ANNUAL REPORT OF THE DIRECTOR FOR FISCAL YEAR 1995-1996

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It is a privilege and pleasure for me to present to you my Annual Report for fiscal

year 1995-1996.

This year has been a very active one, in which we have focused our attention on bringing our major publications up to date, responding to a record high number of requests for AAVSO data and services, starting the electronic publication AAVSO News Flash to keep members/observers informed of stellar activity, expanding our World Wide Web site to include more data and charts, and developing programs and procedures for more efficient handling of our mail list, dues and subscriptions, and observer counts.

In my Annual Report I will share with you the highlights of our operations for this year.

1. Internet connection

Our direct Internet connection through NASA Astrophysics and NASA Science Internet has been extremely helpful in responding to increasing numbers of requests for data via electronic mail, maintaining and expanding our worldwide web (www) home page, distributing publications such as the AAVSO Circular and AAVSO Alert Notice, and disseminating our new electronic publication AAVSO News Flash, which gives observers up-to-the-minute information about stellar activity.

We have started to place AAVSO charts on our file transfer protocol (ftp) site. These charts are the ones that are distributed with the AAVSO Alert Notices and the ones that have been produced in the new format, checked, and are ready to be distributed. Currently we have 114 charts available on our ftp site. Observers are very

excited to be able to access the charts electronically.

1.1. AAVSO World Wide Web statistics

Our web site has been visited 86,676 times in the past fiscal year, on the average of 228 times per day. The sections that receive the most visitors are:

What's New Alert Notices

which indicates that people are coming back to see if something has been updated and/or if there are new Alert Notices and AAVSO News Flashes.

The items that are downloaded most frequently from our FTP site are:

JD Calendar (both sides) Validation file Report forms AAVSO News Flashes AAVSO Alert Notices

Since June 1995, users from the USA have accessed our ftp site through commercial/net providers (80%) and educational institutions (20%). Users from Germany, Japan, and the United Kingdom are the most frequent visitors to our ftp site.

Since June 1996, users from around the world have accessed our web home page through commercial/net providers (89%) and educational institutions (11%).

We continue to update the light curves on our web home page.

2. Data management and data processing

2.1. Computerization and processing of current data

The computerization and the processing of the monthly data that we receive by mail, fax, and e-mail is up-to-date, thanks to Barbara Silva, who enters and verifies the data in the computer, and Shawna Helleur and Elizabeth Waagen, who process and archive the data in the AAVSO International Database. This database of digitized data from 1961 to date contains over 6.4 million observations, and is archived every week on Zip disks.

Increasing numbers of observers e-mail or send on paper their data using the revised data-entry and report-formatting AAVSO software that our technical assistant Michael Saladyga developed last year.

2.2. Processing of archival data

Two technical staff, Elena Khan and Michael Saladyga, are continuing to process the archival data on a part-time basis. We have now completely processed 96% of the data from 1911 to 1963. The rate of processing of the archival data is as follows:

First 10 months — 44138 observations per month

First 12 months — 50297 per month

Last month — 153174 per month

Overall rate — 54017 observations per month

Of the 1,800,000 observations, 1,728,566 (96%) have been processed and 54,017 observations remain to be processed. After the processing of all the data files has been completed, the data will be checked for any processing errors, and all the individual files will then be merged and sorted by star and added to the AAVSO International Database. We anticipate that this part of the project will be accomplished within six months.

2.3. Upgrading computer software

Computer programs continue to be improved and developed for greater efficiency in evaluating, archiving, analyzing, and publishing data, and for administrative operations.

Grant Foster developed a more efficient computer program than the one we were using for obtaining the monthly and yearly counts of the observations. In addition, Sara Beck and Michael Saladyga have used the Lotus program Approach to re-design our mailing list user interface to be more "user friendly" and efficient in updating the membership database and generating mailing labels and invoices for members and subscribers. We hope our members and subscribers like the new dues and subscriptions forms sent with this year's mailing.

2.4. Upgrading computer hardware

We have added two more Pentium computers to our network, and have purchased a bigger hard drive for our computer that is used for our Internet connection, and a Zip drive for archiving our database.

3. Requests for AAVSO data and other special projects

3.1. Requests for AAVSO data

We have responded to a record high number of 448 requests for AAVSO data and information. This number has increased from 373 last year, and from 213 the year before. This significant increase is due partly to our presence on the Internet through our web home page, and partly to our visibility in the educational arena, from where

we are receiving requests for our data and services from teachers and students in high schools and colleges all around the world. A list of individuals requesting data or information, as well as each person's location and affiliation, is given in Table 4 at the end of my report. Figure 1 is a histogram of the annual number of data and information requests the AAVSO has filled since fiscal 1974-75.

The number of individuals requesting data be sent electronically continues to increase. This year 255 requests (56%) were filled electronically, and we sent out literally hundreds of thousands of evaluated data to individuals requesting data, with

many of the requests covering data extending back as far as 30 years.

Our vital role in space research on variable stars also continues. We provided data and services for the following 10 space satellites of NASA, the European Space Agency, and the Japanese Space Agency: RXTE (46 requests), HST (34), EUVE (15), IUE (8), Hipparcos (7), ROSAT (5), ASCA (3), ALEXIS (3), ISO (1), and GRO (1). Figure 2 is a histogram of the number of requests we have filled this year in support of each of the space satellites mentioned above.

The types of stars for which AAVSO data and information have been requested this year are given in the list below and in Figure 3.

- a. Cataclysmic variables—dwarfnovae (18%); novae, recurrent novae, novalike, supernovae (14%);
 - b. Long period variables—Mira type (12%); semiregular (8%);

c. Cepheids (9%);

- d. R Coronae Borealis stars (6%);
- e. Eclipsing binaries (5%);
- f. Symbiotic stars (4%);
- g. The Sun (1%);
- h. Miscellaneous (23%)—AGNs, T Tau stars, nebular variables, P Cyg stars, S Dor stars, central stars of planetary nebulae, RV Tau stars.

The areas in which AAVSO data or services have been used this year are given in the list below and in Figure 4.

- a. Scheduling of satellite and ground-based observing runs (21%). We have helped in the scheduling of observations with ground-based telescopes in La Palma (Canary Islands) and Hawaii, and for such satellites as RXTE, HST, and EUVE. Often our observers' observations triggered the satellite observing runs, and our predictions were the pivotal information for the success and execution of these satellite programs, such as with RXTE;
- b. Multiwavelength data correlation: (21%). AAVSO data have been used for correlation with ground-based data in the optical, infrared, and radio wavelengths and for data obtained with space satellites ranging from gamma ray to infrared wavelengths for such satellites as HST, EUVE, RXTE, ALEXIS, Hipparcos, and ISO;

c. Simultaneous observing (11%) of targeted objects with satellites, particularly for EUVE and RXTE;

- d. Data analysis (4%). AAVSO data have been provided for long term studies of the behavior of long period and cataclysmic variables;
 - e. Educational activities (13%);

f. Student projects (8%);

g. Setting up observing programs (4%);

h. Reference material (16%). We have provided information and light curves to educators and to authors of books and scientific articles on variable stars and related topics;

i. Information for the IAU Circular (2%)

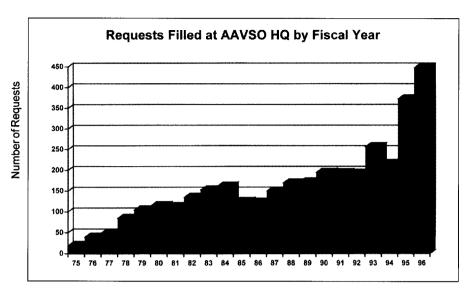


Figure 1. Histogram of the annual number of data requests the AAVSO has filled since fiscal 1974–75.

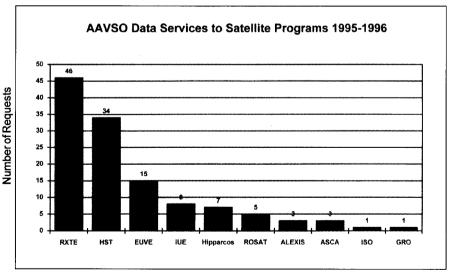


Figure 2. Histogram of the number of requests filled during fiscal year 1995–1996 in support of specific space satellite programs.

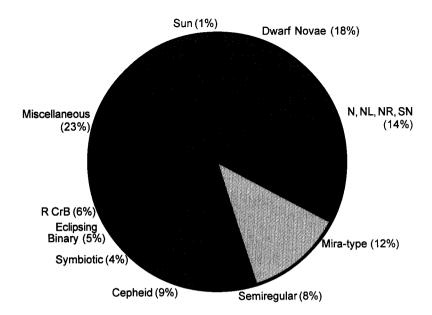


Figure 3. Types of stars for which AAVSO data were requested during fiscal year 1995–1996.

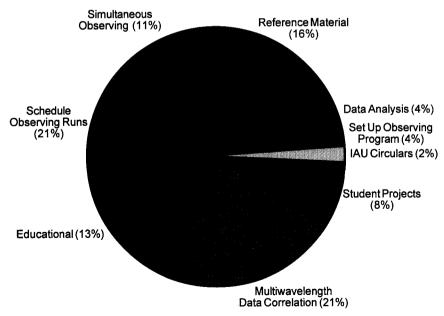


Figure 4. Areas in which AAVSO data or services were used during fiscal year 1995–1996.

I want to share with you some interesting examples of requests we received this year.

We receive many letters from young students asking for information about astronomy and variable stars. Stephen Breault wrote:

... I just love astronomy! I always try to keep up with all the latest information I hear about. But I was wondering if you could mail me some updated information. It can be on ... planets, black holes, comets, stars, deep in space, planetary nebulae, galaxies, or anything. It would help me out a lot and make me understand astronomy a lot better ... P.S. Thank you. I am 10 years old. Thanks!

Another young student, Edward Smith, wrote:

I am an amateur astronomer. I am just starting out and I need some help.... I am 11 years old. I hope to become an astronaut, but for now, I just stare at the stars... can you please give me some tips on sky watching, and or maps of the stars and space....

A graduate student from Korea, Su-Jin Kwon, was writing his thesis on cataclysmic variables, and he sent an email requesting data and charts on SU UMa. He was very appreciative of the data and chart information we sent him, and he wrote:

... I'm fine thanks to [your assistance] ... Thanks for your trouble again! ... I found your photograph in an astronomical book about variable stars... I didn't know you are a woman. (I'm very sorry!). Because there are few woman observers in Korea, I am surprised at the fact that many woman observers are taking such an active part regardless of age. I thought you are old because of your old papers, but you look younger than I thought [you would]. Is this expression impolite? Thank you very much again....

Two high school students, Mary Dombrowski and Jack May, to whom we provided data and information, won Science Fair awards in their respective States on their projects on variable stars. They were each invited to participate in the International Science Fair program in Arizona, at which Mary and Jack each won several awards.

Jack wrote:

...I have now completed my science project titled 'Variable Stars' and have mentioned the AAVSO in the project itself.... Thank you for all your help through e-mail, your web-page, and the packet of information you sent... [Among the prizes I received at the Southeast Arkansas Regional Science Fair was] a two year scholarship to a local university... Thank you again....

These are just a few of the many interesting letters we receive with data requests.

3.2. Special satellite projects

3.2.1. Hipparcos (Project funded by NASA)

We continued to provide statistically-fitted curves to AAVSO observations of Hipparcos long period variables to Dr. M. Grenon and his team at Geneva Observatory, Switzerland, for the *Hipparcos Atlas of Light Curves*; we have provided smooth-fit curves on 337 stars for the Atlas. The Hipparcos photometric data are superimposed

on the AAVSO fitted curves to provide behavioral and phase information on these stars. In addition, the AAVSO data have played an important part in the calibration of satellite photometry. The Atlas has been completed and will be published in mid-1997.

Dr. Grenon and I presented a collaborative paper on this project entitled, "The Photometric Behavior of Carbon Stars Monitored by Hipparcos and AAVSO" at IAU Symposium 177 on "The Carbon Star Phenomenon" in Turkey in May 1996.

At IAU Symposium 177, Dr. Marie-Odile Mennessier, the Hipparcos variable star coordinator, and I presented a collaborative paper entitled "Comparison Mean Light Curve Parameters of M, S, and C Mira and Semiregular Variables Using 75 Years of AAVSO Data."

In addition, one collaborative paper with Dr. Dominique Barthès, Mennessier's assistant and a post-doctoral fellow at AAVSO last year, and M. Chevenez, based on Hipparcos and AAVSO data and titled, "Visual Versus Near-Infrared Variability of R For: Evidence for Multiperiodicity of Circumstellar Modulations," has been published in the *Astronomical Journal*, and another collaborative paper with Dr. Barthès on o Ceti (Mira) has been accepted for publication, also in the *Astronomical Journal*.

3.2.2. Hubble Space Telescope (HST)

We continued to provide timely information for the scheduling and correlation of HST observations on cataclysmic variables such as HT Cas, WX Hyi, and SS Cyg; R Coronae Borealis stars such as V348 Sgr; and long period variable stars such as Mira. Two collaborative papers with Dr. Edward Sion of Villanova University on HST results of U Gem during outburst and quiescence are being prepared for submission to the Astrophysical Journal.

3.2.3. Rossi X-ray Timing Explorer (RXTE) and Extreme Ultraviolet Explorer (EUVE)

During the minor outburst of GK Per (Nova Per 1901), we alerted Dr. Julian Osborne of the University of Leicester, England, who had been given target-of-opportunity time on RXTE. He observed GK Per five times during the rise, maximum, and decline of the outburst. His RXTE observations provided the first systematically-obtained information on the x-ray behavior of a magnetic cataclysmic variable under conditions of changing mass transfer. Our daily updates on the brightness of GK Per were crucial to the scheduling of RXTE and correlation of the x-ray data.

Recently we were involved in another multiwavelength program—observations of SS Cyg with RXTE and EUVE. Drs. Peter Wheatley of Utrecht University in The Netherlands and Christopher Mauche of Lawrence Livermore National Laboratory in California were given time on these satellites for target-of-opportunity observations of SS Cyg when it had its outburst in October. For this Drs. Wheatley and Mauche asked our help first to predict the start of the outburst to the day, so that they could inform the satellite operating teams and then to alert them as soon as possible when SS Cyg started to brighten. Based on our longterm observations of SS Cyg, I was able to predict that it would either go up between October 2 and 7 or between October 15 and 22. I was given the authorization to start the observations with the satellites, in case neither Peter nor Chris could be reached.

On October 8 our observers Albert Dill, Dave York, Ronald Royer, and Tom Burrows called to inform us that SS Cyg might be coming up, as it was at magnitude 11.5. The last one to call was Tom Burrows at 11:45 pm EDT from California. I suggested to Tom that he observe it again and call me within the hour. He did call to say that SS Cyg had reached magnitude 11.4. I called Chris to inform him that the SS Cyg outburst might be starting, and then contacted our observer Bill Albrecht in Hawaii and asked him please to observe SS Cyg for a couple of hours and to call Chris if SS Cyg kept brightening. He did. The next morning Chris wrote:

Your Hawaiian observer, Bill Albrecht, called to say that at JD 2450365.779 SS Cyg had reached 10.9, so he said he was positive it was going to go up. He went so far as to say he'd put money on it. So, I called Pete, who'll contact XTE and eventually SAX. ... Anyway, sounds like we're all set. I hope Bill is right—maybe he's been drinking too much hard pineapple juice!

Dr. Wheatley wrote the next day:

Chris phoned me at 0700 UT with the news from Hawaii. I got onto XTE and triggered the satellite straight away. They have an advertised response time of seven hours, so it's possible we'll get onto SS Cyg within 11 hours of the first observer calling Janet. That would be great.... I was so excited at the news that I fell off my bike on the way to work—and I'm sitting here covered in cuts and bruises. It's a dangerous business we're engaged in.

The next morning we received further confirmation of the start of the outburst, when an e-mail arrived from Björn Granslo in Norway informing us that SS Cyg had reached magnitude 10.3 by JD 2450366.276.

The EUVE observed SS Cyg throughout the outburst, and RXTE observed it two days on the rise and three days on the decline to study the development of x-rays during these phases of the outburst.

In addition to these satellites, ground-based optical telescopes also monitored SS Cyg with high-speed photometers in search of short period oscillations. In fact, a very short period—about 7 seconds—was detected both optically and in the EUV wavelengths.

The observations provided by our visual and CCD observers were crucial in the scheduling of RXTE and in the correlation of the multiwavelength data.

As you can see from the above few examples, our observers are the driving force behind many satellite observing runs of variable stars. I extend to all our observers most sincere thanks for your dedicated efforts.

4. Outreach programs

4.1. Observer Awards and Director's Award

I am delighted to report that at the AAVSO Spring Meeting in Atlanta we presented 15 Observer Awards to visual observers, 6 Photoelectric Observer Awards, and 1 CCD Observer Award.

The recipient of the 1996 Director's Award is William G. (Bill) Dillon, who was present in Atlanta to receive the award. Bill was presented the award in recognition of his enthusiastic dedication to variable star observing, particularly of cataclysmic variables, and his vital astronomical contributions to the Association.

4.2. Active observers sponsored to membership

At the 85th Annual Meeting we elected 40 non-member active observers to sponsored membership. We thank all the members who have so generously provided the funding for these sponsored memberships.

4.3. AAVSO on-line discussion group

Thanks to Dr. Douglas Welch, we are starting an AAVSO discussion forum on the Internet. Interested members and observers may participate by sending a "subscribe" message via e-mail to aavso-discussion-request@physics.mcmaster.ca.

4.4. "Ask the Director"

Although "Ask the Director" was successful in getting in touch with some members, not that many members or observers participated, so I am changing this program to "The Director Asks." On the first Saturday of each month I will call some of our members/observers around the world and ask them for input.

4.5. Mentoring of new observers

We started our mentoring program, designed to pair up new observers with more experienced observers. Long-time observer and Council member Daniel Kaiser is coordinating this program; he can be contacted via e-mail at dkaiser@iquest.net.

5. AAVSO educational projects

5.1. Hands-On Astrophysics (Project funded by the National Science Foundation)

We had a very successful second Teachers Workshop in November, with mostly local teachers participating. The teachers were extremely impressed with the project and its contents. Some of these teachers have already used some of the activities of this

project in several workshops they have given.

The teachers have provided excellent input on the Manual and various project activities. John Percy revised the Manual, taking into consideration the comments of the teachers. During the summer we had four teachers from our previous workshops come to AAVSO Headquarters for a week to help finalize the Manual, and in the coming year one of the teachers, Donna Young, who has been awarded a fellowship at Wright Science Center of Tufts University, will be working further on the Manual as part of her fellowship project.

In addition, M. Milanowski, a student of John Percy's, developed a very user-friendly computer exercise on variable stars, and S. Thompson, another of John Percy's students, worked on developing additional activities for the Manual.

This summer we had a video team from Sheridan College in Toronto, Canada, come to Massachusetts and Connecticut to shoot footage for the three videos that are part of the Hands-On Astrophysics material. Our observer Mary Dombrowski, and Christopher Sousa, a high school student and member of the Amateur Telescope Makers of Boston, were the "stars" of our videos. The footage has now gone through preliminary editing and will be evaluated by attendees during the Annual meeting. The videos will be finalized within few months.

We have also finalized the format of the slides that will be part of the project, and have contracted with a company in Toronto to digitize and print some of the slides.

John Percy presented a talk on HOA at the National Science Teachers Association (NSTA) meeting in Toronto in November 1995, at the IAU Symposium in London in June 1996, and at the meeting of the Astronomical League in Rockford, Illinois, in July 1996.

The project will be completed in 1997.

5.2. Partnership in Astronomy (Project funded by NASA)

The eight telescopes built by 15 students from Lynnfield Middle School with the guidance of Mario Motta are now being used for student-parent star parties and for student observing. The other activities of the project continue, such as the Lynnfield lending library of astronomy books, used extensively by teachers and students.

6. Summary of observations

6.1. Annual observations

Each month we receive thousands of variable star observations from around the

world. These observations come from individual observers, and from variable star associations in Belgium, France, Germany, Hungary, the Netherlands, Norway, South Africa, South America, and Spain.

In fiscal 1995-1996 we received 335,669 visual, photoelectric, and CCD observations from 562 observers around the world. These totals include 131,304 observations from 218 observers in 40 states and territories of the United States, and 204,365 observations from 344 observers in 38 countries. Massachusetts (13,249 observations), Georgia (11,979), and New Mexico (11,150) led the United States, while Germany (28,338), Hungary (24,643), and Belgium (21,419) led the countries abroad.

The total number of observations since 1911 in the AAVSO International Database is 8,486,987.

Table 1 lists the number of observers and the total observational contribution from each country during this fiscal year. Table 2 gives the same information for each state or territory in the United States. Table 3 is an alphabetical list of observers, giving each person's observing initials, name, location, and annual totals of observations and inner sanctum observations (magnitude 13.8 or fainter, or "fainter than" 14.0 or fainter).

This year 38 observers reported between 1000 and 2000 observations; 18 between 2000 and 3000; 6 between 3000 and 4000; and 4 between 4000 and 5000. William Albrecht (Hawaii) reported 5,266 observations; Tonny Vanmunster (Belgium) 5,474; Michael Möller (Germany) 5,625; Paul Vedrenne (France) 5,634; John Bortle (New York) 5,859; Laszlo Szentasko (Hungary) 5,949; Georg Comello (Netherlands) 6,057; Alfons Diepvens (Belgium) 7,381; Stephen Cook (Arkansas) 7,573; Gerald Dyck (Massachusetts) 7,788; David York (New Mexico) 8,076. Our top four observers for the year were Richard Schmude (Georgia) with 11,664 observations, Gary Poyner (England) with 12,333, Danie Overbeek (South Africa) with 12,797, and Sergio Dominguez (Argentina) with 16,695.

Gary Poyner reported the highest number of inner sanctum observations with 7,217, followed by David York with 4,987, and Gerald Dyck with 4,686.

We received 2,505 photoelectric V observations of AAVSO photoelectric photometry program stars from 16 of our photometrists. Howard Landis, chair of the AAVSO Photoelectric Photometry committee, continues to give generously of his time and efforts to see that all of our photoelectric data are computerized, reduced to a standard format, and archived by star.

We received 649 BVRI observations of AAVSO charge-coupled device (CCD) program stars from 4 of our CCD observers. Gary Walker, co-chair of the AAVSO CCD committee, contributes much time and effort to assure that these CCD data are reduced to a standard format and archived by star.

We received 4,217 supernova search observations from 4 of our observers in the United States and Canada. These observations, which are not included in the annual totals of observations, are archived at AAVSO Headquarters. Robert Evans chairs this very active committee and provides information, inspiration, and guidance to the observers, and sets a wonderful example by his continuous visual discovery of extragalactic supernovae.

My sincere thanks to all of our dedicated observers for their contributions, whether one or thousands of observations. Our observers are the keystone of the AAVSO's success.

6.2. International cooperation

We acknowledge with appreciation the observations sent to the AAVSO by

members of the following variable star associations, either individually or as a group, for inclusion in the AAVSO International Database for dissemination to the astronomical community:

- a. Agrupación Astronómica Albireo of Seville (Spain);
- b. Asociación Argentina Amigos de la Astronomia;
- c. Association Française des Observateurs d'Étoiles Variables (France);
- d. Astronomical Society of South Australia;
- e. Astronomical Society of Southern Africa, Variable Star Section;
- f. Astronomischer Jugendclub (Austria);
- g. Astronomisk Selskab (Scandinavia);
- h. British Astronomical Association, Variable Star Section (England);
- i. Bundesdeutsche Arbeitsgemeinschäft für Veränderliche Sterne e.V. (BAV)(Germany);
- j. Grupo Astronomico Silos (Zaragoza, Spain);
- k. Grupo Canario de Estrellas Variables (Canary Islands, Spain);
- 1. Liga Ibero-Americana de Astronomia (South America);
- m. Madrid Astronomical Association M1 (Spain);
- n. Magyar Csillagászati Egyesület, Változócsillag Szakcsoport (Hungary);
- o. Nederlandse Vereniging Voor Weeren Sterrenkunde, Werkgroep Veranderlijke Sterren (Netherlands);
- p. Norsk Astronomisk Selskap, Variable Stjernegruppen (Norway);
- q. Planetario e Observatorio Astronómico do Colegio Estadual do Parana (Brazil);
- r. Red de Observatores de Estrellas Variables—MIRA (Spain);
- s. Royal Astronomical Society of Canada;
- t. Royal Astronomical Society of New Zealand, Variable Star Section;
- u. Sociedad Astronómica "Syrma" (Valladolid, Spain);
- v. Svensk Amator Astronomisk Förening, variabelsektionen (Sweden);
- w. Uniao Brasileira de Astronomia, Variable Star Commission (Brazil);
- x. Unione Astrofili Italiani (Italy);
- y. Variable Star Observers League in Japan;
- z. Vereniging Voor Sterrenkunde, Werkgroep Veranderlijke Sterren (Belgium).

7. Membership

This year at the 85th Spring Meeting held in Atlanta, Georgia, we elected 56 new members, 2 of whom joined as Junior members. A list of these new members appears on page 48 of Volume 25, Number 1, of the Journal. At the 85th Annual Meeting, held in Cambridge, Massachusetts, we elected 79 new members, 2 of whom joined as Junior members, and 40 of whom were active observers sponsored to membership through the generosity of the membership. A list of these new members appears on page 148 of this volume of the Journal.

This year 6 members changed their membership from Annual to Sustaining, thus

supporting the operation of the Association doubly with their dues.

8. AAVSO Publications

Thanks to the efforts of editor Charles A. Whitney, associate editor Elizabeth O. Waagen, and production editor Lynn M. Anderson, I am happy to report that the Journal is essentially up to date.

8.1. AAVSO publications this fiscal year

The following publications were published by the AAVSO during this fiscal year:

- a. AAVSO Journal, Vol. 23, Nos. 1 and 2; Vol. 24, Nos. 1 and 2, edited by Charles A. Whitney, with assistance from Elizabeth O. Waagen and Lynn M. Anderson;
- b. AAVSO Bulletin No. 59: 1996 Predicted Dates of Maxima and Minima of 561 Long Period Variables, prepared by Janet A. Mattei;
- c. AAVSO Alert Notices, Nos. 216-231, prepared by Janet A. Mattei, with assistance from Elizabeth O. Waagen;
- d. AAVSO Circular, Nos. 300-311, edited by John E. Bortle, with assistance from Charles E. Scovil and Robert Leitner;
- e. AAVSO Ephemerides for 1996 for Éclipsing Binaries and RR Lyrae Stars, prepared by Gerard Samolyk and Marvin E. Baldwin;
- f. AAVSO Solar Bulletin, Vol. 51, Nos. 10–12; Vol. 52, Nos. 1–9, edited by Peter O. Taylor;
- g. SID Technical Bulletin, Vol. 7, Nos. 1-3, prepared by Arthur J. Stokes and Peter O. Taylor:
- h. AAVSO Photoelectric Photometry Newsletter, Vol. 16, Nos. 1 and 2, edited by John R. Percy;
- i. AAVSO Newsletter, Nos. 16 and 17, edited by Lynn M. Anderson;
- j. AAVSO News Flash, Nos. 1-69, prepared by Janet A. Mattei, with assistance from Rebecca T. Pellock;
- k. AAVSO Monographs, Nos. 6-9, prepared by Janet A. Mattei, Elizabeth O. Waagen, and Grant Foster:
- AAVSO Monograph Supplements to Monographs 1-5, prepared by Janet A. Mattei, Elizabeth O. Waagen, and Grant Foster.

8.2. Publication of AAVSO Monographs and Monograph Supplements

Thanks to Elizabeth Waagen's efforts and the very efficient programs developed by Grant Foster, this year we have published four AAVSO Monographs and five Supplements to AAVSO Monographs published earlier.

The following Monographs were published:

AAVSO Monograph 6: Light Curves of Z Camelopardalis 1927-1995

AAVSO Monograph 7: Light Curves of RS Ophiuchi 1890-1995

AAVSO Monograph 8: Light Curves of AH Herculis 1963-1995

AAVSO Monograph 9: Light Curves of RX Andromedae 1963-1995

The following Monograph Supplements were published:

AAVSO Monograph 1, Supplement 2: Light Curves of SS Cygni 1991-1995

AAVSO Monograph 2, Supplement 2: Light Curves of U Geminorum 1991-1995

AAVSO Monograph 3, Supplement 2: Light Curves of R Scuti 1991-1995

AAVSO Monograph 4, Supplement 1: Light Curves of R Coronae Borealis 1991-1995

AAVSO Monograph 5, Supplement 1: Light Curves of RY Sagittarii 1991-1995

The data in all the Monographs and Monograph Supplements are on the AAVSO Worldwide Web (WWW) home page.

9. Other publications with AAVSO participation

The following other publications with AAVSO participation were published this year:

a. Predicted maxima dates of bright long period variables and ephemerides of a

few easy-to-observe stars were published by J. A. Mattei, together with an article on "Variable Stars of the Year—U and EU Delphini" with J. R. Percy, in the 1996 Observer's Handbook of the Royal Astronomical Society of Canada.

- b. Monthly predictions of maxima dates of bright long period variables were published by J. A. Mattei in *Sky & Telescope* magazine.
- c. "Analysis of the Long-term Observations of RS Ophiuchi" was published by B. D. Oppenheimer and J. A. Mattei in *Compact Stars in Binaries*, the proceedings of IAU Symposium 165, eds. J. van Paradijs *et al.*, 457 (1996).
- d. "Hands-On Astrophysics: Variable Stars in the Math/Science Lab" was published by J. A. Mattei, J. R. Percy, and M. Saladyga in the *Proceedings of the Fifth International Conference on Teaching of Astronomy* (1996).
- e. "Hands-On Astrophysics: Variable Stars in the Math/Science Lab" was published by J. Mattei, M. Saladyga, L. Anderson, and J. Percy in *Astronomy Education: Current Developments, Future Coordination*, ASP Conference Series 89, ed. J. R. Percy, 247 (1996).
- f. "Partnership in Astronomy: Linking Students and Teachers with a Community of Dedicated Amateur Astronomers" was published by J. A. Mattei, M. Motta, M. Saladyga, and L. M. Anderson, in *Astronomy Education: Current Developments, Future Coordination*, ASP Conference Series 89, ed. J. R. Percy, 249 (1996).
- g. "Superoutburst Photometry of AL Comae Berenices" was published by S. Howell *et al.*, G. Foster, G. Walker, and J. Mattei in the *Astronomical Journal*, 111, 2367 (1996).
- h. "Visual Versus Near Infrared Variability of R For: Evidence for a Multiperiodic Circumstellar Modulation" was published by D. Barthès, M. Chenevez, and J. Mattei in the *Astronomical Journal*, 111, 2391 (1996).
- i. "Simultaneous Multiwavelength Observations of Dwarf Novae I. SU Ursae Majoris: Minihumps at Minioutburst?" was published by J. Echeverria et al. and J. A. Mattei in Cataclysmic Variables, eds. A. Bianchini, M. Della Valle, and M. Orio, Kluwer Academic Publishers, Dordrecht, The Netherlands, 156 (1995), and in the Astrophysical Journal, 467, 851 (1996).
- j. "Nonlinear Analysis of the Lightcurve of the Variable Star R Scuti" was published by J. R. Buchler, Z. Kollath, T. Serre and J. Mattei in the *Astrophysical Journal*, **462**, 489 (1996).
- k. "EUVE Observations of U Gem" was published by K. Long, C. W. Mauche, P. Szkody, and J. Mattei in *Cataclysmic Variables*, eds. A. Bianchini, M. Della Valle, and M. Orio, Kluwer Academic Publishers, Dordrecht, The Netherlands, 133 (1995).
- 1. "EUVE Observations of U Gem in Outburst" was published by K. Long et al. and J. Mattei in the Astrophysical Journal, 469, 841.
- m. A paper on the multiwavelength observations of the symbiotic star AG Draconis will be published by Roberto Viotti et al. and J. Mattei in Workshop on Super Soft X-ray Sources, Springer Verlag (1996).
- n. "Radio Emissions of Dwarf Novae" will be published by A. O. Benz, M. Gudel, and J. Mattei in *Radio Emissions from Stars and the Sun*, ASP Conference Series, eds. A. R. Taylor, J. M. Paredes.
- o. "Time Series Analysis by Projection: I. Statistical Properties of Fourier Analysis" and "Time Series Analysis by Projection: II. Tensor Methods for Time Series Analysis" was published by Grant Foster in the *Astronomical Journal*, 111, 541, and 111, 555 (1996).
- p. The AAVSO was featured in Sky & Telescope: i) in a sidebar in the March 1996 issue, and ii) highlights of the Annual Meeting were featured in the May 1996 issue.

- q. J. Isles wrote an article on the 400th Anniversary of Mira in the February 1996 issue of Sky & Telescope and an article on R Hydrae in the May 1996 issue of Sky & Telescope. In both of these articles, long term AAVSO light curves were displayed.
- r. A commentary article entitled "Progress in CCD Photometry" was published by J. A. Mattei in the Winter 1996 issue of *CCD Astronomy*.

10. Meetings attended and talks given

10.1. Meetings attended

This year I attended the following scientific meetings:

a. The Royal Astronomical Society's meeting on March 8, 1996, in London, England;

b. The first scientific meeting of the François-Xavier Bagnoud Observatory on

March 9, 1996, in Sierre, Switzerland;

c. IAU Symposium 177 on The Carbon Star Phenomenon, May 27-31, 1996, in Antalya, Turkey.

In addition, Grant Foster attended the meeting on Statistical Challenges in Modern Astronomy, June 2–5, 1996, at Pennsylvania State University, State College, PA.

10.2. Talks given

I gave the following talks this year:

a. "The AAVSO and Variable Stars" (Second HOA Workshop, Cambridge, MA);

b. "Variable Stars and Student Projects on Them" (Mt. Holyoke College, S. Hadley, MA);

c. "The AAVSO and Its International Database" (Royal Astronomical Society meeting, London, England);

d. "Contributions of Amateur Astronomers to Variable Stars" (first scientific meeting of the François-Xavier Bagnoud Observatory, Sierre, Switzerland);

e. "Trend Analysis on Carbon Stars using 90 Years of AAVSO Data" (IAU

Symposium 177 on The Carbon Star Phenomenon, Antalya, Turkey);

f. "Variable Stars" (Teachers' Workshop at Wright Center, Tufts University, Medford, MA).

11. Personnel at Headquarters

Our Association is extremely fortunate to have a very special group of people as staffmembers at the Headquarters of the Association. They are dedicated, hardworking, conscientious, team-spirited, and in addition, very caring and very nice. I would like to express my sincere appreciation and thanks to our Headquarters staff who assist me in running the Association: Elizabeth O. Waagen, my senior technical assistant; Grant Foster, our computer specialist and statistician; Michael Saladyga, our technical assistant; Shawna Helleur, our technical assistant; Rebecca T. Pellock, our technical assistant; Elena Khan, our technical assistant; Barbara J. Silva, our data entry technician; Sara J. Beck, our part-time technical and administrative assistant; Lynn M. Anderson, our publications coordinator and newsletter editor; Frank McCorrison, our loyal volunteer; and Benjamin D. Oppenheimer and Samantha Van Gerbig, our summer technical staff.

We welcome Leora A. Hurwitz and Kerrianne H. Malatesta, our technical assistants, and Quinnette Littleton, our office assistant, who recently joined our staff.

I also thank Tanja E. Foulds, our former meeting organizer and project coordinator, who continues to work with us at nights or on weekends when needed.

12. Acknowledgements

I want to express my deepest appreciation and gratitude to all those who have contributed so much the Association this year.

We remember Clint Ford with love and gratitude for his generosity in providing us with our own Headquarters and with a legacy—the Clinton B. Ford Fund—that assures a sound future for the AAVSO.

We warmly remember Margaret Mayall for all she did for the Association to ensure its survival during very hard times and both Margaret and Newton Mayall for providing the AAVSO with a legacy—the Mayall Fund—for a more secure future.

Our appreciation and thanks go to our dedicated, devoted, and untiring observers—562 of them around the world this year —who make this Association so essential to variable star research. Special thanks to all those observers who have contributed to special observing programs this past year, and to all observers who phone or e-mail in their up-to-date observations to Headquarters in addition to sending in their monthly reports.

Our thanks to members who support the AAVSO with their dues, and special thanks to those sponsoring the membership of one or more active observers, as well as to those who have generously contributed above their dues so that we can serve you, our members, and the astronomical community well.

My sincere thanks and appreciation go to our Committee Chairpersons who give so generously of their time and wisdom to the Committee for which they are responsible. Thanks to Marvin Baldwin, Kenneth Beckmann, Priscilla Benson and Gary Walker, Robert Evans, Howard Landis, Charles Scovil, and Peter Taylor.

I very much appreciate the support of our vice presidents Gary Walker and Mark Adams, and of our Council members Michael Hayden, John Isles, Daniel Kaiser, Jeffrey Lockwood, Charles Scovil, Douglas Welch, Lee Anne Willson, and Robert Wing.

I especially thank Albert Holm, our President, Martha Hazen, our Secretary, and our Past Presidents, Wayne Lowder and Thomas Williams, for their support and wisdom and for always being there to help.

A very special thanks to our Treasurer, Theodore Wales, for his wisdom, financial expertise, and for giving so generously of his time.

Last but not least, my personal thanks to my husband Mike for his support and understanding, and for having so many hobbies to keep himself busy when I am working late or away attending meetings.

12.1. Grants

We have been very fortunate to receive strong financial support from institutions, private foundations, and government agencies this year. We gratefully acknowledge the following grants:

12.1.1. National Aeronautics and Space Administration (NASA)

a. To provide data support for the Hipparcos satellite in the astrometric and photometric observations of large amplitude variable stars.

b. As a Co-Investigator with Christopher Mauche in the observations of SS Cyg and VW Hyi with the Extreme Ultraviolet Explorer (EUVE).

12.1.2. National Science Foundation (NSF)

For the grant from the Education Division for the preparation of the project Hands-On Astrophysics: Variable Stars in the Math/Science Lab.

12.1.3. National Oceanographic and Atmospheric Administration (NOAA)

For the grant towards the operation of our Solar Division.

12.1.4. The International Astronomical Union (IAU) and the American Astronomical Society (AAS)

For the travel grant for me to attend IAU Symposium 177 in Turkey.

12.2. Other institutional support

Thanks go to Stamford Observatory for allowing Charles Scovil and John Griesé to use the 22" telescope for making variable star observations, and for allowing Charles Scovil and Robert Leitner to use the facilities of the Observatory to prepare charts and the AAVSO Circular.

Our thanks to the University of Toronto for the time John Percy contributes as the Editor of the AAVSO Photoelectric Newsletter and to the Hands-On Astrophysics project, and for his students' time. Last April I had the distinct pleasure meeting some of John's students who worked with AAVSO data—what wonderful and dedicated bright young men and women!

Our thanks to Smithsonian Astrophysical Observatory for providing us access to electronic mail through their network.

How fortunate we are to be grateful and thankful to so many individuals, institutions, and government agencies!

13. 10th anniversary retrospective

This year marks the 10th anniversary of our move to 25 Birch Street—the Clinton B. Ford Astronomical Data and Research Center. I would like to share with you some of the highlights of these 10 years.

13.1. Scientific highlights

13.1.1. Participated in exciting satellite projects

a. provided data support in the observations of long period variables with the

Hipparcos satellite

b. provided data support in the observations of cataclysmic variables with the satellites EUVE, ASTRO-1, ASTRO-2, ORFEUS, ASCA, ROSAT, RXTE, HST, GINGA, ASCA, and GRO

13.1.2. Transported our database to AAVSO Headquarters

Ten years ago we were using the computers at the Harvard-Smithsonian Center for Astrophysics to process and archive our data. Our database was static and access to it was extremely difficult. Today, all of our data are stored and archived at AAVSO Headquarters. We are totally independent in our data processing and data management, and the AAVSO International Database is dynamic and accessible.

13.1.3. Computerized plotting of data

Ten years ago our data were all plotted by hand due to lack of adequate computers and computer programs. Now, at the click of a computer button, the data are plotted on the screen, and are plotted on paper within minutes.

13.1.4. Developed sophisticated computer programs

Ten years ago we had only data processing programs. Today we have sophisticated and unique programs to process, graph, evaluate, and analyze our data.

13.1.5. Significant increase in data requests

Ten years ago we provided data and services for 123 requests. This year we have

provided data and services for 448 requests.

13.1.6. Significant increase in incoming observations

Ten years ago the annual total of observations was 222,000. This year that number is over 335,000.

13.1.7. Responded to new technologies

During the past ten years we instituted a committee for charge-coupled devices (CCDs). Already we have an impressive database of observations made with CCDs.

13.2. Communications and publications highlights

13.2.1. Use of new technologies in communication

Ten years ago we communicated only by mail and phone. Today we are a node on the Internet, and most of our communications and data dissemination are done electronically. We have our own www home page and ftp site. We place many of our print publications on our www home page for electronic access. We also have a heavily-used fax machine.

We are starting an electronic discussion group during the 1996–97 fiscal year.

13.2.2. New publications

13.2.2.1. Print publications

In the past ten years we have instituted the AAVSO Newsletter, AAVSO Monograph Supplements, CCD Views, Chart News, and the SID Technical Bulletin.

13.2.2.2. Electronic publication

In the past year we have instituted our first electronic publication, the AAVSO News Flash.

13.3. Computerization

13.3.1. Expanded computer hardware

Ten years ago we had several stand-alone CPM-based computers which were then state-of-the-art. Today, each staff person has a DOS PC, and all the computers have been networked, with access to laser printers, CD reader, scanner, and electronic communication.

13.3.2. Computerization of archival data

Ten years ago we had just started the computerization of the archival data. Today we are almost done with the computerization and with the processing of the data, thus creating the world's largest and longest variable star database.

13.4. Summary

We have achieved some impressive results in the ten years we have been at 25 Birch Street, many of which we could never have accomplished were we still in our cramped, rented quarters at 187 Concord Avenue.

We are the only variable star observing organization in the world with its own

headquarters and full-time staff.

We remember Clint Ford with deepest gratitude for providing us with a home and a secure future, so we may well serve our members and the astronomical community.

I look forward to our opportunities and accomplishments in the coming years, particularly as we enter the new millennium, and I thank each of you for your continued contributions and support.

Table 1. AAVSO Observer Totals 1995-1996, by Country

| Country | No. Observers | No. Observations | Country | No. Observers | No. Ohservations |
|----------------|------------------|---------------------|--------------------|------------------|---------------------|
| ARGENTINA | 4 | 16,887 | ITALY | 8 | 1,480 |
| AUSTRALIA | 4 | 2,596 | JAPAN | 3 | 2,606 |
| AUSTRIA | 3 | 1,267 | MALTA | 1 | 495 |
| BELGIUM | 15 | 21,419 | NETHERLANDS | 11 | 14,535 |
| BOTSWANA | 1 | 131 | NEW ZEALAND | 1 | 99 |
| BRAZIL | 5 | 1,597 | NORWAY | 7 | 1,846 |
| BULGARIA | 1 | 4 | PARAGUAY | 1 | 15 |
| CANADA | 20 | 10,015 | POLAND | 11 | 4,328 |
| CHILE | 1 | 121 | PORTUGAL | 3 | 95 |
| CROATIA | 1 | 305 | ROMANIA | 4 | 2,714 |
| CZECH REPUBLIC | 4 | 1,244 | RUSSIA | 1 | 25 |
| DENMARK | 7 | 5,721 | SOUTH AFRICA | 8 | 19,066 |
| ENGLAND | 7 | 15,843 | SPAIN | 35 | 4,800 |
| FRANCE | 40 | 17,414 | SWEDEN | 1 | 323 |
| GERMANY | 39 | 28,338 | SWITZERLAND | 3 | 1,730 |
| GREECE | 4 | 3,233 | UKRAINE | 3 | 627 |
| HAITI | 1 | 830 | URUGUAY | 1 | 78 |
| HUNGARY | 82 | 24,643 | USA | 218 | 131,304 |
| INDIA | 1 | 147 | ZIMBABWE | 1 | 48 |
| IRELAND | 1 | 103 | TOTAL | 562 | 335,669 |

Table 2. AAVSO Observer Totals 1995-1996, USA by State or Territory

| State | No. Observers | No. Observations | State 5 | No. Observers | No. Observations |
|------------------|------------------|---------------------|--------------------|------------------|---------------------|
| ALABAMA (AL) | 1 | 157 | MINNESOTA (MN) | 4 | 2,048 |
| ALASKA (AK) | 1 | 35 | MISSOURI (MO) | 7 | 646 |
| ARIZONA (AŹ) | 7 | 4,295 | NEW HAMPSHIRE (NH |) 6 | 155 |
| ARKANSAS (ÁR) | 3 | 7,627 | NEW JERSEY (NJ) | 5 | 5,624 |
| COLORADO (CO) | 6 | 3,594 | NEW MEXICO (NM) | 5 | 11,150 |
| CALIFORNIA (CA) | 28 | 9,783 | NEW YORK (NY) | 9 | 10,337 |
| CONNECTICUT (CT) | 14 | 2,901 | NEVADA (NV) | 1 | 15 |
| FLORIDA (FL) | 4 | 3,347 | NORTH CAROLINA (N | C) 1 | 36 |
| GEORGIA (GA) | 3 | 11,979 | OHIO (OH) | 6 | 1,888 |
| HAWAII (HI) | 2 | 5,534 | PENNSYLVANIA (PA) | 7 | 3,126 |
| IDAHO (ID) | 1 | 8 | PUERTO RICO (PR) | 1 | 24 |
| ILLINOIS (IL) | 15 | 6,824 | RHODE ISLAND (RI) | 1 | 121 |
| INDIANA (IN) | 7 | 7,947 | TEXAS (TX) | 13 | 1,434 |
| IOWA (IA) | 3 | 195 | UTAH (UT) | 2 | 634 |
| KANSÁS (KS) | 4 | 970 | VERMONT (VT) | 1 | 11 |
| KENTUCKY (KY) | 1 | 4 | VIRGINIA (VA) | 4 | 3,077 |
| LOUISIANA (LA) | 2 | 634 | WASHINGTON (WA) | 6 | 314 |
| MAINE (ME) | 5 | 3,091 | WEST VIRGINIA (WV) | 1 | 527 |
| MARYLAND (MD) | 9 | 1,606 | WISCONSIN (WI) | 9 | 6,307 |
| MASSACHUSETTS (| MA) 11 | 13,249 | | | |
| MICHIGAN (MI) | 2 | 50 | TOTAL | 218 | 131,304 |

TABLE 3. AAVSO Observers, 1995 - 1996

| Code | Name | No. Obs. | No. I.S. | Code Name | No. Obs. | No. I.S. |
|-------------------------|--|--------------|-------------|--|-------------|-------------|
| AAP | P. Abbott, Canada | 720 | 57 | CME @ E. Colombo, Italy | 668 | |
| ABB | B. Adams, CA | 460 | 44 | CMG & G. Comello, Netherlands | 6057 | 559 |
| ADJ | J. Adams, NY | 396 | • | CK S. Cook, AR | 7573 3 | |
| AMT AIS | M. Adams, TX I. Al-Shorafa, CA | 2 7 | 2 | CSJ | 118 | |
| ABV | S. Albert, CT | 6 | | CR T. Cragg, Australia | 2306 | 669 |
| AB | W. Albrecht, HI | 5266 | 26 | CJH J. Crast, PA | 40 | |
| AAA | A. Alves, Brazil | 657 | | CRR R. Crumrine, NY | 30 | |
| AEJ | E. Anderson, NY | 794 74 | | CBZ # B. Csak, Hungary CJK # J. Csanyi, Hungary | 292 80 | 1 |
| AJR ADN | R. Andress, AZ D. Arnautovic, Australia | 11 | | CGB # G. Cseri, Hungary | 20 | |
| AKT | T. Atkin, Haiti | 830 | | CSM # M. Csukas, Romania | 395 | 6 |
| AJM * | JM. Azema, France | 35 | | CCO λ C. Cubillo Rubiato, Spain | 110 | |
| BWY | W. Bailey, AL | 157 | 1 | CKB B. Cudnik, CA | 413 | |
| BM | M. Baldwin, IN | 4566 | | CDT D. Currier, CA | 12 930 | 1 |
| BIV # BGZ | I. Balogh, Hungary G. Banialis, IL | 864 18 | | DMI 8 M. Dahm, Germany DSG @S. Dallaporta, Italy | 145 | |
| | D. Bannuscher, Germany | 383 | | DMM @ M. Damiani, Italy | 1 | |
| BXA * | A. Baranski, France | 605 | | DZD # Z. Danoczy, Hungary | 4 | |
| BSF | S. Barnhart, OH | 132 | 8 | DAM λ A. Darriba Martinez, Spain | 30 | 22 |
| | S. Baroni, Italy | 481 | | DAJ J. Davis, MD | 18 | 1 |
| BNX | N. Bastos, Portugal | 50 | | DBR * B. Decottignies, France DFR F. Dempsey, Canada | 8 174 | |
| BBA BON # | B. Beaman, IL | 8 1 | | DNO O. Deren, Poland | 894 | |
| BEF # | N. Becker, Hungary R. Bennatti, ME | 12 | | DEX ✓ E. De San Ramon Garcia, Spain | 6 | |
| BTY | T. Benner, PA | 260 | 70 | DMG M. DeTraglia, AK | 35 | 9 |
| | T. Berecz, Hungary | 4 | | DVI + F. De Villiers, South Africa | 106 | |
| BTU | T. Beresky, MO R. Berg, IN | 235 | | DPA | 7381 | 648 |
| BEB | R. Berg, IN | 1467 | 47 | DRG R. Diethelm, Switzerland | 1091 | 604 |
| BSH B | S. Beuno, Germany M. Biesmans, Belgium | 1 1234 | 615 | DRD R. Dietz, CO DLA A. Dill, KS | 1 692 | 3 |
| BLV | L. Binder, TX | 34 | 10 | DIL W. Dillon, TX | 278 | 35 |
| BKN | A. Birkner, IL | 9 | •• | DLO # L. Dobo, Hungary | 1 | |
| BKL | J. Blackwell, NH | 4 | | DLO # L. Dobo, Hungary DKT # K. Dolp, Hungary | 52 | |
| HUO | D. Bloom, UT | 48 | | DMY M. Dombrowski, CT | 67 | 150 |
| BNQ # | N. Boja, Hungary | 6 | | DPL P. Dombrowski, CT GDB # G. Domeny, Hungary | 774 31 | 159 |
| BEC 8 BRJ | E. Born, Germany J. Bortle, NY | 1794 5859 | 2938 | GDB # G. Domeny, Hungary DZS S. Dominguez, Argentina | 16695 | |
| | J. Bosch, Spain | 11 | 8 | DKI # I. Drucsko, Hungary | 5 | |
| BMU & | R. Bouma, Netherlands | 1245 | 16 | DMB & M. Duenas Becerril, Spain | 40 | |
| BPI * | P. Bourret, France | 10 | | DMO * M. Dumont, France | 295 | |
| BMK | M. Bradbury, IN | 676 | 69 | DGP G. Dyck, MA | 7788 29 | 4686 |
| BMM R | W. Braune, Germany | 41 | 4 | EKR # K. Edes, Hungary EM G. Emerson, CO | 8 | 2 |
| BTB BHA R | T. Bretl, MN H. Bretschneider, Germany | 53 602 | 7 | EPE 8 P. Enskonatus, Germany | 487 | - |
| BJP | J. Briggs, WI | 4 | | EJO # J. Erdei, Hungary | 414 | |
| BSM | S. Brincat, Malta | 495 | 36 | FCA C. Fausel, IN | 293 | 1 |
| $\mathbf{Bos} \ \nabla$ | E. Broens, Belgium | 2617 | 1812 | FJH & H. Feijth, Netherlands | 4596 | 1044 |
| BJQ | J. Brooks, CA | . 5 | | FKJ # J. Fekete, Hungary | 844 71 | |
| BBT | R. Browning, NJ | 13 | | FBD D. Fernandez Barba, Spain FRF # R. Fidrich, Hungary | 3279 | 182 |
| BYV * | Y. Brucher, France D. Bruggemann, Germany | 3 35 | | FSJ * JL. Fis, France | 53 | 6 |
| BHC ¶ | C. Bruhn, Denmark | 14 | | FEM E. Flynn, MO | 7 | • |
| BOA * | A. Bruno, France | 59 | 7 | FAT # A. Fodor, Hungary | 41 | |
| BJD ✓ | J. Bueno, Spain | 11 | | FSE @ S. Foglia, Italy | 54 | |
| BTH | T. Burrows, CA | 4928 | 1766 | FFC # F. Foldesi, Hungary | 104 | 110 |
| BFS CLM | J. Butler, CT | 6 4 | | FMR M. Fonovich, Croatia FGR G. Forg, OH | 3051 36 | 118 |
| CMP | L. Camacho, CA R. Campbell, FL | 111 | 26 | FRL R. Fournier, OH | 26 | |
| CEA * | B. Candela, France | 202 | 5 | FMC * M. Frangeul, France | 189 | |
| | J. Carvajal Martinez, Spain | 22 | 6 | FML & M. Fridlund, Netherlands | 14 | |
| CVR | R. Carver, Australia | 86 | | FMG G. Fugman, IA | 72 | 9 |
| CFE * | F. Chambon, France | 18 | | GMB M. Gable, OH | 46 | |
| CHX * | R. Chanal, France | 1 393 | 1 | GEC E. Gale, IA GAA P. Garey, IL | 120 .5 | 1 |
| CNT CMH * | D. Chantiles, CA M. Chapelet, France | 35 | 6 5 | GSB 8 S. Gebauer, Germany | 5 | |
| CGF | G. Chaple, MA | 2026 | 639 | GVL V. Genkov, Bulgaria | 4 | |
| CJM v | J. Chavez, Spain | 1 | | GJN 8 J. Gensler, Germany | 120 | |
| ocr ∇ | O. Chretien, Belgium | 148 | | GMC M. Gill, England | 2 | |
| CYA | A. Cichy, Poland | 161 | _ | GVN V. Giovannone, NY | 165 | |
| CLK | W. Clark, MO | 97 | 2 | GLG G. Gliba, MD | 107 | 36 |
| CJB CRX | J. Clarke, MA | 6 528 | | GFB W. Goff, CA GHA 8 H. Goldhahn, Germany | 64 1482 | .00 |
| | R. Cnota, Poland | | | GIN ✓ I. Gomez, Spain | 131 | |
| | I Coco Lonez Spain | | | | | |
| | J. Coco Lopez, Spain O. Cole Arnal, Canada | 42 345 | | GON R. Goncalves, Portugal | 8 | |

TABLE 3. AAVSO Observers, 1995 - 1996, continued

| Code | Name | No. Obs. | No. I.S. | Code Name | No. Obs. | No. I.S. |
|----------------|--|-------------|-------------|---|--------------------|-------------|
| GOP | P. Goodwin, LA | 622 | 107 | KPL P. Kneipp, LA | 12 | |
| GRX GFG | R. Grace, KS F. Graham, OH | 6 3 | | KGT G. Knight, ME KSP S. Knight, ME | 90 | ~ |
| | B. Granslo, Norway | 362 | | KSP S. Knight, ME KS J. Knowles, NH | 145 32 | 26 |
| GRI | J. Griese, CT | 685 | 470 | KOC # A. Kocsis, Hungary | 504 | |
| GOC | R. Grochowski, Poland | 76 | | KHL M. Kohl, Switzerland | 605 | 2 |
| GIO * GCT ¶ | L. Grouiller, France | 17 | 3 | KGY # G. Kokeny, Hungary | 5 | |
| GÜB ∇ | C. Grunnet, Denmark G. Gubbels, Belgium | 234 1057 | 40 | KRS R. Kolman, IL KMA M. Komorous, Canada | 2218 | 302 |
| GHD | H. Guidry, NC | 36 | 70 | KMA M. Komorous, Canada KOS * A. Kosa-Kiss, Romania | 1782 1019 | 30 |
| GPR | P. Guilbault, RI | 121 | | KTD T. Koutsotheodoris, Greece | 116 | |
| GUN * | J. Gunther, France | 2973 | 577 | KVI # I. Kovacs, Hungary | 138 | |
| HCS # | | 1058 | 40 | KZZ # Z. Kranicz, Hungary | 62 | |
| нкв | T. Hager, CT B. Hakes, IL | 147 170 | 49 | KAW 8 A. Krawietz, Germany | 179 | ••• |
| HK | E. Halbach, CO | 1886 | 28 | KWO 6 W. Kriebel, Germany KIS 6 G. Krisch, Germany | 970 2083 | 82 |
| HTT | P. Hallett, Canada | 31 | | KRK K. Krisciunas, WA | 11 | |
| HMG # | | 378 | | KDN D. Kroll, CA | 10 | |
| HMR HP | R. Ham, CO | 1136 | | KJI J. Krticka, Czech Republic | 70 | 4 |
| HCH | W. Hampton, CT C. Hanley, WA | 25 3 | | KUC * S. Kuchto, France KLW L. Kuczkowski, Poland | 938 | |
| HRC | R. Hanley, WA | 3 | | KLW L. Kuczkowski, Poland LTO 8 T. Lange, Germany | 163 1813 | |
| HAN | J. Hannon, CT | 20 | 7 | LZL # Z. Lantos, Hungary | 2 | |
| HSG | G. Hanson, AZ | 2009 | 570 | LMF M. Lara, Brazil | 94 | |
| HPR | C. Harper, NH | 2 | | LKR K. Larsen, CT | 40 | |
| HAV HBL 8 | R. Harvan, MD B. Hassforther, Germany | 760 672 | 179 | LSK S. Lascowski, WI | 47 | |
| HAI | A. Hastings, MA | 17 | | LVA A. Lauvstad, Norway LZT T. Lazuka, IL | 17 1 200 | |
| HSB 8 | W. Hasubick, Germany | 726 | | LEB * R. Lebert, France | 1200 577 | 1 |
| | D. Havassy, Hungary | 13 | | LNZ G. Lenz, CT | 169 | • |
| HGD | G. Havner, TX | 4 | | LJL J. Leonard, IL | 12 | |
| HAB HZL | R. Hays, IL L. Hazel, NY | 1594 296 | 104 | LGE * G. Letellier, France | 74 | |
| HEF | M. Heifner, CO | 550 | 104 | LEV A. Leveque, CA LFV * F. Levrat, France | 92 | |
| FYE | E. Heironimus, MO | 128 | | LGI * G. Liboubon, France | 1 | |
| | C. Henshaw, Botswana | 131 | | LIW W. Liller, Chile | 121 | 52 |
| HGZ # | Z. Herceg, Hungary | 5 | | LSM S. Linscott, TX | 7 | |
| HJN + | J. Hers, South Africa Z. Hevesi, Hungary | 860 551 | 201 | LSL S. Lloyd, CA LOB * J. Lobo-Rodriguez, Spain | 33 | |
| HE " | L. Hiett, VA | 902 | | LOB * J. Lobo-Rodriguez, Spain LGV G. Lopatynski, CA | 5 | |
| HIR | Y. Hirasawa, Japan | 1536 | 125 | LRD D. Loring, UT | 14 586 | 1 |
| | A. Hirshfeld, MA | 15 | | LEJ E. Los. NH | 20 | |
| HWD | W. Hodgson, England | 46 | | LML & M. Lou, Spain | 6 | |
| HIO & | A. Holbe, Germany | 275 | • | LHR H. Lourenco, Brazil | 285 | |
| | J. Holtrop, Netherlands J. Holtz, PA | 118 630 | 3 | LVT J. Lovett, NH LTZ λ T. Lozano, Spain | 95 | |
| HOV # | G. Horvath Hungary | 221 | | LTB T. Lubbers, MN | 2 640 | 1 |
| HVA V | A. Houvenaeghez, Belgium | 21 | | LBG G. Lubcke, WI | 1948 | 29 |
| HOA | A. Howell, GA | 61 | 10 | LPH * P. Lucaud, France | 6 | |
| | G. Hurst, England | 578 | 74 | LFZ @ F. Lucidi, Italy | 7 | |
| | P. Ingrassia, Argentina A. Ischenko, France | 98 31 | | LKA K. Luedeke, NM LHU + H. Lund South Africa | 405 | |
| | F. Ives, New Zealand | 99 | | LHU + H. Lund, South Africa LRE R. Lunsford, CA | 103 55 | |
| | P. Jacquet, France | 173 | | MDW W. MacDonald, Canada | 74 | 4 |
| JEZ # | E. Jambor, Hungary | 4 | | MDD P. Madden, MD | 42 | • |
| | R. James, NM | 2091 | | MDH H. Maddocks, VA | 45 | |
| | M. Jefferson, Canada | 15 99 | 10 | MZG 8 G. Maintz, Germany | 109 | _ |
| | L. Jensen, Denmark R. Johanns, Netherlands | 2309 | 12 209 | MLI L. Maisler, NY MMJ M. Manint, IL | 432 3 | 9 |
| | G. Johnson, MD | 157 | 207 | MPH P. Manker, GA | 254 | |
| JR | R. Johnsson, MD | 9 | 3 | MJZ * J. Manzorro, Spain | 241 | |
| JRW + | R. Jones, South Africa | 1780 | 13 | MCO M. Marcario, TX | 17 | |
| JRU * KDA | R. Juan, Spain | 215 | | MIC * C. Mariller, France | 18 | |
| | D. Kaiser, IN W. Kaminski, NM | 57 470 | 83 | MXR R. Martin, MD MPD J. Martinez Perez, Spain | 384 101 | |
| | I. Kapus, Hungary | 1 | 63 | MRX 8 H. Marx, Germany | 1410 | 165 |
| KAD # | A. Karpati, Hungary | 2 | | MAV D. Matsney, Russia | 25 | 103 |
| KEI | E. Kato, Australia | 193 | 9 | MPR 8 P. Maurer, Germany | 2051 | 175 |
| | L. Keith, WI | 240 | | MGE G. Mavrofridis, Greece | 2908 | 20 |
| | D. Keszthelyi, Hungary | 123 | 00 | MJK J. May, AR | 36 | - |
| | R. King, MN H. Kiss, Hungary | 498 11 | 93 | MJW J. Mayer, PA MGU T. McCague, IL | 846 | 69 |
| KIL # | L. Kiss, Hungary | 1664 | 14 | MGU T. McCague, IL MDP P. McDonald, Canada | 51 210 | 3 9 |
| JKK ¶ | K. Klindt-Jensen, Norway | 39 | | MJP P. McJunkins, FL | 1 | 7 |
| KON T | O. Klinting, Denmark | 10 | _ | MKJ J. McKenna, NJ | 2545 | 379 |
| KZA * | A. Klotz, France | 20 | 2 | MED K. Medway, England | 1700 | |
| | | | | | | |

TABLE 3. AAVSO Observers, 1995 - 1996, continued

| • | • | | | | |
|---|------------------|-------------|--|-------------------|-------------|
| Code Name | No. Obs. | No. I.S. | Code Name | No. Obs. | No. I.S. |
| | | 1.5. | | | |
| MJL * J. Mendez-Alvarez, Spain | 6 48 | | RRB R. Raphael, ME | 711 2 | 216 |
| MSC + C. Mesu, Zimbabwe MYJ 8 A. Mey, Germany | 13 | 1 | RSK S. Redko, Ukraine REP P. Reinhard, Austria | 541 | |
| MMY 8 M. Meyer, Germany | 162 | | RBN * B. Renard, France | 5 | |
| MTK T. Michalik, VA | 156 | | RHL 8 H. Richter, Germany | 14 | |
| MDI I. Middlemist, England MOK \$ O. Midtskogen, Norway | 791 783 | 233 | RRZ # R. Ricza, Hungary RPP * P. Rigault, France | 101 3 | 1 |
| MFM F. Mikan, TX | 19 | 233 | RSN * S. Rigault, France | 1 | - |
| MKT # K. Miklos, Hungary | 38 | | OJR λ J. Ripero Osorio, Spain | 1737 | 306 |
| MCQ C. Miller, NJ MKD K. Millyard, Canada | 1 16 | 8 | RPR P. Robbins, KS RJN * J. Rochefort, France | 211 85 | 39 |
| MZS # A. Mizser, Hungary | 1348 | 46 | RZD λ D. Rodriguez, Spain | 14 | |
| MCE E. Mochizuki, Japan | 10 | | RMU v M. Rodriguez Marco, Spain | 541 | 1 |
| MRV R. Modic, OH | 1645 5625 | 200 | RBI B. Rogan, MD | 11 1 36 | |
| MMI 8 M. Moeller, Germany MOL J. Molnar, VA | 3023 1974 | | RTY T. Rogers, MA RJA * J. Rohart, France | 33 | |
| MLF + L. Monard, South Africa | 2450 | | RGB G. Rosenberg, AZ | 184 | |
| MMO ✓ M. Montesdeoca, Spain | 3 20 | | ROG G. Ross, MI | 41 155 | 15 |
| MPK P. Moreland, CT MOW W. Morrison, Canada | 4664 | 229 | RSH S. Rowse, MO RR R. Royer, CA | 421 | 102 |
| MYL Y. Moskalenko, Ukraine | 154 | | RVR √ R. Ruiz Ruiz, Spain | 12 | |
| MKH S. Mukherjee, India | 147 | | RPH H. Rumball-Petre, CA | 19 | |
| NZO # Z. Nagy, Hungary NPK P. Nakroshis, NH | 94 2 | | RSY S. Ryniker, CA RZM M. Rzepka, Poland | 30 5 | |
| NPK P. Nakroshis, NH NMS M. Nall, MO | 14 | | SJU * J. Saint-Jouan, France | 13 | 3 |
| NRH R. Nelson, Canada | 17 | | SQV λ J. Sainz, Spain | 470 | 2 |
| NLB # L. B. Nemeth, Hungary | 18 | | SJQ A. Sajtz, Romania | 1150 | 208 |
| NJO 8 J. Neumann, Germany NBY J. Nordby, MN | 744 857 | 236 | SSU S. Sakuma, Japan SLU ✓ L. Salas, Spain | 1060 13 | 200 |
| NVK M. Novak, TX | 76 | | SXA ✓ A. Saleado Moreno, Spain | 2 | |
| NMW M. Nowak, Poland | 275 | | SQL R. Salvo, Uruguay | 78 3224 | |
| ONY # O. Nyiro, Hungary OCN S. O'Connor, Canada | 6 575 | | SAH G. Samolyk, WI SQM λ J. Sanjuan, Spain | 3224 16 | 1 |
| ONJ J. O'Neill, Ireland | 103 | | STC G. Santacana, PR | 24 | • |
| OES D. Oesper, IA | 3 | | SCU ✓ C. Santana, Spain | 7 | |
| OCV * C. Olivi, France OAN # A. Onitz, Hungary | 34 2 | | SYN * Y. Santens, France SPO # C. Sapi, Hungary | 65 131 | |
| OAN # A. Opitz, Hungary OV E. Oravec, NY | 2258 | | SKI # K. Sarneczky, Hungary | 364 | 31 |
| OFS F. Osell, HI | 268 | | SGE G. Sarty, Canada | 23 | |
| OJO ¶ J. Ostergaard Olesen, Denmark OSV # L. Osvald, Hungary | 62 91 | | SXJ # N. Schlineider, Hungary SPK 6 P. Schmeer, Germany | 1 124 | |
| OSV # L. Osvald, Hungary OPV # P. Osvath, Hungary | 81 | | SQR R. Schmude, GA | 11664 | |
| OPX P. Otazu Porter, Spain | 29 | | SAQ & A. Scholten, Netherlands | . 5 | |
| OPI P. Ouimet, Canada | 43 | 11 | SLZ 6 G. Schott, Germany | 160 63 | |
| OB + D. Overbeek, South Africa PSU S. Pack, MA | 12797 16 | 26 | SHX 8 H. Schubert, Germany SBD R. Schultz, TX | 35 | |
| PLA F. Padilla Filho, Brazil | 550 | | SCZ * E. Schweitzer, France | 1086 | 33 |
| PCC @R. Papini, Italy | 70 | | SCE C. Scovil, CT | 580 150 | 302 |
| PPS # S. Papp, Hungary PMW M. Paradowski, Poland | 1482 69 | 51 | SVW V. Scurtu, Romania SPB # P. Sebok, Hungary | 150 | |
| PMA M. Parker, CA | 116 | 37 | SFL F. Sevilla Lobato, Spain | 4 | |
| PN A. Pearlmutter, MA | 49 | | SHS S. Sharpe, ME | 2133 | 20 |
| PTI N. Peattie, CA PPB P. Pecorelli, Argentina | 56 62 | | SSA A. Sharpless, WA SQN L. Shaw, CA | 142 710 | 114 |
| PEI ¶ E. Pedersen, Denmark | 17 | | SDK D. Sieker, CA | 4 | *** |
| PEG * C. Peguet, France | 142 | | SBN A. Silva Barros, Brazil | 11 | |
| PAE A. Pereira, Portugal PGY # G. Peter. Hungary | 37 8 | | SNE N. Simmons, WI SDQ # D. Simon, Hungary | 465 26 | 68 |
| PGY # G. Peter, Hungary PLY L. Phillips, IN | 4 | | SKP P. Skalak, Czech Republic | 1074 | 249 |
| PKT J. Pickett, AZ | 9 | 1 | SLQ L. Smelcer, Czech Republic | 24 | |
| PKI O. Piechowski, KY | 4 | | SJX + J. Smit, South Africa SHA H. Smith, MI | 966 9 | |
| PEY E. Piggott, AZ PSB # S. Pinter, Hungary | 61 6 | | SJE J. Smith, CA | 244 | |
| PIJ # J. Piriti, Hungary | 806 | | SMQ M. Smith, AZ | 125 | |
| AST R. Podesta, Paraguay | 15 | | SX L. Snyder, NV SOH ¶ H. Sorensen, Denmark | 15 136 | |
| PZS # Z. Porhanda, Hungary PGG # G. Posztpisl, Hungary | 549 7 | | SOH ¶ H. Sorensen, Denmark SJZ J. Speil, Poland | 1410 | |
| POX M. Poxon, England | 393 | 53 | SPO \$ J. Spongsveen, Norway | 81 | |
| PYG G. Poyner, England | 12333 | 7217 | SC C. Spratt, Canada | 118 | 3 |
| PRI L. Price, WI PDO * D. Proust France | 65 31 | | SSP P. Stamus, CO STR R. Stanton, CA | 13 285 | 227 |
| PDQ * D. Proust, France PUJ λ F. Pujol, Spain | 31 568 | 62 | SVD V. Steblina, WA | 150 | 3 |
| PFR # F. Puskas, Hungary | 25 | | SKS T. Steckner, Canada | 24 | |
| RKE 8 K. Raetz, Germany | 286 194 | | STF G. Stefanopoulos, Greece STI P. Steffey, FL | 153 1501 | 151 |
| RKM B M. Raetz, Germany RXX ✓ X. Rafael, Spain | 194 | | SET C. Stephan, FL | 1734 | 65 |
| · · | - | | | - | |

TABLE 3. AAVSO Observers, 1995 - 1996, continued

| | No. | No. | | No. | No |
|--|-----------------|----------|---|-----------|-------|
| Code Name | Obs. | I.S. | Code Name | Obs. | I.S. |
| SWF A. Stewart, NJ | 1 | | VDH & H. Van den Hil, Netherlands | 62 | |
| SWT R. Stewart, NJ | 3064 | 1183 | VDL | 1929 | |
| STQ N. Stoikidis, Greece | 56 | | VMT ♥ T. Vanmunster, Belgium | 5474 | 3607 |
| SHZ 8 H. Struever, Germany | 61 | | VRO # R. Varga, Hungary | 9 | |
| SQO R. Stuber, IL | 64 | | VED * P. Vedrenne, France | 5634 | |
| SUK M. Stuka, CA | 12 231 | | VPE P. Veleshchuk, Ukraine | 471 | 1512 |
| SAC 8 A. Sturm, Germany SUX √ M. Suarez Tejera, Spain | 302 | 5 | VET * M. Verdenet, France | 2840 | 1513 |
| SUS 8 D. Sussmann, Germany | 600 | , | VJF JF. Viens, Canada VAN 8 A. Viertel, Germany | 31 237 | y |
| SWV D. Swann, TX | 456 | | VII # I. Vincze, Hungary | 10 | |
| SSW S. Swierczynski, Poland | 723 | | VFK 8 F. Vohla, Germany | 3317 | 22 |
| SDX D. Sworin, CA | 1129 | 197 | VOL W. Vollmann, Austria | 589 | |
| SGO # G. Szabo, Hungary | 47 | | VVI # V. Voroshazi, Hungary | 11 | |
| SQB # L. Szabo, Hungary | _ 1 | | WLC L. Wadle, TX | 3 | |
| SBT # R. Szabo, Hungary | 794 | 115 | WGR G. Walker, MA | 85 | 45 |
| SXP # P. Szakal, Hungary | 34 | | WKP P. Walker, VT | 11 | |
| SQT # T. Szalai, Hungary | 13 | | WSM + S. Walsh, South Africa | . 4 | |
| SAO # A. Szauer, Hungary | 100 290 | | WFR 8 F. Walter, Germany | 124 | 1 |
| SLY # L. Szegedi, Hungary SNO # L. Szentasko, Hungary | 5949 | 3555 | WSI R. Wasatonic, PA | 53 219 | |
| SKY # K. Szentes, Hungary | 6 | 3333 | WRS R. Watt, PA WER R. Weber, KS | 61 | |
| SSB S. Szirko, Argentina | 32 | | WPU P. Weeks, CA | 56 | |
| SZK # G. Szitkay, Hungary | 39 | 5 | WEI D. Weier, WI | 284 | 77 |
| TVI \$ V. Takvam, Norway | 9 | - | WC R. Wend, IL | 1338 | • • • |
| TAZ # A. Tari, Hungary | 1 | | WET T. Weselak, Poland | 24 | |
| TDB D. Taylor, Canada | 315 | 93 | WJP J. Wesney, CT | 14 | |
| TPV P. Temple, MO | 10 | | WEF F. West, PA | 1078 | |
| TPH B P. Tengg, Austria | 137 | | WTJ J. West, TX | 74 | 13 |
| THR R. Thompson, Canada | 830 | | WDM π M. Westlund, Sweden | 323 | 1 |
| THU * B. Thouet, France | 893 | 81 | WYT T. Weyenberg, WI | 30 | |
| TIA # A. Timar, Hungary | 125 | | WTK # K. Wieszt, Hungary | 22 | |
| TRL R. Togni, AR TST S. Toothman, IL | 18 28 | | WI D. Williams, IN | 884 | 4 |
| TST S. Toothman, IL. TRT # T. Tordai, Hungary | 20 30 | | WJY ▽ J. Wilms, Belgium WLP ▽ P. Wils, Belgium | 385 7 | 4 |
| TGO # G. Toth, Hungary | 22 | | WDN D. Wilson, TX | 429 | 8 |
| TTK # K. Toth, Hungary | 278 | 2 | WSN T. Wilson, WV | 527 | 206 |
| TSC S. Tracy, CT | 348 | 94 | WSZ # S. Windecker, Hungary | 1 | |
| TDM D. Troiani, IL | 106 | | WKM M. Wiskirken, ID | 8 | |
| TRO O. Trondal, Norway | 555 | 22 | WUL 8 U. Witt, Germany | 212 | |
| TFU √ F. Turi, Spain | 20 | | WTW * JM. Wittwer, Switzerland | 34 | |
| TYS R. Tyson, NY | 107 | | WJM J. Wood, CA | 191 | |
| UND G. Underhay, CA | 20 | | WRO R. Wright, NM | 108 | |
| VFR * F. Vaclic, Czech Republic | 76 | | YRK D. York, NM | 8076 | 4987 |
| VLN * L. Vadrot, France | 207 | | YDO D. Young, MA | 8 | |
| BVE & E. Van Ballegoy, Netherlands VBR H. Van Bemmel, Canada | 50 8 | | ZBA # B. Zagoni, Hungary | 49 | |
| | 81 | 1 34 | ZAG # G. Zajacz, Hungary | 428 | |
| VCP V P. Van Cauteren, Belgium VDE & E. Van Dijk, Netherlands | 70 | 34 | ZZ # Z. Zakany, Hungary | 11 356 | 4 |
| VDJ & J. Van Dijk, Netherlands | 'n | | ZLT # T. Zalezsak, Hungary ZAM @ M. Zanotta, Italy | 54 | 7 |
| VHD ∇ D. Van Hessche, Belgium | 220 | | ZHG 8 H. Zaunick, Germany | 3 | |
| VNL F. Van Loo, Belgium | 859 | 158 | ZRE R. Zissell, MA | 3103 | 1792 |
| VEM E. Van Matre, WA | 5 | | ZSJ # J. Zseli, Hungary | 3 | 2 |
| VWS | 3 | | ZMA # M. Zseli, Hungary | ì | _ |
| These symbols indicate observers | are also affili | iated w | ith the groups below: | | |
| ^ Agrupacia Astronomica Albirec | | | | | |
| Agrupacion Astronomica Arago | nesa (Zarag | oza, S | pain) | | |
| Association Française des Obse | rvateurs d'E | toiles ' | Variables (AFOEV) | | |
| + Astronomical Society of Souther | rn Africa, Va | ariable | Star Section | | |
| ¶ Astronomisk Selskab (Scandina | via) | | | | |

¶ Astronomisk Selskaß (Scandinavia)

Bundesdeutsche Arbeitsgemeinschaft für Veränderliche Sterne e.V. (BAV) (Germany)

Grupo Canario de Estrellas Variables (Canary Islands, Spain)

Madrid Astronomical Association M1 (Spain)

Magyar Csillagäszati Egyesület, Valtozbosillag Szakcsoport (Hungary)

Norwegian Astronomical Society, Valtozbosillag Szakcsoport (Hungary)

Norwegian Astronomical Society, Variable Star Section

Sociedad Astronomica 'Syrma' (Valladolid, Spain)

Norwegian Astronomica 'Syrma' (Valladolid, Spain)

Svensk AmatorAstronomisk Förening, variabelsektionen (Sweden)

Unione Astrofili Italiani (UAI)

Vereniging Voor Sterrendunde, Werkgroep Veranderlijke Sterren (Belgium)

Table 4. Individuals requesting AAVSO data during fiscal year 1995-1996.

| Table 4. Individuals red | questing AAVSO data during fiscal year 1995–1996. |
|------------------------------------|---|
| Name | Affiliation/Location |
| B. Abbott | Villanova University, PA |
| T. Ak | Istanbul University, Turkey |
| S. Albert | The Hotchkiss School, CT |
| G. Ambika | Maharajas College, India |
| M. Anderson | Mancheseter, England |
| M. Ansdell | Manchester, NH |
| G. R. Aradhya | Karnataka, India |
| J. Archibald | Hillsboro,NH |
| H. Arslan | Bursa, Turkey |
| W. Assmus | Sarasota, FL |
| P. Barrera (2) | Instituto Nacional de Astrofísica, Optica y Electrónica, Mexico |
| T. Bedding | European Southern Observatory, Germany |
| R. Bell | NASA Ames Research Center, CA |
| J. Bloch | Los Alamos National Laboratory, NM |
| A. Block | University of Arizona NASA Goddard Space Flight Center, MD |
| S. Bloom D. Boboltz | NASA Goddard Space Flight Center, MD |
| | National Radio Astronomy Observatory, NM |
| M. Bode | Liverpool Polytechnic, United Kingdom |
| B. Boroson | Harvard-Smithsonian Center for Astrophysics, MA |
| H. Bouchelle R. Boyle | Project Starwalk Planetarium, DE |
| D. Branch | Dickinson College, PA University of Oklahoma |
| D. Brandt | ? |
| R. Braun | State University of New York at Stoneybrook |
| S. Breault | Stoneham, MA |
| J. Bridgett | Friendswood, TX |
| M. Brock | New Orleans, LA |
| S. Brooks | Oakton, VA |
| E. Budding | Carter Observatory, New Zealand |
| J. Bush (Ž) | Palm Springs, FL |
| C. Cable | Sidney, NY |
| J. Cannizzo | NASA Goddard Space Flight Center, MD |
| B. Carney | University of North Carolina |
| R. Carney | Alachua, FL |
| K. Champanerkar | Maharashtra, India |
| G. Chaple | Townsend, MA |
| J. Chapman (2) | Anglo-Australian Observatory, Australia |
| H. Cipriotto | Buenos Aires, Argentina |
| G. Clayton (13) | University of Colorado |
| J. Clements | American Fork, UT |
| A. M. Cody | Harvard, MA |
| H. Coeckleberghs | Oud-Heverlee, Belgium |
| M. Collier | Sullivan County Community College, NY |
| R. Conner | Natick, MA |
| R. Cossette | St-Laurent, Canada |
| T. L. Costa | Carver, MA |
| M. Covington | University of Georgia, USA |
| B. Cranston | Edmonton, Canada |
| M. Creech-Eakman (4) E. Cremins | University of Denver, CO Tewksbury High School, MA |
| K. Crowley | Cambridge, MA |
| R. Crumrine | Rochester Academy of Science, NY |
| K. Cuozzo | Briarcliff Manor, NY |
| L. D'Ambruoso | Manchester, NH |
| R. Del Conte | Annandale High School, VA |
| O. Demircan | Ankara University Observatory, Turkey |
| P. Desantis | Azusa, CA |
| | - |

Note: A number in parentheses after a name indicates multiple requests.

| Table 4, cont. Individua | als requesting AAVSO data during fiscal year 1995–1996. |
|---------------------------------|--|
| Name | Affiliation/Location |
| M. Desousa | Waterbury, CT |
| D. DiCicco | Sky & Telescope, MA |
| S. DiMaulo | St. Remy Press, Canada |
| D. Dobrzycka | Harvard-Smithsonian Center for Astrophysics, MA |
| M. Dombrowski (2) | Glastonbury, CT |
| P. Dombrowski | Glastonbury, CT |
| J. Drilling (3) G. Driscoll | Louisiana State University Dorchester, MA |
| M. Duenas | Grupo Astronómico Silos, Spain |
| M. Durrof | Toms River, NJ |
| D. Epelbaum | Livingston, NJ |
| G. Esposito | Bronx, NY |
| G. Favero | University of Padova, Italy |
| D. Ferguson | W. J.Schafer Associates, CA |
| D. Fernie | University of Toronto, Canada |
| M. Fonovich | Plomin, Croatia |
| C. Friedemann | Astrophysikalisches Institut und Universitäts Jena, Germany |
| J. Freidman | Phillips Laboratory, NM |
| A. Frosina | UAI - VSS, Italy |
| B. Gaensicke (5) P. Garnavich | Universitätssternwarte Göttingen, Germany Harvard-Smithsonian Center for Astrophysics, MA |
| R. Garrison | University of Toronto, Canada |
| R. Gehrz (2) | University of Minnesota |
| E. Gerard | Nancay Radiotelescope, France |
| L. Gerstman | Long Beach, NY |
| J. Godin | College of the Pacific, Canada |
| A. Goldberg | Houston, TX |
| J. Gondek | SkyWAAtch: Newsletter of the WAA, NY |
| K. Gordon | University of Toledo, OH |
| S. Gottschalk | Lowden, IA |
| N. Graman | Milford, OH |
| L. Gramer A. R. Gray, Jr. | Medford, MA Greensville Correctional Center, VA |
| D. Green (9) | IAU Circulars, Harvard-Smithsonian Center for Astrophysics, MA |
| J. Greiner | Astrophysical Institute Potsdam, Germany |
| M. Grenon (7) | Geneva Observatory, Switzerland |
| M. Guedes | Liverpool, United Kingdom |
| S. P. Gurjar | Jyotirvidya Parisanstha, India |
| S. Guryanov (2) | School for Young Cosmonauts, Russia |
| N. Hammond | Oceano, CA |
| A. Harbora | Alberta, Canada |
| T. Harrison | New Mexico State University |
| W. Hatchette | Parameter Chata I Indicandos |
| S. Heath | Pennsylvania State University |
| A. Hempelmann (4) E. Herbert | Astrophysikälisches Institüt, Germany Williamson, NY |
| F. Herpin | Observatoire de Bordeaux, France |
| P. Hill (3) | University of St. Andrews, Scotland |
| M. Hoeing | Franklin, PA |
| S. Hoffman | Alberta, Canada |
| K. Hofmann | Max-Planck-Institüt für Radioastronomie, Germany |
| J. M. Hollis | NASA Goddard Space Flight Center, MD |
| R. Hollow | University of Western Sydney, Australia |
| K. Holloway | Milford, DE |
| S. Howell (3) | Planetary Science Institute, AZ |
| J. Hron A. Hunt | University of Vienna, Austria Dracut, MA |
| P. Illinger | Focus Magazine, Germany |
| J. Isles (2) | Plymouth, MI |
| 10.00 (2) | = -y, |

Table 4, cont. Individuals requesting AAVSO data during fiscal year 1995–1996.

| Table 4, cont. Individu | als requesting AAVSO data during fiscal year 1995–1996. |
|---------------------------------|--|
| Name | Affiliation/Location |
| M. Jadhav | Inter-University Centre for Astronomy and Astrophysics, India |
| S. Johnson | Mt. Sterling, KY |
| A. Kachuka (2) | Asociación Argentina Amigos de la Astronomía, Argentina |
| U. S. Kamath M. Karovska (6) | Physical Research Laboratory, India Harvard-Smithsonian Center for Astrophysics, MA |
| P. Keenan | Ohio State University |
| S. Keithley | Corona, CA |
| E. Keyl | Simsbury, CT |
| D. Khan | Ohio Wesleyan University, OH |
| D. Kinsley | ? Dubanamile Canadia |
| Z. Knezevic R. Koch | Dubrovnik, Croatia University of Pennsylvania |
| C. Koen | South African Astronomical Observatory, South Africa |
| R. Kolman | Glen Ellyn, IL |
| K. Krisciunas | Joint Astronomy Center, HI |
| S. Kwon (2) | Chungbuk National University, Korea |
| C. La Dous | IUE - VILSPA Station, Spain |
| J. Lansing | Santa Barbara Sensor Technologies, CA |
| S. Larsson | Stockholm Observatory, Sweden |
| J. Lawrence T. Lebzelter | Fort Wayne, IN University of Vienna, Austria |
| E. Leffert | Central Washington University, WA |
| A. M. Le Squeren | Montepellier University, France |
| V. Lever | Alberta, Canada |
| D. Levit | Crystal Lake, IL |
| J. Lewis | Rich Creek, VA |
| ZY. Li | Nanjing University, China Arcadia, CA |
| J. Liang W. Liller | Viña del Mar, Chile |
| C. Lloyd (3) | Rutherford Appleton Laboratory, United Kingdom |
| K. Long (6) | Space Telescope Science Institute, MD |
| S. Lopez | Ārizona Republic, AZ |
| D. Lubowich | American Institute of Physics, NY |
| F. Lucidi | Associazione Romana Astrofili, Italy |
| D. Lynch D. Lynkowski | The Aerospace Corporation, CA Alberta, Canada |
| S. MacGillivray | Sky & Telescope, MA |
| W. MacLaughlin (2) | Boxborough, MA |
| M. Magalhaes | Instituto Astronômica e Geofísico, Brazil |
| M. Manint | Monticello, IL |
| T. Maroni | Brown University, RI |
| A. Marquez | La Mesa, CA University of Southernton United Kingdom |
| T. Marsh K. Marvel | University of Southampton, United Kingdom National Radio Astronomy Observatory, NM |
| E. Mason | University of Padova, Italy |
| D. Matsnev | Moscow, Russia |
| A. Mattei | Centro Astronómica "Neil Armstrong," Italy |
| J. G. Mattos | Santa Catarina, Brazil |
| C. Mauche (17) | Lawrence Livermore National Laboratory, CA |
| J. May | Redfield, AR Steward Observatory, University of Arizona |
| D. McCarthy W. McCoy | North Cobb High School, GA |
| E. McIntyre | Hannibal, NY |
| J. McRae | Sunset Press, Canada |
| K. Meech | Institute for Astronomy, HI |
| H. Melani | Istanbul, Turkey |
| K. Mendel | ? Contourillo IA |
| R. Miller J. Mize | Centerville, IA Cocoa, FL |
| J. IVIIZE | 2000u, 1 D |

Table 4, cont. Individuals requesting AAVSO data during fiscal year 1995-1996.

| Table 4, cont. Individu | als requesting AAVSO data during fiscal year 1995–1996. |
|----------------------------------|--|
| Name | Affiliation/Location |
| B. Monard | Pretoria, South Africa |
| U. Munari | Asiago Astrophysical Observatory, Italy |
| R. Mutel | University of Iowa |
| P. Nakroshis | Souhegan High School, NH |
| H. E. Neilson | Hayward, CA |
| M. Nowak | Grudziadz, Poland |
| H. Nussbaumer (2) | Institute of Astronomy, Switzerland |
| S. O'Connor | Québec, Canada Wise Observatory James |
| E. Ofek | Wise Observatory, Israel Huntington Park, CA |
| S. Ortega J. Osborne (32) | University of Leicester, United Kingdom |
| O. Owosu | Ghana |
| T. Ozkan | Istanbul University, Turkey |
| J. P. Pacak | Mason, OH |
| J. Palencia | Drexel University, PA |
| A. Paranjpye (2) | Inter-University Centre for Astronomy and Astrophysics, India |
| J. Pardo | Paris Observatory, France |
| A. Parker (2) | University of California at Los Angeles |
| J. Patterson | Columbia University, NY |
| D. Paul | Fayette, IA |
| P. M. Pecorelli (2) | Capital Federal, Argentina |
| J. Pesce | Space Telescope Science Institute, MD |
| C. Phillips J. Pickett | Greensboro, NC |
| F. Pinto | Tucson, AZ |
| M. Piotrowski | Oregon State University Lublin, Poland |
| A. Policicchio | Alberta, Canada |
| E. Pollmann | Fachgruppe Spetroskopie der Vereinigung der Sternfreunde e. V. |
| | Deutschland, Germany |
| R. Poole | Federalsburg, MD |
| S. Powers | Lexington, KY |
| S. Preston | Medina, WA |
| W. Quester | Esslingen, Germany |
| N. K. Rao | Indian Institute of Astronomy, India |
| M. Ratner | Harvard-Smithsonian Center for Astrophysics, MA |
| M. Regalado | Asociación Valenciana de Astronomía, Spain |
| M. Rejkuba T. Rezek | Asiago Astrophysical Observatory, Italy Masarky University and Astronomical Institute, Czech Republic |
| D. Rhone | Beverly, NJ |
| D. Ribeca | Beecher, IL |
| J. Richards (2) | Danville, CA |
| M. Richmond | Princeton University, NJ |
| W. Richter (3) | Arkansas School for Mathematics and Science |
| B Rieck | Traverse City, MI |
| J. Ripero | Madrid Astronomical Association, Spain |
| G. Ripley | New Ipswich, NH |
| S. A. Rivers, II | Lynchburg, VA |
| J. Roberts | University of North Texas |
| J. Roth | Sky & Telescope, MA Shelton, WA |
| D. Rothrock D. Roussel-Dupré (2) | Los Alamos National Laboratory, NM |
| M. Saksena | Bombay, India |
| A. Salmi | Chicago, IL |
| B. Schaefer | Yale University, CT |
| R. Schmude (2) | Gordon College, GA |
| V. Sfatcu | Cypress, CA |
| K. Shaka | Manchester, NH |
| C. Shiver | ABC News, NY |
| Z. Shkhagosheva | Special Astrophysical Observatory, Russia |
| | |

S. Yorka (2)

K. Yu Chen

Z.-D. Yu

Table 4, cont. Individuals requesting AAVSO data during fiscal year 1995-1996.

Affiliation/Location S. SETI Institute, CA Shostack T. Shull Marshfield, WI University of Torino, Italy G. Silvestro V. Simon The Astronomical Institute, Czech Republic E. Sion (2) Villanova University, PA E. Smith Owasso, OK Chr. Michelsen Institute, Norway H. Sperrevik R. Stefanik Harvard-Smithsonian Center for Astrophysics, MA C. Stephan M. Strickman Sebring, FL U.S. Naval Research Laboratory, DC University of Wyoming University of Washington Sudol P. Szkody (2) M. Takeuti Tohoku University, Japan S. Talbot Orem. UT M. Tapia Observatorio Astronómico Nacional, Mexico M. Teodorani
D. Terris
T. Tertilino
D. Teske
G. Thibault
K. Thompson
R. Thompson
J. Tomnev Capodimonte Astronomical Observatory, Italy Rabb School, MA Padova, Italy Jackson, MI Québec, Canada Monash University, Australia Ontario, Canada Baltimore, MD M. Torsoli Z. Treuer J. E. Tsai (3) Rocca Priora, Italy Miami, FL Lexington, MA Turner Boston, MA N. Urbanczyk (3) Farmington Hills, MI G. Van Belle
H. Van Bemmel
K. Vanlandingham
T. Vanmunster
S. Varner University of Wyoming University of Toronto, Canada Arizona State University Landen, Belgium California State University S. Varner
R. Victor
R. Viotti (4)
B. Warner
W. Warren
R. Wasatonic
R. Waugh Abrams Planetarium, MI Instituto di Astrofisica Spaziale, Italy University of Cape Town, South Africa NASA Goddard Space Flight Center, MD Villanova University, PA Owens Science Center, MD Welch CA K. Wells W. Welsh (2) Stockton, CA Keele University, United Kingdom M. L. West Montclair State University, NJ P. Wheatley (17) C. Wheeler (12) Utrecht University, The Netherlands University of Texas D. Whitehead Acton, MA P. Whitelock (3) South African Astronomical Observatory, South Africa J. Wilker Kinzers, PA R. Williams Buckley, WA D. Winger Oil City, PA Cross Roads School, CA J. Wise P. Wood Mt. Stromlo and Siding Spring Observatory, Australia

Denison University, OH

University of Florida

Hubei Research Institute of Environmental Protection, China