The All Sky Automated Survey. Catalog of Variable Stars. I. 0^h-6^h Quarter of the Southern Hemisphere

by

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ABSTRACT

This paper describes the first part of the photometric data from the $9^{\circ} \times 9^{\circ}$ ASAS camera monitoring the whole southern hemisphere in the *V*-band. Data acquisition and reduction pipeline are described and preliminary list of variable stars presented. Over 1 300 000 stars brighter than V=15 mag on 10 000 frames were analyzed and 3126 were found to be variable (1055 eclipsing, 770 regularly pulsating, 132 Mira and 1169 other, mostly SR, IR and LPV stars). Periodic light curves have been classified using the fully automated algorithm, which is described in detail. Basic photometric properties are presented in the tables and exemplary light curves are printed for reference. All photometric data are available over the INTERNET at http://www.astrouw.edu.pl/~gp/asas/asas.html or http://archive.princeton.edu/~asas.

Key words: Catalogs – Stars: variables: general – Surveys

1. Introduction

The All Sky Automated Survey (ASAS, Pojmański 1997, 1998, 2000) has finally achieved its important goal – photometric monitoring of the large part of the sky (Paczyński 1997). After installing two wide-field $(9^{\circ} \times 9^{\circ})$ cameras in October 2000 (Pojmański 2001) ASAS gained capability to measure brightness of the observable stars on the nightly basis.

The prototype ASAS system using small commercial CCD camera, 135 mm f/1.8 telephoto lens and *I*-band (Schott RG-9, 3mm) filter was used in the years 1997–2000 to monitor 0.7% of the sky to the limiting magnitude of $I \approx 13$ mag. During three years of operation it collected over 50×10^6 measurements of over 150 000 stars and detected almost 4000 variable stars.

The instrument, data acquisition and reduction pipeline, the ASAS Catalog and summary of the variability search were described by Pojmański (1997, 1998, 2000).

In summer 2000 we have installed upgraded ASAS-3 system in the dome of the 10" astrograph at the Las Campanas Observatory (operated by the Carnegie Institution of Washington). New hardware consisted of the three independent instruments

each equipped with the automated paralactic mount, imaging optics with standard filter, 2048×2048 (14 μ m pixels) CCD camera and dedicated computer.

Two wide-field systems are equipped with the Minolta 200/2.8 APO-G telephoto lenses giving superb sharpness (FWHM < 2 pixels) but also strong vignetting (40–50% in the corners). The field of view of is 8.8×8.8 . The two systems are equipped with the standard V and I filters.

Narrow field instrument, D = 250 mm, F = 750 mm, is a Cassegrain telescope with a three element, Wyne-type field corrector. It gives sharp images (FWHM < 2.2 pixels) in the field of 2° diameter. With 2048×2048 CCD the field of view is 2.2×2.2 . This system has I filter in its optical path.

Three AP-10 (Apogee) commercial cameras were purchased for the project. High readout noise ($> 10 \, e^-$) and 14 bit ADC were accepted as a trade-off for 5 sec readout time. Unfortunately two of three systems did not meet factory specifications (increased noise resulting in substantially reduced sensitivity, failed thermocooler) and had to be sent for repair after first months of operation. Thus ASAS-3 was left with only wide-field *V*-band camera working.

2. Observations

Mechanical quality of the mount allows for exposures as long as 5–10 minutes (without guiding) for wide-field systems but only 3 minute exposures are taken in the V-band giving the limiting magnitude of almost 15.0 mag and causing saturation of stars brighter than $V=8.5\,$ mag.

The whole sky has been divided into 709 $8^{\circ} \times 8^{\circ}$ fields of which 422 (60%) with $\delta < +20^{\circ}$ can be observed from Las Campanas (up to 300 on a single summer night). Due to the obscuration by the dome only fields with $\delta < +2^{\circ}$ were observed by the V instrument.

The routine observing schedule for each wide-field camera consists of cycling through the list of fields and picking up the one that is the most suitable for observation at the moment. Selection algorithm was not uniform enough, so equatorial fields were observed two times less often than the circumpolar ones.

Although the sky-flats are not working properly for the wide-field instruments we use them both as the raw correction for vignetting and as the pixel-to-pixel sensitivity variation. Each night a series of sky-flat exposures is taken after the sunset, followed by dark exposures.

Between 160 and 200 frames in the V-band are taken each night (depending on the season), enabling camera to cover the whole available sky in less than two days. The raw data stream of one ASAS-3 instrument is thus about 1.5 GB per night. The loss-less compression reduces this stream to 0.7 GB per night (2–3 DAT-3 tapes per month), so we are considering some lossy compression in the future.

Vol. 52

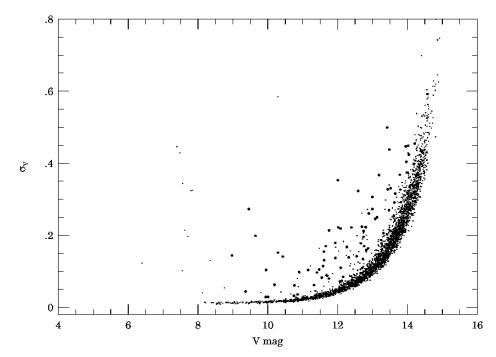


Fig. 1. Standard deviation σ_V of the stellar magnitudes vs. V-band magnitudes observed with wide-field V camera and 3-minute exposures for the field F0120-72-019 (containing the SMC). Larger dots denote detected variables. Small dots lying above 95 centile are mostly due to the "long-term" variables not recognized in this work.

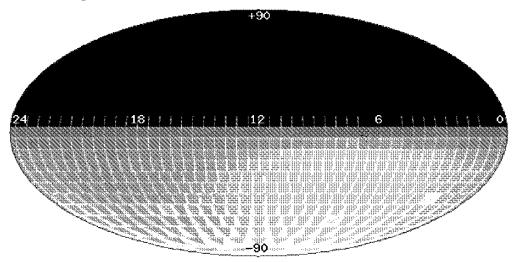


Fig. 2. Coverage of the sky with V-band observations after one year of ASAS-3 operation. White color corresponds to the area observed at least 250 times, dark gray – at least 30. Only fields centered within $0^h < \alpha < 6^h$ are analyzed in this paper.

3. Data Reduction

The data reduction pipeline used for ASAS 1–2 observations was described by Pojmański (1998). ASAS-3 incorporates only some minor changes to that scheme.

Currently used optics gives sharp images and produces less scattered light than the previous one. In fact images can be so sharp (FWHM ≈ 1.4 –1.6 pixels) that only aperture photometry can properly deal with them. Therefore we are now mak-

400

ing simultaneous photometry through five apertures varying in size from 2 to 6 pixels in diameter. Data for each aperture are processed separately, so one can use data obtained with the smallest one for the faint objects and with the largest one for the brightest objects in the catalog.

Reducing ASAS-2 data we partly managed to correct photometry for saturation and bleeding and included overexposed stars in the ASAS Catalog. Unfortunately present CCD cameras do not allow for such correction so the photometry of saturated images is now practically useless.

Less scattered light in the optics (partly due to the smaller opening: f/2.8 vs. f/1.8) have substantially improved the quality of the sky-flats allowing us to obtain good first-order correction of the vignetting.

The astrometry is now based on the ACT catalog and using third order polynomials in X and Y we usually obtain positional accuracy better than 0.2 pixels (< 3 arcsec).

The zero-point offset of our photometry is based on the Hipparcos (Perryman et al. 1997) data. A few hundred Hipparcos stars are usually located in each $9^{\circ} \times 9^{\circ}$ field. We use them for precise offset calibration. The rms scatter of the difference between ASAS and Hipparcos photometry calculated for all stars lying close to the frame center is about 0.015 mag (Fig. 3a). Close to the edges it is significantly larger (Fig. 3b) due to systematic effects caused by non-perfect flat-fielding. Errors are most prominent (Fig. 3c) when we compare brightness of the stars located in the overlapping areas of the neighboring fields (Fig. 3c).

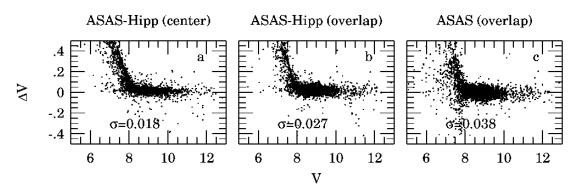


Fig. 3. Difference between Hipparcos and ASAS-3 magnitudes for all available stars.

The final catalog is divided in two parts now. The first one is relatively slow, but it is capable to store information about all sources detected on the frame. This catalog is regularly analyzed and significant measurements are piped into the second, fast-access part of the catalog. The remaining data (usually single entries caused by the image flaws) are archived separately.

All data processing is normally done in real time on the instrument's computer, but due to the necessity of fine-tuning of many elements of the pipeline we are reprocessing the data from the tapes at Warsaw headquarters.

4. Variability Search

Data analyzed in this paper cover the period of one year (2001) of unattended operation. During that time all southern sky has been observed at least 50-150 times. Over 50~000 frames have been collected in the V-band. More than 10~000 of them are in $0^h - 6^h$ quarter of the Southern Hemisphere alone. 1.3 million of stars have been measured in this area more than 40 times. These stars were subject to variability analysis similar to that performed for the ASAS-2 data (Pojmański 2000).

First, light curves for each star in the field were extracted and median magnitude and dispersion were calculated (in each aperture separately). These were plotted on the magnitude-dispersion diagram (Fig. 1) and some centile curves were obtained. Stars lying above the 95% centile were selected for further analysis.

For each suspected star AoV period analysis (Schwarzenberg-Czerny 1989) was performed. Stars with statistics value larger than 10 were accepted. The other stars were subject to long-term variability tests: variance analysis in variable-length bins and trend analysis (average number of consecutive observations showing the same direction of brightness change). Proper thresholds for these observables were selected after tests. Finally all stars showing dispersion above 99.9% centile were added to the set.

As many as 18 000 stars have passed selection criteria and had to be inspected visually. About 3200 of them passed visual inspection. The large number of rejected stars was due to several reasons: First – small number of observations, which usually forces AoV algorithm to produce spurious (or at least hard to verify) frequencies. Second – trends (slopes) in brightness changes of some stars which were partly produced by the increasing defocusing of the optics in the course of the last two months. We decided not to include any light variation of this kind, although we are convinced that some of these are real. Third – saturation, which disappeared for some stars after they became defocused.

The relative number of variable stars detected so far (0.2% of the total) is 10 times lower than that obtained by ASAS 1–2 in the selected fields. This has been caused by several factors.

First, we have investigated only stars above 95% centile in the magnitude-dispersion diagram. In the previous data we have inspected almost 75% of the stars, discovering many low-amplitude variables. This will be done also for the present data set after the more efficient algorithm for data selection is constructed.

Second, data span is one year now *vs.* almost three years of previous run. Together with omitting most "trend" objects we detected now a much smaller number of long-term variables. Despite quite subjective discrimination between "periodic" and "long-term" variables we classified previously about 400 stars (0.26% of the observed sample) as periodic objects and 3400 (2.2%) as long-term variables *vs.* 2200 (0.16%) and 1000 (0.08%), respectively, now.

Third, number of data points for each star is on average a few times smaller than in ASAS-2 data.

Fourth, data sampling was different – a few times per night previously *vs.* once per night now. This resulted in tremendous aliasing problems. In many cases it was not possible to decide which of many possible frequencies ranging from 0.1 day to 10 days is correct. In the case of serious doubts we usually listed the frequency corresponding to the highest peak in the power spectrum. We will solve this problem in the future observing each field for some time in the "high frequency" mode – at least several times per night. As for now we can only present our best choice and try to improve lists available on the INTERNET as soon as new data are available.

506 variable stars observed by ASAS-2 are located in the currently analyzed region. 466 of them were observed with the ASAS-3. Most of the remaining objects were faint in the *I*-band, so probably were too faint for V observations. One star was bright (053820–6937.4 $I \approx 9.69$ mag), but since it is an irregular variable it might have faded below our V detection limit. Only about 100 of 466 stars were detected to be variable in the V-band by the present analysis.

62 other objects were selected by the detection algorithm but were rejected after visual inspection. Only 3 of them were of "periodic" type and in all cases primary rejection reason was a small number of points and low power in spectrum. In one case (053936–7958.6) light curve had an amplitude of 0.1 and only 40 data points. ASAS-2 has easily detected its variability with almost 4000 measurements. The rest of the light curves that did not pass visual inspection were of the "long-term" type and were rejected either because of the "trends" described above or small number of points.

The other 300 (65%) stars were not even preselected by the selection algorithm, again due to either small number of data or too small changes in brightness. In most cases, however, plotting their light-curves folded with the known period clearly reveals periodic variation.

5. Variability Classification

Only 2000 of the 18 000 stars in the initial set of the candidate variable stars were selected by a quite robust long-term selection algorithm. Almost 1500 of them have passed visual inspection.

The other 16 000 stars were selected by the AoV algorithm, thus their folded light curves had to be inspected visually one by one. Unfortunately, the relative number of true variables dramatically decreases as the AoV statistics comes closer to the detection threshold (which was set to 10), making verification process highly non-efficient.

Survey catalogs do not necessary need to provide object classification, but their usefulness increases if they do. However, since the volume of data is growing rapidly, such step requires some automation providing necessary speed, repeatability and consistency.

Vol. 52

Several attempts have been made so far to create classification machines usually based on neural networks and machine learning (e.g., Eyer and Blake 2002, Woźniak et al. 2002b) or on direct parametric analysis (e.g., Udalski et al. 1999, for Cepheids, Szymański, Kubiak and Udalski 2001 for contact binaries).

Here we propose simplified approach that mimics nonlinear neural network behavior which parameters ("weights") can be easily defined in terms of the light curve parameters. "Teaching" in this case is done by defining the multidimensional solids describing selected classes. Classification could then be done by selecting the closest solid in the multidimensional parametric space. To simplify our task we use carefully selected two-dimensional cross-section of that space.

Ruciński (1993) showed that light curves of the contact configurations of W UMa systems can be easily described using only two coefficients, a_2 and a_4 , of the cosine series $\sum a_i \cos(2\pi i \phi)$. Following his work we tested behavior of semi-detached and detached configurations in the a_2-a_4 plane.

The large set (4500) of theoretical light curves was calculated using the Wilson-Devinney code (1972) for a wide range of binary parameters: masses M_1 , M_2 temperatures T_1 , T_2 and radii R_1 , R_2 characteristic for the main sequence O-M stars, periods P varying from the contact configuration to 100 days and inclinations i in the range of 60–90 degree. For each combination of M_1 , M_2 , P we varied R_1 and R_2 between the main sequence size and Roche lobe.

Harmonic series of the form:

$$\sum_{i=1}^{4} a_i \cos(2\pi i \varphi) + b_i \sin(2\pi i \varphi) \tag{1}$$

was then fitted to all light curves.

Fig. 4a shows the relation between coefficients a_2 and a_4 . Filled and open dots represent contact and detached configurations, respectively, while pluses and crosses denote semi-detached configurations with primary and secondary component filling Roche lobe, respectively. Grey area covers over-contact configurations calculated by Ruciński (1993, Fig. 6).

Fig. 4a clearly indicates that in most cases contact, semi-detached and detached configurations can be unambiguously distinguished in the a_2-a_4 plane. However, looking at individual light curves one can note some confusion introduced by widely used EW, EB, EA classification of the light curves: contact or almost contact configurations do not necessarily have minima of the same depth; there are frequent semi-detached configurations with equal minima; detached binaries do not necessarily have flat maxima. Thus, although often used in such context, EW, EB and EA classes do not correspond entirely to the contact/detached discrimination. Since we feel that the latter is physically more interesting, we would prefer to recognize "c", "sd", and "d" configurations. Thus, we will classify as EC the contact configurations lying above the upper line in Fig. 4a, as ED – the detached binaries located below the lower line, and as ESD – the remaining semi-detached systems located between dashed lines.

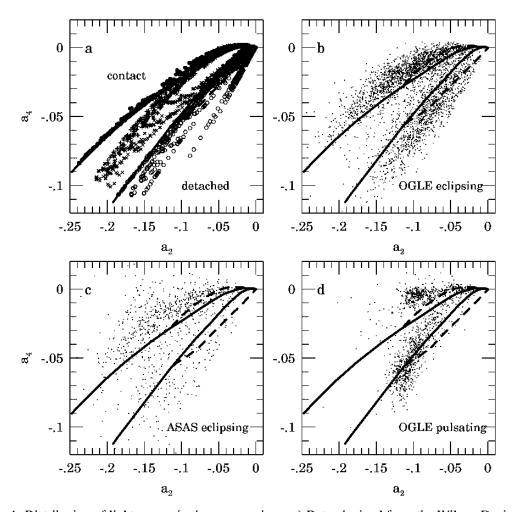


Fig. 4. Distribution of light curves in the a_2-a_4 plane. a) Data obtained from the Wilson-Devinney simulation are plotted. Grey area encloses over-contact models calculated by Ruciński (1993). Two continuous lines delineate contact and detached configurations, while semi-detached systems are located between dashed lines; b) Eclipsing variables from OGLE Bulge database (Woźniak *et al.* 2002a); c) ASAS eclipsing binaries (this paper); d) OGLE Bulge pulsating variables.

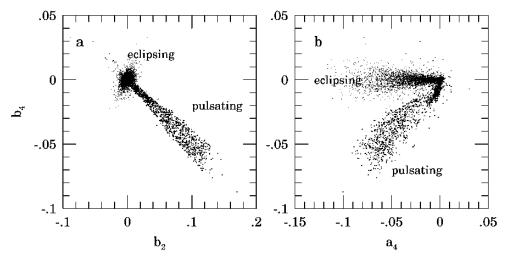


Fig. 5. Separation of eclipsing and pulsating variables in a) b_2-b_4 and b) a_4-b_4 planes. Data plotted are for the OGLE Bulge variables.

Vol. 52

In the case of real data some additional steps have to be taken before applying Fourier decomposition. First, the "base" frequency, f_0 , that equals to the frequency of the eclipsing system and is half the pulsation frequency for the pulsating stars has to be located in the power spectrum. AoV spectrum puts most of the power either into $2f_0$, f_0 or even $2/3f_0$, depending on the light curve shape and distribution of observations – complicating automation of the process.

Fortunately a slightly slower ORTPER code (AoV Multiharmonic Periodogram for Uneven Sampling, Schwarzenberg-Czerny, 1996) usually properly selects $2f_0$ for the pulsating stars and f_0 or $2f_0$ for eclipsing light curves. The final test on f_0 is done performing Fourier decomposition using f_0 . In properly phased light curve we expect the a_2 term to be dominant, so if we obtain $a_4/a_2 > 1$ we have to halve the initial value of f_0 .

The second step necessary for direct comparison of the Fourier coefficients is a consistent zero phase determination. We do that by locating minimum on the reconstructed light curve. In the present work we only use the first four harmonics. This reduces our ability to recognize tiny features on the light curves in return for smaller coefficient scatter.

Large data set of uniform light curves is necessary to efficiently divide parametric volume into solids corresponding to different classes. We have used three major sources of data: our own (ASAS) light curves that were provisionally classified into DSCT, RRAB, RRC, DCEP, EW, EB and EA classes; OGLE SMC and LMC Cepheids (Udalski *et al.* 1999a, 1999b) carefully divided into DCEP_{FU} and DCEP_{FO} (fundamental and first overtone) classes; and subset of OGLE Bulge variables (Woźniak *et al.* 2002a), that were provisionally divided into pulsating and eclipsing groups.

In Fig. 4b the OGLE Bulge eclipsing variables are plotted, while in Fig. 4c ASAS data from this paper. It is interesting that in the case of OGLE data significant deficiency of the semi-detached systems could be spotted.

In Fig. 4d the OGLE Bulge pulsating stars are plotted to show that a_2-a_4 plane cannot be used for separating pulsating and eclipsing systems. Instead b2-b4 or a4-b4 coefficient pairs (Fig. 5ab) provide necessary segregation.

Finally we need to recognize different types of pulsating stars. We have done this using $a_{42} = \frac{a_4}{a_2}$ vs. $\varphi_{42} = \varphi_4 - \varphi_2$ (radial coordinates, Fig. 6ab) and $\log P$ vs. a_{42} (Fig. 6cd) diagrams, on which categorized ASAS data and OGLE Bulge pulsating stars were plotted. The latter one is an equivalent of the well known R_{21} vs. $\log P$ diagram used for Cepheid classification. Although ASAS data were scattered, they provided necessary clues to locate different classes of variables in the above diagrams. However, final sharp polygons in both planes were determined using better quality data from the OGLE Bulge catalog.

Besides the period *P* three other non-Fourier parameters describing light curves were needed to reduce the number of wrong classifications: two describing difference in minima and maxima levels and the third describing vertical asymmetry of

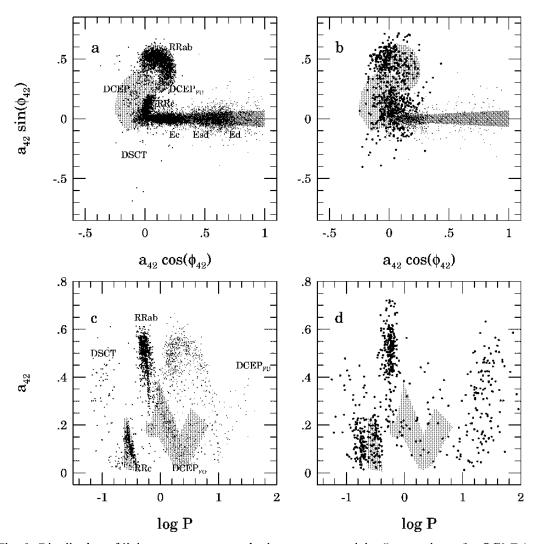


Fig. 6. Distribution of light curve parameters in the $a_{42}-\varphi_{42}$ and $logP-a_{42}$ planes for OGLE (a,c) and ASAS (b,d) variables. Tiny dots in the upper panel are eclipsing binaries, while all larger ones – pulsating.

the light curve (fraction of measurements above the average level). They were necessary, because the fourth order harmonics could not properly recognize narrow, unequal minima or sharp maxima.

Process of automated classification is now straightforward: Each class is described by a set of polygons in several cross-sections of the parametric space. In each plane score function is calculated: it equals 1.0 inside the polygon and decreases exponentially outside the polygon. The rate of decrease depends on the accuracy of the parameter, so we allow large deviations for noisy data. All scores are multiplied and the class with the highest result is selected as a winner. If, however, other classes have similar scores (at least 75% of the maximum) multiple classification is accepted. If the highest score is below 0.50 uncertainty flag (:) is added, while for very low scores (less then 0.2) general class of PULS was applied. So far we have defined three eclipsing classes: EC, ESD, ED and six pulsating: DSCT, RRAB, RRC, DCEP_{FU}, DCEP_{FO}, M.

Vol. 52

Such algorithm has many advantages. It is fast, easy to verify and very flexible. Adding new parameters (like location in color-magnitude or period-luminosity diagrams, spectral type etc.) is simple and needs only defining a new polygon in the parametric space. The obvious disadvantage is that only predefined classes could be selected.

In this paper, using only one filter photometric data, we are in fact classifying data according to the light curve shape and period only. Therefore caution must be taken not to over-interpret results: Many RRC objects might be in fact EC or DSCT. The algorithm will usually recognize and mark such situations. DCEP classes are based on the SMC/LMC data and will not entirely correspond to the Galactic objects. DCEP_{FU} are usually easily recognized by their RRAB-like shapes, but around $\log P = 1$ many sinusoidal cases are encountered and probability of wrong identification increases. M (Mira) class was defined for objects with $\Delta V > 2$ mag and $P > 70^{\rm d}$, so some SR, IR and even CV objects might have been also classified as M.

We have discovered many "M" shaped variables, both in ASAS and OGLE data, with periods of tens of days. The algorithm tends to classify them as EC or ESD, implying they are contact or semi-detached giant stars. In fact, in case of OGLE variables most of them are located close to the Red Clump (Udalski, private communication), so there is no inconsistency. This is why we did not restrict EC class to the short periods only.

Another problem with automated classification is caused by semiregular and irregular variables, which often show strong signal in the power spectrum. Unless detected by other means these stars have a good chance to be falsely classified. We have tried to define SR and IR classes in terms of long-term variations in the light curve, but results are not satisfactory yet. For the present analysis we decided to relay on the initial visual inspection of light curves, during which we have selected about 1100 irregular ones that were marked as MISC and were not subject to automated classification. These are mostly semiregular (SR), irregular (IR), slow irregular (L), LBV and other less regularly changing stars with time scales of variation between 10 and 200 days.

6. The Catalog

Current list of candidate variable stars in the first quarter of the Southern Hemisphere contains 3126 stars.

For each star the following data are provided: ASAS identification ID (coded from the star's α_{2000} and δ_{2000} in the form: hhmmss-ddmm.m), period P in days (or characteristic time scale of variation for irregular objects), T_0 – epoch of minimum (for eclipsing) or maximum (for pulsating) brightness, V_{max} – brightness at maximum, ΔV – amplitude of variation, Type – one of the predefined classes: EC, ESD, ED, DSCT, RRC, RRAB, DCEP_{FU}, DCEP_{FO}, M, PULS and MISC.

 $$T$\,a\,b\,l\,e\,1$$ ASAS Catalog of Variable Stars. $0^h-6^h\,Quarter$ of the Southern Hemisphere.

ID	P	V	ΔV	ID Store	P	V	ΔV	ID	P	V	ΔV
000108-3330.1	0.46658	11,51	0.43	Stars (000202-6653.3	classified as:	EC 12.16	0.60	000309-3456.3	0.265418	12,40	0.47
000336-1452.4	1.05465	10.93	0.32	000424-7437.9?	0.47113	12.42	0.22	000425-5346.4	0.288260	13.82	0.97
000504-3727.0?	0.40251	12.43	0.32	000514-0732.6?	0.38617	12.57	0.97	000622-7621.8?	0.35196	13.65	0.66
000650-3537.5	0.38318	12,19	0.35	000815-2414.7?	0.262427	13.25	0.51	000909-6650.8	0.329324	12,39	0.44
000932-6905.4	0.36725	11.68	0.31	001215-0718.6?	0.76778	11.77	0.36	001229-1052.5?	0.76042	11.43	0.39
001313-5258.7	0.299992	12.04	0.36	001356-3820.4?	0.87903	12.26	0.31	001447-3914.6v	0.36436	11.81	0.84
001508-5335.4	0.239485	13.44	0.69	001547-3105.7v	0.320823	11.72	0.68	001721-7155.0v	0.59483	10.06	0.51
001750-5223.0	0.38384	13.36	0.55	001846-3940.6v	0.41361 0.41273	9.19 11.32	0.28	001913-5608.9	0.289702 0.239260	13.17 12,10	0.64
001913-6302.2? 002112-6251.6?	0.262686 0.42100	13.43 12.23	1.03 0.49	002021-2519.37 002123-3925.1	0.41273	12.89	0.24 0.76	002102-7547.6 002322-4226.8?	0.239200	11.14	0.79
002328-2041.8	0.42100	9.86	0.49	002329-6831.5?	0.520426	12.23	0.76	002325-4220.87	0.02833	13.13	0.32
002328-2041.8	0.313670	12.90	0.73	002539-4229.1	0.44929	10.16	0.20	002806-1648.0	0.46808	12,71	0.53
002811-7026.8	1.01637	10.80	0.41	002821-1453.3	0.40266	11.54	0.44	002821-2904.1	0.269896	12.00	0.55
002857-0812.7?	0.267421	12.59	0.45	003009-3114.8?	0.343184	12.60	0.54	003225-2452.6v	0.56628	10.02	0.28
003336-4349.3v	0.42240	11.06	0.69	003406-5103.0	174	9.58	0.17	003514-4143.2?	0.74857	9.47	0.29
003628-2540.4v	0.51155	10.31	0.68	003647-1958.0?	0.336706	13.83	0.73	004009-2002.9?	0.46068	12.70	0.31
004111-4344.9?	0.36523	13.38	0.45	004114-1800.2?	0.207484	13.72	0.70	004240-2956.7	0.301682	11.05	0.42
004312-5008.7?	0.304819	13.56	0.58	004618-3108.6	0.54671	11.53	0.50	004625-1602.9?	0.89908	12.73	0.41
004634-3331.0	0.299138	12.59	0.83	004647-6002.5	0.46625	12.84	0.49	004717-1941.6	0.48881	11.31	0.40
004801-4240.0	0.42970	12.40	0.62	004843-6143.7?v	1.05386	9.39	0.20	004857-3718.6	0.37503	11.35	0.48
005008-4130.5	0.335422	11.74	0.34	005016-6318.5?	0.273454	13.25	0.58	005521-4427.7	0.340220	12.56	0.43
005530-1106.6	0.54326	10.13	0.52	005543-0205.6v	0.52242	10.43	0.56	005702-7925.7?	0.55230	12.13	0.32
005735-5246.0 005853-0642.9?	0.291417 0.318030	12.16 11.76	0.33	005830-3659.9 005856-7941.3	14.55 0.292275	11.13 13.24	0.28	005848-3027.1 010007-0744.5	0.41897 0.70443	13,42 11.60	0.82
010055-7511.9	0.55933	12.70	0.28	010303-4531.3	0.292273	13.15	0.32	010327-1210,4	0.70443	10,21	0.41
010033-7311.9	0.33233	13.23	0.70	011031-1804.1	0.330643	11.93	0.44	011054-1857.6	0.46669	12.07	0.41
011113-7910.6v	0.284032	12.28	0.87	011116-1425.3	0.60605	10.99	0.18	011213-1956.6?	0.39336	11.26	0.27
011236-6429.5	0.37226	11,71	0.48	011243-8051.1	42,7	10.44	0.23	011315-6411.6?	9.550	10.33	0.19
011509-6155.2?	0.45601	12.69	0.31	011520-5539.2?	0.37359	12.65	0.38	011612-0659.6	0.324740	12.66	0.63
011638-3942.5v	0.37992	10.32	0.52	011816-4853.2	0.40504	12.96	0.46	011833-4217.5	0.293548	11.49	0.20
011910-2746.2	0.39666	12.30	0.48	012040-5702.5?	0.39063	11.70	0.30	012133-2907.8v	0.42290	10.44	0.45
012244-7328.6?	0.75718	12.52	0.23	012336-2515.9?	0.291046	12.00	0.27	012350-6558.5?	0.38472	12.83	0.50
012450-3241.4	0.308971	11.45	0.58	012513-1144.3	0.35288	13.29	0.80	012755-2301.7v	0.58621	11.06	0.63
012841-5037.0?	0.93595	12.05	0.26	012917-7243.4	181	11.59	0.74	013000-3040.5	0.284678	12.90	0.53
013003-1257.4	0.309407	13.16	0.77	013107-4359.6v	0.71987	12.79	0.79	013416-0724.7	0.73471	11.85	0.43
013549-7546.0?	0.95085	11.60	0.10	013624-6500.6	0.41796	11.99	0.42	013711-3459.3v	0.46426	11,02	0.96
013733-0208.4	0.83909 0.256202	11.76	0.74	014226-4557.0v 014447-7500.1?	0.234724 0.320917	12.65	0.67	014255-2007.5 014450-7536.8	0.36595 0.39699	11.11	0.37
014434-7401.7? 014605-4934.1?	0.236202	13.64 10.32	0.68	014447-7300.17	10.889	12.30 9.32	0.23	014656-0945.1?v	0.48596	13.59 10.92	0.74
014725-1704.0	0.282927	11.86	0.35	014838-5718.6?	52.7	11.42	0.16	014854-2053.6v	0.46330	10.40	0.74
014957-0811.8?	0.44858	12,25	0.62	015017-7733.4?	0.268746	13.25	0.57	015024-4658.4v	0.306617	12,23	0.55
015053-2515.3	0.43173	12.46	0.53	015216-2026.9	0.290812	13.24	0.69	015311-2105.7?	1.4777	11.45	0.14
015438-0409.2	0.38764	11.54	0.45	015531-2633.1	0.47923	11.77	0.37	015536-2432.8	0.42424	12.17	0.35
015606-0044.3v	0.74078	10.96	0.50	015705-5051.0	191	11.01	0.39	015749-2740.4	0.341711	13.07	0.56
015911-1743.7?	0.44780	13.65	0.64	015915-7059.5	0.292020	11.58	0.44	015931-1130.8?	0.47145	12.19	0.31
015937-0331.0	0.63152	9.35	0.33	020012-1812.5v	0.79044	10.58	L03	020119-3704.9v	0.308128	9.86	0.46
020156-4218.7?	1.8660	10.96	0.13	020332-3005.1	0.36814	10.68	0.35	020340-2500.8?	0.74346	13,44	0.70
020800-2858.7?	0.42204	11.98	0.32	020933-5945.1	0.36842	12.13	0.26	021147-7139.0	0.39085	11.30	0.24
021229-6911.5	0.36128	10.93	0.31	021306-3247.0?	0.311751	11.14	0.14	021503-6549.1?	0.297448	13.16	0.55
021544-2024.2?	0.41046	13.76	0.74	021552-3643.2	0.346348	12.27	0.73	021625-4312.2?	0.41656	12.71	0.34
021649-4145.2 022014-0252.0	0.37148	10.25	0.33	021900-2305.5?	0.61105	12.75	0.31	021940-6138.2	0.50904	9.64	0.45
022014-0252.0 022211-6343.9?	0.64346 0.297511	10.61 12.20	0.40	022133-4216.2 022358-1247.7?	0.251578 0.80069	12.86 10.51	0.44 0.19	022153-1740.7v 022406-5125.2	0.338960 0.39060	11,59 12.56	0.69
022508-4239.5	0.40408	11.41	0.52	022517-2354.2	0.36267	12.47	0.19	022556-4921.9	0.35990	12.01	0.80
022611-4313.7	0.260948	13.26	0.64	022810-0659.4	0.36984	11.50	0.33	022830-2848.2?	0.53228	12.98	0.28
022846-0229.3	0.58467	11.56	0.72	022902-3025.8	0.38652	10.04	0.27	022917-7745.3?	0.60214	11.49	0.23
022938-7149.0?	0.289622	12.51	0.41	023056-1644.7	1.6531	11.66	0.40	023130-1252.4	0.258565	13.75	0.78
023135-1620.6?	0.292432	13.62	0.63	023152-3837.4	0.58873	9.91	0.38	023215-5002.6?	0.327647	11.91	0.29
023304-3627.9?	0.74267	12.55	0.30	023309-1717.6	0.290404	13.09	0.63	023432-3515.2	0.35629	12.60	0.62
023525-1518.7	2.8709	14,12	1.08	023830-4648.0?	0.66836	9.64	0.36	023833-1417.9v	0.44079	9,47	0.58
023848-1859.1?	9.959	12.15	0.26	023930-7456.6	0.42418	12.06	0.27	023949-2618.1	0.49485	10.65	0.34
024010-4555.0	0.88986	10.67	0.41	024055-6644.1?	0.50557	12.64	0.28	024144-2601.8v	0.61790	13.13	0.63
024145-6734.4?	0.35583	12.00	0.30	024207-5940.0	0.42135	11.79	0.19	024429-7636.8?:	0.45929	11.36	0.57
024507-1807.9	0.36493	10.94	0.47	024508-2821.1	0.86285	13.35	0.60	024526-5941.9	0.42882	12.48	0.52
024536-2932.19	0.325294	12.92	0.31	024557-2918.8?	0.38751	12.55	0.63	024612-4017.9	0.53651	12.44	0.34
024633-7010.1? 024811-1518.1	0.41533	13.02	0.36	024746-5105.1 024828-2732.7	0.77569	10.12	0.36	024750-7539.6?	0.61363	12,29	0.41
024959-1634.7	0.36658 0.38264	12.76 12.62	0.71	024828-2732.7	0.75220 0.271753	9.96 12.48	0.27 0.53	024840-3309.2 025018-3241.8	0.35205 0.322037	12.82 12,16	0.77
024959-1634.7	0.58204	10.14	0.47	025016-4649.27	0.42122	10.70	0.55	025616-2336.5	0.322037	12.16	0.79
025618-2705.5?	1.2576	14.60	1.02	025619-7431.1?	0.336582	12.80	0.43	025643-5210.4	0.37723	12.49	0.59
025853-4308.9	0.40598	12.65	0.49	025931-3238.9v	0.72604	10.32	0.63	025958-1627.4	0.84475	10.13	0.32
	0.77337	12.21	0.29	030031-7707.7?	0.56410	13.36	0.42	030050-4412.2	0.81368	11.57	0.31
030005-1108.5	0.77337										
030005-1108.5 030218-0238.0?	0.77557	11.54	0.27	030235-5625.1	0.42804	12.71	0.55	030254-1554.1	1.01565	10.07	0.31

Table 1

Continued

ID	p	V	ΔV	ID	P	V	ΔV	ID	P	V	ΔV
030521-0619.9?	0.41130	11.26	1 0.34	Stars 030615-6521.6?	classified as 0.81988	EC 10.22	0.16	030617-6812.5	0.41612	9.51	l 0.46
030701-5608.1v	0.62511	10.96	0.78	030703-2602.5	0.52669	10.22	0.16	030707-7935,2	0.36216	13.52	0.46
030735-5721.9?	0.37646	11.85	0.41	030827-1609.1	0.47637	12.99	0.52	030953-0653.6v	0.44528	11.15	0.56
031133-3257.8	0.45131	13.46	0.47	031141-0043.8	0.79359	12,22	0.56	031235-1931.9v	0.62856	12.47	0.44
031246-1704.0	0.38469	13.11	0.47	031252-0744.3	0.36011	12.11	0.72	031341-8045.4	0.292302	12.77	0.44
031506-1707.9?	0.94768	13.26	0.29	031509-5144.2?	21.46	9.75	0.13	031529-1146.2 031740-5318.6?	0.42979	10.82	0.28
031619-6718.9? 031751-3615.5	0.43043 0.39508	13,59 12.05	0.56 0.67	031649-1956.5? 031808-8231.4?	12.97 78.8	10.00 11.12	0.19	031909-3507.0?	0.39285 2.2613	12.48 11.22	0.31
031916-3842.1	0.49110	10.18	0.45	031928-1944.0	0.37306	13.10	0.59	032027-1650.5?	0.307546	11.86	0.33
032038-5902.4v	0.35496	13.64	0.68	032053-1703.5?	0.76784	11,73	0.24	032202-5112.8	8.746	12.16	0.23
032212-4001.0	0.335329	12.66	0.64	032351-4024.3?	0.55273	11.78	0.23	032439-0209.5	0.82571	12.31	0.53
032455-0559.5?	35.3	12.98	0.34	032513-4002.7	0.40473	12.64	0.59	032521-2037.6?	0.69259	14.18	0.80
032629-3101.3 032736-7250.9	0.63867 0.309847	10.81 10.54	0.43	032635-5229.5? 032754-5152.7?	0.36929 0.52510	13.11 13.88	0.42	032709-5333.1 032812-2503.5	0.96640	11.26 11.37	0.17 0.65
033142-5927.4	0.37799	12,17	0.44	033148-2631.7	0.300162	13.89	0.73	033205-7259.0?	0.47139	12.18	0.28
033527-7445.0?	0.40170	12.98	0.56	033543-2021.1	0.327086	11.60	0.70	033623-0755.6	0.56809	11.69	0.52
033702-4131.7v	0.292340	9.59	0.30	033710-7053.9?	0.41435	11.18	0.18	033725-0126.7	0.47504	11.09	0.38
033809-1913.4	0.341545	12,52	0.67	033856-3633.0?	0.38980	12.34	0.28	034135-1143.0?	0.40725	13.52	0.67
034202-5145.2 034340-4505.2?	0.40921 0.35408	10.82 13.51	0.51 0.55	034215-2008.8	0.282038 0.48606	12.26 10.61	0.74	034327-3937.4?v 034444-6105.8	80.0 0.284815	9.54 9.49	0.11
034703-0704.2	0.33406	11.04	0.33	034809-5839.8	0.42924	10.48	0.34	034901-1656.5	0.42369	12.76	0.37
034911-4236.9v	0.82762	1L06	0.64	034927-0609.7?	0.53867	13.39	0.74	034931-0431.2	0.48018	9.03	0.40
034936-2441.2	0.49377	12.63	0.45	034949-0552.5?	0.36264	12.36	0.32	035014-1739.1	0.35215	12.19	0.41
035020-8017.4	0.62241	11.94	0.45	035036-6056.2?	0.85882	11.96	0.79	035120-0331.4	0.49090	12.38	0.46
035153-1031.8v 035248-2926.2	0.50764 0.314441	8.30 9.92	0.51	035200-2155.8 035307-1701.2	0.335164 0.46187	10.69 10.97	0.43	035232-3111.7 035320-7948.6?v	0.36753 0.41244	12.35 9.07	0.58 0.18
035324-2902.4	0.33933	13.74	0.51	035422-3605.6	0.290447	13.52	0.53	035444-1456.1?v	0.63220	9.07	0.78
035454-1330.7?	0.86815	13.05	0.45	035511-4617.3	0.316715	12.40	0.29	035559-3513.7	0.46435	11.48	0.48
035643-1927.3	0.316366	13.56	0.43	035658-1451.2?	0.68161	12.83	0.46	035710-7414.6	1,0943	12.89	0.32
035734-5421.5v	0.49010	8.29	0.69	035756-2623.1?	0.41021	12.14	0.38	035851-5110.6	0.310653	9.45	0.32
035943-4112.0?	2.0989	11,61	0.17	035951-4944.6?	0.42445	12.59	0.25	040053-4434.3	0.71782	12.36	0.43
040300-5750.7? 040508-0939.7?	0.339716 0.34841	11.87 12.94	0.42	040444-1624.8 040528-6536.2	0.49260 0.294770	10.69 11.91	0.45	040455-3351.8? 040531-4341.7	0.46068 0.340220	10.16 12.56	0.23
040550-5402,6	0.36012	11,51	0.36	040633-4729,4	0.40637	11.38	0.37	040637-2740.1v	0.63848	10.16	0.59
040756-3848.9	0.40244	12.13	0.41	040822-0804.5?	0.42002	11.10	0.17	040855-6620.6	0.38658	12.88	0.47
040908-6007.5?	0.97527	11.75	0.35	040911-4906.9	0.285999	12.84	0.51	041025-2747.8?	0.38639	13.03	0.78
041037-3855.7	0.42693	10.55	0.33	041049-4949.8	0.335015	13.06	0.27	041138-4438.0v	0.89456	9.42	0.21
041148-1147.5v 041233-5843.1?	0.41692 37.0	11.51 9.85	0.77 0.16	041208-1335.4? 041321-3613.1	0.45942 0.37046	11.96 11.87	0.23	041209-1028.2v 041339-2433.5?	0.321499 0.45701	8.37 12.74	0.67
041344-2804.1	0.63348	11.50	0.32	041419-4626.9v	0.311635	11.48	0.86	041436-5441.9	0.45771	12.13	0.23
041450-0340.1?	0.41925	12.46	0.39	041451-6814.2	0.297281	12.47	0.39	041635-2506.3	0.38747	11.36	0.41
041731-6649.6?	0.53059	12.79	0.30	041805-7547.1?	0.47112	13.03	0.35	041813-0615.6	0.327760	12.43	0.39
041826-2157.9?	0.41593	12.27	0.41	041938-3004.7	0.346748	11.45	0.51	041946-0518.0	0.35383	12.66	0.53
042031-2813.9 042052-3945.7?	0.40040 0.311885	12.06 11.98	0.43	042041-2905.1? 042103-2629.5	0.292692 0.39586	13.86 9.99	0.66	042049-0451.3 042134-3825.8?	0.49090	11.35 11.73	0.34
042149-4317.5?	4.728	10.21	0.08	042158-1756.5?	0.40819	12.01	0.21	042215-1004.6?	0.295518	10.26	0.20
042317-1302.7	0.67951	10.75	0.34	042401-5006.4?	0.310360	11.52	0.30	042509-1937.1	0.57386	12.96	0.48
042518-2347.4	0.57131	13.57	0.65	042534-4152.1	0.42528	11.19	0.28	042539-3803.6v	0.94376	9.93	0.19
042549-6030.7?	0.56389	12.39	0.34	042559-2129.0v	0.331925	10.71	0.63	042609-3420.9	0.48694	13.47	0.53
042708-1238.8 042844-4258.2?	0.35763 0.61788	12.46 13.72	0.55	042716-2135.0? 042851-4035.3?	0.60109 0.312817	10.54 10.93	0.26	042745-5812.0 042925-3334.6v	0.90899 0.63419	12.57 9.98	0.31 0.47
043046-4813.9	0.35714	12.69	0.64	043128-0043.9v	0.46561	12.46	0.13	043204-2401.2	0.50540	12.37	0.47
043249-7345.5	0.74382	12.01	0.37	043325-2356.3v	0.62358	8.62	0.30	043345-7429.2v	0.43503	13.13	0.53
043348-0754.7	0.85136	12.08	0.23	043423-3634.2	0.83006	11.04	0.27	043433-0919.2	0.46476	11.37	0.62
043437-3152.39	0.84037	12.54	0.28	043450-1905.7?	0.55988	10.72	0.24	043559-0450.1?	0.58349	11.24	0.35
043639-0923.2? 043933-5627.6	0.35378 0.53523	12.78 12.72	0.64 0.38	043842-0249.9 043933-7146.6	0.67095 1.6319	11.65 11.18	0.48	043852-0931.9 043940-3402.1	0.37875 0.54515	12.02 11.67	0.47 0.50
043953-2900.3	0.53056	12.72	0.27	043953-3604.0	0.76315	10.52	0.33	043954-5634,2?	0.35473	13.16	0.57
044005-3027.5?	0.330880	13.27	0.69	044007-6131.5	0.47276	11.89	0.45	044017-2410.7	0.41632	13.75	0.73
044026-6617.9?	0.35466	12.80	0.38	044040-7149.6?	0.65980	10.44	0.20	044053-4326.3	0.91595	13.51	0.66
044106-0121.5?	0.221495	10.51	0.27	044120-2400.9	0.40537	13.28	0.97	044216-2549.5	0.254893	12.65	0.59
044308-1631.5 044447-5427.0	0.294096 0.309680	13.51 10.92	0.63	044336-8448.6v 044516-7060.0?	1.1494 0.49562	9.16 9.80	0.53	044439-2423.1? 044536-2353.0	0.41627 0.33105	12.96 13.10	0.45 0.50
044624-4936.3	0.284723	13,16	0.62	044625-6620.8?	0.258164	10.93	0.23	044639-4737.6?	0.308405	13.11	0.34
044655-5903.6	0.49273	13.26	0.62	044659-1437.4	0.52725	10.91	0.60	044813-5348.1v	0.49692	12.19	0.78
044853-0911.9	0.48963	13,71	0.89	044907-4953.9?	1,1197	10.05	0.16	044908-4908.1	0.40361	12.19	0.36
044925-1259.3?	0.47345	13.11	0.47	045022-1815.0	0.323727	11.78	0.45	045101-1214.4?	1.6922	9.52	0.10
045151-2934.3 045218-0345.4?	0.38150 0.48120	12.56 12.59	0.52 0.41	045156-1629.8 045319-4313.5	0.345823	10.90 12.02	0.32	045211-2511.7 045322-0322.9v	0.57889 0.61402	11.41 11.43	0.31 0.43
045343-4951.5?	0.42383	12.25	0.18	045417-5924.7?	0.39323	13.17	0.36	045450-1135.6?	0.61402	12.98	0.43
045540-1930.3?	0.80573	11.82	0.36	045555-2619.5?	0.34877	13.70	0.81	045657-3308.0	0.48253	10.60	0.63
045706-5516.7	0.41321	12,25	0.61	045707-7207.9?	0.41839	12.08	0.45	045713-3535.5?	0.65228	12.90	0.40
045720-3708.6	0.34152	12.88	0.76	045722-8022.9	0.36693	12.34	1.06	045724-1927.1	0.42337	13.33	0.55
045822-4930.2	0.47132	12,81	0.34	045841-8301.8?	0.95872	13,24	0.46	045858-2238.7?	0.46070	9.45	0.20

Table 1
Continued

[D	P	V	ΔV	ID Store	P	V	Δ V	ID	P	V	ΔV
045920-1758.9?	0.315347	13.07	0.78	Stars 0 045948-6508.4?	lassified as I 0.343027	BC 11,20	0.21	L 050048-7029.9v	0.38735	1 11.35	0.43
050056-3007.9?	1.4572	12.98	0.40	050135-0838.6	0.313364	11.31	0.99	050204-0248.1	0.321983	11.05	0.72
050233-2359.0	0.320560	13.41	0.63	050308-0622.0	0.58479	11.52	0.39	050334-2521.9	0.41406	11.09	0.31
050417-1922.8	0.286919	11.70	0.46	050425-2051.3	1,11780	12,65	0.37	050437-2432.3	0.42866	10.41	0.32
050505-0733.7v	0.92650	11.12	0.59	050512-5812.2?	0.323526	12.78	0.56	050530-6059.0?	38.8	9.98	0.16
050537-5755.6	0.55781	11.48	0.25	050611-0546.3	0.85811	11.28	0.35	050617-2007.8v	0.44864	9,45	0.33
050617-2619.3	0.36020	13.05	0.53	050618-2007.9v	0.44864	9.45	0.33	050631-3832.6	0.45560	11.30	0.46
050631-4833.3?	0.302175	13.41	0.48	050653-2611.2?	0.98917	11.30	0.13	050656-2936.0	0.39837	9.89	0.62
050734-5421.3	0.47623	12.96	0.31	050750-2319.2?	1.07747	11.63	0.15	050904-2727.2?	0.340474	13.52	0.44
050905-0741.7?	0.298088	13.17	0.75	050909-7707.9	0.36932	12.80	0.78	050922-1932.5	0.270842	12.30	0.41
050937-5618.5	1.03555	10.53	0.41	050957-2305.4	0.42874	11.45	0.39	051006-1146.0	0.60336	12.73	0.58
051009-5650.3	0.66997	11,11	0.27	051016-6133.1	0.41446	12,14	0.40	051101-6709.9?v	1,2358	12.96	0.35
051114-0833.4v	0.42340	9.32	0.61	051130-5035.0?	0.54940	14.36	0.54	051134-1034.4	0.59444	11.25	0.45
051135-3120.4?	21.37	9.86	0.09	051207-2919.9	0.41311	12.33	0.65	051228-3741.5?	0.346387	12.42	0.25
051247-2308.1	0.43369	13.36	0.67	051301-2131,7	0.35608	11,92	0.46	051305-6624.7?	0.280563	13.19	0.38
051332-8719.7	0.38408	12.42	0.51	051339-3301.3	0.76465	9.35	0.19	051348-4027.2	0.67572	10.45	0.30
051353-1701.2	0.341836	11.66	0.55	051405-2802.8	0.309576	13.20	0.56	051452-2741.4?	0.51350	12.85	0.28
051459-7356.3	0.34572	11.78	0.39	051521-5509.2	0.54527	13,49	0.69	051527-5555.0?	0.43582	13.14	0.45
051531-2845.0v	0.67234	9.56	0.39	051543-5624.7	0.42900	12.69	0.35	051649-2524.7?	0.40425	13.35	0.64
051700-5555.4	0.79037	10.32	0.51	051733-5447,2	1,2018	11,12	0.30	051738-3639.7	0,44432	11,66	0.41
051757-1146.1?v	9.085	11.57	0.14	051758-3714.8	0.36139	13.37	0.50	051800-1730.5	0.58491	11.45	0.33
051801-6041.4?	0.248267	10.36	0.12	051832-6813.6v	0.285461	11.00	0.71	051901-4556.6?	0.45727	11.89	0.23
051954-3554.1v	0.56519	10.97	0.57	052025-0630,2	0.39026	13,47	0.49	052042-1215.1?	0.307820	13.00	0.36
052046-3232.5?	0.52963	12.82	0.35	052109-4449.3	0.55460	11.10	0.40	052117-0943.5?	0.46695	10.24	0.23
052121-3540.6?	0.37074	11.71	0.31	052126-2959.6?	0.97938	10.37	0.10	052134-6335.2	0.47379	12.15	0.38
052201-6852.3?v	49.8	13.17	0.48	052214-7156.3v	0.77662	10.69	0.61	052234-4635.3	0,44342	11,33	0.47
052313-0907.7	0.40198	12.18	0.41	052446-1301.2?	0.306843	13.22	0.59	052452-2809.2	0.275778	10.61	0.37
052615-0642.4?	1.07166	12.59	0.47	052630-1950.2	0.319652	13,52	0.65	052642-4337.1	0.245713	12.96	0.81
052650-8135.2v	0.46166	8.17	0.49	052651-6121.3	0.55720	12.87	0.68	052746-2357.9?	0.61936	11.86	0.39
052754-3125.9	0.312883	12.88	0.40	052819-1931.3	0.66466	9.65	0.38	052851-3010.2	0.302101	11.31	0.41
052941-1742.8?	0.229750	13.29	0.52	053030-1844.5?	0.51502	11,64	0.17	053042-4815.1?	10.710	9.82	0.12
053056-3844.3?	0.92980	10.25	0.19	053107-0757.7?	0.44333	11.88	0.43	053113-3610.1	0.330847	12.72	0.63
053115-5222.0	0.38654	11.37	0.47	053121-0723.7?	0.51746	11.95	0.29	053122-1540.1	0.36159	12.96	0.73
053123-5812.2	0.344282	11.81	0.66	053126-0058.6?	0.85222	10.39	0.23	053211-2302.0	0.47408	12,73	0.41
053259-1354.0	0.308853	12.72	0.58	053355-1204.4?	0.40681	11.13	0.20	053420-2606.6	0.298081	14.24	0.96
053458-3825.4?	0.261736	12.86	0.79	053558-4208.7?	0.74261	12,91	0.51	053602-2926.9	0.36670	12,27	0.47
053610-1827.2?	0.47277	12.97	0.33	053654-5304.9	0.51747	11.53	0.26	053717-2339.7	0.41111	11.85	0.39
053722-2618.0	0.35757	12.46	0.50	053728-7218.9?v	0.52777	12.04	0.88	053750-3756.2?	0.43477	12.73	0.37
053756-2358.0?	0.317048	13.69	0.97	053758-1602.9	0.323175	12,12	0.55	053808-3314.9	0.36942	12.97	0.50
053817-2731.2	0.319101	11.83	0.39	053845-0820.0	0.344270	11.92	0.73	053854-2315.8	0.50440	12.47	0.65
053905-1458.0?	0.97490	11.58	0.21	053920-4733.5?	0.33565	13.35	0.78	053930-0808.9?	0.44399	10.14	0.33
053959-5343.7?	10.954	11.90	0.32	054000-6828.7v	0.36222	11,38	0.57	054010-4214.5	0.76226	11,80	0.40
054050-1126.0	0.65397	12.29	0.30	054134-6044.1	0.34702	12.15	0.68	054156-2440.1	0.76047	13.11	0.68
054159-1129.1	0.307690	12.87	0.44	054203-2730.2	0.45606	12.56	0.38	054220-5929.0?	0.38661	13.72	0.66
054236-2215.9	0.53189	13.43	0.59	054241-5316.5	0.232730	12.87	0.84	054311-5845.6	0.43708	10.12	0.45
054354-0243.6	0.43810	11.57	0.43	054546-1249.9?	0.70491	12.18	0.39	054651-2615.5?	0.47535	13.39	0.39
054829-2807.5	1.1694	11.95	0.29	054905-2554,4	0.313061	11,82	0.50	054911-1902.6	0.314238	13.74	0.84
054926-2352.5?	59.7	10.80	0.19	055000-0725.9	0.322599	12.22	0.84	055019-5520.3	0.41350	13.34	0.65
055209-2742.8	0.90342	12.28	0.27	055303-2322.5	0.33670	12.51	0.45	055317-5629.1	0.39317	11.43	0.30
055321-1703.7	0.33784	13.55	0.55	055426-1233.5	1.08746	11,12	0.37	055501-7241.6v	0.343841	10.29	0.82
055558-0840.6	0.78805	12.96	0.52	055624-5919.5	0.61917	11.88	0.45	055708-2738.5	0.53583	12.74	0.78
055827-1739.8	0.41459	10.15	0.39	060011-1549.8	0.41690	12.02	0.40	060239-1108.5?	0.312823	10.88	0.19
060244-1927.2	0.40953	13.18	0.68	060501-1028.3?	0.42417	13.18	0.29	060646-2522.3?	0.32537	13.25	0.55
060706-1712.5	0.91461	12.99	0.48	060935-2119.9?	0.90967	11.09	0.30	061019-2333.4	0.77329	11.63	0.64
061059-2012.7v	1.0703	9.57	0.79	061627-7426.8	0.63045	10.76	0.39	062252-7501.9	0.257701	11,46	0.46
064047-8815.4	0.43863	11.82	0.45	073106-8625.2	1.4893	12.20	0.77	084617-8833.7	0.267129	12.59	0.65
100123-8813.5?	0.65226	11.97	0.28	115933-8546.0?v	0.61128	11.61	0.27	123244-8726.4v	0.338519	11.41	0.74
131308-8528.6?v	0.55245	11.51	0.27	213300-8325.2	9.266	10.94	0.23	221220-8453.8	0.52799	11,99	0.26
223203-7852.9	0.279247	11.73	0.54	223709-8728.8	0.84838	11.67	0.60	230401-8045.7?	37.6	10.72	0.17
231745-8239.4	0.45619	12.42	0.39	232348-7454.0	0.334050	11.38	0.38	232416-6222.1v	0.35773	9.79	0.50
232658-6337.0?	0.75639	13.50	0.46	233214-8250.8	0.325393	12,91	0.57	233356-6911.2	0.95370	11.87	0.28
233607-5632.1	0.322861	13.05	0.53	233735-6512.9?	0.35841	13.31	0.53	233819-7742.4?	0.279352	13.59	0.81
233830-4512,4	0.40390	11.97	0.39	233858-3830.3?	0.48675	11.83	0.30	234239-6055.7	0.268751	13.20	0.63
234307-1852.5	0.48626	11.09	0.26	234336-3206.7v	0.42409	11.98	0.50	234558-2113.7	0.303694	11.78	0.48
234716-7842.3	0.78917	13.85	0.58	234718-0805.2v	0.48141	10.38	0.35	234750-6604.3	0.38054	13.05	0.54
234823-4054.7	0.34720	12.85	0.37	234933-1851.7	0.37430	13.57	0.63	235006-8444.3	0.62847	12.90	0.59
235103-0055.8	0.52159	12.80	0.52	235103-1904.5	0.47078	11.90	0.42	235151-4111.3	0.327418	13.16	0.47
235239-2135.2?	1.01014	10.96	0.24	235354-1923.1?	0.63267	13.67	0.79	235424-5756.5	0.58420	11.47	0.47
235451-2806.6	0.41360	11.47	0.22	235620-6411.5	0.38893	12,60	0.35	235620-6535.6?	0.49013	11.97	0.34
235621-7058.8	0.326685	12.36	0.51	235749-5027.0	0.43088	13.63	0.49	235818-3356.8	0.276060	12.59	0.88
235900-0931.6	0.256220		0.51	2007.10	00000		``''				0.50
-20200 022110	J JALL		0	Stars of	l assified as E	SD	' '	1	I	•	1
000053-1717.5?	0.297986	12.66	0.59	000147-5714.5?	0.47035	.5D 11.03	0.20	000221-2929.6?	6.294	12.32	0.40
000229-5653.9?	26.55	10.15	0.11	000955-2808.6?	0.220859	11.70	0.15	001109-5150.3?	0.63829	13,41	0.77
	-0.00		0	100700 2000001	5,220057		V/15/	2002 2.000.	0100000	,	V. / /

Table 1
Continued

ID	P	V	ΔV	ID	P	V	ΔV	ID	P	V	ΔV
				_	assified as E	SD					
002156-2240.4?	0.54045	11.95	0.12	002221-2936.8	0.64658	12.11	0.39	002257-2039.4v	0.76730	10.35	0.32
002525-5741.0?	0.36059	12.18	0.20	002541-3449.7?	0.268644	9.39	0.11	002655-3952.9?v	0.75534	8.94	0.48
002657-5844.8?	0.352222 25.40	11.38	0.27	002807-7922.0v 002904-1713.0v	0.70110 0.62162	13.08	0.78	002811-5919.4	1.9463 0.84474	9.67	0.34
002845-5732.9 003513-3256.0	0.50537	10.49 11.60	0.19 1.03	003537-4041.2?	0.02102	9.87 12.90	0.17	003355-1608.7? 003544-2514.0?	1,3004	12.22 9.76	0.38
003831-1914.6?	1.1381	13.58	0.50	004004-7442.6	0.339826	10.73	0.43	004041-4258.5	0.83623	12.34	0.16
004430-3606.5	0.246539	9.62	0.15	004619-7251.0?v	0.37664	13.48	0.71	004642-5437.5	0.273367	10.89	0.34
005056-1747.0?	0.73511	10.85	0.45	005133-7559.2?	2.7054	13.18	0.66	005149-7159.9?v	0.87086	10.50	1,33
005235-4521.2?	0.61950	10.20	0.11	005633-7603.0?	0.267084	11.65	0.19	010129-7256.5?	5.393	13.28	0.68
010720-7524.1	0.63474	12.05	0.39	010946-2013.0?v	0.256486	9.29	0.19	011322-6139.8	9.365	13,14	0.37
011406-5349.9	0.78065	11.66	0.37	011839-1849.6	1.6884	12.31	0.30	011959-5816.5?	0.48990	11.27	0.16
012048-4742.8?	0.269707	12.16	0.26	012842-5356.2?	1.02464	10.95	0.35	013227-4954.3?	0.45495	11.36	0.22
013556-5228.7?	0.246048	11,45	0.15	013904-7840.7?	1,8990	12.07	0.28	014025-4138.0?v	0.33867	13,48	0.75
014253-5351.7?	0.36407	11.13	0.11	014831-8126.2?	0.316200	14.14	0.84	014933-1937.6?v 015200-2800.4	0.340812	11.20	0.70
015010-7412.9? 015337-3116.8?	0.282760 0.36877	13.78 12.57	0.68 0.26	015136-4310.6?v 015423-5344.9?	0.90356 0.65621	11.03 12.33	0.57	015713-6923.7?	0.44384 0.340337	9.84 12,60	0.33
015902-2901.9	0.30677	13.26	0.49	020230-8202.0?	0.03021	10.12	0.14	020345-1953.4?	0.303122	9.84	0.20
020352-4738.4?	0.35988	11.35	0.13	020511-0732.7?	0.44838	12.73	0.45	020643-0914.3?	0.50925	12.27	0.83
020850-1802.9	0.41471	13.45	0.60	020917-4718.1?	0.34632	12.27	0.30	021341-5942.0?	0.44999	10.78	0.22
021742-0816.7?	L4634	11.16	0.33	021948-4702.7?	0.53997	11.40	0.20	022544-5013.0	0.270447	11.02	0.15
022721-1257.0?	0.67684	13.14	0.79	022837-5021.1?	0.87987	11.48	0.22	023018-3335.7	0.43177	12,73	0.35
023458+0005.9?	0.40647	11.50	0.21	023916-2349.7?	0.51378	11.55	0.17	024012-2645.0?	0.64670	12.44	0.33
024051-7326.2?	0.351287	9.83	0.14	024101-4836.8?	0.42280	13.10	0.53	024138-0307.7?	1.1158	12.95	0.51
024206-7326.2?	0.276255	12.36	0.57	024233-5739.6?	14,74	11.02	0.13	024425-4224.9?	0.37718	12.30	0.21
024658-3215.2?	0.63648	11.10	0.13	024951-7151.1?	0.44955	12.43	0.29	025030-0305.0?	1.4756	10.84	0.41
025237-6213.7?	0.55904	12.60	0.54	025305-2031.7?	0.45886	12.52	0.35	025414-4706.8?	0.266771	13.38	0.52
025535-0219.9 030503-3822.5	0.79274 0.40277	11.59 12.33	0.54 0.61	025859-3523.8? 030728-4155.5?	0.40742 0.41976	12.00 12.59	0.34	030241-7332.9? 031000-1206.3?	28.27 3.4177	9.89 12.55	0.18 1.24
031000-7303.1	0.283816	13.08	0.35	031013-5742.7?	0.266125	12.39	0.43	031029-5721.5?:	2,5041	11,46	0.19
031159-3759.2?	1.4225	12.57	0.25	031208-5248.9?	0.59487	12.51	0.33	031420-7127.6	40.8	10.48	0.12
031612-2205.5v	0.77195	12.55	0.75	031718-4709.0	0.304966	12.81	0.65	032048-3142.0	1.03480	10.03	0.23
032212-5725.1?	0.35588	12.87	0.48	032246-2105.4?	38.0	9.52	0.16	032428-1033.7?	0.46110	12,35	0.32
032736-7730.8?	14.88	11.62	0.12	032743-3854.3?	0.44747	12.27	0.82	032906-1949.5?	31.46	10.96	0.12
033010-8108.4?v	0.36951	13.19	0.97	033131-5000.4?	0.35984	13.14	0.40	033307-2417.0	0.54367	12.71	0.78
033437-0907.8?	0.54183	12,19	0.31	033520-8015.6	0.48877	12.01	0.29	033536-7540.3?	0.344403	12,20	0.29
033642-7908.2?	0.61399	10.23	0.12	033716-1938.4?	0.78522	12.00	0.23	033921-6425.5	0.57088	12.18	0.47
034019-3649.5?	0.76948	11,44	0.19	034242-5823.2	0.41940	11.31	0.15	034331-4515.5	0.70299	10.47	0.36
034400-5141.5? 035046-1339.9?	1.4633 0.286065	11.85 12.81	0.13 0.28	034512-3236.3 035210-3433.1?	0.47655 0.46360	12.08 13.42	0.51 0.58	034921-2052.5?v 040004-2902.4?	0.84305 L6368	9.40 9.67	0.42
040013-3347.7?	1,0949	14.34	1,12	040014-0746.0	0.64048	10.79	0.48	040054-4052.1?	0.306390	13,45	0.60
040225-3200.4?	0.332681	12.47	0.85	040410-0758.4?	0.312262	13.17	0.35	040637-5634.5	0.555550	8.73	0.31
040938-3915.8?	26.29	12.69	0.28	041204-7228.9?	0.41580	13.72	0.79	041210-5906.0?	0.64190	11.25	0.46
041353-0113.0?	0.35175	11,22	0.26	041454-5415.4?	0.36325	12.30	0.45	041501-6932,2v	0.74360	10.61	0.12
041652-0453.8?	0.286827	12.83	0.42	041707-4552.7?	0.81712	12.36	0.27	041723-2231.4	0.68401	13.05	0.58
041946-3235,2?	0.76435	11,93	0.26	042047-4515.4v	0.51385	9.31	0.61	042143-5715.9?	0.84571	12,37	0.19
042401-4949.0?	40.1	10.10	0.17	042519-4430.0?	0.54308	13.27	0.50	042547-3506.9?	0.40511	12.80	0.43
042554-3426.4	13.68	10.55	0.20	042618-3349.6	0.86285	12.81	0.44	042701-0933.4?	0.46827	13.04	0.55
042702-3255.7? 043837-2034.9?	3.0642	12,14 13,45	0.28 1.01	043052-6649.9? 044405-1945.7?	0.319732 0.51803	12.15 12.81	0.17 0.45	043544-2854.9 044455-4137.2?	0.90760 0.67735	11,64 12.04	0.45
044537-0547.6?	1.4186 0.45854	13.03	0.57	044645-5201.5v	1.5431	9.82	0.43	044703-2237.0	2.1529	10.00	0.40
044837-7610.5?v	0.75721	13.24	0.45	045249-1955.0?	1,10473	9.98	0.15	045509-6440.4?	0.37641	12,60	0.32
045641-3911.5?	0.58972	10.85	0.36	045707-1927.7?	0.36612	12.87	0.49	045716-6633.9?v	4.342	13.65	0.65
050032-0914,3	1,1193	12,31	0.55	050049-3212.7	0.333740	12.38	0.64	050136-3354.8?	0.309241	12,40	0.35
050208-2204.9?	6.880	8.68	0.17	050520-0806.8?	0.90323	12.55	0.40	050527-6743.3v	4.049	11.01	0.61
050533-2610.2?	0.48011	11.24	0.20	050554-6810.8?v	0.93546	11.76	0.46	050628-3400.4	2.9382	12.43	0.77
050645-1534.1	0.40373	14.80	0.91	050726-1347.1?	0.49005	13.27	0.55	050728-0524.4?v	2,2549	10.42	0.17
050800-0550.6v	0.82195	10.94	0.34	050805-4242.9	1.7161	11.30	0.28	050825-2326.7?	1.3994	13.62	0.99
050836-5709.6?	0.34554	13.19	0.50	050936-1019.2?	0.35724	13.65	0.73	050940-1247.7?	0.41426	11.54	0.22
051049-0832.5?	1,5556	10.80	0.14	051126-2636.1?	0.40699	12.96	0.40	051126-4413.1	0.73337	12,35	0.66
051153-0428.6 051338-0510.5?	0.73746 1.1825	10.91 10.62	0.44	051206-2928.8? 051414-2142.1v	0.338587	12.57 11.48	0.31 0.89	051211-1312.0v 051424-5321.8?	0.91544 0.57897	9.99 12.85	0.57
051542-4219.8?	0.52459	10.82	0.22	051546-0644.6?	0.90317	10.86	0.89	051700-4852.2	0.57833	11.85	0.49
051947-4259.0	1.2309	12.25	0.51	052018-5605.8?	0.52235	12.69	0.25	052149-6519.0?	1.2670	12.91	0.34
052202-3430.3?	0.63198	10,41	0.16	052246-3917.1?:	5.062	10.40	0.62	052419-4614.1	1.00763	11.00	0.30
052526-2256.2:	6.762	10.31	0.89	052625-3354.5?	0.42686	13.04	0.46	052727-6711.9v	4.830	12.84	0.84
052818-1856.5?	0.65808	13.78	0.81	052833-6836.2?	0.57685	11.36	0.18	053253-2031.0?	0.72814	11.60	0.12
053423-0952.9	0.72431	12,71	0.94	053451-3025.2v	0.51282	11,44	0.62	053516-1210.8?	0.67143	11.64	0.14
053647-3155.3?	0.32917	13.19	0.47	053948-2631.8	1.6040	12.54	1.08	053955-1240.2?	8.311	12.10	0.60
054029-4454.6?	0.64221	11.03	0.17	054234-3415.7?	2.6922	10.57	0.13	054250-3318.8?	0.34185	13.72	0.82
054632-1221.1?	2.0559	11.18	0.14	054654-2528.9	57.0	11.96	0.18	054852-1724.4?	0.87048	12,31	0.27
054921-0938.4?	0.35936	12.00	0.25	055015-0330.4	1.3684	11.73	0.49	055017-1100.7	0.90198	11.83	0.62
055252-1103.4	0.80630 0.70736	10.97 13.05	0.54 0.36	055809-1112.1? 060240-1646.0?	0.51565 26.17	13.07 12.75	0.60 1.12	055828-6056.9 060247-2227.7?	13.23 0.342557	11,11 13.64	0.22
055901-5421.6?											

Table 1
Continued

ID	P	V	ΔV	ID	P	V	ΔV	ID	P	V	ΔV
060606-2539.0?	3,950	9.79	0.18	Stars cl 060900-2906,4?	lassified as E 0.48902	SD 12,49	0.43	074401-8907.6	0.79802	12.82	0.53
221846-8438.4?	2.1349	11.66	0.18	221940-8359.1?	0.48902	13.00	0.68	225436-8327.9	0.79802	12.82	0.33
231336-7556.0	0.53091	11.96	0.18	232545-7257.8	0.67009	12.23	0.50	232748-8613.3?	1.3958	9.36	0.12
232906-6659.4?	0.35723	12,34	0.46	233041-6953.5	0.63147	11,32	0.23	233652-5742.8?	12,45	11.67	0.18
233803-5926.5?v	1.2658	11.30	1.67	233842-6047.8?	17.99	10.91	0.13	234008-6726.3?	1.09055	11.61	0.43
234425-0546.6?	0.328746	9.82	0.30	234520-3100.4?	0.88348	10.94	0.27	235117-8517.4?	0.46073	12.30	0.33
235157-5725.4	0.39258	11.06	0.23	235210-3200.7?	0.35007	12,46	0.41	235428-1236.6?	1.9837	12,24	0.57
235757-0109.8?	12.34	10.59	0.42			12,10	``,		.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	1 = ,= .	0.07
, ,				Stars o	lassified as E	ĖD	' '	,	ı	'	'
000030-3937.5v	2.5545	10.79	1.22	001438-1948.7	1.4698	11.28	0.25	001855-7954.9v	0.90310	11.28	0.77
003016-4628.0v	5.414	12.46	1.11	003245-6535.1	0.92846	11.44	0.37	003449-5124.4	L05861	12.98	1.07
003620-2120.8?	0.40949	13.47	0.53	003640-5557.8	0.91962	11.78	0.45	003655-0552.5	6.975	9.87	0.45
003713-6349.2v	0.86588	9.88	0.36	004550-7849.3v	3.5358	9.88	2.40	004817-2805.3	0.84664	10.18	0.19
005143-6457.3	2.3616	11.54	0.67	010319-3745.2	1.12264	10.78	0.75	010538-8003.7	8.070	10.10	0.44
010921-2408.3	2.4106	11.18	0.49	011328-3821.1	0.44559	11.78	0.33	011513-5149.1	1.7809	13.60	0.66
011748-8119.8	1.9251	12.28	0.67	011750-3753.4	0.97032	11.93	0.73	012424-2753.4	2.0654	10.62	0.18
012534-4148.6v	6.883	10.70	0.76	012546-3956.2?v	1.2608	11.51	0.50	012940-8309.2	0.68986	12.87	0.45
013020-8332.0v	4.489	11.42	1.10	013112-7556.9	1.06334	9.93	0.33	014101-0643.6?	2.3064	10.39	0.58
014122-5520.0	4.635	11.54	0.47	014613-7951.9	1.3170	10.67	0.38	015650-2111.7v	2.2702	10.56	0.50
015838-5331.7v	1,2381	9.63	0.98	020150-6447.1	2,3838	12.66	0.74	020902-3720.9	4.124	12.07	0.42
020931-8518.2	1.3303	9.90	0.64	021258-8124.0	7.458	10.51	0.41	022053-4856.7?	1.1936	10.44	0.56
022136-3712.8v	2.4348	10.33	1.48	022915-7827.9	2.3250	10.07	0.58	023434-3438.3?v	4.278	11.30	0.84
023455-7315.5	1.05502	11.80	0.35	023526-1605.2?	1,6031	12,57	0.54	023539-4504.2v	5.784	9,11	0.91
024458-1746.8v	2.2323	9.30	0.29	024519-5407.4	2.4057	12.01	0.50	024644+0107.9	3.691	10.41	0.57
024946-3825.6	0.46322	11.70	0.64	025136-6734.3?v	0.68586	13.09	0.85	025701-0252.3?	1.2853	11.67	0.49
030518-1838.2v	0.80613	12.47	1.56	030524-6641.1v	6.682	11,45	0.81	030545-8545.0v	0.90709	12,21	1.42
030807-2445.6v	0.91820	10.16	0.55	030847-1927.6v	1.2985	12.92	0.63	030956-4459.5v 032704-4552.9v	1.8721	9.26	0.39
031952-2436.8v	2,4301	10.14	0.43	032123-1017.1v	1,5575	11.68	0.88		2.6078	11.32	0.58
033113-4706.3?	1.6231	12.60	0.36	033240-7553.4?	1.05588	12.26	0.39	033431-3924.7v	4.224	9.56	0.77
033615-6114.1	3.4927	11.94	0.57	033856-7224.5v	0.81707	12.08	0.73	034351-8400.1v 034746-0836.7	2.5996	11.44	1.22
034413-4116.8v	0.72240 1.7927	8.94 11.40	0.60 0.34	034512-1624.6v	2,9597 7.259	8.86	0.49		2.8764 1.8263	9,41 10.21	0.88
034944-8349.9 035858-1713.8v	4.977	10.09	0.34	035418-4306.6v 040057-7753.8v	2.2756	11.91 12.23	0.80	035427-5834.7	3.4144	11.58	0.27
040310-7632.9	2.0358	9.97	0.33	040403-7427.2v	2.8783	10.91	0.37	040506-3110.2v	0.90140	8.52	0.73
040907-4828.6v	2.3832	8.52	0.33	041947-3210.1?	0.64318	11.80	0.44	042347-2426.2	2.3038	10.25	0.30
040507-4828.0v 042535-1848.0v	2.6306	11.98	1.06	042535-6045.4v	2,0846	8.71	0.45	042631-5214.5	0.58756	14,23	1.07
042641-2457.0?	1.2873	11.50	0.58	042735-2513.9?v	1.4267	10.40	0.41	043041-1913.7	1.7974	11.98	0.50
043201-1744.8v	9.298	10.84	0.78	043650-3622.1	1.10473	11.58	0.26	043653-4456.2	1.9717	9.81	0.23
044300-3245.7	2.0054	11.19	0.36	044420-3141,3?	4.335	11,71	0.16	044733-8322.1	2.5695	11,81	1.68
044748-4759.3	1.07770	10.77	0.44	045021-4546.8v	13.96	9.61	0.88	045304-0700.4	1.6224	11.35	0.29
045605-4800.7?	2.2259	10.23	0.21	045907-2302.9	5.259	11.37	0.40	045927-7732.8?	L03698	12.20	0.28
050040-1802.8	1,09577	11.68	0.41	050205-2842.8	3,3023	10.98	0.63	050322-4337.0	1.06362	13.09	0.44
050456-5308.4?v	0.86185	10.51	0.86	050513-2312.8	1.7545	12.82	0.69	050604-3509.1?	0.74615	11.75	0.29
050712-2054.8	1.2161	12.79	0.37	050717-1909.2	2.5258	10.93	0.59	051010-1452.3v	773	11.63	1.20
051023-6846.4?	74.5	10.42	0.49	051433-2519.7	0.89307	12.58	0.50	051815-4534.8v	1.8381	10.07	0.55
051837-5803.2:	5.492	11.26	0.26	051950-3155.0?	L4668	10.72	0.17	052041-5619.1	1.3445	10.84	0.43
052543-2935.2:	4.271	12.02	0.74	052800-3334.6	6.186	11,28	0.73	052919-1617.3	0.66085	11,17	0.42
053104-1102.2	1.09203	11.11	0.56	053200-3320.5	0.73285	12.44	0.42	053503-6843.7	1.0864	12.20	0.41
053638-1247.0	3.0274	11.72	0.67	053854-3337.9v	2.7520	11.84	0.47	054004-0119.7v	4.633	10.58	0.81
054020-2901.4	2.4789	11.49	1.32	054136-1339.6	0.93301	11.96	0.87	054447-2250.9v	3.723	9.45	0.49
054531-1746.6	7.979	10.64	0.28	054937-2114.4	2.0164	9.95	0.29	055010-5648.4	1.1685	8.91	0.27
055035-1022.0	2.6096	12.00	0.41	055655-7320.5?	2.9278	10.24	0.23	055708-0728.2	5.804	12.15	0.48
055918-2013.4v	1.2885	9.83	1.50	060325-5528.4	3.3228	11.37	0.82	060352-2454.1v	4.460	10.84	0.91
060450-1314.3	0.79702	12.40	0.71	060649-2137.6	4.288	11.33	1.93	060927-1501.7	0.87708	9.37	0.36
220923-8615.0	0.92688	11.67	0.62	230727-7818.3	1.9080	9.28	0.33	232326-6948.6?	1.03956	12.05	0.38
233023-5825.6?v	5.463	9.77	1.18		3.3178		0.64	235052-2316.7	1.4023	9.42	0.29
000116 6027 O I	0.100073	1002	0.25		issified as DS		LAZZI	L 000410 5252 00	L 0.121202	1 11 66	1035
000116-6037.0v	0.122072	10.03	0.35	000316-7342,2?	0.201026	13,72	0.54	000410-5252.9?	0.131583	11.66	0.25
000412-2055.1	0.178994	11.57	0.17	001026-3739.9	0.153047 0.164569	12.06 12.43	0.33	001123-1732.5?	0.177967	12.78	0.43
001513-7016.7?	0.209465	11.89	0.19	002134-1345.3?:	l	10.43		002424-7102.99	0.169003	10.97	0.34
002450-5235.8? 003344-1532.6	0.171659 0.198584	13.19 10.43	0.49 0.15	002524-4655,5?v 004100-2541.9?	0.218481 0.180747	12.07	0.17	003323-4849.7? 004445-1503.6?:	0.165699 0.137691	10.86 12.99	0.27
004753-3245.4:	0.196364	10.43	0.13	004852-3625.0?	0.172294	12.07	0.23	004912-4322.5	0.130639	13.65	0.57
004735-3243.4 : 005115-5904.0v	0.202992	13.09	0.63	005221-1907.4?	0.172294	13.50	0.50	010111-6843.1	0.130039	12.09	0.37
010435-1916.7?	0.140436	12.68	0.63	010844-0340.1	0.203720	11.44	0.83	011224-8541.0?	0.091012	12.74	0.44
010433-1910.71	0.205090	10.61	0.08	012349-3643.7	0.127768	9.99	0.83	012555-3558.8?	0.154133	13.54	0.60
013437-3928.2	0.145186	12.09	0.23	014001-1024.5	0.173991	12.49	0.29	014435-7745.3v	0.134133	14.35	1.38
014554-4730.2	0.150850	11.23	0.19	015245-7445.7	0.175521	10.04	0.08	015307-5056.5	0.091002	9.71	0.29
015307-6757.3?	0.140889	10.27	0.15	015455-2626.9	0.206455	12,48	0.30	015619-4040.3	0.191174	11.88	0.20
015724-2626.2?	0.211946	11.67	0.20	015736-3112.6	0.180976	11.76	0.21	020846-7020.8?	0.191314	13.10	0.47
021313-4054.8	0.115507	12.38	0.41	021923-8613.4	0.177578	13.08	0.55	021947-7037.8	0.146672	12.64	0.37
022531-1859.7?	0.186926	12.84	0.56	022818-4856.0?	0.174036	12.58	0.33	023134-3549.1	0.210595	11.83	0.31
023226-2848.2?	0.178662	12.07	0.18	023401-6536.6v	0.199460	9.48	0.17	023546-5603.7?	0.172731	13.43	0.43
023220-2040.2:				1							1

Table 1

Continued

ID	P	V	ΔV	ID	P	V	ΔV	ID	P	V	ΔV
024727-0936.2?	0.187181	1 11.01	0.22	Stars ela 024738-2702.4	ssified as D3 [-0.134958	SCT 13.48	0.49 [024754-4546.7	0.134506	1 12.03	0.15
025237-4927.1?	0.181748	10.49	0.41	025252-3754.5?	0.198962	11.68	0.14	025347-1307.7	0.185929	12.04	0.30
025508-4052.1?	0.206136	11.53	0.33	025743-3351.6	0.064873	11.36	0.20	025845-3833.3	0.121284	11.48	0.25
030503-5642.6?	0.196234	13,25	0.51	030737-1301.7	0.190600	11,33	0.27	031319-3100.4?	0.173388	12.90	0.39
031406-2035.5?	0.197313	10.34	0.14	031504-6429.2	0.220207	12.73	0.30	031636-4957.3	0.208692	11.19	0.23
031826-0950.4	0.144948	12.10	0.18	032246-7237.8	0.129425	12.07	0.33	032350-1439.8	0.145393	12.70	0.47
032917-2138.0 033627-4109.9	0.179375 0.177565	13.33 12.48	0.43 0.36	033109-3742.77 033715-2832.6	0.183400	11,50 13,40	0,21	033219-3539.3 034018-2651.4:	0.060689 0.143222	10.70 13.82	0.23
034534-1123.2?	0.177503	13.13	0.79	040137-5342.1	0.094855	12.26	0.73	040320-8342.0	0.143222	11.88	0.30
040558-8344.2?	0.230377	12,41	0.33	041345-5256.8?	0.178287	13,21	0.36	042232-1325.8	0.201619	12.37	0.18
042337-6032.2?	0.173824	14.10	0.84	042750-1846.3	0.113415	11.01	0.27	043401-3334.0	0.200877	12.29	0.25
043616-1904.4?	0.192372	12.50	0.34	043623-4811.6?	0.192181	11,31	0.41	043720-2928.1?	0.169624	12.66	0.86
043748-6516.6?	0.138084	12.47	0.42	043907-4649.0	0.201566	12.80	0.40	044114-5505.9?	0.188373	12.10	0.35
044225-2617.5?	0.227757	12.32	0.21	044325-1028.9	0.188280	11.90	0.20	044526-4906.8?	0.201264	13.04	0.39
044916-1503.5?	0.167064	13.11	0.41	045338-2906.6?	0.192781	12,17	0.45	045425-6804.7	0.153416	12,20	0.28
045636-2740.8 045956-5829.9	0.078465 0.134604	12.62 8.75	0.57	045800-4555.6 050148-7614.3?	0.103096 0.172780	12.89 12.55	0.90	045801-5011.2 050226-1525.2?	0.093966 0.156772	12.70 13.20	0.41
050318-3449.7	0.144399	12.88	0.44	050402-2116.9?	0.153324	12.33	0.30	050545-1754.0?	0.172556	11,74	0.47
050645-5903.1?v	0.213593	9.34	0.22	050702-0047.6?v	0.215970	10.51	0.21	051144-6242.9?	0.195234	13.23	0.56
051512-3523.6 :	0.245344	12,99	1.04	051614-2955.1?	0.156993	12,40	0.50	051752-2552.3?	0.150510	13.69	0.58
052135-2448.0	0.169032	12.80	0.61	052301-1208.1?	0.164740	11.96	0.26	052707-8334.7	0.139924	11.98	0.28
053123-4731.9?	0.131549	13.26	0.48	053438-1756.0?	0.147025	12.99	0.33	053512-5801.2v	0.104758	12.14	0.15
053607-1538.4?	0.175075	11,95	0.21	053652-0824.8?v	0.173241	12,54	0.28	053714-5158.2	0.143875	13.17	0.46
053940-5934.1	0.158203	12.95	0.46	054049-5527.8?	0.149118	12.46	0.40	054057-1810.6	0.160241	12.09	0.18
054215-1124.7?	0.155481	13.94	1.24	054252-1725.2?	0.111756	13.42	0.67	054514-2204.6?	0.178080	12.84	0.34
054727-1323,2? 060226-2526.9?	0.172267	12.84 12.95	0.33 0.66	055933-1835.5? 060228-0807.1 :	0.197731 0.200464	12,30 10.93	0.25	055941-3039.9v	0.144938 0.181880	9.54 13.43	0.16 0.57
060726-7655.6	0.155634 0.200137	9.57	0.00	154315-8648.1	0.200404	11.42	0.23	060521-5800.6? 230125-8514.1	0.207031	12.75	0.37
233302-6722.2?	0.192630	11.08	0.19	233439-6341.1?	0.117861	12.60	0.26	233610-5006.9?	0.147404	12.71	0.37
233816-4129.5	0.197581	12.72	0.29	234003-4738.6	0.111420	11.37	0.47	234112-5341.7	0.219595	12.63	0.29
234203-4051.0	0.173522	13.38	0.69	234846-0808.7v	0.197822	9,17	0.44	234849-6946.9	0.196619	12,11	0.27
235026-5337.8?	0.198453	12.05	0.23	235144-6728.8?	0.182003	10.99	0.18	235849-0853.3	0.177163	13.33	0.43
235951-3343.5	0.167164	11.22	0.64					ļ			
000507 1004 49	L 0.25012	13.64	0.52	Stars of 001231-1402.1	assified as R	кс 13.33	0.58	003514-0415.0?	0.24462	L 12.02	0.81
000507-1204.6? 003629-2011.7?	0.35013 0.245848	11.50	0.32	004627-5750.5?	0.326337	13.53	0.52	004729-6522.3	0.34463	12.92 13.77	0.70
004929-2723,2?v	0.35471	13.35	0.52	005231-6110.5	0.287839	12.56	0.36	005409-5708.5?	0.297671	13.10	0.40
005618-4122.0?:	0.335374	12.68	0.29	005924-1556.6	0.289576	12.47	0.48	010029-4404.2?	0.325583	12.29	0.24
010117-4556.6	0.37377	11.82	0.30	011148-6355.3?	0.39644	13.35	0.57	011643-3759.6?	0.308660	13.19	0.58
011800-5511.4?	0.262641	12.08	0.33	011831-6755.1v	0.40578	11.56	0.44	012138-7350.2?	0.263843	13.45	0.34
012301-7234.4	0.316314	13.06	0.54	013251-4715.8	0.317882	9.55	0.11	013344-5217.7	0.286989	12.90	0.57
013412-5026.5	0.336951	12.36	0.46	013450-3909.0?	0.288137	12,49	0.40	013931-3322.3	0.316309	12.40	0.45
014226-3027.6 014525-1846.6	0.273712 0.34542	12.12 13.18	0.53	014312-2342.5 015649-0650.0?	0.307141 0.221601	12.36 11.65	0.55	014500-3003.6v 015752-0532.1	0.37738	11.14 11.89	0.53
020010-2433.1	0.324301	12.39	0.40	020013-1728.7	0.258105	12.09	0.23	020728-5752.2v	0.37503	10.90	0.42
020740-7748.8v	0.310666	12.55	0.56	021012-2856.7	0.320204	12.19	0.53	022011-2325.4	0.329154	12.86	0.46
022358-4538.8?	0.319599	12,25	0.21	022637-4119.7 :	0.293921	10,14	0.11	023319-7336.7v	0.287146	11,81	0.57
023706-4257.8v	0.311326	8.84	0.52	024636-0002.4 :	0.40366	10.91	0.15	024728-3209.1	0.33697	13.36	0.62
025134-4748.1v	0.311356	12.13	0.45	025344-2652.9?v	0.280430	13.62	0.62	025705-2826.9	0.39315	12.70	0.51
025928-3105.3?	0.324935	12.89	0.40	030015-0459.7 :	0.315903	12.66	0.50	030114-1059.7	0.36311	13,44	0.64
030405-3952.1?	0.300939	11.42	0.24	030433-4157.7	0.38991	12.42	0.55	030528-3058.7	0.304610	12.69	0.45
030615-2612.8?v	0.40614	13.43 12.18	0.56 0.55	031124-3719.5 031320-1726.8	0.322599 0.262896	13.75 13.61	0.74	031238-7448.3 031408-3446.4	0.312059 0.312434	13.63 11.54	0.62
031315-3008,2 031535-1647.0:	0.283661 0.35132	14.53	0.90	031626-4249.0?	0.202890	13.60	0.85	032820-6458.7v	0.312434	12.63	0.33
033021-5517.9	0.33132	13.72	0.42	033250-4830.5?	0.218309	12,30	0.83	033623-2129.1	0.316991	13.72	0.43
033634-0711.6	0.307785	12.10	0.24	033822-6259.1?	0.342568	9.67	0.10	034033-0856.9?	0.34561	12.04	0.44
034349-1328.3?	0.309994	13.61	0.53	035428-4930.6?	0.315495	11.62	0.22	035658-5446.4	0.264197	12.09	0.54
035813-6629.6?v	0.36058	11.43	0.53	040527-4637.5?	0.39313	13.64	0.56	040625-2339.6v	0.327081	12,21	0.42
041056-6258.7	0.300575	13.08	0.56	041950-1559.1?	0.346849	11.25	0.16	043036-3608.3	0.244161	13.18	0.45
()43741-39()4.1?	0.36013	12.80	0.57	043753-7604.8	0.316099	13.20	0.56	043917-3251.8	0.286085	11.18	0.39
043930-3233.1?	0.35798	10.45	0.17	044146-1809.7?	0.293995	11,07	0.14	044850-3728.4 :	0.252144	13.95	1.03
045213-5620.8	0.35036	13.62	0.71	045815-2244.5	0.274048	12.11	0.41	045914-6935.8v	0.328945	11.34	0.43
050319-0427.0 : 051714-1142.0	0.247440 0.236170	11.39 11.07	0.14	051337-3342.7? 052545-1007.4?	0.37181 0.38351	12.96 12.06	0.61	051618-2936.3? 052840-5316.2	0.241792 0.36797	10.70 13.48	0.10
053022-3234.8?	0.233120	11.79	0.17	053628-3837.0	0.37137	12.78	0.25	053830-3554.4:	0.270632	13.46	0.39
053902-5925.9	0.40997	13.30	0.56	054449-2659,5	0.262611	12,22	0.21	054810-2001.4?v	0.225147	8.16	0.34
055122-6812.8v	0.321775	11.87	0.44	055239-0551.6 :	0.37441	11.96	0.47	055251-8113.4?	0.256639	11.90	0.34
055322-5417.9?	0.245298	12.87	0.58	075836-8530.8?	0.224120	12.25	0.50	230724-7649.1v	0.304971	13.14	0.40
230815-8403.9?	0.277365	13.13	0.55	232521-6750.1 ;v	0.34966	12,95	0.88	233446-4854.3?	0.319542	11.07	0.44
234001-5001.3	0.309888	13.90	0.75	234106-4208.8?v	0.38049	12.83	0.49	234429-4210.3	0.34579	13.66	0.58
234439-0148.6	0.276854	12.23	0.38	235139-7334.4	0.326350	12.56	0.48	235408+0057.8	0.306258	10.39	0.43
235622-5329.4?:	0.42253	12.73	0.48	235721-6414.6?v	0.302975	9.48	0.31				

414

Table 1
Continued

ID	P	V	ΔV	ID Store of	P coiting on P	V	ΔV	ID	P	V	ΔV
000248-2456.7v	0,49337	9.90	1,24	Stars cla 000301-7041,5	ssified as R 0.55381	RAB 13,27	0.90	000316-1125,1 :	0.36892	l 13.64	0.89
000348-1128.6?	0.74089	12.45	0.85	000405-1659.8v	0.60606	11.94	0.66	000410-4108.2	0.52551	13.68	1.22
000452-5254.4?	0.58939	13.58	0.69	000602-3654.3v	0.43911	13.38	0.63	000621-3517.2v	0.57767	13.03	1.20
001141-0144.9v	0.52974	11.83	1.04	001323-4255.2	0.74407	13.62	0.80	001528-6238.8	0.51605	12.73	1.15
001543-5853.1v	0.62538	12.88	1.02	001611-3927.4	0.53158	13.56	1.28	002418-7616.9v	0.56874	13.18	1.12
002443-6949.7?	0.72792	10.98	0.39	002649-4757.6?:	1.04301	11.69	0.22	002831-8054.7?v	0.59395	13.57	0.85
002843-4400.4	0.59993	12,64	0.81	003338-1529.2v	0.57373	11,25	0.59	003358-1331,4	0.43725	12.89	1.32
003543-2141.0	0.56150	13.60	0.91	003640-5036.6?	0.56771	14.11	1.33	003706-4317.7	0.62756	13.57	0.71
003752-3952.0v 004115-6844.0	0.58401	13.35	1.17 0.75	003857-5252.2 004336-6843.5	0.53054 0.68360	13.69 13.10	1.21 0.92	004025-2134.6v 004453-2442.7	0.56537	13.03	0.94
004413-6644.0	0.67805 0.73288	13.44 12.55	0.73	004548-4355.2	0.58981	13.10	0.92	004433-2442.7	0.57050 0.47387	13.13 13.87	0.92
005001-6238.1v	0.73266	11.56	1,22	005031-4340.8	0.56705	13.80	1.30	005453-6642,5v	0.60254	12.47	1.01
005559-2623.0v	0.52064	13.11	1.09	005705-6855.2	0.59317	13.92	1.14	005712-1935.9	0.48053	12.53	1.06
005810-6323.8v	0.64226	10.90	1.10	005829-1508.8	0.51716	13.07	1.13	010028-2812.3v	0.46370	12.58	1.27
010040-1557.4?v	0.58629	11,16	1.00	010308-2530.3?	0.57506	13.62	1.06	010658-6423.0?	0.53067	13.97	1.06
010726-3218.6	0.55011	11.97	1.06	010949-4418.9v	0.48436	12.77	1.04	010958-4207.7?v	0.61554	12.69	0.48
011022-7351.9v	0.53329	14.04	L08	011200-5002.8	0.68120	13.37	1.08	011506-5920.5v	0.45677	12.71	1.22
011515-6255.5	0.52187	13.98	0.99	011815-3912.8v	0.51094	10.48	1.22	011825-1724,9	0.62088	13.17	0.84
012254-2617.6v	0.45168	13.01	1.34	012500-3438.9v	0.42637	13.53	1.21	012612-1738.6	0.46005	13.51	1.32
012848-1127.2?	0.51669	12,83	1,02	013055-5935.2	0.53789	12.57	0.98	013113-7829.1v	0.55576	12.45	0.79
013140-4957.3	0.46042	12.23	1.05	013524-3507.7v	0.63702	11.64	0.86	013744-0954.2	0.56674	13.55	1.04
013922-3304.4v	0.62201	12.67	0.51	014231-8000.6v	0.34837	12.09	1.11	014237-3001.6	0.51455	13.09	1.27
014543-4526.0v 015136-4939.3	0.55941 0.79292	14,14 13.14	0.72 0.75	014721-7321.0v 015649-4421.1v	0.48758 0.58266	13.61 13.72	1.02	014946-6614,8 015920-4025,7?	0.56747 0.52871	13.36 13.35	0.95
020345-1729.1	0.79292	11.34	0.73	020752-2651.9v	0.38200	9.73	1.27	020925-5210.1v	0.62557	13.80	1.11
021214-4422.3	0.56266	13,44	0.18	021356-4624.4	0.39641	13.59	1.23	021515-1048.0v	0.62335	10.62	0.73
021931-7333.9v	0.67535	12.70	0.92	022256-6725.1	0.61340	14.13	1.11	022536-5519.4	0.38710	14.07	0.71
022832-0821.5v	0.51059	11,41	0.82	023020-5908.1	0.57290	11.90	0.64	023106-4406.0 :	0.56779	13.35	0.95
023303-7102.0v	0.38691	13.95	1.18	023627-3736.0	0.57995	12.99	0.83	024457-4351.1	0.52851	13.66	1.22
024506-5007.0?	0.55207	12.82	0.90	024629-1357.0?	0.56154	13.57	0.97	024814-5435.2	0.58196	12.38	0.73
024819-4523.0	0.58725	13.94	1.50	024956-0125.2v	0.54814	12,27	1.05	025010-2615.9 :	0.37043	12.40	0.71
025021-6415.7?v	0.57249	12.89	1.00	025118-2003.5	0.48820	13.51	1.13	025136-7210.3	0.58834	13.38	0.96
025336-6844.9	0.47921	13.81	0.63	025430-2824.1	0.60304	12.27	1.15	025546-5556.2	0.51810	12.63	1.10
025733-5946.3	0.68802	13.77	1,14	030015-4944.5	0.51948	14,19	1.08	030109-3807.7v	0.80377	12.14	0.60
030313-5131.8	0.56291	13.76	1.02	030534-3116.1	0.49645	12.76	1.16	030811-3845.4	0.55011	13.78	0.85
030850-5711.5v	0.73877	13,23	0.84	031100-3520.8	0.60840	13.38	1.07	031113-2629,0v	0.59732	11.51	1.03
031119-2853.6 031245-5655.1	0.55356 0.65281	12.87 13.67	0.82	031141-5804.0v 031346-1412.7v	0.46961 0.64859	13.68 12.49	1.36 0.97	031158-0348.6 031541-4519.8	0.45589 0.53071	13.42 13.88	1.27 1.25
031826-4936.0v	0.64367	12,03	1,19	031948-3331.0	0.63438	12.49	0.97	032145-5645.6	0.54559	12.89	0.85
032229-8122.1v	0.45624	13.94	1.22	032234-3804.6	0.72941	13.20	0.80	032347-4801.3	0.56467	13.20	1.20
032429-4857.0	0.66219	12.49	0.68	032438-2334.7	0.62960	12.33	0.65	032520-6503.37:v	0.49205	11.33	0.89
032601-4126.0?	0.53125	13,25	0.53	032749-3854.6	0.60889	13.33	0.93	033022-3603.2v	0.60535	10.89	0.64
033103-4523.8	0.64962	13.53	0.50	033625-4937.3	0.54860	13.48	1.19	034307-1926.5	0.61509	13.26	0.99
034920-2310.6	0.63866	13.29	1.09	035618-2759.7?	0.62489	13.67	1.05	040011-1949.6	0.60224	12.37	0.53
040054-4923.8 :	0.71603	13.77	0.59	040142-7839.6v	0.61872	13.35	1.37	040312-1951.2	0.60883	11.69	1.02
040327-8148.3v	0.63158	13.21	1.17	040446-2643.0	0.60275	12.45	0.71	040500-4457.1	0.56685	12.87	0.48
040615-3050.0	0.44432	12.05	0.16	041021-2619.1	0.50879	13.94	1.48	041117-1350.9	0.55429	12.60	0.92
041148-3042.6?	0.68909	13.41	0.41	041321-3833.0	0.57650	12.44	0.76	041605-1434.0v	0.48215	13.67	1.29
041749-4800.4 042055-2302.9?	0.57608 0.58069	12.00 13.10	0.92	041801-0342.8? 042116-3518.2v	0.48719 0.66278	10.95 12.53	0.15 1.18	042014-4236.2 042135-6640.2	0.47105 0.45884	13.40 13.16	1.31 1.34
042245-8633.9v	0.52348	13.61	0.75	042602-5116.7	0.48942	13.31	0.68	042640-3618.6v	0.38653	12.55	0.84
042716-4828.0	0.61306	11.63	0.54	042805-1710.6v	0.65691	13.11	1.20	043641-0440.2?	0.63054	12.65	0.38
043659-2244.2?	0.57406	13.68	0.72	043801-0845.3v	0.48162	13.14	1.25	044030-7326.3v	0.53712	12.91	1.02
044040-0911.4v	0.66000	13.24	0.69	044200-2528.8	0.58750	14.25	0.82	044203-5133.6v	0.73207	11.89	0.77
044525-2455.6	0.50502	13.09	1,17	044541-3458.7	0.65857	13.13	0.57	044620-6825.5?	0.51627	13.54	0.95
044753-1120.8	0.63998	12.85	0.50	044801-2531.4	0.54876	12.58	0.96	044901-4523.0?	0.58090	13.46	0.81
044944-1544.5v	0.58725	9.36	0.87	045007-5039.4v	0.44036	11.03	1.14	045018-4311.0	0.47275	12.69	0.29
045129-7137.7	0.68879	12,99	0.73	045314-3749.2v	0.41979	11.62	1.24	045337-1926.0v	0.56989	11.13	0.88
045426-6626.2?	0.60885	12.31	0.59	045618-2113.0v	0.58148	10.13	1.19	045647-3512.8	0.58091	13.66	0.95
045833-7020.8?v	0.97341	12.74	1.07	050124-1849.5	0.59882	12.79	0.68	050138-3908.0v	0.57088	12.46	1.01
050206-6716.9	0.52530	13.56	1.03	050332-6543.0v	0.38661	13.68	1.08	050708-6853.3v	0.49152	12.97	1.05
050747-3351.9v	0.48734	12.14	0.94 1,10	050838-5602.9v	0.51609	12.25 14.09	0.93 1.58	050956-7138.7v	0.40981	13.18	0.91
051001-4123.1 051209-1053.8	0.58679 0.56876	13.66 13.31	1.12	051101-3851.6 051320-5835.1	0.55951 0.45873	13.39	0.80	051118-0131.5 051423-5353.9	0.69491 0.54793	11.60 13.34	0.47
051209-1033.8 051508-4137.7v	0.30870	10.60	0.98	051550-7036.7v	0.55337	13.47	1.29	051623-7527.4	0.83396	13.20	0.70
051651-2728.4v	0.53658	12,43	0.92	051703-0515.8?	0.36965	13.62	0.53	052122-6221,4	0.63330	12.17	0.43
052402-2247.4	0.64987	13.82	0.65	052406-6925.2v	0.55311	13.78	1.36	052415-1406.0v	0.56010	12.06	0.79
052722-5533.8	0.54634	13.76	1.17	052727-0351.6	0.58740	13.36	1.03	052945-6417.2v	0.48284	13.13	1.15
053104-6434.3?	0.49124	9,29	0.15	053212-1305.6	0.53644	13,25	1.22	053436-7539.8v	0.36430	13.54	0.91
053552-0508.2 :v	0.297630	12.40	0.38	053750-2247.5?	0.64660	12.58	0.29	053951-4925.7	0.61025	12.82	0.45
054230-1622.9	0.53890	12.01	0.99	054238-2557.3	0.51690	13.37	1.10	054343-2036.2	0.342338	14.28	1.15
054557-1441.5	0.59940	12.96	1.03	054838-1929.5	0.55879	13.25	1.01	054843-1627.07:	0.37677	12.95	0.61
055109-7219.4	0.55888	13.67	1.21	055133-6041.6	0.44104	13.06	0.97	055620-1848.1	0.73075	12.87	0.63
055651-2740.0v	0.46876	11,91	1,24	055740-2422.6	0.53818	14.00	1.08	060031-2136.3	0.58404	12.76	0.78

Table 1
Continued

ID	P	V	ΔV	ID	P	V	ΔV	ID.	P	V	Δ V
					ssified as R						. 1
092907-8829.7v	0.38355	12.65	0.66	142904-8838.7	0.64655	11.90	0.98	182858-8832.5v	0.57302	13.32	0.99
194301-8746.9	0.58171	13.80	1.20	214719-8739.1v	0.45803	12.53	0.95	215336-8246.8v	0.62187	11.50	1.00
223645-7807.2v	0.63902	12.48	0.69	231215-7434.7v	0.39402	12.28	1.17	232933-7232.6v	0.55005	12.29	0.98
233743-7950.0v	0.41243	13.70	1.36	233951-3530.4	0.67750	12.67	0.40	234023-3818.9v	0.58585	12.80	0.91
234033-5336.9	0.64335	13.21	0.73	234507-5000.0?	0.48061	12.93	0.27	234631-8130.0v	0.58339	14.01	1.12
234854-4141.3	0.73826	13.97	0.81	234948-7411.6v	0.55894	13.92	0.86	235033-7840.9v	0.56772	12.83	0.74
235118-7416.2v	0.56025	13.78	1,24	235401-0740.7	0.52891	12.09	0.87	235442-3328.8v	0.61676	12.57	0.83
235522-2618.1v	0.72775	12.29	0.74	235702-5826.0:	0.68802	13.72	0.93	235807-3345.2	0.65024	13.68	1.16
235811-2000.7?	0.53128	13.60	0.90	Store class	 ified as DCI	 EP-EU					
000614-3249.0 :v	150	7.62	1.70	001255-0341.6	74.4	11.40	0.19	001507-0320.0?	8.834	11.52	0.26
001902-4853.7	14.41	12.24	0.29	001912-7509.3?	9.190	11.32	0.16	002606-1542.3?	20.56	9.56	0.16
002737-8321.4	9.721	12.33	0.21	003005-3319.1	24.75	11.30	0.17	003041-4416.4	1.9007	13.02	1.02
003256-7349.4v	15.85	14.30	1.02	003307-3201.3?	27.60	9.84	0.18	003510-5020.12:	8.354	9.85	0.13
003918-7202.0v	18.86	13.51	0.97	004045-7343.0v	28.45	13.75	1.15	004156-7332.3v	16.79	13.71	0.64
004224-7747.6	2.5716	10.29	0.09	004349-7336.8v	32.08	13.45	1.25	004506-1854.2v	106.1	12.53	0.97
004655-7242.9v	65.7	12.09	L06	005028-7245.1v	84.6	11.69	0.71	005345-7217.3v	73.7	12.00	0.70
005557-7159.0v	42.6	12.86	0.84	005632-0809.1	31.06	11.98	0.28	005754-7224.8v	33,12	13.11	1.28
005905-7203.8v	16.24	13.90	0.88	005919-5954.7	5.868	13.00	0.53	010012-3818.6	20.43	10.57	0.21
010145-1208.1	26.89	10.09	0.18	010150-7205.8?v	50.2	12.84	0.66	010318-7233.1v	17.24	13.69	0.76
010322-7054.3 :v	215	12.18	0.89	010416-7245.3v	208	11.80	1.04	010424-7200.6v	29.09	13.50	1.24
010647-7316.2	15.94	13.61	0.91	010718-7313.4v	32.86	13.36	0.80	011241-2910.8v	7.935	8.89	0.10
011355-5308.3?	14.36	10.06	0.18	011400-1222.0?	8.569	11.84	0.20	011423-7157.7	11,27	14.10	1.13
011428-7239.9	41.9	12.59	0.96	011658-7343.1v	25.42	13.74	0.92	011753-7337.4v	22.65	13.31	0.74
011948-6933.4	22.92	9.58	0.22	012000-8133.4 :v	108.0	12.60	1.19	012008-7254.2?v	20.06	13.23	0.80
012831-7347.8v	28.94	13.03	1,29	013552-7353.3v	15.16	13.72	0.92	014032-7430.4v	33.36	12.70	1.23
014049-6729.7?	1.1228	13.85	1.47	014818-7303.5v	17.67	13.85	0.79	015147-7334.1?	6.985	10.82	0.13
015825-2422.7?v	91.4	10.66	0.37	015930-3129.3v	128	10.70	1.29	015939-1734.8	2,5005	11.13	0.11
020731-2053,2	42.4	10.63	0.22	020851-0721.5	8.932	10.24	0.19	020909-7626,2	53.2	12.06	0.55
021313-8042.6?	80.7	10.92	0.14	021710-6325.0	31.47	10.04	0.27	022049-7305.1v	21.38	13.47	0.94
023010-6506.2v	237	10.86	1.37	023425-0243.8	40.5	11,10	0.23	024704-4018.1?	21,20	11.84	0.21
025112-4753.2	13.18	11.74	0.43	030439-8114.0	17.90	9.99	0.11	031115-5701.5?	10.608	11.33	0.23
031332-3644.5?	38.2	11.39	0.19	031339-1026.5v	2.2132	11.09	0.66	031347-1701.9	11.71	11.36	0.21
032642-5901.1	28.03	10.31	0.16	032738-8050.6	20.30	10.85	0.14	032740-5809.8	4.075	10.99	0.34
032919-0701.9	15.48	13.28	0.55	033149-6331.9?	2.7320	10.89	0.14	033410-4143.8?	15.35	11.46	0.26
033936-2922.0	22.33	12.77	0.27	034025-7054.6?	18.83	10.69	0.29	034037-6601.8	22.54	10.86	0.12
034103-3029.6	32.09	11,28	0.17	034324-6126.0 :	13.36	12,94	0.26	034325-4525.0	18.51	10.29	0.17
034951-2355.8 :v	125	11.89	0.74	035830-5016.4?	8.325	9.91	0.11	035937-3953.3	9.922	9.59	0.24
040404-3801.0	6.307	10.67	0.15	040730-3526.1?	28.89	10.71	0.17	040958-5520,2	9.209	13.86	0.67
041425-2049.5	11.39	9.39	0.11	041443-1852.2?	60.3	9.42	0.10	041847-3003.8	8.888	11.39	0.13
042538-2702.7?	11.96	11.43	0.21	043030-2806.5?	33.81	11.60	0.18	043332-7835.7	38.6	11.59	0.22
043939-0501.9	1.7829	11,20	0.47	044049-2150.9?	25,33	11,14	0.12	044312-3748.9?	45.7	11,41	0.14
044324-6913.7v	8.864	14.01	0.90	044518-6916.6	21.17	13.37	0.39	044529-4656.4	16.38	12.91	0.30
044537-7015.0v	28.34	13.10	1.23	044707-6917.7v	22.52	13.62	1.12	044908-4400.4?	31.28	11.31	0.17
044955-6945.3v	27.04	11.80	0.30	045004-6815.6v	22,33	13.03	0.87	045110-5920.7?	21,82	11.83	0.16
045124-3817.4?	22.73	9.67	0.14	045205-0941.8	4.778	11.19	0.22	045247-6820.9	20.11	14.15	0.85
045319-3131.9	1,2215	13.07	0.59	045423-7054.1	34.5	12.46	1.06	045506-6728.6v	29.85	13.32	0.66
045541-6625.7v	98.2	11.79	0.53	045627-6922.9v	30.32	12.55	0.38	045702-6759.7v	45.1	13.05	0.65
045713-6723.0v	22.70	13.17	0.76	()45745-6542.5v	24.21	12.64	0.76	045751-6750.3v	13.98	13.59	0.75
045751-6957.4v	23.34	13.07	1.18	045805-6927.2v	36.8	12,91	1.02	045811-6957.0v	39.4	12.57	1.07
045836-7006.6v	17.28	13.46	1.40	045847-7003.7v	15.89	13.78	0.81	045848-6719.0v	15.22	13.20	0.63
045941-6927.4v	31.80	12.96	1.12	()45949-4328.()	16.72	11.59	0.29	050008-6827.0v	133	11.69	1.37
050055-6638.2v	27.89	12,64	1.05	050154-6854.3v	20.78	13.10	0.74	050252-7142,1?	12,25	14.28	1.37
050308-6613.8v	23.96	12.81	1.22	050308-6913.4v	17.50	13.13	0.56	050326-6909.0	21.26	13.09	0.79
050346-6852.6v	22.34	13.41	0.75	050349-6856.1v	25.63	13.18	0.74	050609-7115.4	42.2	12.34	1.20
050615-6640.8	36.5	12.18	1.31	050620-8641.8?	7.980	11.30	0.21	050648-7002.2v	47.4	12.45	1.03
050716-6853.0v	52.2	12.07	0.39	050720-7027.2v	26.36	12.83	1.21	050737-0140.1:	6.416	12.34	0.25
050803-7157.6	15.63	13.69	1,29	050819-6846.7v	30.40	12.73	0.73	050904-7021.9v	13.64	14.04	0.83
050915-3813.2?v	50.6	9.36	0.25	050920-7027.4v	37.5	12.43	1.13	051354-6703.8	48.4	12.24	1.29
051514-6549.1v	17.57	13.70	1.42	051833-6712.9	27.96	13.65	0.82	051908-3740.6?	17.98	10.56	0.21
052018-6756.8v	28.27	13,77	1.27	052032-3036.7?	54,4	10.72	0.15	052112-6903.1v	23,61	13.16	0.90
052429-7217.1	21.29	13.52	0.89	052502-0052.4:	70.6	10.71	0.22	052508-6738.7v	48.1	11.88	1.08
052545-7402.7	20.72	11.93	0.21	052548-6721.2v	13.77	13.56	1.27	052606-6710.9?	1.6510	12.29	0.38
052655-6958.9v	28.12	13.09	0.71	052700-7138.6v	16,32	13.60	1.30	052926-6614.4v	16.89	13.77	1.21
053003-6556.1	26.10	13.10	1.21	053014-6926.3v	23.09	13.14	0.67	053122-7057.4v	52.5	12.46	1.01
053259-6643.5	16.19	13.67	1.01	053322-0309.9	65.0	11.35	0.23	053416-3626.0v	22,35	9.53	0.17
053504-0508.2	5.671	10.60	0.22	053537-6832.1v	24.28	12.81	1.24	053543-2955.7?v	3.1054	9.80	0.14
053550-6642.1?v	30.34	12.52	1.34	053813-2124.7?	17.93	11.25	0.12	053820-2021.6:	89.9	12.14	0.67
053954-6750.2v	24,12	13,49	0.93	054041-1058.2:	116	12,93	0.89	054118-7211.9v	12,73	13.82	1.39
054420-5523.5 :	17.95	11.45	0.41	055137-1432.2	1.08259	12.68	1.00	055223-2036.0?	25.54	9.95	0.09
060530-5513.2	151	10.26	1.09	072738-8622.6	60.6	11.93	0.37	100112-8844.6	43.5	10.70	0.27
222914-8149.7?	62.3	11,72	0.14	224542-8654.8	6.068	12,41	0.25	231359-7435.6?	18.81	10.79	0.11
231839-6752.5	2.5526	13.81	1.05	233049-8346.7?	21.41	10.59	0.16	235119-5250.6	43.3	12.50	0.30
235511-4958.4	12,45	10.59	0.20	235638-2738.7?	26.77	12.95	0.33	235930-8636.3?	14.96	12,27	0.22
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Table 1
Continued

ID	P	V	ΔV	ID	P	V	ΔV	ID	P	V	ΔV
(VV)725 1144 59	0.87971	1 1 1 1 5	1017 1	Stars class: 002743-4126.3?	ified as DC 0.48520		Lara	II nosata sott sa	1 5 6 4 0	L 15 41	Laza
000735-1146.5? 003418-4152.3?	0.51340	11.15	0.17 0.27	005218-6826.4	3.1286	10.58 12.08	0.12	003414-2911.3? 005929-1206.9?	5.649 2,5932	12.41 12.04	0.20
010207-1234.1?	3.768	13.67	0.27	010241-4321.5?	0.88988	10.51	0.16	011329-0738.1	0.57969	11.94	0.14
010207-1234.17	0.63955	10.45	0.47	012943-4900.0?	0.57251	13.54	1,14	014028-1606.5?	1,5604	10.60	0.29
014508-1914.2?	2.5232	12.08	0.18	015523-3846.3?	0.89193	11.08	0.15	015656-4149.0	2.5599	12.44	0.12
020017-1620.7v	0.82318	9.38	0.10	021947-1025.7v	0.53187	10.76	0.25	022023-3221.6 :	0.62177	12.66	0.26
022821-3557.1	0.55974	14,12	0.86	023314-3112.8?	0.94820	10.18	0.18	024033-4034,9 :	0.49512	9.84	0.12
024755-1036.0?	0.75161	11.69	0.17	025357-3707.2	1.5735	12.71	0.24	025436-1315.5	0.69253	13.07	0.82
031152-1121.3v	0.71388	9.68	0.59	031243-6524.0v	0.54902	14.00	0.89	031305-8341.8?	0.71138	13.96	0.58
034338-2504.2?	0.55994	13,23	0.66	034612-2725.1?	0.61744	13.80	0.65	034731-4202,3?	0.55162	14.13	1.15
035525-3137.9?	0.73738	11.52	0.17	040037-6014.0?	3.2981	11.85	0.39	041015-7926.9?v	1.0912	13.42	0.65
041743-1754.4?	4.410	11.39	0.13	041928-1225.32:	0.91161	12.02	0.20	042351-7654.7	0.65192	12.84	0.62
043142-0322.1	0.96551	12.03	0.22	043340-4437.7	1.6478	11.37	0.11	043516-4112.4	0.64100	12.69	0.29
043811-0726.3?	2.1092	10.52	0.13	044131-5216.6	0.54869	13.72	0.87	()44315-41()6.3 :	0.46628	10.39	0.14
044546-1748.7	0.91961	12,84	0.92	045037-1651.7	0.51627	11.62	0.14	045305-4844.6?	4.539	10.74	0.10
050421-2129.6	5.378	11.64	0.18	050601-6906.3v	0.95220	13.79	1.15	050710-4923.1?	0.61643	13.76	0.80
050803-7903.8	0.58334	13.75	1.21	051222-2111.6	0.46053	13.41	0.58	051311-3031.8?	5.615	11.33	0.23
051605-6006.9	1.07032	12,09	0.24	051819-2522.4	1,2299	11.72	0.18	052652-2504.8?	0.48578	9.87	0.13
053236-0523.0?v	1.3269	11.99	0.39	053407-3245.6	0.58504	14.13	0.87	053559-2437.1?	0.54686	13.66	1.04
053600-3116.1?	4.140	12.67	0.27	054738-0707.6?	0.63001	11.30	0.23	054806-2959.3 :	0.51163	13.48	1.09
060138-2153.1?	0.52202	12,32	0.20	060537-2453.4?	0.87835	13.89	0.57	061712-7328.9	0.54226	11.24	0.73
()73113-8432.3v	0.55807	12.47	1.05	230450-7311.69:	0.54612	14.29	0.95	231538-7848.9v	0.62762	14.00	0.78
232152-6942,2	1.8732	9.96	0.12	232705-6540.6 : Stars c	0.52201 lassified as	13.99 M	1.35	234624-5642.0 :	0.49061	13.90	1.16
000208-1440.5v	352	8.35	5.27	000736-2529.5v	321	13.29	2.06	000837-3913.2v	304	9.26	5.41
000842-8611.3v	340	11.35	2.35	001522-3202.7v	425	6.72	5.42	001654-3013.8v	171	11.43	3.21
002231-1832.7	197	12.37	2.49	002308-6140.3v	246	8.83	5.20	002404-0919.7v	320	8.46	5.40
002912-3754.5?v	214	9.06	4.49	003026-4624.6v	259	10.55	3.78	003419-4300.1v	144	10.82	2.05
003503-5012.3v	227	9.54	5.00	003939-8002.1v	302	11.94	2.37	004930-3454,8v	257	10.11	3.82
005300-6953.2v	221	9.10	4.86	005712-7459.9v	242	8.47	5.13	010529-3141.6v	329	9.76	2.58
010645-0128.9v	189	9.37	4.01	011028-7650.9v	218	9.98	4.44	011136-3006.5	333	10.30	4.66
011402-5646.7	278	11.15	3.81	011953-5555.1v	352	9.16	5.90	013334-7512.4v	311	9.56	3.32
013407-1014.1v	176	1L00	4.40	013426-1858.5v	258	10.22	2.05	015329-4900.4v	198	10.33	4.70
020534-5708.6v	295	9.56	2.62	021600-2031.2	368	8.68	5.07	021921-0258.8v	418	4.89	4.27
022148-6305.1v	309	9.63	3.48	022516-5934.3v	336	9.49	4.95	022602-0010.7v	166	8.19	5.24
022735-6747.2	140 313	12.15 12.87	1.99 1.31	022915-2605.9	458 219	8.73	2.49 5.64	023124-4127.1v	279	10.94	2.23
023158-1930.9 023723-2658.7v	523	10.09	4.71	023344-1308.9v 023835-5408.1v	147	8.14 11.61	3.17	023552-6235,0v 024422-2912,4v	203 265	8.79 8.68	5.29 1.98
023725-2038.7V 024745-5903.1v	287	8.60	2,10	025353-4953.4v	382	7,22	4.32	025816-1557.5	231	12,35	2.25
030052-5038.5v	218	8.24	4.97	031118-2341.7v	310	9.61	3.00	031153-1152.5v	164	10.92	3.90
031926-0103.9v	172	8.87	3.92	032844-5558.8v	155	11.52	2.90	033229-7626.9v	431	9.45	4.90
033412-1609.8v	360	10,22	3.48	034431-2513.6v	309	9.15	5.79	034748-6230.9v	268	9.81	4.64
035003-5721.2v	256	8.86	2.39	035029-2457.4v	275	9.26	3.97	035155-7358.1	118	11.58	2.91
035247-4549.8v	344	7.51	6.03	035343-5456.1	215	11.85	3.41	035514-2401.9v	239	7.77	4.68
040412-4550.3	277	11,12	3.55	040551-5450.0	162	10.01	2,54	041131-2508.0v	400	8.84	5.12
041741-6035.7v	265	11.56	2.76	041755-1830.4	311	10.47	2.19	042020-5420.2	161	9.80	4.20
042850-5430.1	186	10.14	4.67	043333-6301.8v	277	7.07	6.65	043648-7018.6v	273	12.05	3.21
043917-7421.7?v	54.7	12.48	2.16	044030-3814.2v	387	8.98	5.10	044148-0757.3	287	10.40	2.75
044509-2351.3v	196	11.13	3.89	044550-5947.2v	166	8.51	4.51	044730-5541.1v	236	10.50	3.83
045059-2859.9	145	12,44	2,42	045524-0655.9v	275	10.46	3.59	045701-8416.1v	446	10.74	4.08
045936-1448.4v	397	7.52	1.90	050135-6805.9v	360	11.58	3.21	050417-2228.5	192	12.49	2.41
050451-2154.3v	345	8.04	3.75	051009-6419.1v	365	10.47	3.74	051057-4830.4v	398	8.24	5.01
051102-0513.8v	126	11,57	2.87	051506-4655.1v	198	8.40	5.17	051639-4053.0v	488	10.40	2.33
051820-1621.1v	271	9.03	5.45	051917-3342.5v	233	8.04	3.90	051926-1350.9v	206	10.84	4.10
052145-1555.6v	199	10.55	2.67	052241-1208.5	184	12.15	2.26	052428-1039.4v	451	9.78	2.11
052544-1423.5v	173	11.08	3.64	052606-8623.3v	436	8.19	5.29	052613-0016.9v	193	9.23	1.94
052613-2850.4	170	10.71	4.31	052901-0441.6v	420	8.42	4.85	053221-1037.4v	145	10.13	2.32
053246-2800.8v	260	11,62	2,28	053410-5519.5v	298	10.56	4.32	053600-4404.6?v	190	11.18	3.15
053656-1304.6	246	11.75	2.95	053717-5538.4v	315	9.87	4.16	054053-7320.9	195	12.61	2.31
054134-0407.9v	136	10.47	2.68	054233-2341.7v	412	8.85	5.61	054906-2241.3	191	11.71	2.11
054957-5252.1	162	11,16	2.09	055033-2911.9v	345	8.06	4.18	055329-5226.0	102	12.07	2.33
055412-2241.8v	466	9.91	2.24	055938-2555.9v	145	12.65	1.75	060316-1003.6v	264	12.02	1.63
060913-2743.1	347	12.73	1.45	060932-6007.3v	152	9.87	2.95	060946-1306.9v	142	11.34	2.26
113924-8709.4	186	11,81	3.28	174436-8629.2v	332	10.75	2.65	180844-8647.9v	248	8.13	5.52
225223-7918.3v	138	12.09	2.32	230109-8703.2v	175	9.93	3.87	232340-6622.0v	149	10.99	3.61
234349-1517.1v 235627-4947.2v	343 262	8.00 8.69	2.95 4.58	234405+0022.9 235630-5412.1	252 160	10.04	2.19 1.93	234917-4306.7 235726-6523.1v	265 295	10.67 9.80	3.71 5.22
235754-0857.5	262	9.98	4.20	235844-3927.0v	511	12.22 9.67	5.91	235905-5324.1v	293 268	11.05	4.88
433127-NO313	243	3.70	7.20		ssified as P		3.91	[2JJ76J-J3Z4.1V	1 200	11.03	1 4.00
004145-7343.4v	125	11.68	0.57	010401-7213.9 :v	16.63	13.45	0.88	012727-3645.8	10.442	11.04	0.34
015034-1739.0v	222	9.86	1.20	031101-6527.8:	64.2	12.09	0.59	033247-6356.4 045627-6441.7v	134	12.04	1.43
035510-5330.5v	166	10.34	1,48	044548-4300.9	66.8	13.38	1.61		112	11.72	1.28

Table 1
Continued

ID	P	V	ΔV	ID Steer of	P	V	ΔV	ID	P	V	ΔV
000118-3551.7	25.67	9.84	0.35	Stars cla 000119-3505.9	ssified as 1	MISC 10.77	0.27	000120-5834.8	53.6	9.53	0.33
000139-0345.4v	150	12.82	1.04	000142-4229.3	32.44	10.71	0.29	000155-6707.7	228	12,74	2,41
000157-5250.1	30.95	10.78	0.26	000239-1926.7v	72.8	9.69	0.35	000309-1050.5	68.2	12.01	0.89
000341-3906.9	72.6	11.65	0.59	000407-0818.7	64,9	12,27	0.57	000416-5815.9	88.9	11,01	0.18
000457-5554.1	34.49	10.50	0.25	000506+0043.8	68.5	10.79	0.58	000600-4840.8v	41.6	9.79	0.25
000633-3849.0	37.2	11.41	0.23	000636-3235.6v	71.3	8.97	0.56	000636-3746.5v	53.3	9.51	0.41
000659-0846.7	43.1	9.59	0.21	000716-6338.3	39.7	10.12	0.78	000724-5212,2	42,3	10.73	0.29
000732-1954.5	59.1	13.12	0.50	000739+0120.8	1.9399	10.07	0.53	000819-4949.0	59.5	11.01	0.86
000829-2558.5v	41.9	8.78	0.27	000842-1151.2	35.64	11.24	0.24	001027-5635.0	20.95	9.43	0.17
001152-4807.8	33.20	9.16	0.21	001201-2434.0	101,2	9.91	0.73	001202-5440.0	106.8	12,17	0.86
001205-1305.9	256	11.61	0.27	001215-8312.0	27.29	10.95	0.18	001217-3511.2	64.4	11.12	0.34
001230-7405.Jv	112.0	9.93	0.52	001237-1639.5	100.6	11.58	0.62	001246-1101.3	197	9.45	1.52
001256-2451.5	4.004	11.30	0.13	001330-7010.3	28.11	10.47	0.23	001347-0748.6	120	11.06	1.01
001512-6013.5v	103.3	9.37	1.48	001513-6851.0v	34.86	8.77	0.15	001521-4637.9	48.2	11.12	0.37
001549-7625.8	46.2	9.71	0.21	001714-0536.7	377	10.88	0.46	001724-7559.4	41,6	11.70	0.25
001854-7401.9v	43.9	11.80	0.20	002020-5709.8v	53.0	8.82	0.39	002023-2323.0v	97.7	10.38	0.49
002108-4802.6	350	10.25	0.45	002109-0221.5	26.46	9.50	0.39	002209-7707.1	58.6	10.43	0.59
002219-8351.1	189	12.84	0.95	002251-5920.0	71,1	10.70	0.67	002258-7207.0v	257	11,43	0.51
002331-7222.6v	64.9	11.87	0.39	002334-1751.5	29.12	13.23	0.33	002340-2049.7	44.1	10.21	0.50
002411-1649.7	59.7	9.39	0.57	002417-7558.4	513	11.83	1.04	002430-3244.2	40.3	10.77	0.26
002431-0954.0	103.9	10.67	0.43	002458-7041.8	32.79	9.75	0.14	002504-7209.5v	44.7	11.44	0.48
002431-0934.0	54.9	9.83	0.43	002456-7041.8 002656-7933.0v	103.2	12.01	1.41	002706-0636.3v	179	8.99	0.62
002708-8436.6	10,545	10.24	0.27	002718-6819.8	37.8	9.98	0.18	002808-8224,4	45.5	9.98	0.02
002708-8430.0	46.8	10.24	0.09	003030-5612.1v	127	11.44	1.07	003037-7550.1	47.9	10.78	0.20
003114-1051.2	32.01	9.00	0.13	003125-0938.5	282	13.02	0.83	003222-1839.1	64.1	11.72	0.12
003256-0553.1	39.6	11,44	0.15	003314-1043.7v	96.8	9.47	0.63	003320-0623.6	36.5	9.57	0.49
003336-4847.6	71.5	12.97	0.53	003547-7352.7v	39.3	8.70	0.13	003606-5549.5v	46.8	10.88	0.36
003613-5231.2	39.2	11.41	0.33	003615-1711.0	44.2	10.56	0.12	003629-3020.0v	51.4	8.84	0.32
003651-4439.4	48.1	9.65	0.16	003723-3357.4	49.5	11,49	0.24	003753-8237.2v	107.7	9.22	1.02
003859-1927.7	42.0	11.58	0.28	003925-6307.2	50.2	9.74	0.30	004108-2720.8	0.329590	10.38	0.20
004201-0938.9v	163	8.71	0.26	004237-6740.4	78.8	11.38	0.63	004409-0214.8	73.0	8.98	0.40
004430-3339.2v	31.76	9.00	0.30	004451-7615.3	79.5	12.41	0.03	004506-7305.5	324	12.51	0.40
004619-7240.6	421	12.86	0.25	004658-4758.8v	69.1	9.22	0.50	004753-0119.0v	98.2	11.59	1.29
004842-0631.9	25.67	10.18	0.34	004854-7322.7	213	12.69	0.55	004901-5605.8v	510	10,41	0.18
004902-7259.6	300	12.40	0.59	004927-7318.3v	384	11.59	0.33	004901-3003.8V	38.7	9.62	0.16
	59.2	10.34	1.07	004957-7337.7	141	12.75	0.23	005002-4843.8	200	9.02	1
004942-1141.0 005009-0223.4	39.2 447	11.90	0.75	005106-7243.4v	420	11,16	0.29		75.5	9.66	1.07
005005-0223.4 005125-7238.8v	425	12.49	0.73	005133-0814.9	43.1	9.67	0.79	005124-5937.8v 005151-5550.4	64.8	12.08	0.38
005153-7211.6	341	12.49	0.57	005311-7304.1v		11.95	0.79	005336-7301.6	211	12.69	
005338-6115.9	10.828	9.48	0.12	005348-7202.2	326 1484	12.42	0.21	005354-7142.8	350	12.33	0.32
005338-0113.9	91.4	12.41	0.12	005455-8002.4v	88.9	10.53	0.56	005507-7300.7	309	12.33	0.35
005536-7236.4v	396	12.41	0.37	005553-7318.4v	79.3	11.67			49.0	11,37	0.29
005611-1329.7	39.5	12.74	0.37	005627-7328.4	4.011	12.80	0.57	005606-5810.0 005827-2422.2	50.6	10.27	0.29
	39.3 407	12.43	0.21	005935-7204.1v		12.53	0.48	010014-4831.1	0.39889	13.02	0.29
005931-7215.8v	351	12.34	0.33	010044-3228.4	321 248	11,25			394		1
010042-7210.6v					56.4	9.99	0.40	010054-7251.7v	1	11.63	0.66
010056-7137.9v	400	11.68	1.62	010216-1050.3		ı	0.24	010319-6421.8	73.3	9.31	0.40
010328-7252.2	513	11,71	0.48	010329-5645.6	145	11,61	0.45	010431-7032.4v	47.2	8.80	0.40
010439-7201.4	412	12.06	0.65	010520-8152.6v	48.7	12.10	0.54	010534-1131.9	48.6	12.21	0.39
010628-2055.6	58.4	10.73	0.34	010646-4904.0	27.30	10.78	0.15	010648-3615.1	35.53	10.18	0.14
010648-7216.3	379	11.54	0.59	010718-7228.1v	318	10.08	0.32	010753-7210.7	256	12,13	0.25
010753-8631.2	82.3 56.6	11.57	0.24	010807-0750.7	48.3	11.31	0.33	010810-5114.0	40.1	10.69	0.12
010839-1703.8v	56.6 24.19	8.70	0.44	010852-5530.4	59.7	10.74	0.27	010906-7238.5	85.1	9.43	0.51
010931-5249.7	34.18	10.64	0.26	010939-7320.0v	545	11.56	1.10	011003-7236.9	377	12.86	1.68
011022-5433.7	24.43	9.71	0.16	011101-7136.5	69.2	11.45	0.34	011109-4241.4	63.9	9.35	0.67
011205-5145.1	41.5	8.88	0.19	011313-1655.2	34.76	10.05	0.14	011319-4004.4	53.0	11.09	0.98
011323-6734.9	28.34	11.11	0.26	011339-2617.2v	50.7	10.68	0.37	011415-0210.7v	325	8.60	0.59
011431-6722.1	39.3	10.35	0.21	011437-7348.9	129	13.00	0.57	011651-6101.1	211	11.55	1.24
011653-2350.7v	67.8	9.62	0.64	011717-5851.1	46.5	11,49	0.26	011725-7343.6	38.9	11,04	0.32
011924-2314.2	34.61	10.82	0.29	012010-5145.4	38.8	9.19	0.21	012017-0944.9v	21.75	9.12	0.16
012037-0824.9v	151	9.22	0.57	012057-6938.4	73.4	11.89	0.52	012236-0456.2v	96.6	9.87	0.30
012247-1609.0	67.7	13.52	0.78	012318-6231.4	48.9	9.82	0.32	012325-1515.3	17.52	10.15	0.15
012326-4359.4	99.0	12.40	0.67	012340-7823.2v	83.9	12.67	0.74	012401-3736.0v	46.6	9.07	0.27
012410-7223.5v	341	12.50	0.50	012416-1646.8	51.3	10.48	0.49	012438-5733.8	33.67	10.30	0.17
012450-4245.8v	19.37	8.94	0,11	012514-4555.6v	29.18	8.68	0.36	012646-6224.5	52,9	10.60	0.36
012702-1837.8	72.8	10.48	0.21	012806-3142.2	61.4	10.21	0.61	012810-4524.6v	107.1	11.71	1.01
012850-2729.1	31.04	11.82	0.18	012918-7302.0	186	11,47	0.22	013032-7318.7v	391	12.40	0.76
013139-7056.0	70.5	9.36	0.16	013200-1649.4	98.3	11.38	0.33	013404-4314.5v	53.2	9.88	0.43
013407-2246.7	21.24	9.04	0.15	013420-6431.1v	40.4	9.00	0.21	013503-8255.7	49.2	11.97	0.45
013547-3837.1	25.29	8.64	0.16	013548-1122.5v	218	9.58	1.50	013608-3511.2	127	11.67	0.70
013632-5019.8	0.174195	14.46	0.98	013732-3406.0	68.1	11.77	0.48	013935-0754.4	98.0	11.18	0.68
014000-1206.2	102.4	11.38	0.50	014030-6116.8	38.7	10.12	0.13	014124-6906.1	77.4	10.36	0.83
014138-5934.9	39.8	10.70	0.37	014224-4640.9v	319	9.50	0.59	014318-3618.9	83.6	11.73	0.29
014348-6713.9	60.3	11.50	0.32	014352-3409.0	26.98	9.72	0.19	014420-2044.5	51.0	11.47	0.56
014240-07127							0.31	014458-8011.1v	56.5		

418

Table 1
Continued

ID	P	V	ΔV	ID .	P	V	ΔV	ID	P	V	ΔV
014532-4155.7v	89.1	10,24	0.46	Stars cla 014553-2404.0?	assified as N 53.2	MISC 10.93	0.23	014648-6448.8	T 71.2	10.95	1 0.33
014726-2658.1	26.36	11.56	0.15	014820-8300.1	138	10.33	0.23	014851-6439.4	63.3	9.88	0.33
014930-6917.8	42.9	11.11	0.26	014932-5421.4	52.3	10.34	0.25	014944-3537.9	69.8	10.00	0.34
014945-7134.3	99.0	10.21	0.41	014951-4258.2v	46.9	9.87	0.23	014955-0451.6v	58.1	8.56	0.61
015019-4716.2	44.0	10.41	0.33	015142-3648.3v	46.7	9.34	0.23	015221-1505.3	45.2	9.72	0.37
015226-2646.0	63.6	9.73	0.08	015254-7209.2	51.9	10.12	0.48	015318-4614.4	123	12,30	0.58
015417-7622.8v	62.4	9.91	0.32	015446-1809.1	337	10.90	0.73	015452-6616.0	58.3	11.43	0.49
015516-0219.4	71.6	12.10	0.41	015518-3548.2v	63.9	9.18	0.79	015604-2526.3	30.54	9.65	0.11
015756-7830.5	31,15	9.26	0.28	015757-2628.9v	79.5	9.45	0.57	015827-3648.9v	100.5	9.48	0.35
020104-7805.5v	53.7	10.71	0.19	020213-1619.9	39.2	10.09	0.17	020217-3057.5	386	11.05	0.70
020219-2751.6	107.0	11.35	0.37	020440-2018.0	43.6	11.79	0.46	020453-1344.1	34.54	11.20	0.23
020527-7448.6	44.3	12.67	0.60	020531-4834.4	79.2	9.98	0.41	020606-1012.7v	80.9	9.25	0.33
020638-4035.8	55.2	11.90	0.32	020753-5645.6	70.7	10.85	0.12	020801-3619.1	66.2	11.57	0.56
020956-5909.3	0.317042	13.85	0.67	021008-5430.6v	5.898	10.15	0.19	021011-5457.6	35.26	11.57	0.24
021029-1835.8	72.8	11.42	0.24	021106-5814.3v	49.6	12.06	0.55	021140-2925.5?	28.14	9.89	0.21
021148-2341.7	79.6	10.00	0.37	021149-7129.1v	85.9	9.01	0.78	021253-3224.8	0.267860	14.61	0.84
021255-6823.0	56.2	11.66	0.47	021327-2338.3	39.4	11.18	0.32	021411-8143.8v	129	12,07	0.74
021446-5837.7	41.9	9.41	0.25	021511-1324.4	45.4	10.41	0.40	021712-7925.4v	44.8	12.02	0.53
021741-5639.9	81.9	11.13	0.45	021829-6821.1	68.7	10.87	0.34	022145-3759.6	167	10.82	0.88
022243-1012.2v	60.3	8.77	0.40	022332-4034.3	68.2	12.22	1,10	022458-5548.8	47.8	10.99	0.28
022508-1324.0v	73.8	10.92	0.18	022552-2955.7	44.0	13.01	0.48	022600-1631.2	45.9	10.72	0.35
022607-5814.5	390	10.97	1.08	022729-1844.6	1.4186	11.85	0.18	022748-5736.8	69.6	11.30	0.24
022806+0005.2	141	11.48	0.56	022808-5542.4	36.7	11.07	0.22	022855-1553.8	51.5	9.42	0.33
022856-3630.3	32.29	10.97	0.35	022902-1637.2	40.3	10.38	0.56	023143-1430.3	68.2	10.67	0.69
023145-6222.6	43.5	10.74	0.27	023216-5502.8	113	12.88	0.50	023221-1359.7	33.86	10.34	0.20
023237-1643.6	65.2	9.96	0.91	023243-4550.7	35.9	11.11	0.23	023334-4010.5	157	9.79	0.14
023440-0247.7v	21.02	8.64	0.15	023442-2053.8	126	11.17	0.49	023507-5935.9	125	12.93	1.55
023527-6011.0?	52.2	10.04	0.15	023535-6118.0	39.7	11,27	0.43	023553-1900.1	60.1	11,04	0.48
023716-0253.2	278	11.01	0.99	023747-4537.2v 024042-5025.7	43.9	8.66	0.32	023916-2927.3 024101-6806.0	52.0	11.63	0.55
024003-0859.7 024129-3731.5	29.06 81.7	10.44 12.42	0.24 0.44	024156+0031.6	27.70 273	9.50 9.98	0.12 0.57	024101-0800.0	22.80 33.00	10.22	0.09
024129-3731.5	28.40	11.15	0.16	024230-8804.4	47.6	11.61	0.26	024234-3345.9	51.7	11.53	0.31
024229-8131.0	35.1	11,22	0.16	024258-2607.1v	90.5	8.68	0.20	024412-2001.8	26.82	10.00	0.31
024235-0240.0 024415-5418.1v	64.6	8.84	0.14	024452-1347.6	50.0	10.59	0.37	024528-1359.5	75.8	8.89	0.32
024542-3121.5	59.8	10.29	0.31	024642-4131.5v	68.8	9.66	0.62	024749-3838.1	61.7	9.93	0.32
024820-6150.1	67.0	11,77	0.26	024924-8218.7	48.9	12.85	0.46	024943-6948.7v	59.5	8.65	0.34
024947-3512.5	35.8	10.27	0.40	025006-8609.5	138	12.62	0.67	025314-3746.3v	148	10.05	1.54
025351-7952.0	61.0	11.06	0.14	025402-7009.2	85.6	9.53	0.55	025416-3910.7	39.1	10.68	0.65
025429-7556.7	311	10.37	0.11	025434-2725.4v	26.63	11.51	0.24	025453-5157.2v	27.63	8.79	0.13
025502-4411.0	60.5	10.88	0.35	025619-6611.3	43.7	10.45	0.20	025620-2507.1v	79.7	11.02	0.52
025721-1615.7	68.5	12.50	0.43	025728-4931.4	32.82	9,41	0.30	025858-1320.7v	51.3	8.62	0.44
030027-1335.3v	48.9	10.78	0.33	030035-8803.1	252	11.82	1.86	030036-2701.8	33.84	11.97	0.17
030129-0850.4	64.6	11.31	0.20	030203-8002.1v	424	10.46	1.47	030227-7652.0	62.9	12.54	0.43
030311-2660.0	66.5	10.60	1,12	030313-8538.3v	50.3	8.86	0.23	030349-1413.5v	33.46	9.55	0.23
030409-7318.8	61.6	12.34	0.67	030456-5820.0	0.97723	10.97	0.35	030521-5218.0	73.1	10.35	0.58
030540-3827.8	98.6	11.22	0.16	030615-3942.5	64.0	11.23	0.56	030638+0109.5	37.3	10.07	0.59
030754-2709.0	30.33	10.53	0.22	030838-2626.8v	42.0	8.65	0.25	030842-7547.4v	85.7	11.35	0.98
030943-6442.5v	61.1	11.38	0.75	030954-2731.4	117	11.53	0.42	031002-4047.7	61.9	12.48	0.46
031108-8453.6	57.0	10.62	0.13	031222-7259.1	81.3	9.25	0.30	031333-4633.7	57.5	10.64	0.20
031336-0239.5	46.0	10.16	0.25	031454-6657.1v	59.0	11.11	0.32	031500-1008.0	17.90	12.16	0.22
031544-4532.4v	20.45	9.04	0.16	031547-5750.0	95.7	12.07	0.39	031555-7636.3	56.3	11.55	0.23
031618-2727.3	50.9	10.97	0.21	031625-1935.2	71.3	10.69	0.22	031853-3129.2	160	11.45	0.56
031939-6918.2v	119	11.33	0.96	032009-7136.2v	44.2	10.22	0.91	032016-0006.5	335	9.65	0.85
032020-7551.2	51.0	10.46	0.38	032029-0342.0	68.8	11.58	0.38	032110-1713.9v	163	10.90	1.19
032124-1950.6	47.0	12,25	0.44	032130-2127,4v	83.6	8.97	0.90	032229-3936.3	19.03	10.16	0.12
032242-3041.6	41.6	11.23	0.19	032255-7923.7	39.3	10.79	0.30	032258-7047.3	3()9	10.15	0.32
032323-8503.8	449	12,37	1.03	032336-1953.0v	80.1	10.39	0.69	032353-2520.4	160	11.86	0.30
032433-5409.2	85.5 50.4	10.62	0.40	032503-7856.9	47.7	10.62	0.37	032509-1221.3v	173	9.26	0.74
032512-7839.9v	50.4	8.50 11.45	0.18 0.75	032535-8139.2?	27.09	10.58	0.18	032659-5333.8v	24.57	9.11	0.17
032705-0416.0 032822-1524.2	76.4 77.8	11.76	0.75	032719-0730.7 032846-6041.4	75.5 93.6	9.95	0.49	032737-8233.8 032935-2824.2v	119 90.2	11.86 9.49	0.50
032822-1524.2	77.8 52.4	10.91	0.43	033015-4138.9	27.01	10.58 9.32	0.49	032935-2824.20	53.5	10.84	1.16 0.31
033042-0156.4	58.8	9.85	0.29	033104-1524.8v	70.0	11.68	0.21	033104-6829.5	29.75	10.64	0.31
033042-0130.4 033124-7527.4v	146	12.77	1.38	033227-2539.5v	77.5	7.93	0.50	033313-5324.6	22.39	9.27	0.11
033316-0606.7	411	11,49	0.39	033324-6000.9	39.8	11.34	0.30	033405-4718.7	105.6	12,46	0.11
033425-2537.7	106.6	11.19	0.94	033454-6459.9	51.1	11.16	0.16	033516-5105.8	64.5	11.74	0.36
033553-6911.6v	32.29	8.55	0.12	033620-6129.4v	18.82	9.28	0.24	033630-3219.6	40.9	9.97	0.26
033718-8516.7	51.9	10.08	0.12	033719-5225.5	53.0	10.40	0.11	033739-5148.0	25,71	9.20	0.26
033745-5523.8v	255	8.42	0.56	033926-5745.6v	40.1	11.68	0.10	033953-1337.8	151	10.88	0.58
034116-1045.1v	191	9.03	0.90	034136-3750.4	151	11.08	0.17	034207-1347.2	66.6	12.80	0.26
034234-1450.7	54.7	9.19	0.42	034252-4909.6	26.93	11.63	0.23	034303-3527.1	43.2	12.00	0.29
034319-2929.1	45.2	9.71	0.30	034418-3739.0	31.35	10.59	0.12	034428-7640.0	284	11.77	0.18
		13.67	0.61	034520-4723.3v	206	11.58	1,64	034546-1157.9	49.1	11,71	0.15
034459-1526.8	0.33948	13,017									

Table 1
Continued

ID	P	V	ΔV	ID Ct	P	V	ΔV	ID	P	V	ΔV
034702-6646.2	50.0	10.04	0.30 [Stars 034740-6641.6v	classified as 79.3	MISC 8.15	0.98	034746-1952.1	54.5	11.23	0.28
034750-6232,2v	75.0	11.43	0.36	034900-6952.7v	201	8.78	0.90	034910-2155,2	114	11.48	0.31
035027-8608.5	41.7	9.18	0.34	035116-0015.9v	171	11.01	0.52	035127-0122.3v	127	8.45	0.45
035157-3032.9	117	11.93	0.40	035204-3539.0	102.0	10.41	0.18	035214-4904.3	80.0	9.01	0.38
035216-0703.2	96.8	12.50	0.51	035230-0843.2	37.1	9.64	0.23	035257-7402.6v	274	11.62	0.85
035302-4410.3	38.0	10.88	0.24	035342-1116.1	341	12.51	1.36	035411-3654.1	169	11.25	0.43
035442-2914,4v	42.5	9.99	0.22	035443-8802.8	70.7	12,39	0.32	035504-4710.2	127	9.04	0.26
035620-3228.9v	184	10.80	1.63	035620-3948.6	35.5	10.79	0.20	035803-7205.1	99.5	9.38	0.26
035822-5021.5?	44.6	10.99	0.16	035900-0118.4	80.7	10.92	0.27	035924-4554.8	69.8	11.02	0.44
035928-4222,4	39.7	11,24	0.18	035939-1224.8	42,5	9.67	0.11	035947-5824.3	163	13.21	0.55
035957-5823.8	43.3	11.19	0.20	040016-5242.7	31.55	9.97	0.15	040019-0623.1v	22.83	8.41	0.24
040024-2741.4	21.70	9.20	0.10	040031-1559.5	45.2	11.14	0.25	040053-5515.8	146	9.66	0.85
040101-3726.8	91.0	11.93	1.15	040125-5214.7	62.2	12.35	0.56	040210-6422.7	60.3	11.49	0.24
040215-3954.1	16.58	12.20	0.21	()4()224-7754.1	29.93	10.91	0.16	040251-7532.8	35.9	10.16	0.19
040258-7950.7v	133	9.31	0.62	040326-3922.7v	48.4	9.01	0.25	040329-1121.8?	64.2	11,31	0.35
040340-1329.2	36.2	9.05	0.18	040416-3039.9	52.5	12.02	0.25	040418-2036.7	39.2	8.93	0.05
040419-1543.6v	118	8.58	0.57	()40436-3016.8	200	11.84	0.92	040521-4541.4	55.0	12.58	0.46
040537-2518.4	52.0	11.18	0.33	040558-1838.9v	145	10.35	0.26	040602-0915.7	50.4	12.38	0.70
040650-0740.4v	147	10.11	1.10	040705-1329.0	80.9	12.69	0.50	040717-2800.5	44.5	9.84	0.21
040719-6026.8v	65.5	9.21	0.53	(M0724-3929.9v	55.9	8.80	0.28	040738-1701.6	48.2	9.27	0.27
040752-7313.6	178	11.57	0.20	040814-5353.7	33.80	10.38	0.28	040821-5752.5	41.6	11.00	0.28
040826-7036.5	116	10.49	0.55	040831-0439.8	91.0	12.78	0.73	040850-2525.8	40.0	11.51	0.43
040856-0806.0v	53.2	8.90	0.24	040907-0914.2v	208	9.96	1.25	040920-1326.4	80.1	11.26	0.73
040936-8151.3v	9.685	9.55	0.38	040941-6631.5	68.1	10.42	0.23	041010-0851.5	28.72	10.32	0.13
041027-3435.2	37.8	11.13	0.20	041038-8647.1	45.7	9.81	0.23	041058-3153.8	50.9	10.38	0.56
041104-2003,1v	24.43	9.03	0.10	041210-5815.4	67.0	11.82	0.29	041210-7636.2	89.3	10.99	0.56
041228-6508.8v	123	12.62	1.41	041239-0747.8	145	13.35	0.88	041337-5035.2v	51.2	8.84	0.46
041359-3132.7	8.317	10.63	0.16	()414()4-4413.4	28.13	10.70	0.17	041505-5300.6v	74.8	8.80	0.49
041521-0630.3	41.5	10.39	0.21	041540-5325.8	131	11.03	0.39	041641-0912,0	76.8	11,42	0.89
041657-6247.7	131	11.07	0.53	041704-1213.3	69.8	12.43	1.24	041707-2501.0v	138	10.30	1.05
041712-8344.8	116	12.39	0.33	041737-0923.3	31.44	12,43	0.30	041746-1006.2	33,21	9.74	0.31
041954-1548.5	85.1	11.52	0.33	041956-4303.8	62.9	12.20	0.47	041957-7046.7	175	13.31	0.52
041958-1843.3v	78.6	11.16	0.57	042019-1024.5	252	12.62	1.88	042033-1554.9	56.8	11.47	0.29
042110-0310.3	78.6	10.96	0.59	042120-0250.0	119	13.34	0.71	042131-8500.7	30.46	9.82	0.18
042142-6339.5	72.6	9.84	0.35	042144-1403.8v	271	11.82	0.27	042203-2241.1	39.4	10.02	0.37
042212-6559.2	57.6	11.65	0.42	042221-4623.3	76.1	11.01	0.43	042235-0530.1v	127	9.98	0.43
042241-5032.2	59.0	11.34	0.33	042338-0547.6	32.87	12.62	0.32	042355-7802,4	50.3	12.81	0.60
042401-6707.1v	99.9	12.29	0.97	042447-3745.7	51.3	10.55	0.39	042515-5128.3	0.200940	9.36	0.13
042518-3612,5	50.0	9.90	0.28	042525-1136.9	68.6	11,14	0.48	042554-3448.7	22,47	10.05	0.12
042559-3618.3	110	12.15	1.10	042627-0915.7	116	10.63	0.54	042659-7054.0	35.3	11.55	0.27
042706-0022.9	32.6	10.62	0.21	042724-4635.6	91.4	11.80	0.54	042740-6854.0	50.6	13.81	0.51
042742-3213.3	68.2	10.83	0.94	042756-2912,8	49.8	9.09	0.23	042822-0148.6	151	12,41	0.40
042917-8448.3v	50.8	8.53	0.25	042941-4033.3	51.0	11.97	0.37	043006-1305.4	63.4	11.08	0.47
043007-0803.2v	197	9.84	0.20	043032-1720.0	54.3	9.87	0.21	043051-2817.5	22.77	11.51	0.13
043053-8229.5	30.90	10.30	0.26	043056-0414.6	69.7	11.86	0.53	043116-0201.4	71.5	10.25	0.38
043140-6358.7	85.2	10.50	0.40	043211-6750.6	31.23	10.67	0.15	043215-1029.7	60.1	9.83	0.14
043257-7807.7v	79.2	9.09	0.48	043321-4605.9	156	13.53	0.61	043329-1233.5	66.4	10.86	0.15
043331-3334.8	95.2	12.02	0.56	043358-5147.1	35.5	11.96	0.23	043406-0706.9	0.251433	13.52	0.53
043435-1054.5	127	13.30	0.95	043554-8615.3	140	12.76	0.49	043601-3030.9	52.1	11.29	0.41
043603-3953.7	46.1	10.75	0.28	043607-2731.3	64.3	11,92	0.68	043608-2003.2	106.0	9.71	0.54
043613-0516.2	175	9.38	0.67	043634-2734.7v	158	9.48	0.40	043658-2403.0	54.8	11.44	0.50
043701-2945.7	81.0	11.14	0.28	043707-1238.3	50.5	11.11	0.20	043712-1841.1	121	11.27	0.83
043739-1740.9	98.2	11.45	0.49	043812-6218.2	96.5	10.27	0.62	043827-1710.9	429	12.59	0.63
043923-3027.4v	46.9	8.93	0.28	043924-5212.0	80.2	9.59	0.19	043926-3211.0	58.6	11.29	0.31
043933-0348.7	43.3	9.55	0.31	043935-8408.1	71.4	10.92	0.55	043938-5636.8	35.5	9.82	0.23
043945-2946.0	79.0	11.30	0.43	044003-3924.3	96.7	10.99	0.39	044003-5223.4v	30.58	9.16	0.13
044006-6344.0	301	12.97	1.08	044016-2954.8	43.9	11.75	0.27	044016-5336.6	43.0	11.73	0.27
044033-1412,0v	80.0	10.43	0.30	044037-5236.0	0.169289	13.86	0.55	044128-8235,2	41.5	10,21	0.32
044139-0153.3	194	11.22	0.49	044142-3314.9v	98.8	9.67	0.70	044244-6301.7	89.1	12.13	0.38
044412-5009.1	32.60	11.35	0.38	044421-1240.2	72.8	10.05	0.48	044437-7043.0v	65.7	14.01	1.03
044458-0237.1	90.2	11.08	0.93	044500-3722.0	89,1	11,81	0.24	044502-5906.0	84.9	13.10	0.87
044540-2212.7	42.1	10.29	0.26	044557-3441.4	39.2	11.11	0.15	044653-5847.6	46.7	10.26	0.27
044704-1819.1	33.42	10.45	0.18	044714-7504.6	19.88	9.74	0.09	044723-7831.0	75.4	11.90	0.35
044905-6747.2	434	12.15	0.43	044909-1949,2	192	11,22	1.69	044925-6649.8v	29.62	9.68	0.25
044926-2932.6	188	11.63	0.68	045039-7633.3	77.9	13.41	0.44	045109-5041.5	41.7	10.08	0.21
045116-2407.3	133	13.23	1,13	045119-0549.6	64.2	9,41	0.43	045121-6929.2	290	12.46	0.47
045133-0335.5	58.1	9.72	0.44	045158-6654.9	46.8	11.29	0.37	045213-4100.3	29.10	9.06	0.17
045245-3914.0	42.2	13.82	0.65	045252-0001.9:	0.288233	11.46	0.23	045254-6655.9	393	11.22	0.23
045255-1711.4	29.58	10.68	0.22	045319-6305.7	51,6	11,85	0.35	045328-0534.9v	83.9	10.73	0.69
045331-6917.9	135	12.78	0.60	045409-6832.5	394	12.93	0.85	045414-6912.6	330	10.04	0.16
045426-2810.0	161	10.46	0.19	045434-4414.9	48.5	10.57	0.20	045437-6920.4	512	10.97	0.42
045439-1355.0	48.7	11.06	0.44	045440-6904.6v	509	12.50	0.76	045441-0728.0	89.6	11.79	0.41
045448-3614.3	42.1	9.64	0.17	045459-5305.6	49.4	12.01	0.37	045503+0025.1	65.6	10.47	0.61
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Table 1
Continued

ID	P	v	ΔV	ID Store of	P	V	Δ٧	ID	P	V	Δ٧
045532-6650.6v	402	11.84	0.55	Stars el. 045550-2742,2v	assified as 24,15	MISC 8.45	0.12	045616-0858.2	103.6	11,94	L 0.47
045648-6939.9	512	12.30	0.72	045652-0632.1v	63.6	11.45	0.33	045706-0147.3v	270	12.14	0.84
045727-6623.4	142	12.76	0.56	045731-7009.0v	391	12.38	1.29	045736-8708.3?	58.0	12.40	0.55
045742-6517.0	20.82	9.73	0.11	045820-1734.3	70.9	11.40	0.54	045822-1641.8	79.7	9.95	0.51
045832-0604.1v	127	11.51	1.91	045856-7848.5	51.5	11.23	0.40	045906-2145.0	14.81	11.69	0.25
045909-6540.1	345	9.79	0.32	045930-1627.4	40.1	10.69	0.19	045931-4120.2	77.6	12,30	0.63
045933-3406.6 045954-4750.4	97.9 151	11.29 12.77	0.50	045939-2656.7 050017-3401.2	36.8 84.6	11.50 10.98	0.22	045940-2551.3 050041-6628.5	156 131	11.77 10.75	0.46
050046-1300.3	56.7	11.73	0.39	050049-6550.9	447	12.54	0.57	050106-0439.8	53.3	10.53	0.57
050129-6842.8	409	12.85	0.50	050133-0451.8	33.97	11.28	0.21	050140-5648.3	0.41592	8.79	0.18
050141-1826.1	79.6	11.05	0.59	050147-6859.3	24.35	9.23	0.14	050201-2648.7	49.0	11.63	0.31
050227-6509.1	39.0	11.19	0.21	050231-3854.1	62.3	11.03	0.37	050232-3129.7	39.8	10.47	0.30
050247-2944.1	108.1	12.28	0.71	050300-5405.9v	42.7	8.80	0.23	050324-1630.6	16.44	10.04	0.13
050332-2436.5?	27,24 418	11.37	0.23	050357-1859,1? 050415-6715,1	21,53 42.6	11,17 10.95	0.16	050405-7022,8v 050425-2211.1	511	12,37 11.96	0.44
050414-6716.2v 050445-2837.0	98.7	11.57 9.86	0.39	050503-6918.5v	42.6 156	13.05	0.21	050507-8043.6	63.7 98.7	10.77	0.38
050524-2832,5	26.50	10.56	0.10	050527-1628.0	48.8	9.46	0.16	050542-1409.6	43,2	10.43	0.16
050547-5533.7	53.5	11.45	0.38	050557-7035.4	412	12.98	0.81	050559-7048.2v	293	12.72	0.80
050701-2220.2	38.8	10.49	0.16	050706-3741.9v	69.1	8.68	0.19	050706-7032.7v	349	11.71	0.25
050806-6819.1	411	13.85	1.01	050811-6617.8	54.7	12,71	0.56	050816-5013.1	63.4	9.83	0.32
050838-4947.6	51.4	11.28	0.50	050847-3431.0v	195	8.21	1.00	050851-2425.5v	108.9	8.77	0.90
050855-2043.9	66.7	13.17	0.57	050904-0320.1	61.4	9.86	0.34	050907-1122.5	75.4	12,19	1,11
050911-6936.2	99.0	10.71	0.21	050920-7650.9	62.8	10.23	0.40	050928-2650.4	196	11.73	0.59
051013-6026.3v 051127-3301.0	43.4 56.5	8.73 10.25	0.28	051112-4534.6v 051131-6129.1	79.6 60.7	8.54 11.16	0.43	051118-6526.1v 051200-0820.3	391 96.6	12.07 11.93	0.34
051127-330130	68.4	10.23	0.57	051218-3438.3?	20.26	10.34	0.23	051229-0233.5	168	11.93	0.30
051246-6719.7v	376	12.32	1.08	051333-6720.7v	607	11.94	0.13	051344-2003.3	98.7	12.95	0.98
051345-4932.8v	253	8.71	1.28	051448-6911.5	63.5	10.99	0.73	051449-6727,4v	420	12,33	0.63
051502-7734.9	20.56	12.24	0.17	051505-0939.7	76.7	10.89	0.26	051510-3453.6	51.2	12.15	0.44
051516-6933.1	273	12.40	0.32	051534-6532.6	54.9	10.82	0.36	051535-5309.4	80.1	12,12	0.81
051536-1550.2	28.21	9.94	0.25	051547-6355.9	71.7	9.59	0.88	051600-0948.6v	41.2	9.89	0.30
051600-3417.5	78.3	11.32	0.32	051632-1358.1	65.8	11.51	0.32	051643-5456.7	38.5	11.65	0.30
051644-1758.7	64.0	11.62	0.30	051650-2435.5?v	60.1	9.12	0.42	051652-1140.6	106.7	12.35	0.62
051653-1711.7 051726-0528.2	108.4 45.9	11.77 8.85	0.22	051700-2220.2 051745-3938.5?	35.6 15.35	10.72 11.77	0.17	051703+0016.2 051757-6808.7v	81.0 410	11.81 13.33	0.35
051806-1406.8	39.5	11.42	0.20	051807+0001.3	350	10.14	0.88	051831-3106.2	73.0	10.59	0.59
051831-6806.5	362	12.69	0.78	051846-2212.8v	26.96	8.44	0.00	051852-0001.3	149	11.51	0.21
051857-6756.2v	394	12.22	0.42	051917-6751.8v	43.6	9.71	0.22	051921-1957.0	0.38423	14.13	0.56
051931-6841.2	118	11.79	0.62	051945-1824.6	52.9	12.59	0.58	051952-1752.4	365	10.45	0.77
051954-6804.1v	376	12.22	0.40	052013-1811.3	83.4	13.01	0.51	052024-6933.4v	438	12.03	0.86
052045-5628.4	41.6	12.19	0.28	052056-6546.1	436	11,43	0.31	052056-6639.7	2,1021	13.99	1.26
052107-3833.2	159	12.61	0.40	052133-0635.8	110	11.16	1.42	052135-8624.8	63.6	12.80	0.48
052147-7119.7 052158-8448.8?	335 23.59	11.46 10.39	0.26	052156-6549.8v 052200-2937.1	348 54.0	12.29 11.78	0.72	052158-5701.0 052222-3030.7	137 49,4	11.46 10.53	0.65
052228-4650.2	106.2	11.16	0.14	052248-1910.6	102.3	11.96	0.72	052249-6607.8	236	12.20	0.39
052252-1613.7	37.1	10.08	0.19	052259-2032.9	59.6	9.47	0.27	052303-0630.8	76.1	12.45	0.40
052306-0702.2	68.7	10.26	0.64	052320-2428.1	99.4	12.71	0.63	052321-0434.3v	428	9.60	1.07
052411-7001.1	37.5	9.68	0.21	052422-1020.8	54.2	8.94	0.26	052423-6246.5	20.61	10.07	0.11
052429-0608.8v	115	9.26	1.01	052500-4308.8	32,81	8.49	0.18	052510-1922.5	54.0	10.27	0.37
052528-2010.5	37.1	10.90	0.39	052542-1808.1	64.0	12.38	0.72	052545-6904.9	199	13.48	0.75
052554-4352.4 052616-6607.0v	29.35 265	10.25 13.06	0.11 1.27	052558-7011.1v 052622-6621.5	3.1595 475	11.88 11.45	0.23	052612-5336.6 052624-6952,4	36.2 311	11.95 12,12	0.19
052630-6416.0	35.6	9.49	0.19	052632-1659.4	63.1	10.42	0.22	052634-0019.5	50.2	12.07	0.29
052643-6724.5	360	11.54	0.19	052650-0913.7v	154	11.91	1.80	052701-4802.8	62.8	12.79	0.49
052725-0035.2	54.4	10.83	0.42	052730-6714.2v	149	12.68	0.48	052734-6653.5v	403	12,89	1,49
052745-5110.7	49.9	9.93	0.19	052751-6910.8v	201	12.56	0.76	052802-6607.4	433	12.94	0.57
052804-4535.9	84.9	11.22	0.58	052805-5720.5	176	10.65	1.23	052815-6658.9v	184	12,66	0.53
052816-5908.9v	15.54	8.72	0.09	052817-1222.4	29.54	12.26	0.27	052820-6724.3	159	10.52	0.20
052828-6913.0	415	10.81	0.45	052829-6807.1	391	12.29	0.60	052834-1651.8	191	12.84	0.53
052836-6826.3v	422	12.21	0.66	052845-6858.1 052911-0608.1v	402	11.97	0.42	052901-4821.8	52.4	8.73	0.31
052908-6912.3 052923-2211.8	253 36.8	12.73 10.96	0.43	052931-5402.8	30.05 42.2	10.48 10.67	0.87	052921-6847.5v 052942-6857.4	104.4 507	11.92 11.25	0.22
052945-5339.5	28.70	10.26	0.33	052946-2745.9	62.5	11.66	0.65	052946-6905.8	100.3	12,02	0.46
052953-6907.4	452	11.44	0.78	052955-6718.6v	385	12.16	0.62	053005-5248.7	70.9	11.86	0.59
053019-7302,1	161	10.88	0.50	053021-6720.1v	511	12.54	0.53	053022-6919.7	66.9	10.66	0.17
053031-1303.4	74.7	12.41	0.35	053036-6859.4v	188	12.89	0.81	053041-6915.5v	512	12.08	0.94
053101-0323.4	85.2	12.19	1.07	053111-6635.6	356	11.88	0.33	053114-1028.8	129	9.66	0.20
053118-7900.5v	11,10	8.82	0.30	053138-6630.1	438	11.62	1.17	053146-1408.2	58.5	10.66	0.32
053153-6640.7	425	12.44	1.08	053218-4019.6	51.9	10.31	0.18	053219-3157.1	171	10.30	0.82
053230-2226.2	37.4 47.9	9.97	0.24	053232-6549.6	53.1 57.4	9.41	0.59	053244-5054.5	47.5	9.89	0.30
053251-6310.2 053300-6835.9	440	11.60 11.70	0.43	053255-2646.1 053301-7157.7v	57.4 82.7	11.84 12.09	0.46	053300-0607.0v 053308-6648.1v	408 428	11,73 12.30	0.91
000000-0000.7		9.95	0.28	053314-6703.8	166	12.79	0.70	053315-7422,1v	35.6	11.88	0.94
053313-5846.2	55.6										

Table 1
Continued

ID	P	V	ΔV	ID	P	V	ΔV	ID	P	V	ΔV
053342-1621.6v I	108	12.75	1 0.54 1	Stars o l 053352-6911.2v	classified as	MISC 13.34	0.85 [1 053357-5826.6	35.36	10.13	0.14
053409-4013.7	50.9	12.73	0.34	053414-2343.0	54.3	11,28	0.34	053421-5629.9	35.30	13.07	0.14
053422-6225.4	205	11.05	1.58	053450-2704.3	43.3	11.74	0.45	053451-3828.8	23.79	9.79	0.14
053453-7414.1	60.6	10,29	0.46	053456-7539.0	137	11,44	0.60	053458-2643.2	22.77	11.83	0.23
053500-5156.5	52.8	10.89	0.42	053514-1423.8	0.35030	12.50	0.22	053514-6743.9v	342	12.96	1.22
053539-0825.2	406	11.70	0.76	053541-6641.3v	392	12.36	0.49	053544-3049.6v	100.3	8.70	0.46
053601-6650.7	70.0	12,40	0.46	053612-3319.7	46.7	11,51	0.31	053620-2020.0	41.7	11,24	0.20
053625-6941.5	171	11.96	0.17	053630-5730.2	21.90	9.87	0.13	053642-3603.4	80.5	11.37	0.51
053657-5557.6	127	9.94	0.35	053700-3027.2	40.8	8.85	0.17	053700-7526.6	120	1L86	0.61
053704-3453.1	112	13.06	0.75	053713-0635.0	50.3	9.97	1.25	053727-3344.3	79.2	11,70	0.55
053735-7346.7	160	11.93 8.96	0.60	053753-5519.6	38.7	9.67	0.15	053756-2316.9	187 74.9	11.94	0.48
053832-4547.8 053917-8450.4	10L6 116	13.28	0.61	053853-1402.4v 053926-5125.4	445 163	10.42 11.76	0.29 1.41	053914-4641.8 053929-7404.7	116	11.76 12.11	0.41
053940-1456.6	31.09	10.92	0.02	053943-0809.2v	409	11.76	1.52	053955-4504.2	39.2	9.78	0.01
054004-1505.2	42,6	11,58	0.29	054005-4105.2	283	10.38	1,61	054023-2149.7	101.5	11.89	0.51
054041-7203.1	55.5	9.86	0.29	054049-3124.1	18.35	8.68	0.15	054051-0530.5v	69.4	12.42	0.48
054059-2757.2v	61.8	8.38	0.59	054059-6918.6v	188	13.08	0.54	054108-3908.7	31.81	9.91	0.23
054111-6938.0v	329	12,66	0.59	054112-1652.5v	38.9	8.65	0.15	054123-1743.2	45.9	11.98	0.24
054128-2047.0	80.1	10.85	0.51	054130-7002.0	24.00	9.06	0.20	054149-1402.5	49.5	9.26	0.20
054149-2103.1	278	12.77	1.17	054210-1333.7	49.9	11.74	0.28	054232-1914.0	33.64	10.33	0.18
054240-5625.1v	106.9	10.19	1.05	054241-7515.0v	309	8.11	2.03	054253-5937.3	70.7	10.74	0.46
054256-2218.8	48.7	11.89 12.46	0.33	054257-1726.6v	460	10.97	0.79	054304-1336.0	42.0	12.00	0.35
054317-8804.1 054339-0504.0v	426 36.5	13.31	0.33 1.28	054324-1444.0 054346-6741.9v	86.7 103.6	12.08 9.70	0.35 0.54	054328-6828.2 054353-2331.7	30.84 33.53	10,22 9.14	0.22
054416-5701.2	161	11.48	0.32	054426-5801.5	21.78	9.90	0.34	054444-7627.3	127	11.91	0.65
054450-6729.6	73.7	11,60	0.42	054508-2932.3	32.76	9.06	0.26	054530-1903.5	57.7	10.64	0.48
054549-2709.6	46.4	11.65	0.32	054634-2027.9	24.89	8.37	0.14	054648-1204.0	77.7	12.58	0.57
054649-7551.1	191	11.34	0.58	054720-2315.3	46.3	9.84	0.26	054722-2233.6	162	11.73	1.13
054728-2147.4	195	12,06	1,24	054740-0727.8	57.2	12,45	0.73	054745-0708.8	379	12.86	0.58
054747-6022.1	79.1	12.53	0.67	054754-1737.6	44.0	10.57	0.27	054813-1809.6	111.2	9.23	0.24
054840-2224.5	38.4	10,18	0.18	054841-7003.2	79.1	12,31	0.51	054907-2216.6?	24.26	9,52	0.21
054937-2606.3	96.4	11.17	0.17	055019-1745.5	36.6	9.06	0.25	055050-8543.0	67.3	12.21	0.40
055102-7001.4	47.4 54.9	11.96 9,18	0.42	055103-1930.9	69.0	11.59	0.26 0.35	055119-1308.1	162	12.43 12,22	0.66
055130-1246.9 055202-0716.5	74.9	12.86	0.54	055141-1031.8 055213-1852.0	57.0 41.3	12,02 11.56	0.33	055152-2916.9 055218-1214.2	180 138	11.47	1.15 0.48
055252-0447.9	39.6	10.82	0.34	055315-2157.9	49.1	11.78	0.10	055321-6056.9	127	12.76	0.86
055326-1525.9	64.0	12,10	0.63	055327-2307.5	32.68	9,31	0.37	055335-6112.6	69.3	9.62	0.20
055338-1327.9	70.5	9.32	0.33	055341-2013.9	55.3	12.50	0.58	055343-1024.0	361	11.81	2.04
055354-5505.6v	47,4	8.66	0.19	055358-0625.3v	85.1	10.90	0.84	055406-2509.2	42,1	11.63	0.39
055423-2550.1	104.7	12.30	0.73	055430-0343.2	279	12.02	0.86	055445-6947.2	254	12.75	0.71
055451-1526.2	78.6	11.24	0.86	055458-1829.3	164	10.46	0.32	055508-5457.0	27.21	9.71	0.19
055554-0758.1	106	12,82	0.51	055559-1535.3	30.22	11,75	0.25	055559-2123.0	52.0	9,12	0.22
055616-0803.8v 055734-5538.4	96.3 70.7	10.89 12.49	0.48	055648-5925.4v 055742-1916.3	74.5 77.5	8.99 11.64	0.43	055717-1317.3 055746-3036.5	52.0 54.1	11.95 11.93	0.48
055815-0948.0	50.7	11.85	0.36	055907-1052.6v	120	9,24	0.35	055915-2254.7	24,11	12,10	0.40
055940-1627.9?	25.19	10.86	0.24	060048-5510.2	71.5	10.87	0.40	060049-0739.1	0.284760	11.47	0.30
060056-0929.7	49,2	12,66	0.35	060109-2733.4	20.52	8.93	0.09	060127-1417.3	67.1	13,25	0.86
060128-0354.1	27.96	10.85	0.20	060130-2527.9	90.9	12.49	1.17	060139-1558.1	55.7	9.98	0.46
060143-6931.5	61.4	11.43	0.52	060150-7035.6v	193	10.03	1.36	060151-2106.3v	424	10.12	0.61
060151-2127.7	64.4	11,41	0.36	060201-0422.0	48.5	9.18	0.21	060205-7040.5v	31,21	8.52	0.16
060246-1943.7	73.5	10.02	0.64	060249-2100.1	21.84	12.22	0.21	060306-5754.7	57.7	11.17	0.44
060346-6942.6v	122	8.95	0.45	060349-1217.8	67.3	10.59	0.24	060400-0357.8v	54.5	10.87	0.35
060421-1709.7 060524-5729.6	45.9 127	11,90 10.76	0.22	060457-2212.5 060600-6040.7	108.7 33.96	12,58 9.73	0.87 0.25	060520-2505.6 060612-0830.3v	128 85.2	9.81	0.49
060617-0705.9	336	12.54	1.93	060628-0927.3	31.21	10.30	0.23	060639-2706.1	48.7	9.91	0.31
060643-1245.5	121	12.48	0.84	060645-1239.0	127	11.24	0.74	060649-6044.6	121	11.75	0.87
060652-0812.0	51.1	10.86	0.36	060701-0254.9	26.13	9.35	0.78	060741-2052.4	63.9	8.85	0.19
060810-1406.8	49.0	10.87	0.24	060834-0042.8v	87.3	11,19	0.54	060848-1302.4	150	12,68	0.28
060912-1428.8	58.1	12.92	0.65	060920-2104.6	38.9	10.73	0.27	060925-1306.1	45.2	11.02	0.31
060942-8541.4	59.6	11.95	0.35	060947-2228.8v	168	10.41	0.65	060949-1143.7	84.7	9.94	0.39
060951-2231.8v	47.3	9.53	0.47	061046-6024.0	62.8	10.90	0.64	061248-7736.7	52.8	11.55	1.67
061446-7659.7	27.22	11.28	0.23	062432-8343.0	62.8	10.69	0.58	064333-8555.8	316	13.58	0.93
064624-8538.4	320	11.18	0.24	064629-8450.5	203	12.92	1.31	064951-8243.6	184	10.37	0.62
065208-8517.8	146 54.1	11.56 10.88	0.36	074530-8449.7 091527-8714.5	300 77.4	12.68 13.37	1.76 0.80	075342-8727.4 092930-8721.6	128 60.2	11,13 11.09	0.55
080813-8556.6 094432-8713.6	39,2	10.88	0.20	095013-8725.3	15.13	10.69	0.80	100512-8615.0	48.4	11.98	0.30
102744-8617.9	48.2	11.03	0.26	110752-8632.4	157	12.87	0.87	111701-8835.6	51.8	11.57	0.37
112039-8704.1	166	11.70	0.31	114738-8622.9	110.1	12.66	1.07	120449-8723.1	127	11.54	0.40
122647-8702.0?	57.9	11.45	0.36	124002-8530.7	71.5	11.96	0,42	125351-8609.9	47.5	12,13	0.61
125353-8727.4v	54.5	10.03	0.36	130015-8520.2	53.8	10.65	0.39	132030-8552.4v	253	8.81	0.48
140041-8519.4	20.2	10.75	0.28	140634-8522.9	26.8	9.76	0.17	155630-8547.5v	167	11.32	1.43
162726-8602.7	63.9	11,21	0.63	164538-8611.8	77.7	12,37	0.65	165107-8708.2v	59.0	9.09	0.32
170225-8703.3	32.46	11.21	0.33	171030-8623.0	222	9.96	1.85	171931-8638.5v	84.5	11.77	2.30
182927-8654.3	93.5	12,83	0.42	192802-8813.4	75.8	12,09	0.31	193325-8900.4	53.9	10.83	0.40

Table 1 Concluded

ID	P	V	ΔV	ID	P	V	ΔV	ID	P	V	ΔV
Stars classified as MISC											
202901-8605.2	153	11.92	0.32	203912-8437.6	79.4	11.75	0.70	204429-8713.6	54.9	12.00	0.41
212153-8627.9	29.10	8.68	0.21	215503-8606.7	32.06	9.80	0.14	215650-8151.5	158	12.10	0.53
220020-8654.1	89.1	10.67	0.87	222132-8024.9	91.1	12.10	0.63	222201-8440.0v	310	8.22	0.65
223301-8039.8	48.8	9.95	0.32	223908-8011.3	40.3	11,37	0.16	224737-7827.3	302	13.51	1.85
224759-7834.0	46.0	10.92	0.28	225242-8618.5	29.50	10.43	0.16	225636-8359.0	41.4	11.63	0.32
225937-7745.6	394	11.48	0.36	230409-7856.5	156	9.27	0.53	230856-8425.8	80.6	9.71	0.53
231138-8357.9	100.8	8.86	0.69	231447-7507.5	74.5	10.67	0.88	231708-8548.1	79.0	10.39	0.62
231818-8523.3	255	11.52	0.36	231908-8702.2	0.200480	11.04	0.14	232054-8434.2	28.40	9.40	0.19
232310-6212.3	42.3	11.21	0.32	232348-7128.0	77.6	10.62	0.54	232511-7606.3v	40.8	8.33	0.27
232513-7703.0v	263	11.85	2.00	232641-6901.0	130	11.03	0.80	232859-6002.0	166	12.84	0.75
232903-6446.0v	79.7	9.30	0.59	232950-8213.9	86.1	12.89	0.75	233003-6821.1	55.8	11.35	0.39
233524-5503.1v	39.8	10.78	0.56	233614-8331.0	86.6	12.09	0.71	233713-6044.2	45.8	9,44	0.21
233849-6923.0	56.2	11.60	0.35	233951-5549.9	50.8	11.94	0.49	234303-0730.2	61	8.77	0.24
234406-3405.2	61.1	10.75	0.73	234423-5829.6	38.5	10.04	0.21	234523-0208.8	47.7	10.11	0.37
234547-6257.7	42.4	10.83	0.23	234708-4548.9	78.9	10.93	1,12	234945-4317.1v	57.6	10.01	0.30
235007-1417.8	84.7	10.16	0.49	235010-8651.1	68.7	11.19	0.63	235054-3517.8	159	12.07	0.60
235115-0245.8	127	12.22	1.14	235215-1551.3v	139	8.26	1.90	235258-7752.9v	48.2	11.01	0.29
235331-1000.3	16.14	9.04	0.17	235440-3046.1v	46.8	9.98	0.24	235442-7700.5	106.9	11,71	0.49
235514-4459.8	49.1	11.96	0.49	235651-7928.1	46.2	10.15	0.40	235705-5213.3	50.0	10.09	0.37
235905-5634.6v	244	7.14	1,77	235935-2952.0	218	10.53	0,11	235952-3452.2	67.1	11.75	0.24

67 stars marked with ":" were inspected visually, and in about 20 cases original classification was changed (in most cases for highly distorted ED curves, that were classified as pulsating ones). 680 objects have multiple classification. For 330 cases this is exclusively due to EC/ESD or ED/ESD confusion, but for 180 other this is a more serious EC/RRC or EC/DSCT double classification. Quite often visual inspection may help to remove such degeneracy.

ELL and SR suffixes were added in several (54 and 45) cases for almost purely sinusoidal light curves and for evident long term light curve variations, respectively.

Search for detected variables in the SIMBAD database revealed only 800 matches with stars known to be variable (almost 200 of them are in the the SMC and LMC fields), so over 75% of stars are probably new detections.

T a b 1 c 2

Number of various types of variable stars detected on 5000 square degrees by ASAS-3 V camera

Туре	Count	Type	Count
DCEP _{FU}	189	EC	654
DCEP _{FO}	67	ESD	248
DSCT	143	ED	150
RRAB	245	M	132
RRC	111	MISC	1176
PULS	11		

Table 1 contains a compact version of the catalog. Only three columns are listed for each star: identification ID, V, and ΔV . Column ID also contains some flags – ":" if classification was uncertain, "?" if multiple classes were assigned (objects were grouped in the table according to the highest rank assignment), "v" if SIMBAD lists a star to be variable. Table 2 summarizes our classification effort.

Appendix shows exemplary light curves. Only ID is given for each. For periodic variables phase in the range (-0.1, 2.1) is plotted along the x-axis, while for Mira's and miscellaneous stars – HJD in the range (2451800-2452300). On the y-axis magnitudes are given. Larger ticks always mark 1 magnitude intervals and vertical span is never smaller than 1 mag.

The full catalog of variables observed by the ASAS system, containing more classification details, as well as complete data for the light curves, is available over the INTERNET:

http://www.astrouw.edu.pl/~gp/asas/asas.html

or

http://archive.princeton.edu/~asas

7. Conclusions

We have presented preliminary results of the search for variable stars in the Southern Hemisphere. Only a quarter of available data covering right ascension between 0^h-6^h has been presented in this paper, due to the tremendous effort necessary for visual verification of light curves. Over 3000 variable stars were found so far among 1 300 000 stars brighter than $V \approx 15$ mag. Comparison to the ASAS-2 data suggests, that the number of variable stars should increase 3–10 times, as more observations are collected.

Most of these stars belong to the "periodic" class, as we have not included many candidate objects for the "long-term" variation. There is a large subset of bright (V < 12 mag) detached binaries – useful for distance scale calibration – perfect targets for small size spectroscopic instruments.

Fully automated classification algorithm, described in this paper, efficiently separates stars into predefined classes. For a good quality data its efficiency reaches 100% in those regions of the parametric space, where the classes do not overlap. In doubtful cases alternative classes are always proposed. Currently our algorithm works properly only if the highest peak in the power spectrum corresponds to the true frequency or one of its harmonics, which is not necessarily true for noisy, poorly sampled data. What is still missing is a robust algorithm that will allow to separate light curves into strictly periodic and irregular ones.

However, at this time we feel it is better to publish imperfect data, to allow larger number of astronomers to see the diversity of raw results and to work on variety of scientific topics. Note a recent paper by Pietrukowicz (2001), who used the past ASAS data to determine period changes in the LMC Cepheids.

Processing of the remaining ASAS data is in progress, so we plan to release next parts of this catalog in the near future. In addition, at present four ASAS instruments, covering the whole southern sky each night, are taking data. Over $120\,000$ images have been collected so far in the V, I and R bands, covering the whole hemisphere more than 300 times. Soon real time photometry will be achieved, finally allowing us to setup the Early Warning System.

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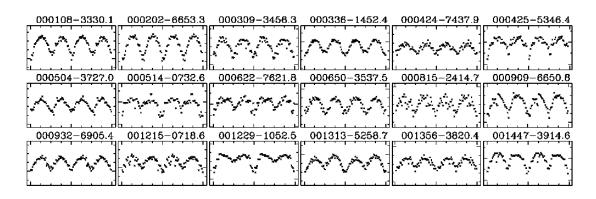
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Appendix

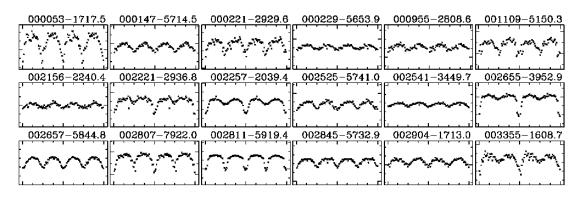
ASAS Atlas of Variable Stars. 0^h-6^h Quarter of the Southern Hemisphere

Only several light curves of each type are printed. Full Atlas is available over the INTERNET: http://www.astrouw.edu.pl/~gp/asas/appendix.ps.gz

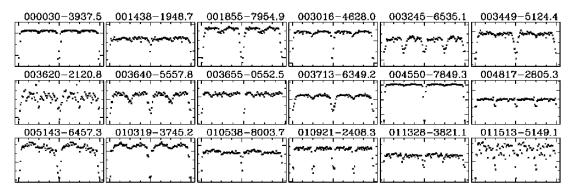
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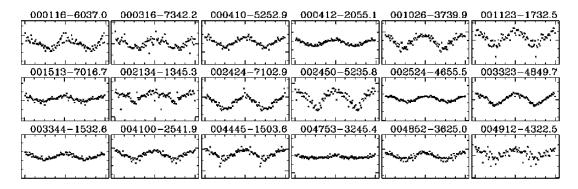
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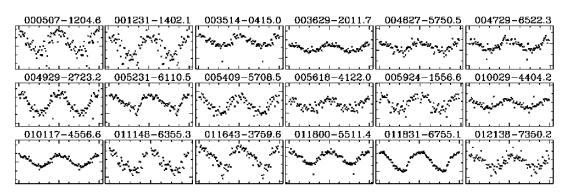
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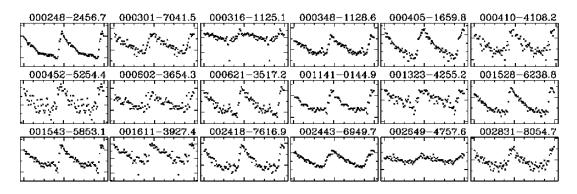
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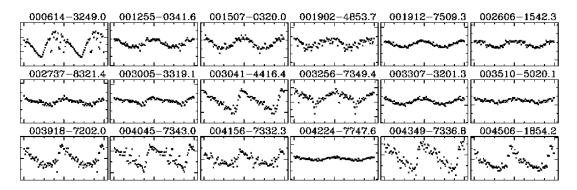
Stars classified as RRC



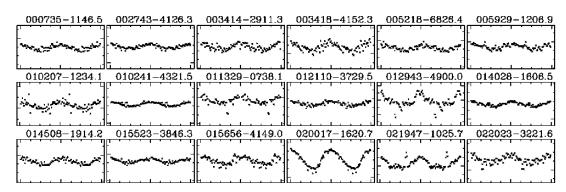
Stars classified as RRAB



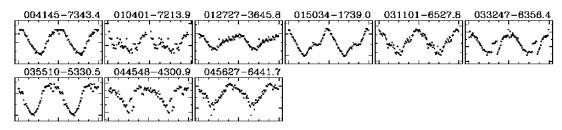
Stars classified as DCEP-FU



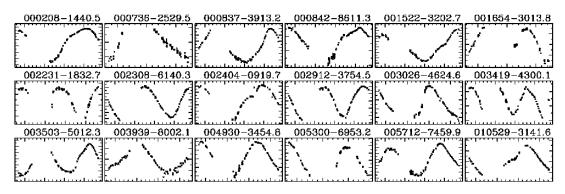
Stars classified as DCEP-FO



Stars classified as PULS



Stars classified as M



Stars classified as MISC

