.9	9.82
13/4	18 24 30.1	-11 27 40.9	SAT.
13/5	18 25 19.2	-11 27 40.9	10.02
13/6	18 25 26.3	-11 27 40.9	10.58
13/7	18 25 35.8	-11 27 40.9	SAT.
13/8	18 25 45.6	-11 27 40.9	9.54
13/9	18 25 53.6	-11 27 40.9	10.58
14/1	18 24 4.9	-11 27 46.9	SAT.
14/2	18 24 46.7	-11 27 46.9	SAT.
14/3	18 24 59.7	-11 27 46.9	8.63
14/4	18 25 3.9	-11 27 46.9	8.54
14/5	18 25 22.2	-11 27 46.9	10.13
14/6	18 25 30.5	-11 27 46.9	10.58
14/7	18 25 49.5	-11 27 46.9	10.26
14/8	18 25 53.6	-11 27 46.9	10.26
15/1	18 24 7.0	-11 27 52.9	10.47
15/2	18 24 9.6	-11 27 52.9	9.51

TABLE A7  
INFRARED SOURCES

Loc.	$l = 20 \quad b = 0$		$K$ (mag)
	$\alpha$ (1950) $\delta$		
	h m s	d m s	
1/1	18 24 39.0	-11 26 28.9	9.74
1/2	18 24 46.7	-11 26 28.9	9.66
1/3	18 24 54.4	-11 26 28.9	8.94
1/4	18 24 57.9	-11 26 28.9	9.07
1/5	18 25 22.8	-11 26 28.9	SAT.
1/6	18 25 33.5	-11 26 28.9	SAT.
1/7	18 25 38.8	-11 26 28.9	10.32
2/1	18 24 16.5	-11 26 34.9	SAT.
2/2	18 24 28.3	-11 26 34.9	9.58
2/3	18 24 55.0	-11 26 34.9	8.86
2/4	18 25 0.3	-11 26 34.9	SAT.
2/5	18 25 7.4	-11 26 34.9	SAT.
2/6	18 25 18.6	-11 26 34.9	9.18
2/7	18 25 21.0	-11 26 34.9	8.92
2/8	18 25 36.4	-11 26 34.9	8.44
2/9	18 25 48.9	-11 26 34.9	9.66
3/1	18 24 3.4	-11 26 40.9	10.26
3/2	18 24 24.1	-11 26 40.9	10.26
3/3	18 25 3.9	-11 26 40.9	9.86
3/4	18 25 5.0	-11 26 40.9	8.41
3/5	18 25 28.1	-11 26 40.9	9.16
3/6	18 25 35.5	-11 26 40.9	9.82
3/7	18 25 40.0	-11 26 40.9	8.27
3/8	18 25 44.1	-11 26 40.9	9.66
4/1	18 24 46.1	-11 26 46.9	10.26
4/2	18 24 59.7	-11 26 46.9	SAT.
4/3	18 25 2.1	-11 26 46.9	SAT.
4/4	18 25 5.6	-11 26 46.9	SAT.
4/5	18 25 25.2	-11 26 46.9	10.58
4/6	18 25 33.5	-11 26 46.9	8.57
5/1	18 24 4.9	-11 26 52.9	9.27
5/2	18 24 7.3	-11 26 52.9	9.82
5/3	18 24 20.0	-11 26 52.9	SAT.
5/4	18 24 31.3	-11 26 52.9	10.26
5/5	18 24 43.1	-11 26 52.9	9.51
5/6	18 24 55.6	-11 26 52.9	10.35
5/7	18 25 10.9	-11 26 52.9	10.41
5/8	18 25 22.8	-11 26 52.9	9.44
6/1	18 24 14.1	-11 26 58.9	9.07
6/2	18 24 37.8	-11 26 58.9	8.34





TABLE A9 (CONTINUED)

Loc.	$l = 30 \quad b = 0$		$K$ (mag)
	$\alpha$ (1950) $\delta$		
	h m s	d m s	
24/5	18 43 22.2	- 2 34 46.8	SAT.
24/6	18 43 34.0	- 2 34 46.8	10.59
24/7	18 43 43.2	- 2 34 46.8	10.01
25/1	18 42 0.4	- 2 34 52.8	9.81
25/2	18 42 11.4	- 2 34 52.8	10.45
25/3	18 42 16.7	- 2 34 52.8	10.16
25/4	18 42 20.9	- 2 34 52.8	9.81
25/5	18 42 28.3	- 2 34 52.8	10.83
25/6	18 42 37.7	- 2 34 52.8	9.73
26/1	18 41 46.2	- 2 34 58.8	SAT.
26/2	18 42 14.3	- 2 34 58.8	10.16
26/3	18 42 15.8	- 2 34 58.8	8.93
26/4	18 42 25.3	- 2 34 58.8	10.06
26/5	18 42 40.1	- 2 34 58.8	11.14
26/6	18 42 48.4	- 2 34 58.8	SAT.
26/7	18 43 5.3	- 2 34 58.8	10.75
26/8	18 43 36.9	- 2 34 58.8	11.14
27/1	18 42 24.4	- 2 35 4.8	10.91
27/2	18 42 30.6	- 2 35 4.8	SAT.
28/1	18 41 57.5	- 2 35 10.8	10.30
28/2	18 42 3.4	- 2 35 10.8	11.14
28/3	18 42 18.8	- 2 35 10.8	10.41
28/4	18 42 53.7	- 2 35 10.8	9.30
28/5	18 42 55.8	- 2 35 10.8	10.45
28/6	18 42 57.9	- 2 35 10.8	11.14
28/7	18 42 59.9	- 2 35 10.8	8.93
28/8	18 43 39.0	- 2 35 10.8	11.11
29/1	18 42 28.3	- 2 35 16.8	SAT.
29/2	18 43 26.3	- 2 35 16.8	SAT.
29/3	18 43 34.0	- 2 35 16.8	10.63
30/1	18 42 12.8	- 2 35 22.8	9.26
30/2	18 42 14.9	- 2 35 22.8	10.59
30/3	18 42 18.2	- 2 35 22.8	10.29
30/4	18 42 22.3	- 2 35 22.8	10.89
30/5	18 42 32.4	- 2 35 22.8	SAT.
30/6	18 43 7.9	- 2 35 22.8	10.55
30/7	18 43 12.7	- 2 35 22.8	9.02
30/8	18 43 44.1	- 2 35 22.8	9.46
30/9	18 43 45.0	- 2 35 22.8	9.44
31/1	18 41 53.6	- 2 35 28.8	10.39
31/2	18 42 23.5	- 2 35 28.8	10.59
31/3	18 42 43.9	- 2 35 28.8	11.14
31/4	18 42 57.0	- 2 35 28.8	10.59
31/5	18 42 57.9	- 2 35 28.8	10.59
31/6	18 43 16.2	- 2 35 28.8	11.11
31/7	18 43 36.4	- 2 35 28.8	SAT.
32/1	18 41 52.1	- 2 35 34.8	10.12
32/2	18 42 6.4	- 2 35 34.8	9.46
32/3	18 42 8.1	- 2 35 34.8	9.19
32/4	18 43 5.0	- 2 35 34.8	9.03
32/5	18 43 41.1	- 2 35 34.8	10.13
33/1	18 41 46.2	- 2 35 40.8	SAT.
33/2	18 41 59.2	- 2 35 40.8	SAT.
33/3	18 42 36.6	- 2 35 40.8	SAT.
33/4	18 43 12.4	- 2 35 40.8	9.49
33/5	18 43 45.6	- 2 35 40.8	9.93
34/1	18 42 4.5	- 2 35 46.8	10.52
34/2	18 42 35.4	- 2 35 46.8	11.01
34/3	18 43 2.3	- 2 35 46.8	11.11
34/4	18 43 35.8	- 2 35 46.8	11.14
35/1	18 42 12.3	- 2 35 52.8	SAT.
35/2	18 42 59.0	- 2 35 52.8	11.14
35/3	18 43 4.4	- 2 35 52.8	11.14
35/4	18 43 21.0	- 2 35 52.8	SAT.
36/1	18 41 59.5	- 2 35 58.8	10.04

TABLE A9 (CONTINUED)

Loc.	$l = 30 \quad b = 0$		$K$ (mag)
	$\alpha$ (1950) $\delta$		
	h m s	d m s	
36/2	18 42 0.4	- 2 35 58.8	10.80
36/3	18 42 26.5	- 2 35 58.8	10.59
36/4	18 43 36.9	- 2 35 58.8	10.13
37/1	18 41 56.6	- 2 36 4.8	10.70
37/2	18 42 7.5	- 2 36 4.8	9.08
37/3	18 42 18.2	- 2 36 4.8	9.05
37/4	18 42 31.8	- 2 36 4.8	10.63
37/5	18 42 36.0	- 2 36 4.8	11.14
37/6	18 42 48.4	- 2 36 4.8	10.73
37/7	18 42 51.1	- 2 36 4.8	SAT.
37/8	18 43 2.3	- 2 36 4.8	10.59
38/1	18 41 50.4	- 2 36 10.8	11.14
38/2	18 41 59.2	- 2 36 10.8	10.91
38/3	18 42 16.4	- 2 36 10.8	11.11
38/4	18 42 52.6	- 2 36 10.8	SAT.
38/5	18 43 42.9	- 2 36 10.8	9.89

TABLE A10 (CONTINUED)

Loc.	$l = 220 \quad b = +1.0$		$K$ (mag)
	$\alpha$ (1950) $\delta$		
	h m s	d m s	
14/7	07 07 44.4	-05 41 15.3	10.81
15/1	07 06 15.9	-05 41 27.3	10.64
15/2	07 06 33.7	-05 41 27.3	10.71
16/1	07 05 18.1	-05 41 39.3	10.50
17/1	07 07 32.2	-05 41 51.3	10.81
18/1	07 05 49.2	-05 42 03.3	10.64
18/2	07 07 13.3	-05 42 03.3	10.10
19/1	07 07 03.3	-05 42 15.3	10.81
20/1	07 04 47.1	-05 42 27.3	10.78
20/2	07 07 18.1	-05 42 27.3	10.55
20/3	07 08 01.9	-05 42 27.3	10.68
20/4	07 08 09.0	-05 42 27.3	9.31
21/1	07 07 36.1	-05 42 39.3	10.81
22/1	07 06 53.2	-05 42 51.3	10.26
23/1	07 07 34.4	-05 43 03.3	8.68
24/1	07 04 48.8	-05 43 15.3	10.81
26/1	07 07 21.0	-05 43 39.3	10.61
27/1	07 06 31.3	-05 43 51.3	10.81
27/2	07 07 40.6	-05 43 51.3	10.78
28/1	07 04 52.4	-05 44 03.3	10.58
28/2	07 06 20.6	-05 44 03.3	SAT.
28/3	07 07 47.7	-05 44 03.3	9.76

TABLE A10

## INFRARED SOURCES

Loc.	$l = 220 \quad b = +1.0$		$K$ (mag)
	$\alpha$ (1950) $\delta$		
	h m s	d m s	
1/1	07 04 45.9	-05 38 39.3	SAT.
1/2	07 04 50.6	-05 38 39.3	10.06
1/3	07 05 38.0	-05 38 39.3	SAT.
1/4	07 06 26.0	-05 38 39.3	10.74
1/5	07 06 36.3	-05 38 39.3	9.22
1/6	07 07 0.9	-05 38 39.3	10.26
1/7	07 07 22.8	-05 38 39.3	SAT.
2/1	07 05 34.4	-05 38 51.3	10.81
2/2	07 05 44.5	-05 38 51.3	10.50
2/3	07 06 13.5	-05 38 51.3	8.87
2/4	07 06 30.1	-05 38 51.3	SAT.
4/1	07 07 03.3	-05 39 15.3	10.64
4/2	07 07 25.2	-05 39 15.3	SAT.
4/3	07 07 48.8	-05 39 15.3	9.91
5/1	07 07 00.9	-05 39 27.3	10.74
5/2	07 07 14.5	-05 39 27.3	10.81
5/3	07 07 47.3	-05 39 27.3	10.37
5/4	07 08 04.3	-05 39 27.3	10.81
6/1	07 05 40.9	-05 39 39.3	10.81
6/2	07 06 52.6	-05 39 39.3	9.46
6/3	07 07 56.0	-05 39 39.3	9.27
8/1	07 05 07.8	-05 40 03.3	8.67
8/2	07 07 13.3	-05 40 03.3	10.68
9/1	07 06 36.3	-05 40 15.3	10.81
9/2	07 07 00.3	-05 40 15.3	10.74
9/3	07 07 10.9	-05 40 15.3	10.53
10/1	07 07 03.9	-05 40 27.3	9.14
10/2	07 07 45.6	-05 40 27.3	10.81
13/1	07 06 44.9	-05 41 03.3	10.26
14/1	07 05 42.1	-05 41 15.3	8.70
14/2	07 06 21.8	-05 41 15.3	10.81
14/3	07 06 47.9	-05 41 15.3	10.81
14/4	07 06 58.5	-05 41 15.3	SAT.
14/5	07 07 12.7	-05 41 15.3	10.81
14/6	07 07 17.2	-05 41 15.3	10.58

TABLE A11  
INFRARED SOURCES

Loc.	$l = 220 \quad b = 0$		$K$ (mag)
	$\alpha$ (1950) $\delta$		
	h m s	d m s	
1/1	7 1 55.3	- 5 58 5.7	SAT.
1/2	7 2 13.3	- 5 58 5.7	10.97
1/3	7 4 21.6	- 5 58 5.7	10.74
3/1	7 2 3.6	- 5 58 29.8	10.93
4/1	7 3 27.1	- 5 58 41.8	SAT.
4/2	7 3 33.6	- 5 58 41.8	10.97
4/3	7 3 49.6	- 5 58 41.8	10.46
4/4	7 4 52.4	- 5 58 41.8	10.37
5/1	7 4 45.2	- 5 58 53.7	9.89
6/1	7 2 13.1	- 5 59 5.8	10.02
6/2	7 2 51.0	- 5 59 5.8	9.92
6/3	7 3 10.5	- 5 59 5.8	10.93
6/4	7 4 53.5	- 5 59 5.8	10.58
7/1	7 2 31.7	- 5 59 17.7	10.97
8/1	7 2 52.1	- 5 59 29.7	9.95
8/2	7 4 21.6	- 5 59 29.7	10.97
8/3	7 4 31.6	- 5 59 29.7	10.97
9/1	7 2 48.3	- 5 59 41.8	9.83
9/2	7 3 24.7	- 5 59 41.8	10.97
12/1	7 4 12.7	- 6 0 17.7	10.63
12/2	7 4 38.1	- 6 0 17.7	10.31
14/1	7 2 22.5	- 6 0 41.8	10.90
14/2	7 3 40.1	- 6 0 41.8	10.55
14/3	7 3 42.2	- 6 0 41.8	10.97
14/4	7 4 44.1	- 6 0 41.8	10.68
15/1	7 2 26.4	- 6 0 53.7	10.97
15/2	7 3 25.9	- 6 0 53.7	10.97
15/3	7 3 50.8	- 6 0 53.7	10.90
15/4	7 4 34.6	- 6 0 53.7	10.25
18/1	7 2 56.3	- 6 1 29.7	10.63



TABLE A11 (CONTINUED)

Loc.	$l = 220 \quad b = 0$				$K$ (mag)
	$\alpha$ (1950) $\delta$				
	h m s	d m s			
18/2	7 2 58.7	- 6 1 29.7			9.76
18/3	7 4 27.5	- 6 1 29.7			9.76
19/1	7 4 2.0	- 6 1 41.8			10.71
20/1	7 2 11.3	- 6 1 53.8			8.95
21/1	7 3 6.6	- 6 2 5.7			9.46
21/2	7 2 27.3	- 6 2 5.7			10.10
21/3	7 3 47.2	- 6 2 5.7			10.87
23/1	7 3 33.0	- 6 2 29.7			9.55
23/2	7 4 14.5	- 6 2 29.7			9.58

TABLE A12 (CONTINUED)

Loc.	$l = 220 \quad b = -1$				$K$ (mag)
	$\alpha$ (1950) $\delta$				
	h m s	d m s			
27/3	6 59 35.0	- 6 44 26.0			10.37
28/1	6 58 11.5	- 6 44 38.0			10.17
28/2	6 59 15.2	- 6 44 38.0			9.51
28/3	6 59 27.6	- 6 44 38.0			SAT.
28/4	7 0 25.4	- 6 44 38.0			10.39

TABLE A13 (CONTINUED)

Loc.	$l = 230 \quad b = 0$				$K$ (mag)
	$\alpha$ (1950) $\delta$				
	h m s	d m s			
29/4	7 22 59.7	-15 9 7.4			9.34
30/1	7 21 22.8	-15 9 19.4			8.90
30/2	7 21 46.2	-15 9 19.4			10.73
30/3	7 22 31.5	-15 9 19.4			11.02
31/1	7 21 26.4	-15 9 31.4			10.51
32/1	7 23 14.2	-15 9 43.4			11.02
36/1	7 23 10.6	-15 10 31.4			10.44
37/1	7 21 52.7	-15 10 43.4			10.76
37/2	7 23 11.2	-15 10 43.4			SAT.
38/1	7 22 46.9	-15 10 55.4			10.21

TABLE A13  
INFRARED SOURCESTABLE A12  
INFRARED SOURCES

Loc.	$l = 220 \quad b = -1$				$K$ (mag)
	$\alpha$ (1950) $\delta$				
	h m s	d m s			
1/1	6 57 51.4	- 6 39 14.0			9.05
1/2	6 58 23.4	- 6 39 14.0			10.58
1/3	6 58 48.8	- 6 39 14.0			9.08
1/4	7 0 3.4	- 6 39 14.0			10.64
2/1	6 58 50.0	- 6 39 26.0			9.08
2/2	6 59 13.1	- 6 39 26.0			SAT.
3/1	6 59 14.3	- 6 39 38.0			SAT.
4/1	6 58 0.3	- 6 39 50.0			10.61
5/1	6 58 23.4	- 6 40 2.0			10.35
6/1	6 58 20.7	- 6 40 14.0			10.67
6/2	6 58 37.6	- 6 40 14.0			10.92
7/1	6 59 45.7	- 6 40 26.0			10.13
8/1	6 59 54.6	- 6 40 38.0			10.92
9/1	6 58 33.4	- 6 40 50.0			9.47
10/1	6 57 55.2	- 6 41 2.0			10.92
10/2	6 59 59.9	- 6 41 2.0			9.86
11/1	6 59 52.8	- 6 41 14.0			10.12
12/1	6 58 7.1	- 6 41 26.0			9.71
12/2	7 0 8.8	- 6 41 26.0			10.85
13/1	6 58 42.9	- 6 41 38.0			10.92
13/2	7 0 39.9	- 6 41 38.0			SAT.
15/1	6 58 28.4	- 6 42 2.0			8.81
15/2	6 59 31.5	- 6 42 2.0			10.92
15/3	7 0 38.4	- 6 42 2.0			10.58
16/1	6 59 51.6	- 6 42 14.0			10.92
16/2	7 0 41.3	- 6 42 14.0			10.67
18/1	6 58 32.8	- 6 42 38.0			10.92
19/1	6 58 55.3	- 6 42 50.0			10.92
19/2	6 59 18.4	- 6 42 50.0			9.84
20/1	6 59 58.1	- 6 43 2.0			10.72
21/1	6 58 51.2	- 6 43 14.0			10.35
21/2	7 0 8.8	- 6 43 14.0			SAT.
22/1	7 0 17.1	- 6 43 26.0			SAT.
23/1	6 57 58.5	- 6 43 38.0			10.92
23/2	7 0 14.1	- 6 43 38.0			SAT.
24/1	6 59 9.6	- 6 43 50.0			8.98
24/2	6 59 47.5	- 6 43 50.0			10.33
24/3	7 0 17.1	- 6 43 50.0			10.53
24/4	7 0 24.2	- 6 43 50.0			10.76
25/1	7 0 8.8	- 6 44 2.0			10.17
26/1	6 58 7.4	- 6 44 14.0			9.59
26/2	6 59 33.8	- 6 44 14.0			10.07
26/3	7 0 32.5	- 6 44 14.0			10.64
27/1	6 58 18.6	- 6 44 26.0			10.79
27/2	6 59 16.1	- 6 44 26.0			9.35

TABLE A13  
INFRARED SOURCES

Loc.	$l = 230 \quad b = 0$				$K$ (mag)
	$\alpha$ (1950) $\delta$				
	h m s	d m s			
1/1	7 22 20.3	-15 3 31.4			10.19
1/2	7 23 17.1	-15 3 31.4			10.25
2/1	7 21 41.8	-15 3 43.4			11.02
3/1	7 21 37.4	-15 3 55.4			9.34
3/2	7 22 52.3	-15 3 55.4			10.46
4/1	7 21 37.6	-15 4 7.4			SAT.
4/2	7 22 45.2	-15 4 7.4			SAT.
6/1	7 21 20.5	-15 4 31.4			10.70
6/2	7 21 50.1	-15 4 31.4			11.02
6/3	7 21 53.0	-15 4 31.4			9.15
7/1	7 21 57.8	-15 4 43.4			10.34
7/2	7 22 35.7	-15 4 43.4			SAT.
7/3	7 23 1.1	-15 4 43.4			9.89
8/1	7 22 19.1	-15 4 55.4			9.16
8/2	7 22 32.7	-15 4 55.4			10.58
8/3	7 22 47.5	-15 4 55.4			SAT.
9/1	7 22 18.2	-15 5 7.4			10.13
9/2	7 22 38.6	-15 5 7.4			10.98
10/1	7 22 55.2	-15 5 19.4			10.34
13/1	7 23 18.0	-15 5 55.4			11.02
15/1	7 23 0.9	-15 6 19.4			10.98
15/2	7 23 17.4	-15 6 19.4			9.85
16/1	7 22 41.3	-15 6 31.4			10.70
16/2	7 23 2.0	-15 6 31.4			10.82
17/1	7 21 39.7	-15 6 43.4			8.96
18/1	7 21 20.5	-15 6 55.4			SAT.
19/1	7 22 31.8	-15 7 7.4			11.02
19/2	7 23 15.1	-15 7 7.4			10.36
20/1	7 23 10.3	-15 7 19.4			9.99
21/1	7 21 54.8	-15 7 31.4			10.30
21/2	7 22 22.1	-15 7 31.4			10.98
22/1	7 21 44.8	-15 7 43.4			10.08
22/2	7 21 51.9	-15 7 43.4			10.82
22/3	7 22 29.5	-15 7 43.4			SAT.
22/4	7 22 59.1	-15 7 43.4			11.02
23/1	7 23 11.8	-15 7 55.4			10.95
24/1	7 22 2.5	-15 8 7.4			10.63
24/2	7 22 6.7	-15 8 7.4			10.85
24/3	7 22 9.6	-15 8 7.4			10.18
25/1	7 22 43.1	-15 8 19.4			10.34
26/1	7 22 35.7	-15 8 31.4			10.26
26/2	7 22 56.1	-15 8 31.4			11.02
27/1	7 21 40.6	-15 8 43.4			10.82
27/2	7 23 7.7	-15 8 43.4			10.70
28/1	7 21 59.6	-15 8 55.4			11.02
28/2	7 22 15.5	-15 8 55.4			10.70
28/3	7 22 38.6	-15 8 55.4			10.68
29/1	7 21 43.6	-15 9 7.4			11.02
29/2	7 22 17.3	-15 9 7.4			SAT.
29/3	7 22 25.0	-15 9 7.4			10.82

TABLE A14  
INFRARED SOURCES

Loc.	$l = 240 \quad b = 0$				$K$ (mag)
	$\alpha$ (1950) $\delta$				
	h m s	d m s			
1/1	7 41 44.1	-23 34 29.1			SAT.
1/2	7 42 45.4	-23 34 29.1			10.88
1/3	7 43 2.6	-23 34 29.1			10.88
1/4	7 43 30.7	-23 34 29.1			9.98
2/1	7 42 48.1	-23 34 41.0			10.88
2/2	7 43 7.3	-23 34 41.0			10.84
3/1	7 42 16.4	-23 34 53.1			10.57
3/2	7 42 18.5	-23 34 53.1			10.88
3/3	7 42 40.4	-23 34 53.1			SAT.
3/4	7 43 9.1	-23 34 53.1			10.68
4/1	7 42 51.9	-23 35 5.1			9.37
6/1	7 42 21.4	-23 35 29.1			9.37
6/2	7 43 7.6	-23 35 29.1			SAT.
8/1	7 42 10.8	-23 35 53.0			10.84
8/2	7 43 28.9	-23 35 53.0			10.57
8/3	7 43 34.3	-23 35 53.0			10.54
9/1	7 42 3.1	-23 36 5.0			10.88
9/2	7 42 27.3	-23 36 5.0			10.57
10/1	7 43 31.9	-23 36 17.1			9.72
14/1	7 42 26.9	-23 37 5.0			9.80
16/1	7 43 40.2	-23 37 29.1			10.88
17/1	7 42 42.7	-23 37 41.0			SAT.
17/2	7 43 1.4	-23 37 41.0			10.33
17/3	7 43 25.4	-23 37 41.0			9.96
18/1	7 42 10.8	-23 37 53.1			10.22
18/2	7 42 31.5	-23 37 53.1			10.84
18/3	7 42 40.7	-23 37 53.1			SAT.
18/4	7 43 4.1	-23 37 53.1			10.22
20/1	7 43 5.2	-23 38 17.1			9.34
21/1	7 41 44.1	-23 38 29.0			9.93
22/1	7 42 24.4	-23 38 41.1			10.88
22/2	7 42 41.8	-23 38 41.1			10.57
22/3	7 42 58.7	-23 38 41.1			10.81
22/4	7 43 20.0	-23 38 41.1			10.84
22/5	7 43 26.9	-23 38 41.1			10.71
24/1	7 41 46.8	-23 39 5.0			10.71
24/2	7 43 43.1	-23 39 5.0			10.74
25/1	7 42 4.8	-23 39 17.1			SAT.
26/1	7 43 0.5	-23 39 29.1			10.60
28/1	7 43 46.1	-23 39 53.1			10.33
29/1	7 42 37.4	-23 40 5.1			SAT.
29/2	7 42 46.3	-23 40 5.1			10.42
30/1	7 41 58.3	-23 40 17.0			10.74

TABLE A15  
INFRARED SOURCES

Loc.	$l = 250 \quad b = 0$		$K$ (mag)
	$\alpha$ (1950) $\delta$ h m s	d m s	
1/1	8 5 25.1	-32 11 23.8	SAT.
1/2	8 5 32.8	-32 11 23.8	10.74
1/3	8 6 6.6	-32 11 23.8	10.28
1/4	8 6 52.4	-32 11 23.8	10.88
1/5	8 7 31.9	-32 11 23.8	10.15
2/1	8 6 33.8	-32 11 35.9	10.49
3/1	8 6 30.9	-32 11 47.8	10.88
3/2	8 7 17.7	-32 11 47.8	10.28
3/3	8 7 30.7	-32 11 47.8	9.68
4/1	8 5 42.3	-32 11 59.8	9.17
4/2	8 6 0.1	-32 11 59.8	10.16
4/3	8 7 31.6	-32 11 59.8	9.56
5/1	8 5 54.7	-32 12 11.9	10.84
6/1	8 6 27.3	-32 12 23.8	10.60
7/1	8 5 41.7	-32 12 35.8	9.22
7/2	8 6 19.0	-32 12 35.8	10.33
7/3	8 7 13.5	-32 12 35.8	10.88
7/4	8 7 18.3	-32 12 35.8	10.88
8/1	8 6 7.8	-32 12 47.9	10.54
9/1	8 5 41.1	-32 12 59.8	10.37
9/2	8 6 8.1	-32 12 59.8	10.37
9/3	8 6 7.5	-32 12 59.8	10.88
9/4	8 7 19.4	-32 12 59.8	10.42
10/1	8 7 6.4	-32 13 11.8	10.57
12/1	8 5 36.1	-32 13 35.8	10.62
12/2	8 6 50.4	-32 13 35.8	SAT.
13/1	8 6 20.8	-32 13 47.8	10.28
13/2	8 7 42.2	-32 13 47.8	10.88
14/1	8 6 20.5	-32 13 59.9	9.94
14/2	8 6 25.0	-32 13 59.9	8.67
14/3	8 6 39.2	-32 13 59.9	10.51
14/4	8 6 53.1	-32 13 59.9	10.37
17/1	8 7 3.4	-32 14 35.9	SAT.
17/2	8 7 37.8	-32 14 35.9	9.82
18/1	8 5 31.7	-32 14 47.8	SAT.
18/2	8 5 55.9	-32 14 47.8	10.88
18/3	8 7 17.4	-32 14 47.8	10.88
20/1	8 5 28.1	-32 15 11.8	8'70
20/2	8 6 15.5	-32 15 11.8	9.86
21/1	8 5 34.0	-32 15 23.7	10.71
21/2	8 5 50.6	-32 15 23.7	SAT.
21/3	8 6 13.4	-32 15 23.7	10.20
21/4	8 7 20.9	-32 15 23.7	10.78
22/1	8 6 4.2	-32 15 35.8	10.88
22/2	8 6 23.2	-32 15 35.8	10.88
24/1	8 6 8.4	-32 15 59.8	9.22
25/1	8 5 58.3	-32 16 11.8	9.06
25/2	8 6 38.6	-32 16 11.8	SAT.
25/3	8 6 43.9	-32 16 11.8	10.37
26/1	8 5 58.9	-32 16 23.8	9.89
26/2	8 7 32.5	-32 16 23.8	10.57
27/1	8 7 9.4	-32 16 35.7	SAT.
27/2	8 7 31.3	-32 16 35.7	9.28
28/1	8 6 57.5	-32 16 47.8	10.11
28/2	8 7 6.4	-32 16 47.8	SAT.
28/3	8 7 36.6	-32 16 47.8	9.47
29/1	8 5 30.5	-32 16 59.9	10.88
29/2	8 5 58.9	-32 16 59.9	10.51
29/3	8 6 32.1	-32 16 59.9	10.33
29/4	8 7 12.6	-32 16 59.9	10.84
29/5	8 7 55.0	-32 16 59.9	9.08
30/1	8 5 44.4	-32 17 11.7	10.20
31/1	8 6 35.0	-32 17 23.8	8.69
32/1	8 6 22.9	-32 17 35.8	10.30
32/2	8 7 35.4	-32 17 35.8	10.88
32/3	8 7 52.0	-32 17 35.8	10.88
33/1	8 5 57.1	-32 17 47.7	10.60

TABLE A16  
INFRARED SOURCES

Loc.	$l = 260 \quad b = 0$		$K$ (mag)
	$\alpha$ (1950) $\delta$ h m s	d m s	
1/1	8 33 9.5	-40 26 42.1	10.74
2/1	8 33 48.0	-40 26 54.1	10.47
2/2	8 34 42.5	-40 26 54.1	10.18
2/3	8 35 7.4	-40 26 54.1	10.74
3/1	8 34 14.4	-40 27 6.1	10.79
3/2	8 34 17.0	-40 27 6.1	10.74
3/3	8 35 5.0	-40 27 6.1	10.26
3/4	8 35 21.0	-40 27 6.1	10.95
4/1	8 33 26.7	-40 27 18.0	9.63
4/2	8 34 25.3	-40 27 18.0	11.05
4/3	8 36 0.1	-40 27 18.0	SAT.
5/1	8 34 16.5	-40 27 30.1	11.05
5/2	8 34 23.0	-40 27 30.1	10.52
6/1	8 33 49.8	-40 27 42.2	10.71
6/2	8 33 53.4	-40 27 42.2	10.79
6/3	8 33 55.2	-40 27 42.2	10.49
6/4	8 34 47.2	-40 27 42.2	11.05
7/1	8 33 29.1	-40 27 54.1	10.58
8/1	8 33 42.1	-40 28 6.1	9.00
8/2	8 34 5.8	-40 28 6.1	11.05
9/1	8 33 9.8	-40 28 18.1	10.56
9/2	8 33 39.7	-40 28 18.1	10.74
9/3	8 33 44.5	-40 28 18.1	9.32
9/4	8 34 2.2	-40 28 18.1	10.63
9/5	8 34 40.1	-40 28 18.1	SAT.
9/6	8 35 15.7	-40 28 18.1	11.05
10/1	8 33 33.8	-40 28 30.0	9.46
11/1	8 33 42.4	-40 28 42.1	10.74
11/2	8 33 43.6	-40 28 42.1	10.74
11/3	8 35 8.6	-40 28 42.1	10.30
12/1	8 33 51.0	-40 28 54.2	10.74
12/2	8 34 43.4	-40 28 54.2	9.41
14/1	8 33 30.3	-40 29 18.1	10.79
15/1	8 33 16.9	-40 29 30.1	11.05
16/1	8 33 24.3	-40 29 42.0	9.30
16/2	8 33 51.6	-40 29 42.0	SAT.
16/3	8 35 4.4	-40 29 42.0	9.22
16/4	8 35 33.4	-40 29 42.0	10.45
17/1	8 33 42.7	-40 29 54.1	SAT.
17/2	8 34 38.4	-40 29 54.1	SAT.
17/3	8 35 14.8	-40 29 54.1	10.91
17/4	8 35 53.3	-40 29 54.1	11.05
18/1	8 34 32.4	-40 30 6.1	9.24
18/2	8 35 26.3	-40 30 6.1	10.14
18/3	8 35 28.7	-40 30 6.1	11.05
19/1	8 33 16.3	-40 30 18.0	9.38
19/2	8 34 23.0	-40 30 18.0	11.05
19/3	8 34 54.1	-40 30 18.0	9.63
19/4	8 35 12.7	-40 30 18.0	11.01
20/1	8 33 14.9	-40 30 30.1	8.87
21/1	8 34 31.3	-40 30 42.1	10.43
22/1	8 34 7.0	-40 30 54.0	11.05
22/2	8 34 54.1	-40 30 54.0	10.18
23/1	8 34 24.7	-40 31 6.1	10.16
23/2	8 34 54.9	-40 31 6.1	8.87
23/3	8 35 29.3	-40 31 6.1	SAT.
23/4	8 35 36.4	-40 31 6.1	10.49
24/1	8 34 42.5	-40 31 18.1	9.88
24/2	8 35 25.1	-40 31 18.1	SAT.
24/3	8 35 38.2	-40 31 18.1	SAT.
25/1	8 33 39.7	-40 31 30.0	9.18
25/2	8 35 9.8	-40 31 30.0	SAT.
26/1	8 34 24.7	-40 31 42.1	10.79
27/1	8 33 11.0	-40 31 54.1	10.95
27/2	8 33 44.5	-40 31 54.1	10.01

TABLE A16 (CONTINUED)

Loc.	$l = 260 \quad b = 0$		$K$ (mag)
	$\alpha$ (1950) $\delta$ h m s	d m s	
27/3	8 34 58.5	-40 31 54.1	10.10
28/1	8 33 43.6	-40 32 6.0	10.16
29/1	8 35 48.8	-40 32 18.1	10.30
29/2	8 35 55.4	-40 32 18.1	9.54
30/1	8 33 20.2	-40 32 30.1	10.14
30/2	8 34 56.7	-40 32 30.1	SAT.
31/1	8 34 3.1	-40 32 42.0	11.01
31/2	8 34 56.7	-40 32 42.0	SAT.
32/1	8 35 44.7	-40 32 54.1	9.96
33/1	8 33 21.4	-40 33 6.1	10.88
33/2	8 34 1.1	-40 33 6.1	9.15
33/3	8 34 56.7	-40 33 6.1	10.04
33/4	8 35 47.4	-40 33 6.1	10.16
35/1	8 33 39.1	-40 33 30.1	10.74
36/1	8 33 33.8	-40 33 42.1	10.91
36/2	8 34 9.6	-40 33 42.1	10.91
36/3	8 35 16.9	-40 33 42.1	11.05
38/1	8 33 48.0	-40 34 6.1	10.68
38/2	8 35 22.2	-40 34 6.1	10.82
38/3	8 35 45.9	-40 34 6.1	10.49

TABLE A17  
INFRARED SOURCES

Loc.	$l = 270 \quad b = 0$		$K$ (mag)
	$\alpha$ (1950) $\delta$ h m s	d m s	
1/1	9 8 24.2	-48 19 19.1	10.98
1/2	9 9 18.4	-48 19 19.1	10.73
1/3	9 9 29.1	-48 19 19.1	10.65
1/4	9 10 17.1	-48 19 19.1	11.02
2/1	9 9 7.2	-48 19 31.2	10.26
4/1	9 9 35.0	-48 19 55.1	10.82
4/2	9 10 12.3	-48 19 55.1	10.79
5/1	9 9 11.3	-48 20 7.1	11.02
5/2	9 9 51.0	-48 20 7.1	9.91
6/1	9 10 11.1	-48 20 19.2	10.70
7/1	9 8 9.7	-48 20 31.1	10.14
8/1	9 8 12.1	-48 20 43.2	10.58
8/2	9 8 13.3	-48 20 43.2	10.46
8/3	9 8 18.6	-48 20 43.2	SAT.
9/1	9 9 12.2	-48 20 55.2	10.70
9/2	9 10 24.2	-48 20 55.2	9.98
10/1	9 8 36.4	-48 21 7.2	11.02
10/2	9 8 48.5	-48 21 7.2	11.02
10/3	9 9 48.9	-48 21 7.2	10.30
11/1	9 8 55.9	-48 21 19.1	10.95
11/2	9 10 27.7	-48 21 19.1	10.51
12/1	9 8 34.0	-48 21 31.2	10.76
12/2	9 8 54.1	-48 21 31.2	10.51
13/1	9 8 13.0	-48 21 43.1	10.91
13/2	9 8 34.0	-48 21 43.1	10.98
14/1	9 8 10.9	-48 21 55.2	11.02
14/2	9 8 55.9	-48 21 55.2	10.79
14/3	9 10 26.8	-48 21 55.2	10.28
15/1	9 9 29.7	-48 22 7.2	10.58
15/2	9 9 33.8	-48 22 7.2	10.48

TABLE A17 (CONTINUED)

Loc.	$l = 270 \quad b = 0$		$K$ (mag)
	$\alpha$ (1950) $\delta$		
	h m s	d m s	
15/3	9 9 59.3	-48 22 7.2	9.09
17/1	9 7 57.9	-48 22 31.1	SAT.
20/1	9 10 20.0	-48 23 7.1	10.25
20/2	9 10 24.8	-48 23 7.1	9.82
21/1	9 9 2.1	-48 23 19.2	10.23
21/2	9 9 17.2	-48 23 19.2	10.65
21/3	9 10 2.3	-48 23 19.2	9.63
23/1	9 9 36.2	-48 23 43.1	10.46
24/1	9 8 2.6	-48 23 55.2	10.46
24/2	9 8 38.8	-48 23 55.2	10.95
24/3	9 8 50.6	-48 23 55.2	10.46
25/1	9 9 52.8	-48 24 7.2	10.91
26/1	9 8 59.2	-48 24 19.1	11.02
26/2	9 9 17.2	-48 24 19.1	11.02
26/3	9 9 19.0	-48 24 19.1	10.79
27/1	9 9 46.9	-48 24 31.2	10.51
28/1	9 8 34.0	-48 24 43.2	10.63
28/2	9 9 10.1	-48 24 43.2	11.02
29/1	9 8 31.6	-48 24 55.1	10.79
29/2	9 8 48.8	-48 24 55.1	SAT.
30/1	9 8 3.2	-48 25 7.2	10.40
30/2	9 9 40.9	-48 25 7.2	10.26
30/3	9 9 59.9	-48 25 7.2	10.58
31/1	9 8 25.7	-48 25 19.2	9.07
31/2	9 9 50.4	-48 25 19.2	10.68
32/1	9 10 25.3	-48 25 31.1	10.08
33/1	9 8 58.9	-48 25 43.2	8.90
36/1	9 8 6.8	-48 26 19.2	9.42
36/2	9 9 22.9	-48 26 19.2	10.65
37/1	9 10 15.6	-48 26 31.2	9.64

TABLE A18

## INFRARED SOURCES

Loc.	$l = 280 \quad b = 0$		$K$ (mag)
	$\alpha$ (1950) $\delta$		
	h m s	d m s	
1/1	10 0 9.5	-54 45 41.3	SAT.
1/2	10 0 26.4	-54 45 41.3	10.30
1/3	10 2 8.4	-54 45 41.3	10.98
1/4	10 4 5.8	-54 45 41.3	SAT.
1/5	10 4 17.0	-54 45 41.3	10.76
2/1	10 1 37.1	-54 45 53.4	9.16
2/2	10 1 45.4	-54 45 53.4	11.02
2/3	10 1 57.9	-54 45 53.4	10.95
2/4	10 2 14.4	-54 45 53.4	10.30
2/5	10 2 21.5	-54 45 53.4	9.19
2/6	10 3 7.6	-54 45 53.4	10.68
2/7	10 5 10.3	-54 45 53.4	9.76
3/1	10 1 20.5	-54 46 5.3	10.98
3/2	10 1 25.9	-54 46 5.3	10.36
3/3	10 3 11.3	-54 46 5.3	10.04
3/4	10 3 48.9	-54 46 5.3	9.90
3/5	10 4 20.6	-54 46 5.3	10.85
3/6	10 4 24.1	-54 46 5.3	10.95
4/1	10 0 29.6	-54 46 17.3	11.02
4/2	10 1 42.5	-54 46 17.3	11.02
4/3	10 1 56.1	-54 46 17.3	11.02
4/4	10 4 22.4	-54 46 17.3	11.02
5/1	10 0 31.4	-54 46 29.4	11.02
5/2	10 0 35.2	-54 46 29.4	11.02
5/3	10 0 47.4	-54 46 29.4	10.36

TABLE A18 (CONTINUED)

Loc.	$l = 280 \quad b = 0$		$K$ (mag)
	$\alpha$ (1950) $\delta$		
	h m s	d m s	
5/4	10 1 27.7	-54 46 29.4	10.63
5/5	10 2 7.3	-54 46 29.4	10.40
5/6	10 2 34.6	-54 46 29.4	9.82
5/7	10 4 54.9	-54 46 29.4	10.28
6/1	10 0 33.5	-54 46 41.3	11.02
6/2	10 1 9.6	-54 46 41.3	10.63
6/3	10 1 12.8	-54 46 41.3	10.10
6/4	10 2 33.7	-54 46 41.3	10.07
7/1	10 0 16.3	-54 46 53.3	10.51
7/2	10 0 53.0	-54 46 53.3	11.02
7/3	10 0 56.9	-54 46 53.3	11.02
7/4	10 1 4.0	-54 46 53.3	11.02
7/5	10 1 16.4	-54 46 53.3	10.98
7/6	10 2 44.0	-54 46 53.3	10.26
7/7	10 3 55.7	-54 46 53.3	SAT.
7/8	10 4 25.9	-54 46 53.3	9.99
7/9	10 4 56.7	-54 46 53.3	9.12
8/1	10 1 13.4	-54 47 5.4	10.38
8/2	10 2 3.8	-54 47 5.4	9.91
8/3	10 3 56.9	-54 47 5.4	11.02
8/4	10 4 31.2	-54 47 5.4	11.02
9/1	10 1 5.1	-54 47 17.3	10.26
9/2	10 1 9.9	-54 47 17.3	10.79
9/3	10 2 11.5	-54 47 17.3	11.02
9/4	10 3 39.7	-54 47 17.3	10.32
9/5	10 4 18.8	-54 47 17.3	9.40
10/1	10 0 19.0	-54 47 29.3	11.02
10/2	10 0 53.9	-54 47 29.3	10.26
10/3	10 1 16.4	-54 47 29.3	10.51
10/4	10 1 59.0	-54 47 29.3	10.76
10/5	10 2 22.1	-54 47 29.3	10.60
10/6	10 3 47.4	-54 47 29.3	10.82
10/7	10 3 58.7	-54 47 29.3	9.82
10/8	10 4 44.3	-54 47 29.3	11.02
11/1	10 0 40.9	-54 47 41.4	11.02
11/2	10 0 45.0	-54 47 41.4	9.45
11/3	10 1 7.5	-54 47 41.4	9.94
11/4	10 1 49.0	-54 47 41.4	11.02
11/5	10 1 54.9	-54 47 41.4	10.73
11/6	10 2 13.3	-54 47 41.4	9.60
11/7	10 2 51.7	-54 47 41.4	10.70
11/8	10 3 27.3	-54 47 41.4	11.02
11/9	10 3 38.5	-54 47 41.4	10.63
11/10	10 3 49.8	-54 47 41.4	10.25
11/11	10 4 2.5	-54 47 41.4	10.58
11/12	10 4 7.0	-54 47 41.4	11.02
12/1	10 1 37.1	-54 47 53.3	SAT.
12/2	10 2 1.4	-54 47 53.3	11.02
12/3	10 2 21.2	-54 47 53.3	10.46
12/4	10 2 23.3	-54 47 53.3	11.02
13/1	10 0 57.4	-54 48 5.3	9.38
13/2	10 1 18.8	-54 48 5.3	10.13
13/3	10 2 3.5	-54 48 5.3	11.02
13/4	10 2 6.1	-54 48 5.3	10.95
13/5	10 2 25.1	-54 48 5.3	9.61
13/6	10 3 3.0	-54 48 5.3	10.85
13/7	10 3 50.1	-54 48 5.3	10.68
13/8	10 4 1.0	-54 48 5.3	9.84
13/9	10 4 27.1	-54 48 5.3	10.73
13/10	10 5 1.4	-54 48 5.3	11.02
14/1	10 3 2.4	-54 48 17.4	10.98
14/2	10 3 35.6	-54 48 17.4	9.82
14/3	10 3 42.7	-54 48 17.4	10.70
14/4	10 4 13.5	-54 48 17.4	10.58
14/5	10 4 30.9	-54 48 17.4	10.53

TABLE A18 (CONTINUED)

Loc.	$l = 280 \quad b = 0$		$K$ (mag)
	$\alpha$ (1950) $\delta$		
	h m s	d m s	
15/1	10 0 10.7	-54 48 29.3	10.26
15/2	10 1 37.1	-54 48 29.3	SAT.
15/3	10 2 24.5	-54 48 29.3	10.73
15/4	10 4 38.3	-54 48 29.3	10.88
16/1	10 1 1.0	-54 48 41.3	10.82
16/2	10 2 34.0	-54 48 41.3	10.85
16/3	10 2 37.5	-54 48 41.3	SAT.
16/4	10 3 6.8	-54 48 41.3	11.02
16/5	10 3 34.4	-54 48 41.3	11.02
16/6	10 3 40.3	-54 48 41.3	10.91
16/7	10 3 56.9	-54 48 41.3	SAT.
17/1	10 0 19.5	-54 48 53.4	10.88
17/2	10 0 21.3	-54 48 53.4	10.70
17/3	10 0 26.7	-54 48 53.4	10.63
17/4	10 0 37.9	-54 48 53.4	SAT.
17/5	10 1 12.3	-54 48 53.4	11.02
17/6	10 2 40.5	-54 48 53.4	11.02
17/7	10 4 54.9	-54 48 53.4	9.43
18/1	10 1 1.9	-54 49 5.4	10.53
18/2	10 1 30.9	-54 49 5.4	9.92
18/3	10 1 40.1	-54 49 5.4	11.02
18/4	10 3 29.1	-54 49 5.4	10.70
18/5	10 4 16.1	-54 49 5.4	10.79
19/1	10 0 28.4	-54 49 17.3	SAT.
19/2	10 1 53.1	-54 49 17.3	9.98
19/3	10 2 5.5	-54 49 17.3	11.02
19/4	10 2 8.5	-54 49 17.3	10.88
19/5	10 2 16.2	-54 49 17.3	10.85
19/6	10 2 20.9	-54 49 17.3	11.02
19/7	10 4 6.4	-54 49 17.3	10.10
19/8	10 4 37.7	-54 49 17.3	10.76
19/9	10 4 43.7	-54 49 17.3	10.51
19/10	10 4 47.2	-54 49 17.3	10.91
19/11	10 5 4.4	-54 49 17.3	10.70
20/1	10 1 41.3	-54 49 29.4	10.25
20/2	10 1 57.9	-54 49 29.4	10.79
20/3	10 3 24.9	-54 49 29.4	11.02
20/4	10 4 26.2	-54 49 29.4	10.26
20/5	10 4 41.3	-54 49 29.4	11.02
21/1	10 0 33.2	-54 49 41.3	11.02
21/2	10 1 12.8	-54 49 41.3	9.07
21/3	10 1 44.8	-54 49 41.3	10.88
21/4	10 1 46.6	-54 49 41.3	10.91
21/5	10 2 13.3	-54 49 41.3	SAT.
21/6	10 2 44.6	-54 49 41.3	10.65
21/7	10 2 48.2	-54 49 41.3	11.02
21/8	10 2 58.3	-54 49 41.3	9.79
21/9	10 3 2.4	-54 49 41.3	SAT.
21/10	10 3 27.9	-54 49 41.3	10.10
21/11	10 4 54.9	-54 49 41.3	9.92
22/1	10 1 30.6	-54 49 53.3	10.68
22/2	10 2 0.2	-54 49 53.3	10.70
22/3	10 2 8.5	-54 49 53.3	8.83
22/4	10 2 30.4	-54 49 53.3	10.51
23/1	10 1 21.1	-54 50 5.3	10.95
23/2	10 2 31.0	-54 50 5.3	10.95
23/3	10 3 53.3	-54 50 5.3	11.02
23/4	10 4 31.2	-54 50 5.3	9.41
23/5	10 4 34.2	-54 50 5.3	SAT.
23/6	10 4 52.6	-54 50 5.3	10.30
23/7	10 4 58.5	-54 50 5.3	10.85
24/1	10 1 2.8	-54 50 17.4	10.10
24/2	10 1 19.4	-54 50 17.4	SAT.
24/3	10 1 35.9	-54 50 17.4	10.70
24/4	10 1 37.1	-54 50 17.4	10.44

TABLE A18 (CONTINUED)

Loc.	$l = 280 \quad b = 0$		$K$ (mag)
	$\alpha$ (1950) $\delta$		
	h m s	d m s	
24/5	10 2 6.1	-54 50 17.4	10.98
24/6	10 4 2.8	-54 50 17.4	9.61
25/1	10 0 38.5	-54 50 29.3	9.09
26/1	10 0 16.0	-54 50 41.4	10.13
26/2	10 1 8.1	-54 50 41.4	11.02
26/3	10 1 46.6	-54 50 41.4	10.70
26/4	10 1 59.6	-54 50 41.4	8.90
26/5	10 2 15.6	-54 50 41.4	11.02
26/6	10 3 33.2	-54 50 41.4	10.95
26/7	10 3 46.8	-54 50 41.4	10.26
26/8	10 4 4.0	-54 50 41.4	SAT.
26/9	10 4 9.3	-54 50 41.4	10.95
26/10	10 4 19.4	-54 50 41.4	10.26
27/1	10 0 12.7	-54 50 53.3	11.02
27/2	10 0 17.8	-54 50 53.3	9.42
27/3	10 0 21.3	-54 50 53.3	10.76
27/4	10 1 1.0	-54 50 53.3	10.08
27/5	10 1 9.3	-54 50 53.3	10.70
27/6	10 1 56.1	-54 50 53.3	10.40
27/7	10 2 45.5	-54 50 53.3	9.82
27/8	10 3 2.4	-54 50 53.3	10.25
27/9	10 3 57.5	-54 50 53.3	10.60
28/1	10 0 29.6	-54 51 5.3	10.85
28/2	10 0 56.3	-54 51 5.3	11.02
28/3	10 1 13.1	-54 51 5.3	11.02
28/4	10 1 36.5	-54 51 5.3	9.74
28/5	10 1 45.4	-54 51 5.3	10.88
28/6	10 1 48.1	-54 51 5.3	10.95
28/7	10 2 35.8	-54 51 5.3	10.46
28/8	10 3 0.6	-54 51 5.3	SAT.
28/9	10 3 44.5	-54 51 5.3	10.60
28/10	10 4 5.5	-54 51 5.3	10.60
28/11	10 4 50.5	-54 51 5.3	10.38
29/1	10 0 25.8	-54 51 17.3	10.88
29/2	10 1 52.2	-54 51 17.3	11.02
29/3	10 4 5.8	-54 51 17.3	10.19
30/1	10 1 5.1	-54 51 29.4	10.98
30/2	10 2 18.6	-54 51 29.4	10.40
30/3	10 2 23.9	-54 51 29.4	10.26
30/4	10 3 8.3	-54 51 29.4	11.02
30/5	10 3 13.1	-54 51 29.4	10.10
30/6	10 4 8.4	-54 51 29.4	10.88
30/7	10 4 21.8	-54 51 29.4	10.85
30/8	10 4 57.3	-54 51 29.4	10.85
30/9	10 5 3.2	-54 51 29.4	9.34
31/1	10 0 33.2	-54 51 41.3	10.30
31/2	10 0 59.8	-54 51 41.3	10.10
31/3	10 1 25.9	-54 51 41.3	11.02
31/4	10 1 29.4	-54 51 41.3	SAT.
31/5	10 2 6.1	-54 51 41.3	9.59
31/6	10 2 10.3	-54 51 41.3	10.70
31/7	10 3 3.6	-54 51 41.3	10.70
31/8	10 3 16.6	-54 51 41.3	9.95
31/9	10 4 14.1	-54 51 41.3	SAT.
32/1	10 0 35.5	-54 51 53.4	9.43
32/2	10 1 37.7	-54 51 53.4	10.68
32/3	10 2 26.0	-54 51 53.4	11.02
32/4	10 2 33.4	-54 51 53.4	11.02
32/5	10 2 37.5	-54 51 53.4	10.85
32/6	10 2 42.3	-54 51 53.4	11.02
32/7	10 3 10.4	-54 51 53.4	11.02
32/8	10 3 27.3	-54 51 53.4	10.73
32/9	10 4 28.9	-54 51 53.4	10.98
32/10	10 5 1.1	-54 51 53.4	11.02
33/1	10 0 27.8	-54 52 5.4	10.98

TABLE A18 (CONTINUED)

Loc.	$l = 280 \quad b = 0$		$K$ (mag)
	$\alpha$ (1950) $\delta$		
	h m s	d m s	
33/2	10 0 50.3	-54 52 5.4	10.46
33/3	10 0 54.5	-54 52 5.4	10.10
33/4	10 1 34.8	-54 52 5.4	10.26
33/5	10 1 46.3	-54 52 5.4	9.58
33/6	10 2 22.1	-54 52 5.4	11.02
33/7	10 3 54.2	-54 52 5.4	10.63
33/8	10 4 22.9	-54 52 5.4	10.46
34/1	10 1 10.5	-54 52 17.3	10.10
34/2	10 2 9.7	-54 52 17.3	11.02
34/3	10 2 28.1	-54 52 17.3	10.95
34/4	10 2 53.2	-54 52 17.3	10.26
34/5	10 3 54.5	-54 52 17.3	10.46
35/1	10 0 32.6	-54 52 29.3	11.02
35/2	10 1 22.9	-54 52 29.3	SAT.
35/3	10 1 52.5	-54 52 29.3	10.07
35/4	10 3 29.6	-54 52 29.3	9.73
35/5	10 3 55.7	-54 52 29.3	SAT.
35/6	10 4 36.0	-54 52 29.3	SAT.
36/1	10 1 22.3	-54 52 41.4	9.48
36/2	10 2 2.0	-54 52 41.4	10.18
36/3	10 2 50.6	-54 52 41.4	9.80
36/4	10 3 6.5	-54 52 41.4	10.02
36/5	10 4 38.3	-54 52 41.4	9.85
36/6	10 5 0.8	-54 52 41.4	10.65
37/1	10 0 36.1	-54 52 53.3	10.76
37/2	10 1 31.8	-54 52 53.3	9.48
37/3	10 1 40.7	-54 52 53.3	10.73
37/4	10 2 52.9	-54 52 53.3	10.30
37/5	10 3 52.1	-54 52 53.3	9.14
37/6	10 4 59.1	-54 52 53.3	SAT.
38/1	10 0 23.7	-54 53 5.3	9.50
38/2	10 2 7.3	-54 53 5.3	10.18
38/3	10 3 17.2	-54 53 5.3	8.71
38/4	10 4 4.6	-54 53 5.3	10.70
38/5	10 4 59.1	-54 53 5.3	8.77
39/1	10 0 39.1	-54 53 17.4	9.01
39/2	10 2 5.0	-54 53 17.4	10.48
39/3	10 3 47.7	-54 53 17.4	11.02
40/1	10 1 2.2	-54 53 29.3	10.36
40/2	10 1 18.8	-54 53 29.3	SAT.
40/3	10 3 2.4	-54 53 29.3	8.77
40/4	10 3 30.8	-54 53 29.3	11.02
40/5	10 4 3.4	-54 53 29.3	9.86

TABLE A19  
INFRARED SOURCES

Loc.	$l = 290 \quad b = 0$		$K$ (mag)
	$\alpha$ (1950) $\delta$		
	h m s	d m s	
1/1	11 2 27.4	-59 40 9.1	SAT.
1/2	11 2 39.9	-59 40 9.1	10.69
1/3	11 2 48.8	-59 40 9.1	10.83
1/4	11 3 8.3	-59 40 9.1	10.80
1/5	11 3 13.0	-59 40 9.1	9.32
1/6	11 3 19.5	-59 40 9.1	10.86
1/7	11 3 48.6	-59 40 9.1	9.57
1/8	11 4 0.4	-59 40 9.1	10.28
1/9	11 4 13.4	-59 40 9.1	10.02
1/10	11 5 29.2	-59 40 9.1	10.54

TABLE A19 (CONTINUED)

Loc.	$l = 290 \quad b = 0$		$K$ (mag)
	$\alpha$ (1950) $\delta$		
	h m s	d m s	
1/11	11 6 13.1	-59 40 9.1	8.89
1/12	11 6 32.6	-59 40 9.1	10.95
1/13	11 7 7.5	-59 40 9.1	SAT.
1/14	11 7 28.3	-59 40 9.1	11.05
1/15	11 7 33.0	-59 40 9.1	10.13
1/16	11 7 37.7	-59 40 9.1	9.99
1/17	11 7 47.2	-59 40 9.1	10.59
1/18	11 8 2.0	-59 40 9.1	10.36
1/19	11 8 9.1	-59 40 9.1	10.21
1/20	11 8 10.3	-59 40 9.1	10.28
2/1	11 4 5.7	-59 40 21.0	10.80
2/2	11 4 17.5	-59 40 21.0	9.17
2/3	11 7 35.3	-59 40 21.0	9.86
3/1	11 2 40.5	-59 40 33.1	11.05
3/2	11 2 48.8	-59 40 33.1	11.05
3/3	11 3 27.2	-59 40 33.1	SAT.
3/4	11 3 43.2	-59 40 33.1	11.02
3/5	11 3 56.9	-59 40 33.1	9.08
3/6	11 4 25.9	-59 40 33.1	10.69
3/7	11 4 27.1	-59 40 33.1	9.96
3/8	11 4 49.6	-59 40 33.1	10.44
3/9	11 5 15.6	-59 40 33.1	11.05
3/10	11 5 38.7	-59 40 33.1	10.74
3/11	11 5 45.2	-59 40 33.1	10.98
3/12	11 6 6.5	-59 40 33.1	11.05
3/13	11 6 26.7	-59 40 33.1	SAT.
3/14	11 6 51.6	-59 40 33.1	SAT.
3/15	11 7 9.3	-59 40 33.1	11.05
3/16	11 7 29.5	-59 40 33.1	11.05
3/17	11 7 52.6	-59 40 33.1	11.05
3/18	11 8 22.8	-59 40 33.1	11.02
4/1	11 3 18.4	-59 40 45.1	10.89
4/2	11 4 0.4	-59 40 45.1	SAT.
4/3	11 4 19.4	-59 40 45.1	SAT.
4/4	11 4 33.6	-59 40 45.1	10.61
4/5	11 6 10.1	-59 40 45.1	10.30
4/6	11 7 22.9	-59 40 45.1	11.05
5/1	11 2 31.6	-59 40 57.0	11.02
5/2	11 2 44.0	-59 40 57.0	10.34
5/3	11 3 51.5	-59 40 57.0	11.05
5/4	11 4 27.7	-59 40 57.0	11.05
5/5	11 4 44.8	-59 40 57.0	10.95
5/6	11 5 5.0	-59 40 57.0	10.28
5/7	11 7 39.5	-59 40 57.0	11.05
5/8	11 7 54.3	-59 40 57.0	SAT.
5/9	11 8 3.8	-59 40 57.0	11.05
6/1	11 3 1.2	-59 41 9.0	SAT.
6/2	11 5 0.8	-59 41 9.0	11.05
6/3	11 5 9.7	-59 41 9.0	11.02
6/4	11 6 5.4	-59 41 9.0	SAT.
6/5	11 6 11.3	-59 41 9.0	9.86
6/6	11 7 13.5	-59 41 9.0	10.74
7/1	11 2 35.7	-59 41 21.1	11.05
7/2	11 3 5.9	-59 41 21.1	8.99
7/3	11 3 45.0	-59 41 21.1	10.71
7/4	11 5 16.2	-59 41 21.1	11.02
7/5	11 6 32.6	-59 41 21.1	10.54
7/6	11 6 48.6	-59 41 21.1	9.99
7/7	11 7 25.0	-59 41 21.1	9.25
7/8	11 7 52.6	-59 41 21.1	10.30
8/1	11 2 32.2	-59 41 33.0	10.77
8/2	11 2 54.1	-59 41 33.0	9.76
8/3	11 3 41.5	-59 41 33.0	9.45
8/4	11 3 49.2	-59 41 33.0	9.34
8/5	11 5 27.5	-59 41 33.0	SAT.



TABLE A19 (CONTINUED)

Loc.	$l = 290 \quad b = 0$				$K$ (mag)
	$\alpha$ (1950) $\delta$				
	h m s	d m s			
30/6	11 8 18.0	-59 45 57.0			11.05
31/1	11 2 26.2	-59 46 9.1			9.42
31/2	11 2 38.7	-59 46 9.1			10.66
31/3	11 2 48.8	-59 46 9.1			10.89
31/4	11 3 7.1	-59 46 9.1			11.05
31/5	11 3 51.5	-59 46 9.1			10.36
31/6	11 3 57.4	-59 46 9.1			10.74
31/7	11 3 59.2	-59 46 9.1			10.61
31/8	11 5 4.4	-59 46 9.1			9.08
31/9	11 5 23.9	-59 46 9.1			10.98
31/10	11 5 35.2	-59 46 9.1			10.86
31/11	11 5 41.1	-59 46 9.1			9.20
31/12	11 6 42.1	-59 46 9.1			10.89
31/13	11 6 55.7	-59 46 9.1			9.89
31/14	11 7 9.9	-59 46 9.1			SAT.
31/15	11 7 17.6	-59 46 9.1			11.05
31/16	11 7 53.1	-59 46 9.1			10.20
31/17	11 8 2.0	-59 46 9.1			10.61
32/1	11 3 18.7	-59 46 21.0			10.66
32/2	11 3 31.4	-59 46 21.0			9.83
32/3	11 4 8.7	-59 46 21.0			11.05
32/4	11 4 25.3	-59 46 21.0			9.56
32/5	11 4 28.8	-59 46 21.0			10.98
32/6	11 4 51.3	-59 46 21.0			10.34
32/7	11 5 9.1	-59 46 21.0			SAT.
32/8	11 5 13.8	-59 46 21.0			SAT.
32/9	11 5 16.2	-59 46 21.0			10.34
32/10	11 5 59.4	-59 46 21.0			10.86
32/11	11 7 0.4	-59 46 21.0			9.04
32/12	11 7 4.6	-59 46 21.0			10.36
33/1	11 2 37.5	-59 46 33.0			10.74
33/2	11 2 47.0	-59 46 33.0			10.89
33/3	11 2 50.8	-59 46 33.0			8.79
33/4	11 3 5.9	-59 46 33.0			8.95
33/5	11 3 25.5	-59 46 33.0			10.30
33/6	11 3 28.4	-59 46 33.0			10.40
33/7	11 3 45.6	-59 46 33.0			9.40
33/8	11 4 3.1	-59 46 33.0			10.00
33/9	11 5 31.0	-59 46 33.0			10.80
33/10	11 7 49.6	-59 46 33.0			11.05

TABLE A20

## INFRARED SOURCES

Loc.	$l = 290 \quad b = +1$				$K$ (mag)
	$\alpha$ (1950) $\delta$				
	h m s	d m s			
1/1	11 6 16.5	-59 8 29.2			SAT.
1/2	11 6 19.5	-59 8 29.2			SAT.
1/3	11 6 57.1	-59 8 29.2			10.64
1/4	11 7 43.3	-59 8 29.2			10.81
1/5	11 10 9.2	-59 8 29.2			10.03
1/6	11 10 38.3	-59 8 29.2			10.14
1/7	11 11 29.2	-59 8 29.2			SAT.
2/1	11 6 42.6	-59 8 35.1			10.88
2/2	11 7 8.6	-59 8 35.1			8.84
2/3	11 7 44.2	-59 8 35.1			10.72

TABLE A20 (CONTINUED)

Loc.	$l = 290 \quad b = +1$				$K$ (mag)
	$\alpha$ (1950) $\delta$				
	h m s	d m s			
2/4	11 7 55.4	-59 8 35.1			10.95
2/5	11 9 3.5	-59 8 35.1			10.64
2/6	11 9 45.0	-59 8 35.1			9.66
2/7	11 9 46.7	-59 8 35.1			9.59
2/8	11 10 0.7	-59 8 35.1			8.78
2/9	11 10 41.2	-59 8 35.1			10.51
2/10	11 13 2.8	-59 8 35.1			SAT.
3/1	11 6 22.4	-59 8 47.2			10.14
3/2	11 6 45.5	-59 8 47.2			10.78
3/3	11 7 40.3	-59 8 47.2			8.96
3/4	11 8 36.9	-59 8 47.2			9.36
3/5	11 8 38.0	-59 8 47.2			9.27
3/6	11 8 56.4	-59 8 47.2			10.05
3/7	11 9 34.3	-59 8 47.2			10.75
3/8	11 9 35.5	-59 8 47.2			10.91
3/9	11 9 38.5	-59 8 47.2			10.95
3/10	11 10 31.8	-59 8 47.2			10.31
3/11	11 10 52.5	-59 8 47.2			10.56
3/12	11 11 54.1	-59 8 47.2			10.95
3/13	11 12 28.4	-59 8 47.2			10.03
3/14	11 13 1.0	-59 8 47.2			8.74
3/15	11 13 8.1	-59 8 47.2			9.37
4/1	11 7 1.5	-59 8 59.2			10.95
4/2	11 8 2.5	-59 8 59.2			10.95
4/3	11 8 10.2	-59 8 59.2			10.95
4/4	11 9 58.6	-59 8 59.2			10.95
4/5	11 10 24.6	-59 8 59.2			9.37
4/6	11 11 35.7	-59 8 59.2			10.51
4/7	11 13 11.1	-59 8 59.2			10.78
6/1	11 6 23.6	-59 9 23.2			SAT.
6/2	11 6 54.4	-59 9 23.2			10.88
6/3	11 7 39.4	-59 9 23.2			10.33
6/4	11 8 18.8	-59 9 23.2			10.40
6/5	11 8 20.3	-59 9 23.2			10.37
6/6	11 8 46.9	-59 9 23.2			8.97
6/7	11 9 7.7	-59 9 23.2			9.75
6/8	11 9 36.7	-59 9 23.2			10.81
6/9	11 10 8.7	-59 9 23.2			10.22
6/10	11 11 17.9	-59 9 23.2			10.95
6/11	11 11 49.9	-59 9 23.2			9.20
6/12	11 12 23.7	-59 9 23.2			9.91
6/13	11 13 6.3	-59 9 23.2			10.88
7/1	11 6 20.4	-59 9 35.2			10.95
7/2	11 6 28.4	-59 9 35.2			10.40
7/3	11 6 59.7	-59 9 35.2			10.95
7/4	11 7 11.6	-59 9 35.2			10.58
7/5	11 7 45.6	-59 9 35.2			10.78
7/6	11 8 27.4	-59 9 35.2			10.95
7/7	11 8 43.4	-59 9 35.2			SAT.
7/8	11 8 57.0	-59 9 35.2			10.69
7/9	11 9 55.6	-59 9 35.2			10.91
7/10	11 10 1.0	-59 9 35.2			10.03
7/11	11 10 2.7	-59 9 35.2			10.13
7/12	11 10 19.3	-59 9 35.2			9.77
7/13	11 10 45.4	-59 9 35.2			10.72
7/14	11 11 16.2	-59 9 35.2			10.91
7/15	11 12 24.9	-59 9 35.2			9.28
7/16	11 12 59.8	-59 9 35.2			10.27
8/1	11 9 39.6	-59 9 47.1			9.38
8/2	11 11 43.4	-59 9 47.1			10.75
9/1	11 7 11.6	-59 9 59.2			SAT.
9/2	11 8 3.7	-59 9 59.2			10.23
9/3	11 9 15.4	-59 9 59.2			10.64
9/4	11 9 54.4	-59 9 59.2			10.88
9/5	11 10 30.6	-59 9 59.2			10.95

TABLE A20 (CONTINUED)

Loc.	$l = 290 \quad b = +1$				$K$ (mag)
	$\alpha$ (1950) $\delta$				
	h m s	d m s			
9/6	11 10 43.6	-59 9 59.2			9.75
9/7	11 10 50.1	-59 9 59.2			SAT.
9/8	11 10 51.3	-59 9 59.2			SAT.
9/9	11 10 55.4	-59 9 59.2			10.13
9/10	11 11 33.9	-59 9 59.2			10.40
9/11	11 11 35.7	-59 9 59.2			9.90
9/12	11 12 5.3	-59 9 59.2			9.20
9/13	11 13 11.1	-59 9 59.2			10.69
10/1	11 7 14.0	-59 10 11.2			SAT.
10/2	11 7 26.4	-59 10 11.2			SAT.
10/3	11 8 13.2	-59 10 11.2			10.01
10/4	11 10 50.1	-59 10 11.2			8.81
10/5	11 10 54.3	-59 10 11.2			SAT.
10/6	11 11 38.7	-59 10 11.2			10.51
11/1	11 6 18.3	-59 10 23.1			10.91
11/2	11 11 32.7	-59 10 23.1			8.94
11/3	11 11 60.0	-59 10 23.1			10.20
11/4	11 12 38.5	-59 10 23.1			10.95
12/1	11 6 34.9	-59 10 35.2			10.06
12/2	11 6 58.0	-59 10 35.2			10.67
12/3	11 9 44.4	-59 10 35.2			9.87
13/1	11 7 2.7	-59 10 47.2			10.58
13/2	11 7 43.6	-59 10 47.2			10.35
13/3	11 9 50.9	-59 10 47.2			9.82
13/4	11 9 56.8	-59 10 47.2			9.77
13/5	11 10 40.6	-59 10 47.2			10.95
13/6	11 10 57.8	-59 10 47.2			10.67
13/7	11 11 12.6	-59 10 47.2			10.44
13/8	11 11 39.9	-59 10 47.2			10.95
13/9	11 12 37.3	-59 10 47.2			10.88
13/10	11 12 45.0	-59 10 47.2			10.95
14/1	11 6 34.9	-59 10 59.1			10.85
14/2	11 6 41.4	-59 10 59.1			10.64
14/3	11 6 58.6	-59 10 59.1			10.95
14/4	11 8 51.1	-59 10 59.1			SAT.
14/5	11 9 40.8	-59 10 59.1			10.23
14/6	11 10 0.1	-59 10 59.1			9.72
14/7	11 10 43.6	-59 10 59.1			10.88
14/8	11 10 56.0	-59 10 59.1			10.51
14/9	11 11 21.5	-59 10 59.1			8.98
14/10	11 11 48.1	-59 10 59.1			10.91
14/11	11 11 60.0	-59 10 59.1			10.95
14/12	11 12 4.1	-59 10 59.1			10.95
14/13	11 12 46.8	-59 10 59.1			9.00
15/1	11 7 57.2	-59 11 11.1			10.58
15/2	11 8 3.7	-59 11 11.1			SAT.
15/3	11 8 12.0	-59 11 11.1			9.89
15/4	11 9 43.8	-59 11 11.1			10.72
15/5	11 9 47.9	-59 11 11.1			10.13
15/6	11 10 26.4	-59 11 11.1			9.33
15/7	11 10 30.6	-59 11 11.1			9.18
15/8	11 11 13.2	-59 11 11.1			9.82
15/9	11 11 19.7	-59 11 11.1			10.29
16/1	11 6 18.3	-59 11 23.2			9.51
16/2	11 7 39.4	-59 11 23.2			9.04
16/3	11 7 52.4	-59 11 23.2			10.56
16/4	11 8 0.1	-59 11 23.2			9.44
16/5	11 8 48.1	-59 11 23.2			9.68
16/6	11 8 60.0	-59 11 23.2			10.69
16/7	11 9 4.1	-59 11 23.2			10.95
16/8	11 9 20.4	-59 11 23.2			10.37
16/9	11 9 21.3	-59 11 23.2			10.29
16/10	11 10 48.9	-59 11 23.2			10.42
16/11	11 13 8.1	-59 11 23.2			SAT.
17/1	11 7 17.5	-59 11 35.1			10.40

TABLE A20 (CONTINUED)

Loc.	$l = 290 \quad b = +1$			$K$ (mag)
	$\alpha$ (1950) $\delta$			
	h m s	d m s		
17/2	11 7 41.8	-59 11 35.1	10.91	
17/3	11 7 57.8	-59 11 35.1	10.23	
17/4	11 8 1.9	-59 11 35.1	9.29	
17/5	11 8 7.3	-59 11 35.1	SAT.	
17/6	11 8 49.3	-59 11 35.1	9.97	
17/7	11 8 54.0	-59 11 35.1	9.00	
17/8	11 11 48.7	-59 11 35.1	10.64	
17/9	11 12 9.5	-59 11 35.1	10.75	
17/10	11 12 17.8	-59 11 35.1	10.88	
17/11	11 12 58.6	-59 11 35.1	10.56	
17/12	11 12 59.8	-59 11 35.1	10.49	
18/1	11 8 30.9	-59 11 47.2	10.78	
18/2	11 9 50.9	-59 11 47.2	10.40	
18/3	11 11 2.0	-59 11 47.2	10.20	
18/4	11 11 23.3	-59 11 47.2	10.99	
18/5	11 11 33.3	-59 11 47.2	10.64	
18/6	11 12 23.1	-59 11 47.2	10.09	
18/7	11 12 38.5	-59 11 47.2	10.37	
18/8	11 12 56.2	-59 11 47.2	10.40	
18/9	11 13 15.8	-59 11 47.2	10.64	
19/1	11 7 4.5	-59 11 59.2	10.95	
19/2	11 7 19.3	-59 11 59.2	9.41	
19/3	11 7 35.3	-59 11 59.2	SAT.	
19/4	11 8 28.6	-59 11 59.2	10.37	
19/5	11 8 43.4	-59 11 59.2	10.58	
19/6	11 9 13.0	-59 11 59.2	10.85	
19/7	11 11 12.6	-59 11 59.2	10.20	
19/8	11 11 15.6	-59 11 59.2	10.69	
19/9	11 11 20.3	-59 11 59.2	10.06	
19/10	11 11 38.7	-59 11 59.2	8.67	
19/11	11 12 22.5	-59 11 59.2	10.88	
20/1	11 6 20.1	-59 12 11.1	10.81	
20/2	11 6 50.3	-59 12 11.1	10.35	
20/3	11 8 3.1	-59 12 11.1	10.95	
20/4	11 8 13.8	-59 12 11.1	10.95	
20/5	11 8 25.0	-59 12 11.1	10.95	
20/6	11 8 28.6	-59 12 11.1	10.06	
20/7	11 8 52.3	-59 12 11.1	10.53	
20/8	11 9 15.7	-59 12 11.1	10.95	
20/9	11 9 21.9	-59 12 11.1	SAT.	
20/10	11 9 58.0	-59 12 11.1	10.91	
20/11	11 10 11.6	-59 12 11.1	10.11	
20/12	11 10 41.8	-59 12 11.1	9.63	
20/13	11 10 48.9	-59 12 11.1	9.69	
20/14	11 11 17.9	-59 12 11.1	10.37	
20/15	11 11 19.7	-59 12 11.1	10.81	
20/16	11 11 44.0	-59 12 11.1	10.05	
20/17	11 11 57.6	-59 12 11.1	8.89	
20/18	11 12 29.6	-59 12 11.1	10.35	
21/1	11 7 41.2	-59 12 23.1	10.51	
21/2	11 8 33.3	-59 12 23.1	10.88	
21/3	11 8 39.2	-59 12 23.1	9.37	
21/4	11 8 48.7	-59 12 23.1	9.89	
21/5	11 9 17.7	-59 12 23.1	10.95	
21/6	11 9 49.1	-59 12 23.1	10.29	
22/1	11 6 27.2	-59 12 35.2	9.94	
22/2	11 6 44.3	-59 12 35.2	SAT.	
22/3	11 7 39.4	-59 12 35.2	10.61	
22/4	11 11 23.9	-59 12 35.2	10.56	
22/5	11 11 45.8	-59 12 35.2	10.42	
22/6	11 12 25.5	-59 12 35.2	9.90	
22/7	11 12 54.5	-59 12 35.2	10.95	
22/8	11 13 17.6	-59 12 35.2	10.51	
23/1	11 7 18.7	-59 12 47.1	10.88	
23/2	11 7 38.2	-59 12 47.1	10.88	

TABLE A20 (CONTINUED)

Loc.	$l = 290 \quad b = +1$			$K$ (mag)
	$\alpha$ (1950) $\delta$			
	h m s	d m s		
23/3	11 8 0.1	-59 12 47.1	SAT.	
23/4	11 8 35.1	-59 12 47.1	9.89	
23/5	11 9 2.9	-59 12 47.1	10.72	
23/6	11 9 15.9	-59 12 47.1	10.95	
23/7	11 11 49.3	-59 12 47.1	9.85	
24/1	11 6 47.3	-59 12 59.2	9.63	
24/2	11 7 28.8	-59 12 59.2	9.82	
24/3	11 8 8.4	-59 12 59.2	SAT.	
24/4	11 10 5.1	-59 12 59.2	10.91	
24/5	11 11 9.1	-59 12 59.2	10.35	
24/6	11 11 18.5	-59 12 59.2	8.74	
25/1	11 6 34.3	-59 13 11.2	10.95	
25/2	11 6 53.2	-59 13 11.2	9.83	
25/3	11 7 30.5	-59 13 11.2	9.94	
25/4	11 8 36.9	-59 13 11.2	10.44	
25/5	11 8 41.0	-59 13 11.2	10.42	
25/6	11 8 57.0	-59 13 11.2	10.67	
25/7	11 9 31.3	-59 13 11.2	9.37	
25/8	11 9 59.2	-59 13 11.2	10.20	
25/9	11 10 1.0	-59 13 11.2	10.06	
25/10	11 10 3.3	-59 13 11.2	SAT.	
25/11	11 11 20.3	-59 13 11.2	10.25	
25/12	11 11 23.3	-59 13 11.2	9.89	
25/13	11 11 43.4	-59 13 11.2	10.75	
25/14	11 12 34.3	-59 13 11.2	10.78	
25/15	11 12 43.8	-59 13 11.2	10.95	
25/16	11 12 47.4	-59 13 11.2	SAT.	
25/17	11 12 51.5	-59 13 11.2	SAT.	
25/18	11 13 9.9	-59 13 11.2	10.64	
26/1	11 6 32.5	-59 13 23.1	10.14	
26/2	11 7 47.1	-59 13 23.1	10.91	
26/3	11 7 55.4	-59 13 23.1	10.72	
26/4	11 8 42.8	-59 13 23.1	10.88	
26/5	11 9 37.3	-59 13 23.1	10.03	
26/6	11 9 41.1	-59 13 23.1	10.95	
26/7	11 10 43.6	-59 13 23.1	10.61	
26/8	11 10 56.0	-59 13 23.1	SAT.	
26/9	11 12 11.8	-59 13 23.1	9.65	
26/10	11 12 19.5	-59 13 23.1	SAT.	
27/1	11 6 21.8	-59 13 35.1	10.95	
27/2	11 6 35.5	-59 13 35.1	9.76	
27/3	11 7 2.7	-59 13 35.1	9.93	
27/4	11 7 41.2	-59 13 35.1	SAT.	
27/5	11 7 52.4	-59 13 35.1	10.95	
27/6	11 8 36.3	-59 13 35.1	10.22	
27/7	11 10 32.3	-59 13 35.1	10.69	
27/8	11 10 54.3	-59 13 35.1	SAT.	
27/9	11 10 59.6	-59 13 35.1	SAT.	
27/10	11 12 9.5	-59 13 35.1	SAT.	
27/11	11 12 21.3	-59 13 35.1	10.51	
27/12	11 13 11.6	-59 13 35.1	10.78	
28/1	11 6 40.2	-59 13 47.2	9.07	
28/2	11 10 19.9	-59 13 47.2	10.14	
28/3	11 10 43.6	-59 13 47.2	10.22	
28/4	11 12 8.3	-59 13 47.2	10.95	
29/1	11 8 5.5	-59 13 59.1	9.58	
29/2	11 8 31.5	-59 13 59.1	10.78	
29/3	11 9 30.2	-59 13 59.1	10.58	
29/4	11 10 21.1	-59 13 59.1	10.16	
29/5	11 10 44.8	-59 13 59.1	10.78	
29/6	11 11 44.6	-59 13 59.1	SAT.	
29/7	11 13 2.2	-59 13 59.1	10.78	
29/8	11 13 4.5	-59 13 59.1	10.64	

TABLE A21  
INFRARED SOURCES

Loc.	$l = 300 \quad b = 0$			$K$ (mag)
	$\alpha$ (1950) $\delta$			
	h m s	d m s		
1/1	12 23 55.4	-62 27 27.1	8.86	
1/2	12 24 5.5	-62 27 27.1	10.97	
1/3	12 24 16.7	-62 27 27.1	10.71	
1/4	12 24 20.3	-62 27 27.1	9.90	
1/5	12 24 43.4	-62 27 27.1	SAT.	
1/6	12 25 5.9	-62 27 27.1	SAT.	
1/7	12 25 30.8	-62 27 27.1	10.05	
1/8	12 25 42.0	-62 27 27.1	10.97	
1/9	12 25 57.4	-62 27 27.1	10.31	
1/10	12 27 18.0	-62 27 27.1	10.60	
1/11	12 28 8.3	-62 27 27.1	SAT.	
2/1	12 24 49.3	-62 27 39.1	10.42	
2/2	12 25 9.5	-62 27 39.1	8.97	
2/3	12 25 16.6	-62 27 39.1	10.90	
2/4	12 25 24.9	-62 27 39.1	SAT.	
2/5	12 26 34.7	-62 27 39.1	10.93	
2/6	12 27 35.1	-62 27 39.1	9.45	
2/7	12 27 45.2	-62 27 39.1	9.39	
2/8	12 27 51.1	-62 27 39.1	10.80	
2/9	12 28 26.1	-62 27 39.1	10.66	
3/1	12 25 15.4	-62 27 51.0	10.68	
3/2	12 25 39.7	-62 27 51.0	10.55	
3/3	12 25 48.5	-62 27 51.0	9.64	
3/4	12 25 52.1	-62 27 51.0	10.55	
3/5	12 26 8.1	-62 27 51.0	8.85	
3/6	12 26 34.1	-62 27 51.0	10.66	
3/7	12 27 9.1	-62 27 51.0	10.97	
3/8	12 27 10.3	-62 27 51.0	10.66	
3/9	12 27 17.4	-62 27 51.0	9.90	
3/10	12 27 47.0	-62 27 51.0	10.87	
3/11	12 27 52.3	-62 27 51.0	10.87	
3/12	12 28 19.0	-62 27 51.0	10.66	
4/1	12 24 9.3	-62 28 3.0	9.78	
4/2	12 24 13.8	-62 28 3.0	10.97	
4/3	12 24 41.0	-62 28 3.0	9.88	
4/4	12 25 2.3	-62 28 3.0	10.10	
4/5	12 25 13.6	-62 28 3.0	10.22	
4/6	12 25 27.2	-62 28 3.0	10.33	
4/7	12 27 12.3	-62 28 3.0	10.31	
4/8	12 28 7.1	-62 28 3.0	10.97	
5/1	12 24 41.0	-62 28 15.1	9.70	
5/2	12 25 34.9	-62 28 15.1	10.93	
5/3	12 26 48.4	-62 28 15.1	10.55	
5/4	12 28 37.3	-62 28 15.1	10.22	
6/1	12 23 59.6	-62 28 27.0	10.97	
6/2	12 25 24.3	-62 28 27.0	10.07	
6/3	12 27 14.4	-62 28 27.0	9.78	
6/4	12 27 31.0	-62 28 27.0	10.25	
6/5	12 27 37.5	-62 28 27.0	10.87	
6/6	12 28 11.3	-62 28 27.0	SAT.	
7/1	12 24 42.8	-62 28 39.1	10.51	
7/2	12 24 57.0	-62 28 39.1	10.80	
7/3	12 25 36.4	-62 28 39.1	10.02	
7/4	12 25 56.8	-62 28 39.1	10.71	
7/5	12 26 24.7	-62 28 39.1	10.68	
7/6	12 26 35.9	-62 28 39.1	SAT.	
7/7	12 26 54.3	-62 28 39.1	SAT.	
7/8	12 27 3.2	-62 28 39.1	SAT.	
7/9	12 27 6.1	-62 28 39.1	10.08	
7/10	12 27 57.0	-62 28 39.1	10.80	
7/11	12 28 1.8	-62 28 39.1	10.15	
7/12	12 28 21.3	-62 28 39.1	SAT.	
8/1	12 24 32.1	-62 28 51.1	SAT.	
8/2	12 24 45.8	-62 28 51.1	10.24	
8/3	12 25 29.6	-62 28 51.1	9.34	





TABLE A21 (CONTINUED)

Loc.	$l = 300 \quad b = 0$			K (mag)
	$\alpha$ (1950) $\delta$			
	h m s	d m s		
27/6	12 26 18.2	-62 32 39.0	9.47	
27/7	12 26 32.4	-62 32 39.0	10.66	
27/8	12 26 53.7	-62 32 39.0	10.22	
27/9	12 27 25.1	-62 32 39.0	10.97	
27/10	12 27 53.5	-62 32 39.0	SAT.	
27/11	12 28 30.2	-62 32 39.0	9.66	
28/1	12 24 18.5	-62 32 51.0	10.97	
28/2	12 24 23.9	-62 32 51.0	10.83	
28/3	12 25 45.6	-62 32 51.0	10.71	
28/4	12 25 47.9	-62 32 51.0	10.97	
28/5	12 26 45.7	-62 32 51.0	9.04	
28/6	12 27 32.8	-62 32 51.0	9.67	
28/7	12 28 7.7	-62 32 51.0	10.97	
28/8	12 28 19.6	-62 32 51.0	SAT.	

TABLE A22 (CONTINUED)

Loc.	$l = 310 \quad b = 0$			K (mag)
	$\alpha$ (1950) $\delta$			
	h m s	d m s		
5/6	13 50 16.3	-61 35 55.1	9.14	
5/7	13 50 29.9	-61 35 55.1	SAT.	
5/8	13 51 0.7	-61 35 55.1	SAT.	
5/9	13 51 4.3	-61 35 55.1	8.89	
5/10	13 52 24.8	-61 35 55.1	9.89	
5/11	13 54 13.2	-61 35 55.1	10.30	
5/12	13 54 58.8	-61 35 55.1	10.77	
5/13	13 55 23.7	-61 35 55.1	10.58	
6/1	13 49 59.7	-61 35 49.2	10.39	
6/2	13 51 13.2	-61 35 49.2	9.64	
6/3	13 52 51.5	-61 35 49.2	10.81	
6/4	13 53 27.0	-61 35 49.2	9.49	
6/5	13 55 17.2	-61 35 49.2	10.17	
6/6	13 55 51.5	-61 35 49.2	10.77	
7/1	13 50 34.1	-61 35 43.2	9.52	

TABLE A22 (CONTINUED)

Loc.	$l = 310 \quad b = 0$			K (mag)
	$\alpha$ (1950) $\delta$			
	h m s	d m s		
13/5	13 52 1.7	-61 35 7.2	9.00	
14/1	13 50 36.5	-61 35 1.1	SAT.	
14/2	13 51 7.8	-61 35 1.1	SAT.	
14/3	13 51 11.4	-61 35 1.1	10.74	
14/4	13 51 38.6	-61 35 1.1	10.81	
14/5	13 52 46.1	-61 35 1.1	10.81	
14/6	13 52 54.4	-61 35 1.1	SAT.	
14/7	13 53 27.0	-61 35 1.1	10.25	
14/8	13 54 0.8	-61 35 1.1	9.95	
14/9	13 54 57.0	-61 35 1.1	9.89	
15/1	13 50 6.8	-61 34 55.2	*.50	
15/2	13 50 43.6	-61 34 55.2	SAT.	
15/3	13 53 1.5	-61 34 55.2	10.34	
16/1	13 49 25.4	-61 34 49.2	10.67	
16/2	13 50 41.8	-61 34 49.2	10.49	

TABLE A22  
INFRARED SOURCES

Loc.	$l = 310 \quad b = 0$			K (mag)
	$\alpha$ (1950) $\delta$			
	h m s	d m s		
1/1	13 49 7.4	-61 36 19.2	8.56	
1/2	13 49 32.0	-61 36 19.2	SAT.	
1/3	13 50 4.8	-61 36 19.2	10.77	
1/4	13 51 10.3	-61 36 19.2	10.37	
1/5	13 52 51.5	-61 36 19.2	9.92	
1/6	13 52 59.2	-61 36 19.2	9.90	
1/7	13 53 31.2	-61 36 19.2	SAT.	
1/8	13 54 55.9	-61 36 19.2	10.00	
1/9	13 55 22.0	-61 36 19.2	10.11	
1/10	13 55 42.1	-61 36 19.2	10.34	
1/11	13 55 45.1	-61 36 19.2	9.93	
2/1	13 49 52.0	-61 36 13.1	10.67	
2/2	13 49 58.3	-61 36 13.1	10.77	
2/3	13 52 21.9	-61 36 13.1	10.07	
2/4	13 52 38.4	-61 36 13.1	SAT.	
2/5	13 52 46.1	-61 36 13.1	9.89	
2/6	13 52 50.3	-61 36 13.1	10.44	
2/7	13 53 33.2	-61 36 13.1	SAT.	
3/1	13 49 27.8	-61 36 7.2	9.97	
3/2	13 49 37.8	-61 36 7.2	10.32	
3/3	13 49 51.2	-61 36 7.2	10.30	
3/4	13 50 36.2	-61 36 7.2	10.70	
3/5	13 51 32.1	-61 36 7.2	10.81	
3/6	13 51 57.0	-61 36 7.2	10.25	
3/7	13 52 15.9	-61 36 7.2	10.37	
3/8	13 52 23.1	-61 36 7.2	10.25	
3/9	13 52 43.8	-61 36 7.2	10.32	
3/10	13 53 56.0	-61 36 7.2	10.42	
3/11	13 55 22.5	-61 36 7.2	10.27	
4/1	13 49 21.5	-61 36 1.2	9.64	
4/2	13 51 14.9	-61 36 1.2	9.45	
4/3	13 53 6.3	-61 36 1.2	10.21	
4/4	13 53 41.2	-61 36 1.2	10.81	
4/5	13 54 22.4	-61 36 1.2	9.52	
4/6	13 54 24.5	-61 36 1.2	9.74	
5/1	13 49 5.8	-61 35 55.1	10.55	
5/2	13 49 21.8	-61 35 55.1	9.40	
5/3	13 49 26.6	-61 35 55.1	9.31	
5/4	13 49 54.4	-61 35 55.1	10.25	
5/5	13 50 14.0	-61 35 55.1	9.83	

7/2	13 50 40.6	-61 35 43.2	10.81
7/3	13 51 32.1	-61 35 43.2	9.42
7/4	13 51 35.1	-61 35 43.2	9.77
7/5	13 52 39.0	-61 35 43.2	9.12
7/6	13 52 52.7	-61 35 43.2	10.64
7/7	13 55 4.7	-61 35 43.2	9.14
7/8	13 55 38.5	-61 35 43.2	9.64
8/1	13 49 11.2	-61 35 37.1	9.86
8/2	13 50 29.9	-61 35 37.1	10.81
8/3	13 51 5.2	-61 35 37.1	10.81
8/4	13 51 51.1	-61 35 37.1	10.81
8/5	13 51 58.8	-61 35 37.1	9.00
8/6	13 52 36.7	-61 35 37.1	SAT.
8/7	13 53 8.7	-61 35 37.1	SAT.
8/8	13 55 27.5	-61 35 37.1	10.77
9/1	13 49 40.2	-61 35 31.2	10.13
9/2	13 50 38.8	-61 35 31.2	SAT.
9/3	13 52 16.5	-61 35 31.2	SAT.
9/4	13 53 5.1	-61 35 31.2	10.77
9/5	13 53 50.1	-61 35 31.2	10.04
9/6	13 55 49.1	-61 35 31.2	SAT.
10/1	13 50 2.7	-61 35 25.2	SAT.
10/2	13 51 47.5	-61 35 25.2	9.89
10/3	13 51 54.0	-61 35 25.2	10.81
10/4	13 52 38.4	-61 35 25.2	9.03
10/5	13 53 33.5	-61 35 25.2	SAT.
10/6	13 54 26.8	-61 35 25.2	10.49
10/7	13 54 57.0	-61 35 25.2	9.35
10/8	13 55 36.7	-61 35 25.2	10.77
10/9	13 55 58.6	-61 35 25.2	SAT.
11/1	13 49 45.5	-61 35 19.1	10.81
11/2	13 50 28.8	-61 35 19.1	SAT.
11/3	13 50 42.4	-61 35 19.1	9.84
11/4	13 50 45.3	-61 35 19.1	10.47
11/5	13 51 57.6	-61 35 19.1	9.29
11/6	13 53 26.1	-61 35 19.1	9.51
11/7	13 54 2.5	-61 35 19.1	10.23
11/8	13 54 11.4	-61 35 19.1	10.81
11/9	13 54 41.0	-61 35 19.1	8.69
11/10	13 54 55.2	-61 35 19.1	9.74
12/1	13 50 8.6	-61 35 13.2	10.64
12/2	13 50 26.4	-61 35 13.2	10.09
12/3	13 52 56.8	-61 35 13.2	8.85
12/4	13 53 10.4	-61 35 13.2	SAT.
12/5	13 54 52.3	-61 35 13.2	SAT.
12/6	13 55 50.3	-61 35 13.2	9.40
13/1	13 49 14.7	-61 35 7.2	10.47
13/2	13 49 37.8	-61 35 7.2	9.61
13/3	13 50 22.8	-61 35 7.2	10.25
13/4	13 50 42.1	-61 35 7.2	10.49

16/3	13 51 6.7	-61 34 49.2	10.44
16/4	13 52 22.8	-61 34 49.2	SAT.
16/5	13 52 36.7	-61 34 49.2	10.77
16/6	13 53 8.1	-61 34 49.2	10.19
16/7	13 54 14.4	-61 34 49.2	SAT.
16/8	13 54 38.4	-61 34 49.2	10.05
16/9	13 55 24.9	-61 34 49.2	10.37
17/1	13 48 58.4	-61 34 43.1	SAT.
17/2	13 49 34.9	-61 34 43.1	10.47
17/3	13 49 43.7	-61 34 43.1	10.81
17/4	13 50 33.5	-61 34 43.1	9.17
17/5	13 50 54.8	-61 34 43.1	10.30
17/6	13 51 23.8	-61 34 43.1	SAT.
17/7	13 53 27.6	-61 34 43.1	10.64
17/8	13 53 54.8	-61 34 43.1	SAT.
17/9	13 54 39.3	-61 34 43.1	9.32
17/10	13 54 47.0	-61 34 43.1	10.81
17/11	13 54 49.0	-61 34 43.1	10.05
17/12	13 55 43.2	-61 34 43.1	10.44
18/1	13 49 17.7	-61 34 37.2	10.11
18/2	13 49 20.4	-61 34 37.2	10.13
18/3	13 53 17.5	-61 34 37.2	8.86
18/4	13 53 26.4	-61 34 37.2	9.89
18/5	13 53 40.6	-61 34 37.2	10.11
18/6	13 54 4.3	-61 34 37.2	SAT.
18/7	13 54 12.0	-61 34 37.2	9.74
18/8	13 54 33.3	-61 34 37.2	9.05
18/9	13 54 58.8	-61 34 37.2	10.42
18/10	13 55 39.1	-61 34 37.2	10.05
18/11	13 55 53.0	-61 34 37.2	10.81
19/1	13 51 25.9	-61 34 31.2	10.61
19/2	13 52 32.5	-61 34 31.2	10.21
19/3	13 52 58.0	-61 34 31.2	10.81
19/4	13 53 50.1	-61 34 31.2	10.81
19/5	13 54 0.2	-61 34 31.2	SAT.
19/6	13 54 53.5	-61 34 31.2	SAT.
19/7	13 55 30.2	-61 34 31.2	9.39
20/1	13 48 57.6	-61 34 25.1	SAT.
20/2	13 49 40.8	-61 34 25.1	9.81
20/3	13 50 10.4	-61 34 25.1	10.77
20/4	13 50 25.8	-61 34 25.1	10.70
20/5	13 50 34.1	-61 34 25.1	10.27
20/6	13 51 26.8	-61 34 25.1	10.34
20/7	13 51 33.9	-61 34 25.1	10.32
20/8	13 51 55.2	-61 34 25.1	10.74
20/9	13 52 46.7	-61 34 25.1	9.71
20/10	13 53 16.4	-61 34 25.1	SAT.
20/11	13 53 21.7	-61 34 25.1	10.25
20/12	13 54 3.7	-61 34 25.1	9.63
20/13	13 54 49.9	-61 34 25.1	SAT.

TABLE A22 (CONTINUED)

Loc.	$l = 310 \quad b = 0$			
	$\alpha (1950) \delta$		$K$ (mag)	
	h m s	d m s		
20/14	13 55 5.9	-61 34 25.1	10.81	
20/15	13 55 43.2	-61 34 25.1	10.49	
20/16	13 55 50.0	-61 34 25.1	10.49	
21/1	13 51 38.0	-61 34 19.2	9.54	
21/2	13 53 18.1	-61 34 19.2	9.98	
21/3	13 53 55.4	-61 34 19.2	10.81	
21/4	13 55 21.3	-61 34 19.2	SAT.	
22/1	13 49 28.4	-61 34 13.2	10.52	
22/2	13 49 46.7	-61 34 13.2	10.77	
22/3	13 50 48.9	-61 34 13.2	9.77	
22/4	13 51 30.9	-61 34 13.2	10.44	
22/5	13 51 40.4	-61 34 13.2	10.19	
22/6	13 53 13.4	-61 34 13.2	9.92	
22/7	13 53 46.0	-61 34 13.2	10.77	
22/8	13 54 4.9	-61 34 13.2	10.81	
22/9	13 54 23.9	-61 34 13.2	10.04	
22/10	13 54 31.6	-61 34 13.2	9.90	
22/11	13 54 53.5	-61 34 13.2	9.13	
22/12	13 54 57.0	-61 34 13.2	8.99	
23/1	13 49 21'2	-61 34 7.1	9.27	
23/2	13 49 38.4	-61 34 7.1	SAT.	
23/3	13 50 6.3	-61 34 7.1	9.74	
23/4	13 50 56.6	-61 34 7.1	10.77	
23/5	13 51 52.8	-61 34 7.1	SAT.	
23/6	13 51 55.2	-61 34 7.1	10.23	
23/7	13 52 49.7	-61 34 7.1	10.39	
23/8	13 53 11.6	-61 34 7.1	SAT.	
23/9	13 53 57.2	-61 34 7.1	10.25	
24/1	13 49 5.3	-61 34 1.2	10.02	
24/2	13 49 8.8	-61 34 1.2	8.56	
24/3	13 49 32.5	-61 34 1.2	10.81	
24/4	13 50 59.0	-61 34 1.2	8.87	
24/5	13 51 48.1	-61 34 1.2	10.77	
24/6	13 53 54.5	-61 34 1.2	10.81	
25/1	13 49 21.2	-61 33 55.3	10.81	
25/2	13 49 59.1	-61 33 55.3	10.42	
25/3	13 50 12.8	-61 33 55.3	9.35	
25/4	13 51 1.3	-61 33 55.3	10.49	
25/5	13 52 5.9	-61 33 55.3	10.30	
25/6	13 52 18.9	-61 33 55.3	9.73	
25/7	13 52 27.8	-61 33 55.3	10.61	
25/8	13 53 16.9	-61 33 55.3	9.24	
25/9	13 53 51.3	-61 33 55.3	9.19	
25/10	13 54 17.4	-61 33 55.3	9.83	
25/11	13 54 54.1	-61 33 55.3	9.00	
25/12	13 55 24.9	-61 33 55.3	10.74	
26/1	13 49 47.9	-61 33 49.2	10.11	
26/2	13 50 22.2	-61 33 49.2	10.49	
26/3	13 50 25.2	-61 33 49.2	10.21	
26/4	13 50 43.9	-61 33 49.2	10.81	
26/5	13 51 30.3	-61 33 49.2	10.25	
26/6	13 51 60.0	-61 33 49.2	10.17	
26/7	13 52 26.0	-61 33 49.2	9.21	
26/8	13 52 50.3	-61 33 49.2	10.49	
26/9	13 54 39.9	-61 33 49.2	SAT.	
26/10	13 54 44.0	-61 33 49.2	10.05	
26/11	13 54 51.7	-61 33 49.2	10.25	
27/1	13 48 59.9	-61 33 43.2	10.32	
27/2	13 49 41.4	-61 33 43.2	10.30	
27/3	13 50 0.9	-61 33 43.2	10.02	
27/4	13 51 11.4	-61 33 43.2	SAT.	
27/5	13 51 39.2	-61 33 43.2	10.55	
27/6	13 52 22.5	-61 33 43.2	10.81	
27/7	13 53 39.7	-61 33 43.2	10.55	
27/8	13 53 43.6	-61 33 43.2	10.55	

TABLE A22 (CONTINUED)

Loc.	$l = 310 \quad b = 0$			
	$\alpha (1950) \delta$		$K$ (mag)	
	h m s	d m s		
27/9	13 54 15.0	-61 33 43.2	8.85	
27/10	13 54 19.1	-61 33 43.2	10.81	
27/11	13 54 23.3	-61 33 43.2	10.17	
27/12	13 55 3.5	-61 33 43.2	10.25	
27/13	13 55 55.7	-61 33 43.2	9.29	
28/1	13 49 28.4	-61 33 37.2	10.70	
28/2	13 51 6.7	-61 33 37.2	10.81	
28/3	13 51 24.4	-61 33 37.2	10.81	
28/4	13 51 44.0	-61 33 37.2	8.81	
28/5	13 52 5.3	-61 33 37.2	SAT.	
28/6	13 53 1.5	-61 33 37.2	8.99	
28/7	13 53 3.9	-61 33 37.2	SAT.	
28/8	13 53 14.0	-61 33 37.2	10.77	
28/9	13 53 18.7	-61 33 37.2	10.81	
28/10	13 53 27.6	-61 33 37.2	10.44	
29/1	13 48 57.6	-61 33 31.1	SAT.	
29/2	13 50 20.5	-61 33 31.1	9.59	
29/3	13 50 28.2	-61 33 31.1	10.05	
29/4	13 50 31.7	-61 33 31.1	9.32	
29/5	13 50 33.5	-61 33 31.1	10.00	
29/6	13 50 54.8	-61 33 31.1	9.74	
29/7	13 52 53.3	-61 33 31.1	10.67	
29/8	13 53 15.2	-61 33 31.1	10.64	
29/9	13 53 26.4	-61 33 31.1	10.47	
29/10	13 53 47.7	-61 33 31.1	9.77	
29/11	13 54 2.5	-61 33 31.1	10.23	
29/12	13 54 13.2	-61 33 31.1	9.29	
29/13	13 55 4.7	-61 33 31.1	10.61	
29/14	13 55 30.5	-61 33 31.1	10.05	
29/15	13 55 52.1	-61 33 31.1	10.15	
30/1	13 49 14.7	-61 33 25.2	10.00	
30/2	13 50 11.0	-61 33 25.2	10.64	
30/3	13 50 18.1	-61 33 25.2	9.59	
30/4	13 51 9.6	-61 33 25.2	SAT.	
30/5	13 51 30.3	-61 33 25.2	SAT.	
30/6	13 51 49.3	-61 33 25.2	SAT.	
30/7	13 54 54.7	-61 33 25.2	10.49	
30/8	13 55 43.8	-61 33 25.2	9.03	
31/1	13 49 33.1	-61 33 19.2	SAT.	
31/2	13 50 9.2	-61 33 19.2	10.15	
31/3	13 51 33.3	-61 33 19.2	10.25	
31/4	13 52 31.3	-61 33 19.2	10.04	
31/5	13 53 32.3	-61 33 19.2	10.19	
31/6	13 54 45.8	-61 33 19.2	SAT.	
31/7	13 55 5.3	-61 33 19.2	10.55	
31/8	13 55 42.6	-61 33 19.2	10.77	
31/9	13 55 49.1	-61 33 19.2	SAT.	
32/1	13 49 8.2	-61 33 13.1	9.57	
32/2	13 49 21.2	-61 33 13.1	10.25	
32/3	13 49 47.9	-61 33 13.1	SAT.	
32/4	13 50 5.7	-61 33 13.1	SAT.	
32/5	13 51 17.9	-61 33 13.1	9.97	
32/6	13 51 45.7	-61 33 13.1	9.16	
32/7	13 51 51.7	-61 33 13.1	10.42	
32/8	13 52 8.2	-61 33 13.1	10.81	
32/9	13 52 59.8	-61 33 13.1	8.63	
32/10	13 53 21.7	-61 33 13.1	8.75	
32/11	13 53 26.4	-61 33 13.1	SAT.	
32/12	13 53 33.5	-61 33 13.1	10.81	
32/13	13 54 32.2	-61 33 13.1	10.81	
32/14	13 54 51.1	-61 33 13.1	9.57	
32/15	13 55 18.3	-61 33 13.1	9.11	
32/16	13 55 33.2	-61 33 13.1	10.70	
32/17	13 55 44.4	-61 33 13.1	8.83	
33/1	13 49 47.9	-61 33 7.2	SAT.	

TABLE A22 (CONTINUED)

Loc.	$l = 310 \quad b = 0$			
	$\alpha (1950) \delta$		$K$ (mag)	
	h m s	d m s		
33/2	13 52 11.2	-61 33 7.2	10.52	
33/3	13 52 30.8	-61 33 7.2	10.74	
33/4	13 52 41.4	-61 33 7.2	9.97	
33/5	13 53 37.1	-61 33 7.2	SAT.	
33/6	13 53 49.5	-61 33 7.2	SAT.	
33/7	13 54 22.7	-61 33 7.2	10.49	
33/8	13 55 15.4	-61 33 7.2	8.78	
34/1	13 50 19.3	-61 33 1.2	10.81	
34/2	13 50 31.4	-61 33 1.2	9.47	
34/3	13 51 33.9	-61 33 1.2	10.67	
34/4	13 51 56.4	-61 33 1.2	10.55	
34/5	13 53 15.2	-61 33 1.2	10.37	
34/6	13 53 39.4	-61 33 1.2	10.07	
34/7	13 54 0.2	-61 33 1.2	10.32	
34/8	13 54 35.1	-61 33 1.2	10.47	
34/9	13 54 52.9	-61 33 1.2	10.44	
35/1	13 49 14.1	-61 32 55.2	10.47	
35/2	13 50 6.8	-61 32 55.2	10.30	
35/3	13 50 33.5	-61 32 55.2	10.77	
35/4	13 51 9.6	-61 32 55.2	SAT.	
35/5	13 52 21.9	-61 32 55.2	10.39	
35/6	13 52 55.6	-61 32 55.2	10.67	
35/7	13 54 16.8	-61 32 55.2	10.70	
35/8	13 54 25.6	-61 32 55.2	8.99	
35/9	13 54 29.2	-61 32 55.2	10.55	
35/10	13 54 58.8	-61 32 55.2	10.19	
35/11	13 55 17.8	-61 32 55.2	10.39	
36/1	13 49 27.2	-61 32 49.2	10.25	
36/2	13 49 48.5	-61 32 49.2	9.89	
36/3	13 50 16.6	-61 32 49.2	10.81	
36/4	13 51 19.1	-61 32 49.2	SAT.	
36/5	13 52 17.7	-61 32 49.2	SAT.	
36/6	13 52 29.3	-61 32 49.2	9.52	
36/7	13 53 28.2	-61 32 49.2	10.61	
36/8	13 53 46.6	-61 32 49.2	10.81	
36/9	13 54 5.5	-61 32 49.2	10.25	
36/10	13 54 15.6	-61 32 49.2	10.74	
36/11	13 55 11.8	-61 32 49.2	10.49	
36/12	13 55 27.2	-61 32 49.2	8.97	

TABLE A23 (CONTINUED)

R. A. = 14 07 43.18

Dec. = -65 11 5.8

Loc.	$\alpha (1950) \delta$				$K$ (mag)
	h m s	d m s			
1/1	14 10 25.4	-65 13 53.8	8.63		
1/2	14 11 17.6	-65 13 53.8	10.45		
1/3	14 11 50.7	-65 13 53.8	10.49		
1/4	14 15 18.6	-65 13 53.8	10.13		
2/1	14 11 1.0	-65 13 41.9	9.93		
2/2	14 13 15.4	-65 13 41.9	10.52		
3/1	14 8 0.3	-65 13 29.8	9.60		
3/2	14 9 57.0	-65 13 29.8	9.01		
3/3	14 11 42.4	-65 13 29.8	10.11		
3/4	14 12 8.5	-65 13 29.8	SAT.		

TABLE A23 (CONTINUED)

R. A. = 14 07 43.18				
Dec. = -65 11 5.8				
Loc.	$\alpha$ (1950) $\delta$		K (mag)	
	h m s	d m s		
3/5	14 14 21.7	-65 13 29.8	10.18	
4/1	14 8 27.0	-65 13 17.7	8.56	
4/2	14 9 6.1	-65 13 17.7	9.97	
4/3	14 10 18.3	-65 13 17.7	9.95	
4/4	14 11 21.7	-65 13 17.7	9.60	
4/5	14 13 20.7	-65 13 17.7	SAT.	
4/6	14 13 59.8	-65 13 17.7	8.61	
4/7	14 14 12.8	-65 13 17.7	SAT.	
5/1	14 8 15.2	-65 13 5.8	8.86	
5/2	14 8 29.4	-65 13 5.8	10.39	
5/3	14 9 55.2	-65 13 5.8	9.50	
5/4	14 10 10.0	-65 13 5.8	8.41	
5/5	14 11 30.0	-65 13 5.8	10.18	
5/6	14 12 3.7	-65 13 5.8	10.36	
5/7	14 14 20.0	-65 13 5.8	8.47	
6/1	14 9 10.8	-65 12 53.8	10.16	
6/2	14 10 37.9	-65 12 53.8	10.52	
6/3	14 11 35.3	-65 12 53.8	9.12	
6/4	14 12 46.4	-65 12 53.8	SAT.	
6/5	14 12 52.3	-65 12 53.8	SAT.	
6/6	14 15 28.7	-65 12 53.8	10.52	
6/7	14 15 39.3	-65 12 53.8	9.31	
7/1	14 8 5.7	-65 12 41.8	10.52	
7/2	14 9 16.1	-65 12 41.8	9.28	
7/3	14 9 15.6	-65 12 41.8	10.11	
7/4	14 11 40.1	-65 12 41.8	10.18	
7/5	14 13 11.3	-65 12 41.8	9.70	
7/6	14 13 44.4	-65 12 41.8	10.39	
7/7	14 15 0.2	-65 12 41.8	10.21	
8/1	14 10 42.0	-65 12 29.9	8.30	
8/2	14 10 50.3	-65 12 29.9	8.60	
8/3	14 12 22.7	-65 12 29.9	SAT.	
8/4	14 13 17.2	-65 12 29.9	10.42	
8/5	14 13 31.4	-65 12 29.9	SAT.	
8/6	14 15 38.1	-65 12 29.9	10.16	
9/1	14 9 29.8	-65 12 17.8	9.57	
9/2	14 12 48.8	-65 12 17.8	9.56	
10/1	14 11 25.8	-65 12 5.7	10.52	
10/2	14 14 56.7	-65 12 5.7	10.52	
11/1	14 9 15.9	-65 11 53.9	10.18	
11/2	14 9 54.1	-65 11 53.9	SAT.	
11/3	14 10 0.3	-65 11 53.9	8.57	
11/4	14 10 7.1	-65 11 53.9	10.13	
11/5	14 10 14.8	-65 11 53.9	8.84	
11/6	14 11 9.9	-65 11 53.9	SAT.	
11/7	14 11 26.1	-65 11 53.9	10.45	
12/1	14 7 46.7	-65 11 41.8	9.99	
12/2	14 11 36.5	-65 11 41.8	8.71	
12/3	14 12 46.4	-65 11 41.8	8.73	
12/4	14 12 58.8	-65 11 41.8	10.30	
12/5	14 14 25.9	-65 11 41.8	10.21	
13/1	14 8 18.7	-65 11 29.8	9.38	
13/2	14 8 26.4	-65 11 29.8	9.60	
13/3	14 9 28.6	-65 11 29.8	10.13	
13/4	14 11 17.0	-65 11 29.8	9.45	
13/5	14 12 55.9	-65 11 29.8	9.38	
13/6	14 14 44.8	-65 11 29.8	10.42	
13/7	14 15 23.9	-65 11 29.8	SAT.	
13/8	14 15 32.8	-65 11 29.8	9.56	
14/1	14 8 19.9	-65 11 17.9	9.32	
14/2	14 8 37.1	-65 11 17.9	10.39	
14/3	14 9 7.3	-65 11 17.9	10.21	
14/4	14 9 55.8	-65 11 17.9	9.11	
14/5	14 10 49.1	-65 11 17.9	10.52	
14/6	14 11 29.4	-65 11 17.9	9.18	

TABLE A23 (CONTINUED)

R. A. = 14 07 43.18				
Dec. = -65 11 5.8				
Loc.	$\alpha$ (1950) $\delta$		K (mag)	
	h m s	d m s		
14/7	14 14 42.5	-65 11 17.9	10.52	
15/1	14 7 43.2	-65 11 5.8	SAT.	
15/2	14 8 43.6	-65 11 5.8	9.36	
15/3	14 11 9.9	-65 11 5.8	8.31	
15/4	14 13 18.4	-65 11 5.8	10.36	
15/5	14 13 43.2	-65 11 5.8	8.71	
16/1	14 9 34.5	-65 10 59.9	SAT.	
16/2	14 9 12.0	-65 10 59.9	SAT.	
16/3	14 14 54.3	-65 10 59.9	10.24	
16/4	14 15 36.9	-65 10 59.9	8.86	
17/1	14 9 34.5	-65 10 47.8	9.49	
17/2	14 12 40.5	-65 10 47.8	9.67	
17/3	14 13 38.5	-65 10 47.8	9.62	
17/4	14 14 35.4	-65 10 47.8	9.51	
18/1	14 10 18.3	-65 10 35.8	9.68	
18/2	14 11 27.0	-65 10 35.8	10.18	
18/3	14 12 3.7	-65 10 35.8	9.79	
18/4	14 15 14.4	-65 10 35.8	8.51	
19/1	14 10 21.9	-65 10 23.9	SAT.	
19/2	14 11 45.4	-65 10 23.9	9.97	
19/3	14 15 28.7	-65 10 23.9	SAT.	
19/4	14 15 38.1	-65 10 23.9	SAT.	
20/1	14 7 53.8	-65 10 11.8	10.36	
20/2	14 7 58.6	-65 10 11.8	9.53	
20/3	14 9 4.9	-65 10 11.8	10.27	
20/4	14 12 39.9	-65 10 11.8	9.72	
20/5	14 12 53.5	-65 10 11.8	10.18	
20/6	14 13 41.5	-65 10 11.8	10.27	

TABLE A24 (CONTINUED)

$l = 320 \quad b = -1$				
Loc.	$\alpha$ (1950) $\delta$		K (mag)	
	h m s	d m s		
3/5	15 13 13.6	-59 1 33.4	SAT.	
4/1	15 9 59.7	-59 1 39.3	9.50	
4/2	15 11 18.5	-59 1 39.3	10.71	
4/3	15 13 34.1	-59 1 39.3	10.97	
5/1	15 10 6.8	-59 1 45.3	10.97	
5/2	15 10 34.0	-59 1 45.3	SAT.	
5/3	15 11 1.3	-59 1 45.3	10.97	
5/4	15 11 7.2	-59 1 45.3	9.10	
5/5	15 11 21.4	-59 1 45.3	10.05	
5/6	15 12 32.5	-59 1 45.3	10.97	
5/7	15 13 29.9	-59 1 45.3	10.22	
5/8	15 13 53.6	-59 1 45.3	9.71	
5/9	15 14 7.8	-59 1 45.3	9.52	
5/10	15 14 21.1	-59 1 45.3	10.90	
6/1	15 9 41.3	-59 1 51.4	10.93	
6/2	15 11 25.6	-59 1 51.4	10.05	
6/3	15 11 52.8	-59 1 51.4	SAT.	
6/4	15 11 59.3	-59 1 51.4	10.39	
6/5	15 12 35.4	-59 1 51.4	SAT.	
6/6	15 13 25.2	-59 1 51.4	9.56	
6/7	15 13 35.3	-59 1 51.4	SAT.	
6/8	15 13 44.1	-59 1 51.4	10.66	
7/1	15 9 37.2	-59 1 57.3	10.66	
7/2	15 9 46.7	-59 1 57.3	SAT.	
7/3	15 9 53.8	-59 1 57.3	10.93	
7/4	15 10 21.0	-59 1 57.3	10.87	
7/5	15 10 52.4	-59 1 57.3	SAT.	
7/6	15 11 16.7	-59 1 57.3	10.20	
7/7	15 11 24.4	-59 1 57.3	9.30	
7/8	15 11 56.9	-59 1 57.3	9.47	
7/9	15 12 22.7	-59 1 57.3	10.46	
7/10	15 12 34.3	-59 1 57.3	10.20	
7/11	15 12 39.0	-59 1 57.3	9.78	
7/12	15 12 50.2	-59 1 57.3	10.97	
7/13	15 13 57.2	-59 1 57.3	SAT.	
7/14	15 14 10.8	-59 1 57.3	10.46	
8/1	15 13 22.2	-59 2 3.4	10.66	
8/2	15 14 2.5	-59 2 3.4	10.71	
8/3	15 14 5.5	-59 2 3.4	10.05	
9/1	15 10 17.5	-59 2 9.4	8.86	
9/2	15 10 41.1	-59 2 9.4	9.36	
9/3	15 10 57.1	-59 2 9.4	9.79	
9/4	15 11 2.8	-59 2 9.4	10.58	
9/5	15 12 30.1	-59 2 9.4	10.97	
9/6	15 12 40.2	-59 2 9.4	10.87	
9/7	15 13 19.3	-59 2 9.4	10.97	
9/8	15 14 6.6	-59 2 9.4	9.96	
10/1	15 10 35.8	-59 2 15.3	10.83	
10/2	15 12 20.6	-59 2 15.3	9.49	
10/3	15 13 28.7	-59 2 15.3	10.66	
11/1	15 10 8.9	-59 2 21.4	10.53	
11/2	15 10 30.5	-59 2 21.4	10.90	
11/3	15 10 51.8	-59 2 21.4	9.85	
11/4	15 11 46.9	-59 2 21.4	9.14	
11/5	15 12 8.2	-59 2 21.4	10.80	
11/6	15 12 21.8	-59 2 21.4	9.60	
11/7	15 13 21.6	-59 2 21.4	10.97	
11/8	15 13 31.1	-59 2 21.4	10.25	
11/9	15 13 58.3	-59 2 21.4	10.42	
12/1	15 9 39.3	-59 2 27.4	10.90	
12/2	15 9 41.3	-59 2 27.4	10.66	
12/3	15 10 9.2	-59 2 27.4	10.97	
12/4	15 10 16.9	-59 2 27.4	10.66	
12/5	15 11 1.0	-59 2 27.4	10.42	
12/6	15 12 27.1	-59 2 27.4	9.19	

TABLE A24

## INFRARED SOURCES

$l = 320 \quad b = -1$				
Loc.	$\alpha$ (1950) $\delta$		K (mag)	
	h m s	d m s		
1/1	15 9 36.6	-59 1 21.3	SAT.	
1/2	15 9 43.7	-59 1 21.3	SAT.	
1/3	15 10 15.7	-59 1 21.3	9.42	
1/4	15 10 30.5	-59 1 21.3	8.97	
1/5	15 10 58.3	-59 1 21.3	8.69	
1/6	15 11 17.9	-59 1 21.3	9.31	
1/7	15 11 32.7	-59 1 21.3	SAT.	
1/8	15 11 54.0	-59 1 21.3	10.83	
1/9	15 12 13.2	-59 1 21.3	10.55	
1/10	15 12 39.0	-59 1 21.3	9.89	
1/11	15 12 59.7	-59 1 21.3	9.70	
1/12	15 13 19.9	-59 1 21.3	9.30	
2/1	15 10 3.8	-59 1 27.3	SAT.	
2/2	15 10 10.9	-59 1 27.3	9.89	
2/3	15 10 42.9	-59 1 27.3	10.90	
2/4	15 10 57.7	-59 1 27.3	9.68	
2/5	15 11 7.8	-59 1 27.3	10.35	
2/6	15 11 23.2	-59 1 27.3	9.42	
2/7	15 11 49.2	-59 1 27.3	SAT.	
2/8	15 12 15.9	-59 1 27.3	SAT.	
2/9	15 14 10.8	-59 1 27.3	10.10	
3/1	15 10 27.5	-59 1 33.4	10.93	
3/2	15 10 41.1	-59 1 33.4	9.56	
3/3	15 11 24.4	-59 1 33.4	9.56	
3/4	15 13 8.6	-59 1 33.4	9.28	









TABLE A26 (CONTINUED)

Loc.	$l = 320 \quad b = 0$		$K$ (mag)
	$\alpha$ (1950) $\delta$		
	h m s	d m s	
39/1	15 2 14.8	-58 8 10.1	8.94
39/2	15 2 51.2	-58 8 10.1	10.26
39/3	15 2 54.2	-58 8 10.1	9.58
40/1	15 2 36.7	-58 8 16.0	9.69
40/2	15 3 17.6	-58 8 16.0	10.02
41/1	15 1 48.8	-58 8 22.1	10.02
41/2	15 1 55.6	-58 8 22.1	9.32
41/3	15 2 5.0	-58 8 22.1	9.51
41/4	15 2 44.7	-58 8 22.1	9.58
42/1	15 2 8.9	-58 8 28.1	10.26
42/2	15 2 46.5	-58 8 28.1	SAT.
43/1	15 1 49.4	-58 8 34.0	10.26
43/2	15 2 7.4	-58 8 34.0	9.82
43/3	15 2 11.0	-58 8 34.0	10.02
43/4	15 3 24.4	-58 8 34.0	10.26
44/1	15 2 8.0	-58 8 40.1	10.58
44/2	15 2 13.9	-58 8 40.1	SAT.
44/3	15 2 21.3	-58 8 40.1	10.58
44/4	15 2 51.8	-58 8 40.1	10.58
44/5	15 3 1.9	-58 8 40.1	9.44
44/6	15 3 12.6	-58 8 40.1	9.82
45/1	15 1 31.9	-58 8 46.1	SAT.
45/2	15 2 3.3	-58 8 46.1	9.92
45/3	15 2 47.1	-58 8 46.1	8.69
46/1	15 1 37.2	-58 8 52.1	9.58
46/2	15 1 54.4	-58 8 52.1	SAT.
46/3	15 2 6.8	-58 8 52.1	10.02
46/4	15 2 38.2	-58 8 52.1	9.82
46/5	15 2 44.7	-58 8 52.1	9.82
46/6	15 2 51.2	-58 8 52.1	9.66
46/7	15 3 5.5	-58 8 52.1	9.27
47/1	15 1 42.5	-58 8 58.2	10.58
47/2	15 2 11.0	-58 8 58.2	10.41
47/3	15 2 40.0	-58 8 58.2	8.63
47/4	15 3 1.0	-58 8 58.2	9.16
48/1	15 2 19.9	-58 9 4.1	9.21
48/2	15 2 22.2	-58 9 4.1	SAT.
48/3	15 2 54.2	-58 9 4.1	9.82
48/4	15 3 10.2	-58 9 4.1	SAT.
49/1	15 2 58.3	-58 9 10.0	10.02
50/1	15 3 3.1	-58 9 16.1	9.82
50/2	15 3 6.6	-58 9 16.1	10.41
50/3	15 3 12.6	-58 9 16.1	SAT.
51/1	15 2 13.9	-58 9 22.1	9.03
51/2	15 1 59.1	-58 9 22.1	10.26
51/3	15 2 19.3	-58 9 22.1	10.02
51/4	15 2 29.6	-58 9 22.1	9.44

TABLE A27

## INFRARED SOURCES

Loc.	$l = 320 \quad b = +1$		$K$ (mag)
	$\alpha$ (1950) $\delta$		
	h m s	d m s	
1/1	14 58 53.4	-56 59 49.4	SAT.
1/2	15 0 3.8	-56 59 49.4	9.26
1/3	15 1 5.4	-56 59 49.4	10.39
1/4	15 1 32.1	-56 59 49.4	10.13
1/5	15 1 57.6	-56 59 49.4	10.79

TABLE A27 (CONTINUED)

Loc.	$l = 320 \quad b = +1$			$K$ (mag)
	$\alpha$ (1950) $\delta$			
	h m s	d m s		
1/6	15 2 14.1	-56 59 49.4	10.19	
1/7	15 2 46.7	-56 59 49.4	9.42	
1/8	15 2 50.3	-56 59 49.4	9.10	
1/9	15 2 55.0	-56 59 49.4	10.12	
1/10	15 3 37.6	-56 59 49.4	10.67	
1/11	15 4 35.1	-56 59 49.4	9.79	
1/12	15 6 20.1	-56 59 49.4	9.84	
1/13	15 5 45.6	-56 59 49.4	10.92	
2/1	14 59 5.8	-56 59 55.4	9.71	
2/2	14 59 14.4	-56 59 55.4	9.73	
2/3	14 59 16.5	-56 59 55.4	10.92	
2/4	14 59 19.4	-56 59 55.4	10.85	
2/5	14 59 34.5	-56 59 55.4	10.61	
2/6	14 59 40.2	-56 59 55.4	9.07	
2/7	15 1 34.8	-56 59 55.4	SAT.	
2/8	15 1 58.7	-56 59 55.4	10.56	
2/9	15 2 7.0	-56 59 55.4	10.56	
2/10	15 2 52.3	-56 59 55.4	9.12	
2/11	15 3 38.8	-56 59 55.4	10.92	
2/12	15 3 43.0	-56 59 55.4	SAT.	
2/13	15 4 52.8	-56 59 55.4	10.89	
2/14	15 5 41.4	-56 59 55.4	10.89	
3/1	14 58 59.9	-57 0 1.4	9.69	
3/2	15 2 10.6	-57 0 1.4	10.26	
3/3	15 3 22.2	-57 0 1.4	9.52	
3/4	15 3 43.0	-57 0 1.4	SAT.	
3/5	15 4 10.8	-57 0 1.4	10.19	
3/6	15 4 17.3	-57 0 1.4	10.53	
3/7	15 5 6.5	-57 0 1.4	9.42	
3/8	15 5 27.8	-57 0 1.4	10.61	
4/1	14 58 55.7	-57 0 7.3	SAT.	
4/2	14 59 52.0	-57 0 7.3	9.11	
4/3	15 0 9.8	-57 0 7.3	10.76	
4/4	15 0 27.5	-57 0 7.3	10.15	
4/5	15 0 36.4	-57 0 7.3	9.93	
4/6	15 0 50.3	-57 0 7.3	10.92	
4/7	15 0 57.1	-57 0 7.3	10.37	
4/8	15 1 12.5	-57 0 7.3	8.81	
4/9	15 1 19.7	-57 0 7.3	10.89	
4/10	15 2 5.3	-57 0 7.3	9.83	
4/11	15 2 15.3	-57 0 7.3	9.25	
4/12	15 2 44.9	-57 0 7.3	10.92	
4/13	15 3 5.7	-57 0 7.3	10.33	
4/14	15 3 26.4	-57 0 7.3	10.82	
4/15	15 3 35.6	-57 0 7.3	10.00	
4/16	15 4 21.5	-57 0 7.3	10.08	
4/17	15 5 14.8	-57 0 7.3	SAT.	
4/18	15 5 52.7	-57 0 7.3	10.00	
5/1	14 59 33.6	-57 0 13.3	9.37	
5/2	15 0 4.4	-57 0 13.3	10.92	
5/3	15 0 38.8	-57 0 13.3	10.67	
5/4	15 1 4.8	-57 0 13.3	10.76	
5/5	15 2 2.9	-57 0 13.3	9.72	
5/6	15 2 32.5	-57 0 13.3	10.89	
5/7	15 3 47.1	-57 0 13.3	10.76	
5/8	15 4 36.3	-57 0 13.3	SAT.	
5/9	15 5 10.6	-57 0 13.3	10.17	
5/10	15 5 37.3	-57 0 13.3	9.59	
5/11	15 5 49.1	-57 0 13.3	10.69	
6/1	14 59 31.3	-57 0 19.4	9.18	
6/2	15 0 11.0	-57 0 19.4	10.19	
6/3	15 0 18.1	-57 0 19.4	9.51	
6/4	15 0 44.7	-57 0 19.4	9.64	
6/5	15 1 16.1	-57 0 19.4	10.08	
6/6	15 1 30.3	-57 0 19.4	SAT.	

TABLE A27 (CONTINUED)

Loc.	$l = 320 \quad b = +1$			$K$ (mag)
	$\alpha$ (1950) $\delta$			
	h m s	d m s		
6/7	15 1 40.4	-57 0 19.4	10.92	
6/8	15 3 12.2	-57 0 19.4	SAT.	
6/9	15 5 13.0	-57 0 19.4	10.76	
6/10	15 5 23.6	-57 0 19.4	10.67	
6/11	15 5 29.0	-57 0 19.4	9.86	
6/12	15 5 37.3	-57 0 19.4	9.53	
7/1	14 59 35.4	-57 0 25.3	9.32	
7/2	14 59 57.9	-57 0 25.3	8.95	
7/3	15 0 2.1	-57 0 25.3	SAT.	
7/4	15 0 58.3	-57 0 25.3	10.33	
7/5	15 1 37.4	-57 0 25.3	9.72	
7/6	15 3 22.8	-57 0 25.3	9.86	
7/7	15 3 52.4	-57 0 25.3	10.92	
7/8	15 4 52.3	-57 0 25.3	10.02	
7/9	15 5 0.8	-57 0 25.3	8.83	
7/10	15 5 11.2	-57 0 25.3	10.64	
7/11	15 5 27.2	-57 0 25.3	SAT.	
8/1	14 59 43.7	-57 0 31.3	9.93	
8/2	14 59 47.9	-57 0 31.3	9.60	
8/3	14 59 53.8	-57 0 31.3	10.12	
8/4	15 0 8.0	-57 0 31.3	10.33	
8/5	15 0 32.9	-57 0 31.3	SAT.	
8/6	15 1 43.9	-57 0 31.3	10.85	
8/7	15 1 49.3	-57 0 31.3	10.92	
8/8	15 1 58.7	-57 0 31.3	9.72	
8/9	15 2 4.7	-57 0 31.3	9.18	
8/10	15 2 13.5	-57 0 31.3	SAT.	
8/11	15 4 15.5	-57 0 31.3	SAT.	
8/12	15 4 31.5	-57 0 31.3	9.18	
8/13	15 4 58.8	-57 0 31.3	SAT.	
9/1	15 0 15.7	-57 0 37.4	10.03	
9/2	15 0 57.1	-57 0 37.4	10.92	
9/3	15 1 10.2	-57 0 37.4	SAT.	
9/4	15 1 19.7	-57 0 37.4	10.37	
9/5	15 2 34.0	-57 0 37.4	9.25	
9/6	15 2 43.2	-57 0 37.4	9.87	
9/7	15 2 58.0	-57 0 37.4	9.82	
9/8	15 4 43.1	-57 0 37.4	10.89	
9/9	15 5 4.4	-57 0 37.4	SAT.	
9/10	15 5 27.8	-57 0 37.4	10.05	
10/1	14 59 2.3	-57 0 43.3	10.00	
10/2	15 0 14.5	-57 0 43.3	9.97	
10/3	15 1 15.5	-57 0 43.3	10.35	
10/4	15 1 22.6	-57 0 43.3	SAT.	
10/5	15 1 46.3	-57 0 43.3	SAT.	
10/6	15 2 34.9	-57 0 43.3	8.98	
10/7	15 3 5.1	-57 0 43.3	SAT.	
10/8	15 4 45.7	-57 0 43.3	10.37	
10/9	15 5 11.8	-57 0 43.3	10.37	
11/1	14 58 54.6	-57 0 49.3	SAT.	
11/2	14 58 59.3	-57 0 49.3	10.58	
11/3	14 59 43.1	-57 0 49.3	9.53	
11/4	15 1 23.2	-57 0 49.3	9.32	
11/5	15 1 59.9	-57 0 49.3	9.86	
11/6	15 3 49.5	-57 0 49.3	10.41	
11/7	15 4 33.6	-57 0 49.3	9.80	
11/8	15 4 36.3	-57 0 49.3	10.92	
11/9	15 5 53.3	-57 0 49.3	10.92	
12/1	14 59 2.3	-57 0 55.4	10.79	
12/2	14 59 16.5	-57 0 55.4	10.17	
12/3	15 0 16.3	-57 0 55.4	SAT.	
12/4	15 1 52.8	-57 0 55.4	10.58	
12/5	15 1 58.7	-57 0 55.4	10.58	
12/6	15 2 52.9	-57 0 55.4	9.31	
12/7	15 3 1.5	-57 0 55.4	SAT.	







TABLE A28 (CONTINUED)

TABLE A28 (CONTINUED)

TABLE A28 (CONTINUED)

Loc.	l = 330 b = 0		K (mag)	Loc.	l = 330 b = 0		K (mag)	Loc.	l = 330 b = 0		K (mag)
	α (1950)	δ			α (1950)	δ			α (1950)	δ	
	h m s	d m s		h m s	d m s			h m s	d m s		
14/5	16 1 31.8	-52 24 59.0	8.78	17/15	16 3 29.7	-52 25 16.9	9.52	21/12	16 2 19.2	-52 25 41.0	10.58
14/6	16 2 34.0	-52 24 59.0	8.95	17/16	16 3 33.9	-52 25 16.9	9.62	21/13	16 2 29.9	-52 25 41.0	9.75
14/7	16 2 48.8	-52 24 59.0	9.44	18/1	15 58 25.0	-52 25 23.0	9.30	21/14	16 2 32.2	-52 25 41.0	SAT.
14/8	16 3 41.5	-52 24 59.0	10.82	18/2	15 58 47.2	-52 25 23.0	9.18	21/15	16 2 59.5	-52 25 41.0	9.19
15/1	15 58 40.7	-52 25 5.0	10.13	18/3	15 59 38.1	-52 25 23.0	10.30	21/16	16 3 2.4	-52 25 41.0	8.62
15/2	15 59 29.2	-52 25 5.0	8.64	18/4	15 59 57.7	-52 25 23.0	SAT.	21/17	16 3 20.8	-52 25 41.0	10.92
15/3	15 59 47.0	-52 25 5.0	10.61	18/5	16 0 3.8	-52 25 23.0	10.76	21/18	16 3 24.3	-52 25 41.0	10.58
15/4	15 59 49.4	-52 25 5.0	10.21	18/6	16 0 56.9	-52 25 23.0	10.72	22/1	15 58 27.1	-52 25 47.0	10.51
15/5	16 0 10.1	-52 25 5.0	9.72	18/7	16 2 6.1	-52 25 23.0	10.92	22/2	15 58 34.5	-52 25 47.0	10.89
15/6	16 1 18.2	-52 25 5.0	9.35	18/8	16 2 41.7	-52 25 23.0	SAT.	22/3	15 58 54.3	-52 25 47.0	8.70
15/7	16 1 24.7	-52 25 5.0	9.83	18/9	16 2 59.5	-52 25 23.0	SAT.	22/4	15 59 26.9	-52 25 47.0	10.92
15/8	16 1 49.6	-52 25 5.0	10.82	18/10	16 3 9.5	-52 25 23.0	SAT.	22/5	15 59 34.6	-52 25 47.0	10.33
15/9	16 1 57.9	-52 25 5.0	9.03	18/11	16 3 17.5	-52 25 23.0	10.15	22/6	16 0 33.2	-52 25 47.0	10.41
15/10	16 2 3.2	-52 25 5.0	9.05	18/12	16 3 20.2	-52 25 23.0	9.34	22/7	16 0 55.1	-52 25 47.0	9.99
15/11	16 2 24.5	-52 25 5.0	10.92	18/13	16 3 45.7	-52 25 23.0	SAT.	22/8	16 1 49.6	-52 25 47.0	10.35
15/12	16 2 36.9	-52 25 5.0	10.17	18/14	16 3 49.2	-52 25 23.0	9.86	22/9	16 2 6.5	-52 25 47.0	10.17
15/13	16 2 42.3	-52 25 5.0	10.21	18/15	16 4 3.7	-52 25 23.0	8.94	22/10	16 2 47.0	-52 25 47.0	SAT.
15/14	16 3 1.2	-52 25 5.0	10.92	19/1	15 58 22.3	-52 25 29.0	9.87	22/11	16 3 11.9	-52 25 47.0	10.03
15/15	16 3 18.4	-52 25 5.0	9.15	19/2	15 58 37.1	-52 25 29.0	SAT.	22/12	16 3 14.2	-52 25 47.0	10.37
15/16	16 3 23.7	-52 25 5.0	8.72	19/3	16 0 19.0	-52 25 29.0	8.87	22/13	16 3 36.2	-52 25 47.0	8.98
15/17	16 3 26.1	-52 25 5.0	8.90	19/4	16 0 30.8	-52 25 29.0	9.73	22/14	16 4 1.3	-52 25 47.0	10.92
16/1	15 58 27.1	-52 25 11.0	8.65	19/5	16 1 49.0	-52 25 29.0	10.10	23/1	15 58 11.7	-52 25 52.9	10.56
16/2	15 58 39.5	-52 25 11.0	10.21	19/6	16 2 7.9	-52 25 29.0	8.86	23/2	15 58 15.8	-52 25 52.9	10.51
16/3	15 59 5.0	-52 25 11.0	SAT.	19/7	16 2 12.1	-52 25 29.0	10.51	23/3	15 58 20.5	-52 25 52.9	9.44
16/4	15 59 19.8	-52 25 11.0	10.24	19/8	16 2 14.4	-52 25 29.0	SAT.	23/4	15 59 18.0	-52 25 52.9	9.77
16/5	15 59 21.5	-52 25 11.0	8.86	19/9	16 2 18.0	-52 25 29.0	10.21	23/5	15 59 37.5	-52 25 52.9	9.37
16/6	15 59 27.5	-52 25 11.0	9.08	19/10	16 2 35.2	-52 25 29.0	10.67	23/6	16 0 50.6	-52 25 52.9	9.83
16/7	15 59 34.0	-52 25 11.0	SAT.	19/11	16 2 52.3	-52 25 29.0	9.31	23/7	16 1 19.4	-52 25 52.9	10.37
16/8	15 59 42.3	-52 25 11.0	SAT.	19/12	16 3 1.2	-52 25 29.0	9.86	23/8	16 1 27.1	-52 25 52.9	10.92
16/9	15 59 48.2	-52 25 11.0	10.17	19/13	16 3 6.3	-52 25 29.0	10.37	23/9	16 1 35.4	-52 25 52.9	SAT.
16/10	16 0 8.9	-52 25 11.0	9.58	19/14	16 3 11.9	-52 25 29.0	SAT.	23/10	16 2 21.0	-52 25 52.9	9.71
16/11	16 0 17.2	-52 25 11.0	10.89	19/15	16 3 30.2	-52 25 29.0	9.74	23/11	16 2 54.1	-52 25 52.9	SAT.
16/12	16 0 37.3	-52 25 11.0	10.35	20/1	15 58 39.5	-52 25 34.9	10.61	23/12	16 3 13.1	-52 25 52.9	9.20
16/13	16 0 40.9	-52 25 11.0	10.37	20/2	16 0 11.3	-52 25 34.9	9.69	24/1	15 58 14.0	-52 25 59.1	10.48
16/14	16 1 0.4	-52 25 11.0	10.61	20/3	16 0 17.8	-52 25 34.9	SAT.	24/2	15 59 38.7	-52 25 59.1	9.51
16/15	16 1 16.4	-52 25 11.0	9.87	20/4	16 0 26.1	-52 25 34.9	SAT.	24/3	15 59 45.2	-52 25 59.1	10.64
16/16	16 1 21.7	-52 25 11.0	10.67	20/5	16 0 36.7	-52 25 34.9	10.56	24/4	16 0 11.3	-52 25 59.1	10.92
16/17	16 1 30.0	-52 25 11.0	10.67	20/6	16 1 2.5	-52 25 34.9	10.13	24/5	16 0 20.7	-52 25 59.1	SAT.
16/18	16 1 37.7	-52 25 11.0	SAT.	20/7	16 1 20.0	-52 25 34.9	SAT.	24/6	16 0 26.1	-52 25 59.1	10.89
16/19	16 1 63.7	-52 25 11.0	SAT.	20/8	16 1 29.4	-52 25 34.9	10.69	24/7	16 0 39.1	-52 25 59.1	10.92
16/20	16 2 1.4	-52 25 11.0	8.97	20/9	16 1 43.1	-52 25 34.9	8.62	24/8	16 1 1.6	-52 25 59.1	10.58
16/21	16 2 18.0	-52 25 11.0	SAT.	20/10	16 1 52.0	-52 25 34.9	SAT.	24/9	16 1 38.0	-52 25 59.1	10.15
16/22	16 2 21.6	-52 25 11.0	10.61	20/11	16 2 1.4	-52 25 34.9	9.86	24/10	16 1 45.4	-52 25 59.1	SAT.
16/23	16 2 35.8	-52 25 11.0	10.12	20/12	16 2 4.4	-52 25 34.9	10.51	24/11	16 2 37.5	-52 25 59.1	SAT.
16/24	16 2 41.1	-52 25 11.0	10.02	20/13	16 2 28.0	-52 25 34.9	10.92	24/12	16 2 49.1	-52 25 59.1	10.82
16/25	16 3 14.6	-52 25 11.0	9.01	20/14	16 2 30.7	-52 25 34.9	9.62	24/13	16 3 35.6	-52 25 59.1	10.39
16/26	16 3 21.4	-52 25 11.0	10.39	20/15	16 2 51.4	-52 25 34.9	9.75	24/14	16 3 48.0	-52 25 59.1	10.37
16/27	16 3 28.5	-52 25 11.0	9.78	20/16	16 2 55.9	-52 25 34.9	10.85	25/1	15 58 18.2	-52 26 5.0	10.85
16/28	16 3 32.0	-52 25 11.0	9.82	20/17	16 2 57.6	-52 25 34.9	8.66	25/2	16 0 1.8	-52 26 5.0	9.84
16/29	16 3 43.3	-52 25 11.0	10.89	20/18	16 3 0.3	-52 25 34.9	10.61	25/3	16 0 7.4	-52 26 5.0	10.37
16/30	16 3 50.7	-52 25 11.0	10.92	20/19	16 3 22.5	-52 25 34.9	10.76	25/4	16 0 30.2	-52 26 5.0	9.31
17/1	15 59 2.6	-52 25 16.9	10.85	20/20	16 3 29.3	-52 25 34.9	9.73	25/5	16 1 11.1	-52 26 5.0	10.61
17/2	15 59 6.7	-52 25 16.9	SAT.	20/21	16 3 44.5	-52 25 34.9	10.44	25/6	16 1 21.1	-52 26 5.0	9.71
17/3	15 59 12.4	-52 25 16.9	9.03	20/22	16 3 52.7	-52 25 34.9	9.69	25/7	16 1 32.1	-52 26 5.0	8.92
17/4	16 0 38.5	-52 25 16.9	10.33	21/1	15 58 18.8	-52 25 41.0	SAT.	25/8	16 2 27.8	-52 26 5.0	10.92
17/5	16 0 42.1	-52 25 16.9	10.17	21/2	15 58 59.0	-52 25 41.0	10.72	25/9	16 3 27.3	-52 26 5.0	10.30
17/6	16 1 2.2	-52 25 16.9	10.41	21/3	15 59 19.2	-52 25 41.0	9.58	25/10	16 3 46.8	-52 26 5.0	10.37
17/7	16 1 22.9	-52 25 16.9	10.89	21/4	15 59 42.9	-52 25 41.0	SAT.	25/11	16 4 1.6	-52 26 5.0	9.31
17/8	16 1 28.8	-52 25 16.9	10.37	21/5	15 59 49.4	-52 25 41.0	10.61	26/1	15 58 20.5	-52 26 11.1	10.35
17/9	16 2 22.7	-52 25 16.9	10.35	21/6	15 59 51.2	-52 25 41.0	10.61	26/2	15 58 37.1	-52 26 11.1	10.37
17/10	16 2 34.6	-52 25 16.9	9.84	21/7	16 0 10.1	-52 25 41.0	10.72	26/3	15 59 35.2	-52 26 11.1	9.99
17/11	16 2 42.9	-52 25 16.9	SAT.	21/8	16 0 22.5	-52 25 41.0	8.63	26/4	15 59 42.3	-52 26 11.1	10.51
17/12	16 2 58.3	-52 25 16.9	10.30	21/9	16 1 3.4	-52 25 41.0	10.08	26/5	16 0 27.2	-52 26 11.1	9.67
17/13	16 3 16.1	-52 25 16.9	8.93	21/10	16 1 8.7	-52 25 41.0	9.33	26/6	16 0 29.0	-52 26 11.1	9.63
17/14	16 3 22.5	-52 25 16.9	10.48	21/11	16 1 21.7	-52 25 41.0	SAT.	26/7	16 1 18.8	-52 26 11.1	SAT.



TABLE A29 (CONTINUED)

Loc.	$l = 340 \quad b = 0$		K
	$\alpha$ (1950) $\delta$	(mag)	
	h m s	d m s	
8/4	16 48 19.0	-46 17 24.1	9.51
8/5	16 50 18.6	-45 17 24.1	9.41
8/6	16 50 55.9	-45 17 24.1	9.52
8/7	16 52 34.8	-45 17 24.1	SAT.
9/1	16 44 52.9	-45 17 18.1	9.27
9/2	16 51 46.2	-45 17 18.1	10.02
9/3	16 52 43.7	-45 17 18.1	SAT.
10/1	16 44 53.5	-45 17 12.0	9.38
10/2	16 *6 15.8	-45 17 12.0	8.36
10/3	16 51 47.4	-45 17 12.0	10.02
11/1	16 44 45.8	-45 17 6.1	9.82
11/2	16 46 11.6	-45 17 6.1	8.36
11/3	16 49 54.9	-45 17 6.1	8.57
11/4	16 52 11.1	-45 17 6.1	8.92
11/5	16 52 23.0	-45 17 6.1	SAT.
11/6	16 52 46.6	-45 17 6.1	SAT.
12/1	16 43 53.0	-45 17 0.1	8.97
12/2	16 44 46.9	-45 17 0.1	9.51
12/3	16 45 16.5	-45 17 0.1	9.07
12/4	16 46 3-9	-45 17 0.1	SAT.
12/5	16 46 33.5	-45 17 0.1	9.27
12/6	16 47 58.3	-45 17 0.1	9.66
12/7	16 49 31.2	-45 17 0.1	8.94
12/8	16 49 54.9	-45 17 0.1	8.52
12/9	16 52 11.1	-45 17 0.1	9.66
12/10	16 52 23.0	-45 17 0.1	9.27
12/11	16 52 43.7	-45 17 0.1	SAT.
12/12	16 52 49.6	-45 17 0.1	SAT.
13/1	16 43 56.6	-45 16 54.1	9.03
13/2	16 44 46.9	-45 16 54.1	9.82
13/3	16 45 22.5	-45 16 54.1	8.72
13/4	16 46 3.9	-45 16 54.1	9.51
13/5	16 46 6.9	-45 16 54.1	SAT.
13/6	16 46 34.2	-45 16 54.1	10.02
13/7	16 49 31.2	-45 16 54.1	8.76
13/8	16 50 45.2	-45 16 54.1	SAT.
13/9	16 51 17.8	-45 16 54.1	8.94
13/10	16 52 45.4	-45 16 54.1	8.36
14/1	16 45 58.8	-45 16 48.1	9.80
14/2	16 47 19.9	-45 16 48.1	10.04
14/3	16 50 42.4	-45 16 48.1	8.27
14/4	16 51 12.1	-45 16 48.1	9.27
14/5	16 51 29.8	-45 16 48.1	10.13
15/1	16 43 6.3	-45 16 42.2	9.58
15/2	16 47 23.9	-45 16 42.2	9.36
15/3	16 47 44.6	-45 16 42.2	8.69
15/4	16 48 34.9	-45 16 42.2	9.58
15/5	16 51 34.4	-45 16 42.2	9.62
16/1	16 44 5.5	-45 16 36.0	9.27
16/2	16 45 39.1	-45 16 36.0	10.02
16/3	16 47 19.7	-45 16 36.0	SAT.
16/4	16 47 38.7	-45 16 36.0	8.90
16/5	16 48 32.0	-45 16 36.0	9.38
16/6	16 49 21.7	-45 16 36.0	9.86
16/7	16 49 54.9	-45 16 36.0	9.79
16/8	16 52 40.7	-45 16 36.0	8.70
17/1	16 44 5.5	-45 16 30.1	9.66
17/2	16 45 40.3	-45 16 30.1	10.02
17/3	16 47 20.9	-45 16 30.1	8.32
17/4	16 48 26.0	-45 16 30.1	9.75
17/5	16 49 25.3	-45 16 30.1	SAT.
17/6	16 61 23.7	-45 16 30.1	9.32
17/7	16 52 15.8	-45 16 30.1	8.46
17/8	16 52 34.8	-45 16 30.1	9.04
17/9	16 52 41.9	-45 16 30.1	8.33

TABLE A29 (CONTINUED)

Loc.	$l = 340 \quad b = 0$		K
	$\alpha$ (1950) $\delta$	(mag)	
	h m s	d m s	
18/1	16 44 29.8	-45 16 24.1	9.74
18/2	16 46 14.6	-45 16 24.1	8.63
18/3	16 47 22.7	-45 16 24.1	9.51
18/4	16 47 29.8	-45 16 24.1	10.04
18/5	16 48 2.4	-45 16 24.1	10.02
18/6	16 48 26.0	-45 16 24.1	8.90
18/7	16 48 49.2	-45 16 24.1	8.36
18/8	16 49 21.1	-45 16 24.1	9.07
18/9	16 51 23.7	-45 16 24.1	8.86
18/10	16 52 12.3	-45 16 24.1	8.58
18/11	16 52 40.1	-45 16 24.1	10.02
19/1	16 46 15.8	-45 16 18.0	9.27
19/2	16 47 3.2	-45 16 18.0	10.21
19/3	16 47 29.8	-45 16 18.0	10.41
19/4	16 47 44.6	-45 16 18.0	9.66
19/5	16 48 54.5	-45 16 18.0	SAT.
19/6	16 49 25.3	-45 16 18.0	9.51
19/7	16 52 22.4	-45 16 18.0	10.26
20/1	16 43 48.9	-45 16 12.1	10.32
20/2	16 47 44.6	-45 16 12.1	9.32
20/3	16 48 51.5	-45 16 12.1	10.13
20/4	16 49 19.4	-45 16 12.1	10.02
20/5	16 50 18.6	-45 16 12.1	10.02
21/1	16 43 53.6	-45 16 6.1	10.41
21/2	16 44 46.9	-45 16 6.1	9.77
21/3	16 46 40.6	-45 16 8.1	10.44
21/4	16 48 43.8	-45 16 6.1	10.02
21/5	16 49 6.3	-45 16 6.1	10.13
21/6	16 50 24.5	-45 16 6.1	10.26
21/7	16 51 29.6	-45 16 6.1	10.54
21/8	16 51 54.5	-45 16 6.1	10.24
22/1	16 43 2.1	-45 16 0.0	8.91
22/2	16 44 54.1	-45 16 0.0	9.27
22/3	16 45 40.3	-45 16 0.0	10.58
22/4	16 47 23.3	-45 16 0.0	10.51
22/5	16 48 48.0	-45 16 0.0	10.44
22/6	16 49 6.3	-45 16 0.0	9.86
22/7	16 49 49.0	-45 16 0.0	9.74
22/8	16 49 56.1	-45 16.0 0.0	10.26
22/9	16 51 53.4	-45 16.0 0.0	8.83
23/1	16 44 58.8	-45 15 54.1	10.02
23/2	16 51 56.3	-45 15 54.1	9.36
24/1	16 47 9.1	-45 15 48.2	8.41
24/2	16 48 32.0	-45 15 48.2	SAT.
24/3	16 48 50.9	-45 15 48.2	9.69
24/4	16 50 30.4	-45 15 48.2	9.51
24/5	16 51 47.4	-45 15 48.2	10.58
24/6	16 51 58.1	-45 15 48.2	10.61
25/1	16 44 29.2	-45 15 42.1	10.58
25/2	16 45 16.5	-45 15 42.1	10.61
25/3	16 47 15.0	-45 15 42.1	8.83
25/4	16 47 38.7	-45 15 42.1	10.58
25/5	16 47 46.4	-45 15 42.1	10.09
25/6	16 48 34.9	-45 15 42.1	8.57
25/7	16 48 55.7	-45 15 42.1	SAT.
25/8	16 50 36.3	-45 15 42.1	10.47
25/9	16 50 43.4	-45 15 42.1	8.86
25/10	16 52 45.4	-45 15 42.1	10.16
26/1	16 43 35.9	-45 15 36.1	10.26
26/2	16 43 52.5	-45 15 36.1	10.06
26/3	16 45 19.5	-45 15 36.1	9.41
26/4	16 47 43.4	-45 15 36.1	9.86
26/5	16 47 50.5	-45 15 36.1	9.51
26/6	16 48 51.5	-45 15 36.1	9.66
26/7	16 48 58.6	-45 15 36.1	SAT.

TABLE A29 (CONTINUED)

Loc.	$l = 340 \quad b = 0$		K
	$\alpha$ (1950) $\delta$	(mag)	
	h m s	d m s	
26/8	16 50 48.2	-45 15 36.1	SAT.
26/9	16 51 0.6	-45 15 36.1	10.26
26/10	16 51 53.4	-45 15 36.1	9.44
26/11	16 52 48.4	-45 15 36.1	9.29

TABLE A30  
INFRARED SOURCES

Loc.	$l = 350 \quad b = 0$		K
	$\alpha$ (1950) $\delta$	(mag)	
	h m s	d m s	
1/1	17 15 50.1	-37 23 54.4	10.58
1/2	17 16 17.9	-37 23 54.4	10.13
1/3	17 16 45.8	-37 23 54.4	10.58
1/4	17 16 47.6	-37 23 54.4	9.27
2/1	17 15 34.7	-37 24 0.5	SAT.
2/2	17 15 54.3	-37 24 0.5	8.69
2/3	17 15 57.8	-37 24 0.5	8.76
2/4	17 16 0.2	-37 24 0.5	8.72
2/5	17 16 2.6	-37 24 0.5	8.69
2/6	17 16 19.2	-37 24 0.5	10.26
2/7	17 16 23.9	-37 24 0.5	10.58
2/8	17 16 28.0	-37 24 0.5	10.58
2/9	17 16 31.6	-37 24 0.5	9.82
3/1	17 15 44.2	-37 24 6.5	9.82
3/2	17 16 9.7	-37 24 6.5	9.74
3/3	17 16 16.5	-37 24 6.5	10.26
3/4	17 16 35.4	-37 24 6.5	10.26
3/5	17 16 37.2	-37 24 6.5	8.79
4/1	17 15 38.9	-37 24 12.4	9.66
4/2	17 15 40.4	-37 24 12.4	9.82
4/3	17 15 49.5	-37 24 12.4	9.66
4/4	17 15 56.0	-37 24 12.4	SAT.
4/5	17 16 5.5	-37 24 12.4	10.02
4/6	17 16 12.6	-37 24 12.4	8.86
4/7	17 16 30.4	-37 24 12.4	SAT.
4/8	17 16 33.3	-37 24 12.4	SAT.
5/1	17 15 51.3	-37 24 18.5	9.38
5/2	17 16 2.0	-37 24 18.5	SAT.
5/3	17 16 18.6	-37 24 18.5	9.44
5/4	17 16 36.9	-37 24 18.5	SAT.
5/5	17 16 39.3	-37 24 18.5	SAT.
6/1	17 15 43.0	-37 24 24.5	10.02
6/2	17 15 59.6	-37 24 24.5	8.69
6/3	17 16 6.7	-37 24 24.5	9.51
6/4	17 16 13.8	-37 24 24.5	8.90
6/5	17 16 26.8	-37 24 24.5	SAT.
6/6	17 16 38.7	-37 24 24.5	10.58
6/7	17 16 39.9	-37 24 24.5	9.82
7/1	17 15 38.3	-37 24 30.4	8.76
7/2	17 16 2.6	-37 24 30.4	9.74
7/3	17 16 9.7	-37 24 30.4	SAT.
7/4	17 16 22.7	-37 24 30.4	SAT.
7/5	17 16 36.3	-37 24 30.4	9.51
7/6	17 16 45.2	-37 24 30.4	8.27
8/1	17 15 43.0	-37 24 36.5	SAT.



TABLE A30 (CONTINUED)

Loc.	$l = 350 \quad b = 0$		$K$ (mag)
	$\alpha$ (1950)	$\delta$	
	h m s	d m s	
40/5	17 16 32.4	-37 27 48.4	9.51
41/1	17 15 88.6	-37 27 54.5	9.82
41/2	17 16 5.5	-37 27 54.5	9.27
41/3	17 16 12.0	-37 27 54.5	9.92
41/4	17 16 15.0	-37 27 54.5	9.55
41/5	17 16 21.2	-37 27 54.5	10.26
42/1	17 15 47.2	-37 28 0.4	10.13
42/2	17 16 37.5	-37 28 0.4	SAT.
43/1	17 15 41.5	-37 28 6.4	9.07
43/2	17 15 46.3	-37 28 6.4	8.52
43/3	17 15 57.2	-37 28 6.4	9.66
43/4	17 16 18.3	-37 28 6.4	9.38
43/5	17 16 24.2	-37 28 6.4	10.58
44/1	17 15 27.6	-37 28 12.5	9.38
44/2	17 15 38.3	-37 28 12.5	10.58
44/3	17 15 53.1	-37 28 12.5	10.26
44/4	17 16 8.5	-37 28 12.5	9.74
44/5	17 16 21.5	-37 28 12.5	10.26
44/6	17 16 22.7	-37 28 12.5	10.26
44/7	17 16 39.9	-37 28 12.5	10.26

TABLE A30 (CONTINUED)

Loc.	$l = 350 \quad b = 0$		$K$ (mag)
	$\alpha$ (1950)	$\delta$	
	h m s	d m s	
45/1	17 15 17.0	-37 28 18.5	10.02
45/2	17 15 28.8	-37 28 18.5	10.02
45/3	17 15 40.0	-37 28 18.5	9.66
45/4	17 15 50.1	-37 28 18.5	10.58
45/5	17 15 54.3	-37 28 18.5	10.26
45/6	17 16 5.5	-37 28 18.5	9.82
45/7	17 16 30.1	-37 28 18.5	10.26
46/1	17 15 39.2	-37 28 24.4	9.51
46/2	17 15 41.9	-37 28 24.4	SAT.
46/3	17 16 12.6	-37 28 24.4	10.58
46/4	17 16 20.0	-37 28 24.4	10.41
46/5	17 16 22.1	-37 28 24.4	8.83
46/6	17 16 28.9	-37 28 24.4	8.46
46/7	17 16 38.7	-37 28 24.4	10.26
47/1	17 15 33.0	-37 28 30.5	SAT.
47/2	17 15 46.6	-37 28 30.5	9.21
47/3	17 16 37.8	-37 28 30.5	9.82
48/1	17 15 11.9	-37 28 36.5	9.38
48/2	17 15 25.9	-37 28 36.5	SAT.
48/3	17 15 39.8	-37 28 36.5	9.27

TABLE A30 (CONTINUED)

Loc.	$l = 350 \quad b = 0$		$K$ (mag)
	$\alpha$ (1950)	$\delta$	
	h m s	d m s	
48/4	17 16 0.8	-37 28 36.5	10.58
48/5	17 16 5.2	-37 28 36.5	8.60
48/6	17 16 30.7	-37 28 36.5	10.41
49/1	17 15 7.8	-37 28 42.4	9.07
49/2	17 15 13.1	-37 28 42.4	9.32
49/3	17 15 47.7	-37 28 42.4	9.32
49/4	17 16 17.3	-37 28 42.4	10.58
49/5	17 16 31.6	-37 28 42.4	10.26
49/6	17 16 42.8	-37 28 42.4	10.41

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