ANNUAL REPORT OF THE DIRECTOR
FOR FISCAL YEAR 1978 - 1979

I present to you my sixth annual report as your Director for the fiscal year 1978-79.

Once again, I will report our accomplishments in the different areas of our operation and I will state our goals for the coming year.

DATA PROCESSING

Accomplishments: We converted all data and programs to the Digital VAX Computer, processed incoming observations, verified data between 1971 and 1974, and processed data for the Extension of the Studies of Long Period Variables.

1. Conversion of Data and Programs

We use the computer facilities of Harvard-Smithsonian Center For Astrophysics for our data processing. We are granted a limited amount of computer time for which we are grateful to Center For Astrophysics, Professor Owen Gingerich and Barbara Welther. This year, the Center For Astrophysics replaced its CDC 6400 computer with a Digital VAX 11 system. This required the conversion of all our computer programs and this was quite a setback because we don't have a full-time staff member specializing in computer programming. Our member and data processing consultant, Richard Strazdas, went to work with my assistants, Christopher Walton and Sandra Galejs, both from the Venture Student Program. After a series of difficulties, weeks of testing, and much help from the computer system staff at Center For Astrophysics, our magnetic tapes and programs were successfully converted, several new programs which will expedite our operation were developed, and all our incoming observations were entered and processed successfully. The new computer system, once one gets used to its idiosyncrasies, is much more versatile and much faster.

2. Processing Current and Old Data

Thanks to a grant from Clint Ford for data processing, we have hired and trained two CETA employees to enter the incoming observations on computer cards. Current observations are now processed each month without delay.

Whenever time permits, we verify the keypunched data from 1971 to 1974. Once the verification is completed, the data will be processed and the so-called "gap" data from 1966 to 1974 will be fully accessible and ready to be prepared for publications.

3. Report 38/39

We have not fulfilled our goal of publishing Reports 38/39 due to the time lost in converting our data and programs to the new computer system. All the magnetic tapes of data for the Reports are now successfully converted and new editing and plotting programs are developed. Our major activity this year will be to publish these Reports.

4. Processing Data for the Extension of the Studies of Long Period Variables

For the past two years, Margaret Mayall has been checking the compiled data of maxima and minima of long period variables from 1955 to 1975. The checking was completed this summer. The data have been

entered on computer cards by our CETA data processors, B. Kelly and B. Silva, using the funds of the Margaret Mayall Assistantship. A computer program has also been developed by S. Galejs to process and format the data for publication. Thus, many long hours of typing the data has been eliminated. This colossal work, much sought by astronomers working with long period variables, will be published when funds are available.

Goals: Publication of Report 38/39, completion of the verifications of "gap" data, successful processing of the current data, and the publication of the Extension of the Studies of Long Period Variables.

SPECIAL REQUESTS

Accomplishments: Significant contributions to variable star astronomy.

Each year, as astronomers probe further into the secrets of variable stars, by extending their observations into more domains of the electromagnetic spectrum, our data become more valuable for correlation purposes, for simultaneous ground-based monitoring, and for predicting the possible behavior and brightness of these stars. This year, our observers were again involved in several observing programs and they worked with professionals, providing them with indispensable data for their research. During the fiscal year we had 104 special requests from astronomers, which is 22% more than last year's record high, and new names were added to the list of astronomers who request our data.

Requests for our data were made on almost every type of variable star that we have in our program. In order of popularity, these were:

1. Long period and semiregular variables
2. Dwarf novae
3. Novae and recurrent novae
4. Symbiotic stars
5. R Coronae Borealis type stars
6. Irregular variables
7. Nebular variables
8. Cepheids
9. The Sun

Since space does not allow me to mention each and every special request, this year again a list of the special requests is included at the end of my annual report, and here I will share some of the highlights with you.

Special requests came from all corners of the United States and around the world.

Long period and semiregular variables led the special requests. Although significant advances have been made in understanding these fascinating red giants, much still needs to be learned about the mechanism of their pulsations, the composition and motion of their atmospheres, their size, their luminosity and mass. Dr. Robert Wing in his recent review paper compares the long period variables to a jellyfish due to their loose and extended atmospheres and he states that these heavenly bodies are observers' delights and theoreticians' headaches. Although these stars vary cyclicly, the period in individual cycles can change significantly. Since many spectroscopic features in these stars are phase dependent, astronomers turn to us for phase determination of observations in specific cycles. Our visual

data were used in about 40 research projects involving correlation of visual observations with ultraviolet, optical (spectroscopic and photometric), infrared, and radio observations, scheduling of observations with large telescopes, and improving spectral classification of these stars. For example, the Max Planck Institüt in West Germany requested our ten-year data on 75 long period variables. It was a major job of compilation and a big bundle of light curves to ship (~10 lbs). Dr. Solf wrote that our data are very important for their interpretation of spectroscopic observations of the near infrared calcium II emission lines in Mira variables. Dr. Philip Keenan, the prominent spectroscopist, needed our long-term data on 25 S and SC type Mira and related variables to determine the phases and brightness of these variables during their spectroscopic observations in the past 13 years. He used these data to revise the spectral classification of these stars. Dr. LeeAnne Willson of Iowa State University made a special trip to our Headquarters to obtain copies of our light curves and to discuss several aspects of the behavior of these stars.

In the area of dwarf novae, our major contribution to the success of x-ray survey of cataclysmic variables with HEAO-1 (High Energy Astronomical Observatory-1), convinced the astronomical community to recognize us as one of the guest investigators of HEAO-2 observing program. We have been granted funding from NASA to monitor the cataclysmic variables in the HEAO-2 observing program and to publish our observations in the form of computerized light curves so that the x-ray observations from HEAO-2 can be correlated with the visual observations.

France Cordova told me recently that the HEAO-2 results show that the x-ray emission from these stars is closely related to their optical activity. Thus it is important for us to monitor these stars simultaneously during HEAO-2 observations.

Throughout the year Dr. Fredrick Seward, who is in charge of the scheduling of observations with HEAO-2, as well as individual investigators, have informed me of the specific times of observations. Our observers have been alerted at these times through our Alert Notices and phone calls and they have contributed very significantly to the success of the experiments. AAVSO contributions to HEAO projects are being acknowledged in many astronomical publications.

In the area of infrared observations of these stars, our observers played a major role during an observing run on these stars at Tenerife, Canary Islands, with the 150-centimeter infrared detector by astronomers from Royal Greenwich Observatory. The observing run was for 10 days and throughout that time our observers kept a very close eye on the behavior of U Gem stars and called me when outbursts were observed, so that astronomers could be informed at Tenerife by phone. It was very exciting to relay these important messages across the Atlantic.

Another observing program that is dependent on our close monitoring of dwarf novae is that of Dr. R. Hildebrand and his colleagues at Yerkes Observatory and also at Mt. Lemmon Observatory in Arizona. They have been observing almost every month in the past six months and they are very grateful for AAVSO's contribution - the contribution from you, our observers.

Our data in novae and recurrent novae was also important in correlation with the infrared data for the detection of dust shell around Nova Cygni of 1978. Dr. Ney who was carrying on the infrared observations was very appreciative of our monitoring when they were observing Nova Cygni 1978 in infrared. Later in the year during the

outbursts of WZ Sagittae and U Scorpii again our observations were much in demand from astronomers working in the field.

In the past fiscal year, about 20 papers that I know of have been published that have either referenced, or acknowledged AAVSO data. These papers have been published in major astronomical journals, and they involve almost every type of variable star. Some of the titles are: "The Variations of Stellar Masers," "IUE Observations of Circumstellar Emission from the Late Type Variable R Aqr," "Spectroscopic Study of WZ Sge During the 1978 Outburst," "Detection of an X-ray Outburst from the Old Nova, GK Persei," "Hard X-rays from U Gem," "Soft X-ray Oscillations from U Gem," "Soft X-ray Emission from the Vicinity of Dwarf Novae and AY Lyrae," "Soft X-ray Pulsations from SS Cyg," "Eruptions and Superhumps in Dwarf Novae," "Changes in the Rapid Oscillations of AH Her During an Outburst," "Spectroscopic Observations of CH Cygni During the 1977-78 Outburst," "16-39 Micron Spectroscopy of Oxygen Rich Stars." Not only this, throughout the year several astronomers who have used our data have visited our Headquarters. They were interested in your data, in the way the data are being processed, and in the way we operate. We enjoyed the visits of Drs. France Cordova, Jerry Nelson, Richard Wade, Joe Patterson, John Percy, Hugh Johnson, LeeAnne Willson, Dominique Proust, and, of course, our neighbors from Center For Astrophysics, Fred Seward, Wendy Hagen, Bill and Martha Liller.

ALERT NOTICES

Despite the bad weather, this year was quite active astronomically. We issued 10 Alert Notices, which contained information on the discovery of the supernova in NGC 4321 (M100) on April 19.13 UT by our member, Gus E. Johnson; the outbursts of two recurrent novae, WZ Sge on December 1.1 UT, 1978, and U Sco on June 23.55 UT., 1979; the discovery of a nova-like object in Vulpecula on April 5.83 UT by Y. Kuwano; special requests for simultaneous optical coverage of cataclysmic variables in HEAO-2 Observing Schedule; and optical coverage of R CrB-type stars during observations with the 150 cm. infrared collector at Tenerife and notification of activity on SS Cyg, U Gem, Z Cam, SU Tau and o Cet.

When special data are requested, you, our observers, are most enthusiastic to respond, and you provide a network that is unique to the AAVSO. I am very thankful and grateful to those who keep vigil, who alert me of the special behavior of the variables, who call or send notes for data that are requested by astronomers. Special thanks to Jim Morgan, John Griese, Ernst Mayer, Bob Annal, Paul Goodwin, John Bortle, Jim DeYoung, Tom Fetterman, Peter Collins, Richard Lynch, Charles Scovil, Robert Ariail, Tim Baker, Ken Beckmann, Tom Bretl, Antonio Bueno, Arnold Grossman, Lancaster Hiett, Donna Hughes, Carolyn Hurless, David Iadevaia, Gus Johnson, George Kelly, Kevin Krisciunas, David Levy, George Lindbloom, Pat Madden, Ken Medway, Charles Morris, Steve O'Meara, Michael Smith, Chris Spratt, Chris Stephan, Mike Wesolowski, and Tom Wilson.

You, our observers, make many research projects a success.

Keep on watching the stars!

SUMMARY OF OBSERVATIONS

The milestone in our observations this year was the visual discovery of a supernova in M100 (NGC 4321) by our member, Gus Johnson, on April 19.13 UT. Gus is the first AAVSOer and the second amateur astronomer in this century to discover an extragalactic supernova,visu-

ally. We are certainly very proud of this discovery and extend our heartfelt congratulations to Gus.

Several factors affect the quantity of observations we receive throughout the year. Positive factors are discoveries, unusual heavenly activity, and special requests. The major negative factor is the weather. Looking at our monthly totals we have a good idea of the weather conditions around the world. Observing conditions this year were in the majority greatly affected by clouds. In the reports we received there were remarks such as:

"We never see the sky anymore."
"It's the pits."
"I've been observing almost 20 years in Chicago. I've never seen such rotten skies and weather as I've seen this past August."

And, even at that, you our observers tried your best. We received a total of 155,705 observations from 360 observers this year. Of this, 94,735 observations came from observers in the USA and 60,970 (or 39%) came from observers abroad. This brings our grand total to 4,225,466. The counts of our observations have been computerized this year by my assistant, Elizabeth Waagen. This has saved an enormous amount of time in checking totals and enables us to give a few statistics at this time. The state that leads in observations is New York, next is Ohio, and next Virginia. In countries outside the United States it is Canada (20,565), next is West Germany (9,177) and then Hungary (7,520).

Twenty-two observers sent observations numbering between 1000 and 2000; Bob Annal, John Bortle, Tim Baker, Jim DeYoung, Paul Goodwin, John Griesé, Heinz Grzelczyk, Carolyn Hurless, David Levy, Warren Morrison, Csaba Mezosi, Eddie Oravec, Michael Smith, Chris Spratt, Georg Stephanopolus and Antal Tolgyesi, between 2000-3000; Gerry Samolyk 3,107; Ernst Mayer, 3,907; Steve Sharp, 4,069; Marv Baldwin, 4,273; Lancaster Hiett, 4,293; Wayne Lowder, 5,035; and Bernard Bois of Canada, 6,003.

Ernst Mayer again leads on our inner sanctum observations with 1,702 observations (44% of his total), Bob Annal with 1,032 (35% of his observations) and John Griesé with 973 (43% of his total) follow.

The following observers contributed valuable photoelectric data to our regular and to our eclipsing binary observing programs: Leonard Kalish, Kevin Krisciunas, Howard Louth, Melanie Mitchell, Charles Scovil, and David Targan. Jack Newton and Russell Patterson sent photographic and Ronald Royer photovisual observations.

We are grateful to all our observers for their astronomical contribution , may it be just one observation or thousands. What is important is not the quantity, but the quality of the observation.

INTERNATIONAL COLLABORATION WITH OTHER VARIABLE STAR ASTRONOMERS

Accomplishments: Improvement of collaboration with variable star observers abroad.

Observations of southern long period variables by enthusiastic members of Variable Star Section of Royal Astronomical Society of New Zealand are compiled by their devoted member, Gordon Smith, and sent to us by their Director, Dr. Frank Bateson. These observations are used in our Annual Bulletin for the determination of the predicted

maxima and minima dates of these variables, and they continue to be of great value.

Enthusiastic observers of the Astronomical Society of Southern Africa (ASSA) continue to contribute valuable data on southern variables. During the General Assembly of the IAU, their Acting Director, Jan Hers, and I discussed ways of more effective communication and collaboration.

At the IAU meeting, I also met Dominique Proust, the scientific representative of the French Variable Star Observers (AFOEV) and discussed ways to make the observations of AFOEV more available to astronomers. On Dominique's return to France, after discussions with Mr. Schweitzer, the recorder of AFOEV, it has been decided to have AFOEV send us their data to be processed and included in our publications of computerized light curves, with due acknowledgements. These observations will continue to be listed in the Bulletin of AFOEV. Several members of AFOEV have joined us in the close monitoring of cataclysmic variables for HEAO-2. Their honorary secretary continues to send valuable observations. The recent decision will certainly increase the collaboration between the two associations.

The Albireo Amateur Astronomy Club of Hungary, Variable Star Observers of Austria and Belgium, and Japanese Astronomical Study Group have increased their valuable contribution to our observing programs with the addition of many enthusiastic observers.

Exchange of publications continues between AAVSO and variable star observing groups and/or institutions in Argentina, Australia, Brazil, Canada, Chile, England, Italy, Mexico, Netherlands, Scandinavia and the Soviet Union.

REQUEST FOR INFORMATION AND NEW MEMBERSHIP

We have fulfilled about 625 requests for information about the AAVSO. We have also sent Observing Kits to several colleges, high schools, and astronomy clubs that were interested in setting up programs in observing variable stars.

During this fiscal year we voted in 99 annual, and 3 sustaining members, namely: Kenneth Kelly, LeeAnne Willson and Richard Landry. Eighty-seven members changed from annual to sustaining. The list of these members is published in J.AAVSO, Vol. 8, p. 36. The revenue from these sustaining memberships has definitely helped in defraying the rising cost of our operation. It is our hope that those who have changed to sustaining membership will continue their support of our association each year and that more of our members will join them in their financial support.

This year we have one member from Hungary, Janos Danko, who is sponsored by Jack Davis. At the IAU meeting, the editor of the IAU Information Bulletin of Variable Stars, Dr. Szeidl from Hungary, praised our sponsorship program of iron-curtain country observers. He pointed out that it means a great deal for these enthusiastic observers to be members of AAVSO. There are still many active observers, mostly from Hungary, who could be sponsored into membership. I invite more of you to sponsor colleagues from the iron-curtain countries.

Goal: Let us each make our goal to bring in one new member into AAVSO this year.

PUBLICATIONS

Journal of the AAVSO: Our Journal is the forum for our members to publish papers in variable stars and related fields, as well as to publish reports of the activities of our association. Both at the meeting of the American Astronomical Society and the I.A.U., several astronomers commented favorably about our Journal and wished to subscribe to it. This year Vol. 7, Nos. 1 and 2 were published. I thank Dr. C. Whitney for his excellent editorship, the editorial board for their suggestions and recommendations and Steve Siok and Agnes Meaney for their editorial assistance.

AAVSO Bulletin: The 1979 "Annual Predictions of Maxima and Minima Dates of Long Period Variables" has been published in Bulletin 42, and distributed to observers and astronomers. This publication enables astronomers to schedule efficient ground-based and satellite observing programs. Several astronomers scheduled observations with the International Ultraviolet Explorer (IUE) using our Bulletin.

The data in Bulletin 42 have been schematically represented in Bulletin 42 A&B. This year, Peter Taylor and Josefa Manella computerized the compilation of maxima and minima. I thank Peter and Josefa for their excellent work with Bulletin 42 A&B.

AAVSO Circular: This monthly publication by John Bortle and Charles Scovil has been valuable in giving the observers and astronomers preliminary information on the behavior of cataclysmic, and unusual variables, and publishing preliminary charts of novae, supernovae, and of some variables. Through this publication I have communicated special observing requests of astronomers, and lists of variables in need of more observations, to our active observers. Many thanks to John and Charles for their efforts in preparing this helpful publication. The AAVSO Circular can be received through individual subscriptions.

Solar Bulletin: This monthly publication is prepared by Casper Hossfield and until January, 1979, also by Bruce and Dr. Robert Ammons. It is published by Carolyn Hurless. Many thanks to Bruce and Robert for their excellent and conscientious work in analyzing the solar flares for about six years, and to Casper, Carolyn and Jim Ruhl for continuing to prepare this publication.

Ephemerides of Eclipsing Binaries and RR Lyrae Stars: Thanks are extended to Donald Livingston and Marvin Baldwin for preparing the computerized ephemerides for 1979 for eclipsing binaries and RR Lyrae stars.

Predicted dates of maxima and minima of bright variables were prepared for monthly publication in Sky & Telescope, and annually for the Observers Handbook of the Royal Astronomical Society of Canada (R.A.S.C.). "Variable Star Notes" were published in the Journal of the R.A.S.C. on Nova Serpentis, Minima of R Coronae Borealis in 1977-1978, The Unique Long Period Variable R Aquarii, and V342 Aquilae - an interesting eclipsing binary star with changing period - written by Marvin Baldwin.

PERSONNEL

We engaged in several educational and training programs that provided us with students and participants who helped us with different aspects of our operations, and they in turn received valuable experience. I will report those programs and participants under a different heading - Educational Programs. In this section I will mention

only the regular full- and part-time staff of Headquarters.

Mary Thompson assisted conscientiously in the general operation of the office. When she left in March, our careful and hardworking part-time assistant, Dorothy Haviland, filled the position and carries it on very capably.

During part of the academic year Harvard University and Wellesley College students, in particular Jill Gustafson and William Segal, keypunched and verified incoming observations.

This summer we added to the full-time staff Elizabeth Waagen, a very capable, conscientious and hardworking astronomy major, graduate from Smith College, as my assistant. I thank Mrs. Jaworowska for finding her for us.

Our member, Richard Strazdas, continued to be an indispensable data processing consultant. Particularly this year with the conversion of the computer system, Richard's guidance, suggestions and recommendations in the revision of the programs were much appreciated.

To help me with the enormous amount of correspondence we receive, we have an excellent part-time corresponding secretary, Agnes Meaney, funded by Clinton Ford's communication grant.

EDUCATIONAL AND TRAINING PROGRAMS

Venture program, established mostly for colleges in the Northeast, places students taking time off from college in challenging jobs related to their field. This is the second year in which we participated in this program. We had three Venture students: Christopher Walton for 12 months from Bates College; Douglas Edwards for 8 months and Sandra Galejs for 6 months, both from Brown University. Chris and Sandra worked closely with Richard Strazdas and revised and developed computer programs, converted our data into the new computer system, and created well written documentations for all our programs and data processing. I am grateful to them for their very fine work and contributions. Douglas Edwards assisted us capably with our data processing.

This year we trained two CETA participants, Bethune Kelly and Barbara Silva, in data processing, keypunching and verifying. CETA (Comprehensive Employment and Training Act) is a federal program which provides job training and employment to the economically disadvantaged. Both Bethune and Barbara are extremely careful and conscientious keypunchers. Thanks to Clinton B. Ford's data processing grant and CETA's financial contribution, we were able to have them full time. Never before have we processed our incoming observations so fast and so well.

Under Harvard University Work-Study Program, which is another federally funded program paying the major portion of the salaries of eligible students, we were fortunate to have our member and Harvard student, Ann Piening, during the academic year and the summer to prepare data for special requests, to assist me with the analysis of our data, and to compile and check our data on cataclysmic variables in the observing schedule of HEAO-2. While I was away at the IAU, Ann did a superb job of handling special requests from astronomers from Tenerife.

A special project is going on between Clint Ford, the Chairman of our New Charts Committee and me, where we are checking each of our preliminary charts and the data we are receiving from our observers

who are using these charts. In several cases our data indicated that there may be a problem which may be due to identification of the star on the charts, or classification of stars, or other reasons. In order to clarify these questions, Clint Ford donated a summer research grant to have a qualified student check Harvard's plate collection. Our member and a former Maria Mitchell summer student, Karen Meech, worked in the Harvard plate stacks on about 66 problematic stars. Her findings are already proving to be very helpful and valuable.

In March we had Jim Allen from Rye High School in New York, under a high school internship program. Jim helped to analyze light curves of R Aqr and AX And. A paper co-authored with me was published in JRASC. Jim has written that, as a result of his experience at the AAVSO, he received a job at Goddard Institute for Space Studies this summer and he thanks us for our encouragement in his "budding interest in astronomy and astrophysics."

Under the guidance of our member, David Targan, Dan Miller, a student at Brown University, has undertaken the analysis and digitizing of data of cataclysmic variables. CZ Ori was studied last year.

It has been a busy year where we participated in many educational and training programs.

ACKNOWLEDGEMENTS

We are grateful to Harvard-Smithsonian Center For Astrophysics for their support of our computer activities and to Professor Owen Gingerich for making this support possible. We greatly appreciate and thank Barbara Welther for her helpful suggestions in data processing and her assistance in computer funding.

We extend our thanks to the excellent staff of the Computation Facility of the Center For Astrophysics for the help they have given us throughout the year.

Our heartfelt thanks and gratitude go to Clinton Ford for his grant for data processing and communications; two areas which are vital to have a healthy and a happy AAVSO, and also for the summer research grant to checking problematic new charts.

We thank Drs. Martha and Bill Liller of Center For Astrophysics for their assistance to Karen Meech and for permitting us to use Harvard Plate Stacks and its excellent facilities.

I am very happy to announce the generous contribution from the Perkin Fund to match our funds in the Margaret Mayall Assistantship Program. This brings our fund to a total of $15,000. In addition, the Perkin Fund decided to match additional funds received from our members in the coming two years toward this program in order to reach our target of $25,000. Mr. Richard Perkin, for whom the Perkin Fund is named, was an active life member of the AAVSO. We are very grateful to the Perkin Fund for their contribution which will make it possible to hire a summer student under the Margaret Mayall Assistantship Program. We also thank Margaret and Newton Mayall for being instrumental in obtaining this contribution.

We are grateful for the contribution of Cy and Emily Fernald which helped to hire Sandra Galejs who worked in the conversion of our computer programs and data. Cy had always contributed generously to AAVSO.

We thank the National Oceanic and Atmospheric Administration for their support of the activities of our Solar Division.

I gratefully acknowledge the IAU Travel Grant from the National Science Foundation which enabled me to attend the IAU meetings, in Rochester, NY, and Montreal, Canada.

We thank Stamford Observatory for making their facilities available to Charles Scovil for the preparation of our Circulars, our preliminary charts, and the AAVSO Variable Star Atlas.

My sincere thanks to Leonard Barisano for his contribution to buy a dictaphone to improve the handling of our correspondence.

Our thanks to Richard Lynch for contributing the group photographs at our meetings and for his help in our data analysis.

We greatly appreciate the volunteer help of our members to assist us in our data analysis. We are grateful to Margaret Mayall for her careful checking of the compiled data on the Extension of the Studies of Long Period Variables. I should like to thank Keith Danskin, who visits and helps at our office whenever his flight schedule permits, and Jack Davis, who made a special trip to HQ to help with the analysis of UU Aql.

Our sincere thanks to our members who have changed their membership from annual to sustaining, and who have contributed over their dues.

I am grateful to my husband for his understanding, encouragement, and patience with me, particularly during the preparation of our Spring and Fall meetings when we resort to TV dinners!

My most sincere thanks to you our officers, committee chairmen, members, and particularly our observers. The success of our association is due to your dedication and devotion to the goals of AAVSO.

Let us continue our dedication to the AAVSO and our contribution to astronomy.

Respectfully submitted,

Janet Akyüz Mattei

LIST OF SPECIAL REQUESTS
DURING FISCAL YEAR 1978-79

Altamore, A., U. di Roma, Italy. Light curve and a recent article on Z And for the reduction of IUE and optical spectroscopic data.

Angel, R., U. of Arizona. Notification of the outbursts of U Gem.

Augason, G., NASA Ames Research Center . Light curve of α Ori in Nov. and Dec. of 1978 when it appeared to be faint.

_____, Brightness and phase of R Aql in Sept. 1979 to correlate with infrared data.

Boland, D., U. of Georgia. Longterm light curves of α Ori, α Her, μ Cep, o Cet, T Cas to investigate periodicities for M.S. thesis.

Brosch, N., Telaviv U., Israel. Light curve of WZ Sge during the recent outburst, to correlate with spectroscopic data. Requested through J. Bortle.

Burnham, R., Astronomy Magazine. Light curve of Y CVn.

_____, Light curve and chart of S Lac for reference in the magazine article.

Charles, P., U. of California. Observations of UZ Ser in Sept. 1977 and Mar. 1978 to correlate with x-ray data from HEAO-1.

Cimerman, M., California Inst. of Tech. Light curve of W Hya to correlate with radio observations.

Clark, F., U. of Kentucky. Light curves of R Aql, RR Aql, RX Boo, VY CMa, R Cas, o Cet, S CrB, X Cyg, U Her, R Hya, R Leo, S Per, U Ori, IK Tau, VX Sgr, WX Ser from 1976 to 1979 to correlate with maser polarization observations.

Clegg, R. E. S., U. of Texas. Visual magnitudes and phases of S type stars in R And, T Cam, R Gem, S UMa, R Cam and R Cyg during spectroscopic observations in the near infrared for the study of "Keenan bands."

Cohen, N., Cornell U. Light curves of the symbiotic stars: AX Per, BX Mon, AG Dra, RS Oph, YY Her, V443 Her, FN Sgr, BF Cyg, HM Sge, CI Cyg, V1329 Cyg, AG Peg, Z And to be used for the study of H_2O maser emission detection. AAVSO observers alerted for simultaneous visual observations during observing run.

Cordova, F., California Inst. of Tech. Observations of outbursts of AH Her, AF Cam, AB Dra, FO Per, AQ Eri, UZ Ser, IR Gem, AY Lyr, CY Lyr, SU UMa, YZ Cnc, BV Pup, VW Hyi, X Leo (for search of x-ray emission) from August 1977 to May 1978 of HEAO-1.

_____, Observations of SS Cyg during Dec. 1978 and Jan. 1979 outburst for correlation with x-ray from HEAO-1.

_____, Observations of YZ Cnc for Apr. 1979 to correlate with x-ray data from HEAO-2.

_____, Observations of U Gem during the Oct. 1979 outburst, for correlation with HEAO-1 x-ray data.

_____, Simultaneous optical coverage for SU UMa, Z Cam, MV Lyr, EM Cyg and AY Lyr, during HEAO-2 observing run.

Cunningham, E., Hatfield Polytechnic Obs., England. Simultaneous optical coverage of SU Tau, R CrB, V348 Sgr, SV Sge, and RY Sgr during observing period with 1.5 m. infrared flux collector at Tenerife, Canary Islands.

Dickinson, D., Williams College. Phase determination of o Cet, IK Tau, VY CMa, R Leo, W Hya, VX Sgr, R Cas, T Cep, U Ori to correlate with radio observations. Predictions of max. and min. dates for 1979 and 1980.

Dunham, D., Computer Sciences Corporation. Information on the optical state of SZ Sgr for grazing occulation.

_____, Phase of R Leo occulted in July 25 and Sept. 18, 1979.

Erikson, E., NASA Ames Research Center. Optical behavior of VY CMa to correlate with infrared data.

Forrest, W., Cornell U. Light curves of IK Tau, α Ori, VY CMa, Y CVn, RX Boo, χ Her, U Her, α Her, V Cyg, μ Cep, PZ Cas, and R Cas to correlate with 16-40μ spectroscopic observations.

_____, Projected magnitude and phase of S Cep needed for NASA Kuiper Airborne Observatory (KAO) flight series.

_____, Light curves of Y CVn, W Aql, RX Boo, BC Cyg, χ Cyg, S Cep, μ Cep for correlation with infrared observations from KAO.

Gehrz, R., U. of Wyoming. Light curves of Nova Ser 1978, Nova Cyg 1978, and WZ Sge for correlation with infrared data.

Goebel, J., NASA Ames Research Center. Ten year light curve of V CrB to correlate with optical and infrared spectroscopic data.

Hagen, W., Harvard-Smithsonian Center For Astrophysics. Predictions of maxima and minima dates and mean brightness of southern variables.

_____, Phase and brightness of R Cen in May 1973.

Henry, P., Harvard-Smithsonian Center For Astrophysics. Observation of the quasar 3C-273 Vir.

Hickerson, Y., Pollard Junior High School. Chart of sunspot activity to be used in earth-science program.

Hildebrand, R. et al, U. of Chicago. Predictions of outbursts of cataclysmic variables in order to schedule observations at the NASA/U. of Arizona 152 cm. telescope of the Mt. Lemmon Observatory.

_____, Pre and simultaneous optical coverage and immediate notification of outbursts of U Gem and Z Cam stars to assist high speed photometric observations at Mt. Lemmon and Yerkes Observatory throughout the year.

_____, Light curve of AH Her for 1978 and 1979 to assist in the analysis of data of rapid oscillations.

Hinkle, K., Kitt Peak National Obs. Light curve of χ Cyg to be used in the analysis of infrared spectra.

Holm, A., NASA Goddard Space Flight Center. Simultaneous coverage and optical information on R CrB and RY Sgr for IUE observations.

_____, Notifications of outbursts of SS Cyg and U Gem, and minimum of SU Tau.

Hull, T., U. of Pennyslvania. Light curves of Vl500 Cyg and Vl668 Cyg to correlate with polarimetric and photometric data.

Irvine, N., M.I.R.A. Optical behavior and light curve of o Cet.

Jawirowsky, S., NASA Ames Research Center. Optical behavior of RX Boo in July to assist observations.

Johnson, H., Lockheed Palo Alto Research Lab. Reprint of recent article and brightness and phase of R Aqr on Dec. 4, 1978, to correlate with IUE observations.

Keenan, P., Ohio State U. Brightness and phase of 25 Mira variables of S and SC type, to correlate with spectroscopic observations made to prepare a catalogue of revised spectral types of these stars.

Knapp, G., California Inst. of Tech. Light curves from 1976 to 1979 of o Cet, RX Boo, χ Cyg to correlate with radio observations.

Ku, W., Columbia U. Observations of HU Ori and NP Ori to correlate with x-ray data from HEAO-2.

_____, Simultaneous optical coverage of Orion Nebular variables during observing run in Sept.

Lane, A., U. of Massachusetts. Light curves of R Cas, VX Sgr, W Hya, o Cet, VY CMa, U Her, U Ori, R Leo, χ Cyg, T Cep, RX Boo to correlate with radio observations. AAVSO predictions of maxima and minima dates of long period variables to assist scheduling radio observations.

Liller, W., Harvard-Smithsonian Center For Astrophysics. Star chart for nova-like object in Vulpecula 1979.

Mancil, M., Auburn U. Light curve of W Ori to determine its long-term behavior to assist in research in detection of cosmic rays.

Maran, J., Harvard-Smithsonian Center For Astrophysics. Maxima and minima dates of R Cas from 1974 to 1978 for phase determination.

Markert, T., Massachusetts Inst. of Tech. Notification of SS Cyg outburst in June to schedule simultaneous HEAO-2, IUE and ground-based observations.

Mariska, J., Naval Research Lab. Information on the elements of β Dor, ξ Gem, η Aql and δ Cep to aid in IUE observations.

Mason, K., U. of California. Simultaneous ground-based observations of AH Her during HEAO-2 monitoring on Mar. 6, 7.

_____, Simultaneous ground-based observations of EQ Mon during HEAO-2 observations on Mar. 28.

_____, Simultaneous visual monitoring of U Gem during scheduled HEAO-2 observations on Apr. 2.

_____, Simultaneous visual monitoring of KT Per during scheduled HEAO-2 observations on July 28.

Mayo, S., Royal Greenwich Observatory, England. Immediate notification of the outburst of cataclysmic variables to be monitored with 150 cm. infrared flux collector at Tenerife, Canary Islands.

McGraw, J., U. of Arizona. Up-to-date light curve of WZ Sge outburst.

McLean, I., U. of Arizona. Light curve of o Cet. AAVSO predictions of max. and min. dates of LPVs.

_____, Up-to-date light curve of o Cet to aid in the international observing campaign.

Michalitsianos, A., NASA. AAVSO predictions of max. and min. dates of LPVs to schedule IUE observations.

_____, Simultaneous observations of W Hya, R Aql and R Aqr during scheduled IUE observations. Preprint of R Aqr article.

_____, Revised AAVSO preliminary chart on BX Mon for IUE observations.

_____, Light curve and chart of R Aql for IUE observations.

Myers, A., NASA Ames Research Center. Projected brightness of S Cep, V CrB, RV Dra, χ Cyg, Y Tau to aid observing in infrared with KAO. AAVSO predictions of maxima and minima dates of long period variables to schedule observing programs.

Ney, E., U. of Wyoming. Light curve of V1668 Cyg and NQ Vul to correlate infrared observations.

_____, Light curves of novae: Ser 1978, Sgr 1977, Aql 1975 to correlate the infrared data for the detection of dust shells around the novae.

Olofsson, H., Onsala Space Observatory, Sweden. Light curve of R Leo and o Cet to correlate with radio observations of the SiO maser line emission.

Panek, R., Pennsylvania State U. Observations of UZ Ser and VW Hya to correlate spectroscopic data.

Patchett, B., Appleton Lab., England. Light curves of X And, R And, U Cas, RW And, RR And, S Cas, RZ Per, T Cam, Z Tau, R Lyn, Z Del.

Rafanelli, P., Osservatorio Astronamico, Italy. Observations of HT Cas to correlate with spectroscopic observations.

Raymond, J., Harvard-Smithsonian Center For Astrophysics. Charts for V Sge, AE Aqr, V533 Her for identification of fields with IUE.

Roberts, W., Harvard-Smithsonian Center For Astrophysics. Observations of V Cas and U Gem to correlate data from HEAO-1.

Querci, F., Observatoire de Paris, France. Light curves of UU Aur, WZ Cas, and TX Psc to correlate with high speed spectroscopic data. AAVSO predictions of max. and min. of LPVs to schedule spectroscopic observations.

Seward, F., Harvard-Smithsonian Center For Astrophysics. Observations of SS Cyg at minimum to correlate with HEAO-2 x-ray data.

_____, Notification of SS Cyg outburst in June for scheduling simultaneous HEAO-2, IUE and ground-based observations.

Seward, F., Harvard-Smithsonian Center For Astrophysics. Constant communication of HEAO-2 observing schedule of cataclysmic variables for providing simultaneous visual monitoring by AAVSO.

Sherwood, W., Max Planck Inst. für Radioastronomie, W. Germany. Long-term light curves of R Aql, RR Aql, R Cas, U Her, V Mic, U Ori, VY CMa, and VX Sgr needed for phase determination of radio observations.

Slovak, M., U. of Texas. Longterm light curves of symbiotic stars: EG And, AX Per, AG Dra, BF Cyg, CH Cyg, CI Cyg, V1329 Cyg, AG Peg, and Z And for dissertations.

Smith, L., Grumman Aerospace Corp. Maxima and minima dates of R Aql and o Cet to correlate with infrared observation.

_____, Light curves of Y CVn, TX Psc. AAVSO predictions of max. and min. dates of LPVs to schedule jet flight observations.

_____, Present behavior and predicted maxima dates of R Lep and SS Vir in 1980 to be used in scheduling jet flight observations.

Smith, S., U. of Toledo. Longterm light curves of CH Cyg to correlate with spectroscopic observations.

_____, Longterm light curve of EG And to correlate spectroscopic data.

Solf, J., Max-Planck Inst. für Astronomie, W. Germany. Ten year light curves of 75 long period variables for interpretation of spectroscopic observations of the near infrared Ca II emission lines.

Spillar, E., et al., U. of Chicago. See under Hildebrand, R.

Stencel, R., NASA. Longterm light curve of α Ori, μ Cep, S Per, Z Uma. A list of semiregular variables in AAVSO observing program for future reference.

Stick, T., Predicted maxima dates of ζ Gem.

Stiening, R., et al, U. of Chicago. See under Hildebrand, R.

Swank, J., NASA. Light curve of SS Cyg for 1976, 1977 and 1978 to correlate with HEAO-1 x-ray observations.

_____, List of individual observations of SS Cyg for June 1978 to correlate with HEAO-1 x-ray data.

_____, Longterm AAVSO light curve and article on SS Cyg.

Tomaszewski, L., U. of Western Ontario, Canada. Light curves of o Cet, R Leo, V CVn.

Varshni, Y., U. of Ottawa. Longterm light curves of P Cyg, δ Cas and χ Oph.

Wade, R., California Inst. of Tech. Light curve of SS Cyg for July 1977.

_____, Light curve of YZ Cnc for Dec. 1978 and Jan. 1979 to analyze ground-based photometric and IUE observations during its outburst.

Waller, W., Harvard-Smithsonian Center For Astrophysics. Light curve of V1668 Cyg for correlation with spectroscopic observations.

_____, Weekly information on AAVSO sunspot numbers given by C. Hossfield, Chairman of AAVSO Solar Division.

Wallenstein, G., U. of Washington. AAVSO predictions of max. and min. dates of LPVs for 1979.

_____, Observed dates of maxima and brightness of T Cas, o Cet, U Ori, R Tri, R Leo, R Cyg, χ Cyg, and T Cep to schedule spectroscopic observations.

Warren, D., Aerospace Corp. Brightness and phase of o Cet for May 1979 to correlate with infrared data.

Webbink, R., U. of Illinois. Light curve of WZ Sge.

Whelan, J., Inst. of Astronomy, England. Listing of individual observations for January 1979 and longterm light curve of SS Cyg.

Williamon, R., Fernbank Science Center. Data on RR Ari.

Willson, L., Iowa State U. Longterm light curve of S Per, VX Sgr for theoretical studies.

_____, Longterm maxima and minima dates of LPV and semiregular variables for theoretical studies.

_____, List of symbiotic stars in AAVSO observing program for future reference.

_____, Maxima dates of o Cet, χ Cyg, T Cep in 1977 to correlate radial velocity data.

TABLE I

Country	No.of Obs.	Total Obs.	Country	No.of Obs.	Total Obs.
Argentina	1	28	Netherlands	1	868
Australia	4	2085	Norway	1	143
Austria	9	2246	Poland	1	132
Belgium	6	2278	Rhodesia	1	160
Brazil	5	67	Rumania	1	1230
Canada	24	20544	South Africa	9	2900
Czechoslovakia	1	578	Scotland	1	8
England	6	1012	Spain	2	2142
France	2	578	Sweden	1	10
Greece	3	2843	U.S.A.	241	94735
Hungary	22	7520	Venezuela	1	49
Italy	7	682	West Germany	11	7987
Japan	6	3690	German Dem. Rep.	1	1190
			TOTAL	368	155705

TABLE II

State		No.of Obs.	Total Obs.	State		No.of Obs.	Total Obs.
Alabama	(AL)	1	4	New Hampshire	(NH)	2	57
Arizona	(AZ)	6	3488	New Jersey	(NJ)	9	3838
Arkansas	(AR)	1	30	New Mexico	(NM)	5	3459
California	(CA)	25	8519	New York	(NY)	14	13808
Colorado	(CO)	7	3330	North Carolina	(NC)	1	245
Connecticut	(CT)	13	4954	North Dakota	(ND)	2	380
Florida	(FL)	6	830	Ohio	(OH)	22	9417
Georgia	(GA)	1	152	Oklahoma	(OK)	1	63
Hawaii	(HI)	1	171	Oregon	(OR)	4	430
Illinois	(IL)	11	999	Pennsylvania	(PA)	12	2232
Indiana	(IN)	3	4336	Rhode Island	(RI)	6	1218
Kansas	(KS)	3	673	South Carolina	(SC)	2	1602
Louisiana	(LA)	2	3062	Tennessee	(TN)	2	320
Massachusetts	(MA)	13	2859	Texas	(TX)	11	764
Maryland	(MD)	3	521	Vermont	(VT)	3	84
Michigan	(MI)	11	2376	Virginia	(VA)	6	8888
Minnesota	(MN)	1	12	Washington	(WA)	2	1106
Missouri	(MO)	6	2569	West Virginia	(WV)	1	1024
Nebraska	(NE)	1	4	Wisconsin	(WI)	20	5951
Nevada	(NV)	1	949	Wyoming	(WY)	1	11
				TOTAL		241	94735

TABLE III - AAVSO OBSERVERS 1978-79

AD	R. M. Adams, MA	1674-	173	DAN	J. Danko, Hungary	16	
AB	W. Albrecht, WI	171		DS	J.M. da Silva, Brazil	49	
ALG	G. S. Aldering, MI	114-	4	DV	G. Davidson, KS	42-	2
AJR	J. R. Andress, OH	41-	1	DAJ	J. Davis, MD	176-	14
ANN	R. J. Annal, CA	2955-	1032	DMS	M. S. Davis, CT	29	
ARI	R. B. Ariail, SC	862-	86	DEB	B. Deane, TN	20	
ASZ	J. Asztalos, WI	10		DCS	L. Deicsics, Hungary	107	
AHC	H. C. Atkinson, CA	4		DEF	F. T. DeStefano, MA	30	
ATW	P. Atwood, CT	126		DEY	J. A. DeYoung, VA	2446-	10
BTR	T. R. Baker, WI	2041-	176	DMN	D. Dierick, Belgium	215-	2
BM	M. E. Baldwin, IN	4273		DIL	W. G. Dillon, TX	15	
BRM	R. M. Bales, OR	32		DMR	R. E. Domen, OH	62	
BBN	W. Barbin, PA	139-	11	DWR	W. R. Douglas, S.Afr.	15	
BSF	S. F. Barnhart, OH	357-	20	DUR	M. V. Duruy, France	576-	15
BSR	S. Baroni, Italy	154		DGP	G. Dyck, MA.	7	
BKM	M. Bartonek, Austria	65		ECJ	J. H. Eckendorf, AZ	1056-	96
BB	R. S. Bates, MA	107		EMS	M. S. Edelstein, WI	25	
BAU	J. Bauer, W.Germany	874-	22	EHR	E. Ehrhart, CA	166	
BBA	B. B. Beaman, IL	221-	11	ELJ	J. Elliott, IL	2	
BCJ	C. J. Beaman, IL	5		ECL	C. L. Evans, VA	4	
BEJ	J. Beaver, OH	34		FPJ	J. T. Pöltl, Hungary	124	
BKK	K. Beckmann, MO	1743		FRW	W. B. Farrar, NM	326-	43
BGN	G. De Benedetto, Italy	69		FCA	C. A. Fausel, MI	32	
BGK	K. Berglund, Canada	7		FJL	J. L. Ferreira, CA	76-	2
BKN	A. Birkner, IL	110		FET	T. I. Fetterman, NJ	1395-	187
BLD	D. L. Blane, S.Africa	14		FHS	S. Fishman, OH	2	
BOH	D. Böhme,Ger.Dem.Rep.	1190		FLG	G. Fleischer, Austria	97	
BOI	B. Bois, Canada	6003-	82	FEM	E. M. Flynn, PA	293-	2
BOM	M. Bolen, MI	1		FD	C. B. Ford, CT	875-	269
BRJ	J. E. Bortle, NY	2431-	653	FT	G. Fortier, Canada	47-	3
BZC	C. Borzelli, NJ	76-	5	FPK	P. K. Frank, OK	63	
BPW	P. W. Bradshaw, CT	8-	1	FIV	I. V. Freitas, Brazil	2	
BDM	D. M. Brainard, NH	15		FN	D. Friedman, CA	258	
BTB	T. C. Bretl, KS	522-	8	FR	E. E. Friton, MO	82	
BLP	P. Brlas, Hungary	15		FMG	G. C. Fugman, WI	17	
BMB	M. B. Brown, PA	29		GDB	D. Gabor, Hungary	428	
BNK	N. Brown, W. Australia	71		GAU	U. Gaetani, Italy	70	
BFD	F. D. Bruner, IN	56		GJW	J. W. Garasich, PA	12	
BUO	A. T. Bueno, CA	873-	10	GAA	P. Garey, MO	8	
BUS	R. Buss, ND	106		GAP	P. Garnavich, MD	7	
BUL	T. Butler, MO	76		GHO	L. H. Ghio, Argentina	28	
CWA	W. Campney, Canada	1018-	21	GCH	R. S. Gilchrist, CT	195	
CJA	J.A.S. Campos,S.Africa	232		GLF	F. Glenn, NY	955-	1
CAN	E. R. Canada, AL	4		GLW	W. Glenn, NY	993	
CIT	M. Cavagna, Italy	305		GLG	G. W. Gliba, OH	40	
CST	G. J. Christensen, OR	39		GOP	P. N. Goodwin, LA	2928-	382
CLL	S. P. Clancy, NM	42-	16	GOR	R. A. Gorkin, MI	61	
CLK	W. Clark, MO	45		GLM	L. M. Gorski, IL	4	
CEW	E. W. Clement, FL	108		GBA	B. Greene, PA	3	
CLB	R. Clyde, OH	124		GRI	J. W. Griese, CT	2278-	973
CLO	A. Cole, FL	10		GA	A. S. Grossman, CA	164	
CGR	G. Collier, WY	11		GML	M. Grunanger, Austria	25	
COL	P. L. Collins, MA	505-	9	GRZ	H. Grzelczyk, W.Ger.	2408	
CMG	G. Comello,Netherlands	868-	24	HK	E. A. Halbach, CO	144-	29
CRN	D. Cortner, TN	300		HMR	R. Ham, CO	882	
CSD	D. Costanzo, VA	130		HLP	P. Harles, ND	274-	1
CDA	A. Coulombe, Canada	73		HRR	P. Harrington, CT	41	
CR	T. A. Cragg,Australia	1888-	436	HAV	R. P. Harvan, PA	52	
CRR	R. E. Crumrine, NY	66		HWL	W. Hawley, NH	42	
CUN	D. Cunningham, Canada	109		HAY	E. R. Hayden, CT	31-	17
CRY	J. D. Currie, OH	3		HJM	J. Hayes, Canada	8	

TABLE III - AAVSO OBSERVERS 1978-79

HZL	L. Hazel, NY	706-	159
HY	A. S. Heasley, OH	17	
HEF	M. A. Heifner, CO	2096-	41
HGW	G. W. Henry, OR	13	
HJN	J. Hers, So. Africa	135-	1
HEV	Z. Hevesi, Hungary	190	
HIR	Y. Hirasawa, Japan	663-	9
HEY	B. Heyndrickx, Belgium	571-	10
HE	L. Hiett, VA	4293	
HID	D. H. Hill, MI	149	
HRI	R. E. Hill, MI	724-	101
HJE	J. E. Holcomb, TX	3	
HOH	H. Honda, Japan	1484	
HOP	U. Hopp, W. Germany	24-	1
HOV	G. Horvath, Hungary	232	
HOI	I. Horvath, Hungary	6	
HOU	D. Hough, NJ	36	
HU	W. S. Houston, CT	9	
HOY	S. J. Hoyle, France	2	
HDA	D. M. Hudak, OH	134	
HUO	D. J. Hughes, CA	949-	3
HR	C. J. Hurless, OH	2142-	362
HUR	G. M. Hurst, England	242-	12
IDG	D. G. Iadevaia, RI	448	
ITO	M. Ito, Japan	882-	1
JCK	A. Jackson, OH	1	
JKM	M. G. Jackson, S.Afr.	1692-	30
JAG	G. Jaeger, WI	109-	5
JPR	P. R. James, WI	18	
JM	R. A. James, WI	19	
JOG	G. E. Johnson, MD	338-	21
JBN	B. Johnston, MN	12	
JRV	R. V. Jones, NC	245	
KL	L. Kalish, CA	24-PEP	
KAI	I. Karaszi, Hungary	107	
KED	D. Keith, MA	5	
KLY	G. W. Kelley,Jr., VA	785-	262
KIB	B. Kinkade, IL	3	
KIR	P. E. Kirby, OH	759	
KS	J. Knowles, NY	209	
KLG	G. Kohl, AZ	65	
KOD	D. Kolb, MI	2	
KLZ	Z. Kollath, Hungary	226	
KHJ	H. J. Koller, Canada	29	
KRS	R. S. Kolman, IL	331-	16
KMA	M. A. Komorous, S.Afr.	359	
KOS	A. Kosa-Kiss, Romania	1230	
KOA	M. Koshiro, Japan	268-	3
KIS	G. Krisch, W. Germany	926	
KRK	K. L. Krisciunas, CA	448-PEP	
KGK	K. Krueger, WI	4	
KRU	J. Kruta, Czech.	578	
KUH	J. L. Kuhns	152-	10
KUA	A. Kunszt, Hungary	341	
LAG	G. LaFontaine, RI	300	
LAO	D. Larosa, Italy	61	
LWS	M. Lawson, TX	6-	3
LLA	L. A. Lemke, Brazil	8	
LEV	A. J. LeVeque, CA	34	
LVY	D. H. Levy, AZ	2361-	5
LEF	F. Ley, CA	279	
LNB	G. C. Lindbloom, PA	825	
LEC	E. C. Lins, Brazil	2	
LOF	F. G. Loso, NJ	37	
LOT	H. Louth, WA	741-PEP	
LX	W. M. Lowder, NY	5035	
LZR	R. C. Lozar, IL	7	
LKS	R. Lukas, W. Germany	207	
LYR	R. F. Lynch, RI	281-	1
MWT	W. T. Mach, Jr., TX	1	
MDD	P. Madden, LA	134-	100
MWG	W. Maleck, W. Germany	84	
MCO	M. Marcario, CA	11-	5
MRX	H. Marx, W. Germany	1780	
MTO	M. Mateo, TX	180	
MTH	H. Matsuyama, Japan	379	
MTT	J. Mattei, MA	6	
MTM	M. Mattei, MA	46	
MTZ	O. Matzek, Austria	49	
MGE	G. Mavrofridis, Greece	410	
MYR	E. H. Mayer, OH	3907-1702	
MYW	E. W. Mayer, OH	39	5
MKK	K. M. McKeown, CO	30	
MRH	R. H. McNaught, Scotland	8	
MED	K. J. Medway, England	387	
MEN	P. T. Menoher, CT	196	
MEZ	C. Mezosi, Hungary	542	
MHL	E. J. Michaels, Sr., TX	9	
MNW	W. A. Mintel, NJ	1	
MML	M. Mitchell, RI	89-PEP	
MZS	A. Mizser, Hungary	2176-	35
MCE	E. Mochizuki, Japan	14	
MGJ	J. Mogelinski, NJ	210	
MOC	C. Molnar, Hungary	65	
MOL	J. Molnar, VA	1230	
MOR	R. L. Monske, PA	728-	12
MJ	A. C. Montague, MI	1282-	14
MJA	J. A. Morgan, WI	178	
MOJ	J. E. Morgan, AZ	1799-	379
MRR	C. S. Morris, MA	212	
MOW	W. C. Morrison, Canada	2810	
MUN	C. R. Munford, England	143	
MUR	P. Murn, WI	2	
MUS	G. Musolino, Italy	12	
MYE	K. J. Myers, IN	7	
NAM	M. Naslund, Sweden	10	
NRH	R. H. Nelson, Canada	6	
NEJ	J. Newton, Canada	1-PTG	
NIM	M. Nicola, Italy	11	
NOG	G. Nowak, VT	8	
OCN	S. D. O'Connor, Canada	224	
OMI	M. Ohl, TX	4	
OME	S. O'Meara, MA	393-	135
OV	E. G. Oravec, NY	2416	
OGJ	J. C. Ortega, Spain	427	
OSW	W. Osborn, MI	3	
OJR	J. R. Osorio, Spain	1715	
OSA	A. Ostermann, Austria	119	
PST	S. Parsons, MA	7	
PAR	R. H. Patterson, VT	51-	11-PTG
PCE	E. C. Pearce, NM	140-	2
PN	A. E. Pearlmutter, MA	273	

TABLE III - AAVSO OBSERVERS 1978-79

PEM	M. Peel, England	67- 1		SZH	H. J. Stelzer, IL	94	
P	L. C. Peltier, OH	550- 47		SET	C. Stephan, OH	469-	17
PEN	A. Penikis, WI	2		STF	G.Stephanopoulos,Greece	2213	
PED	D. B. Pettengill, FL	91		STQ	N. Stoikidis, Greece	220	
PFF	G. Pfeiffer, W.Ger.	1295		SDT	D. B. Strydom,So.Africa	12	
PIJ	J. Piriti, Hungary	507		SPP	P. Sullivan, CA	33-	2
POJ	J. Polman, Brazil	6		SVN	P. Sventek, CA	155	
POK	A. K. Porter, England	106- 16		SMZ	M. Szasz, Hungary	34	
PFJ	F. J. Price, NY	26		SZC	B.Szentmartoni, Hungary	80	
PRI	L. H. Price, SC	740- 2		SKB	B. Szoke, Hungary	93	
PRG	G. Prosser, S.Africa	430		TNV	V. Tangney, WI	5	
RRE	R. E. Reaves, CA	4		TDA	D. Targan, RI	93-PEP	
REH	D. Rehner, OH	88		TLA	M. D. Taylor, England	67	
REP	P. Reinhard, Austria	18		THG	G. Thibault, Canada	195-	2
RNT	C. C. Reinhart, OH	3- 1		TBD	D. Thibeault, Canada	48	
RIP	M. Rippel, NM	6		THL	J. Thiel, MI	1	
RIR	F. Rieth, W. Germany	221		TM	H. D. Thomas, WA	365	
RAR	R. A. Robotham, Canada	33		TMR	R. Thomas, CA	14-	6
ROR	D. A. Rodger, Canada	135		TME	M. E. Thompson, CO	36	
RB	D. W. Rosebrugh, FL	397		THR	R. Thompson, Canada	174	
ROG	G. M. Ross, MI	7- 1		TMV	M. V. Thurrell, WI	3	
RR	R. E. Royer, CA	61-17-PV		TAN	A. Tölgyesi, Hungary	2012	
RJF	J. F. Ruhl, AZ	49		TOZ	Z. Toth, Hungary	8	
RPH	H. Rumball-Petre, CA	28		TFN	F. N. Traynor, Australia	37	
RUD	D. Ruokonen, WI	89		TDK	D. K. Turner, NY	13	
RJP	J. P. Russell, OH	7		TYS	R. L. Tyson, NY	189	
RYJ	J. Ryan, WI	20		UND	E. Underhay, CA	218-	1
SJD	J. D. Sabia, PA	68		VCP	P. Van Cauteren,Belgium	219	
SAB	K. M. Sabine, CA	1084- 2		VNL	F. R. Van Loo, Belgium	679	
SKJ	J. Saksek, AZ	14		VMT	T. Vanmunster, Belgium	401	
SAH	G. Samolyk, WI	3107		VIN	J. V. Vincent, Rhodesia	160-	1
SHU	E. Schauer, W.Germany	6		VLJ	J. Volhard, WI	131-	1
SDC	M. Schmid, Austria	2		VOK	K. Volkmer, CA	326-	1
SMF	F. E. Schmidt, NY	31		VOL	W. Vollmann, Austria	1871-	22
SMJ	J. F. Scholl, NY	735		WGM	M. S. Wagner, IL	67	
SCE	C. E. Scovil, CT	663-298PEP		WTH	T. H. N. Wales, MA	34	
SCP	P. Scully, So. Africa	11		WLL	H. J. Walls, TX	58	
SEK	K. G. Sears, NJ	138		WRN	R. Warden, PA	41-	5
SBP	P. Sebastiano, VT	25		WAB	B. D. Warner, CO	139-	1
SEE	E. H. Seifert, NE	4		WBB	W. V. Webb, OH	609	
SHS	S. B. Sharpe, Canada	4069-177		WER	R. J. Weber	109-	7
SNB	B. Sherman, Canada	78		WED	G. Wedemayer, WI	15	
SHB	C. Sherrod, AR	30		WEI	D. D. Weier, WI	103-	5
SRC	R. Shinkfield, S.Aus.	89		WEL	D. L. Welch, Canada	29	
SID	D. R. Simmons, CA	19		WEM	M. Wesolowski, Canada	498-	2
SKL	K. Simmons, FL	117		WEF	F. West, CT	465	
SKW	W. Simmons, FL	107		WJT	J. T. Wilcox, PA	12	
SCS	S. C. Siok, RI	7		WLM	T. R. Williams, TX	397-	8
SKN	C. R. Skinner, NJ	165		WLP	P. Wils, Belgium	193	
SHA	H. A. Smith, CT	38- 1		WJA	J. A. Wilson, MO	615	
SJ	J. R. Smith, TX	75- 12		WLN	K. Wilson, CA	5	
STL	M. B. Smith, NM	2945		WSN	T. W. Wilson, WV	1024-	115
SOD	J. Soder, OH	29		WSR	R. T. Windsor, TX	16	
SOK	M. Somodi, Hungary	195		WNB	B. Wingate, NJ	1780	
SOU	R. G. Southwick, OR	346		WWR	W. R. Winkler, CO	3	
SJZ	J. Speil, Poland	132		YRK	D. York, MA	65	
SLF	L. F. Spieth, CA	35		YON	R. R. Young, PA	30	
SPO	J. Spongsveen, Norway	143		ZAF	J. Zaffi, Venezuela	49	
SC	C. E. Spratt, Canada	2572-174		ZAD	D. Zak, NY	3	
STR	R. H. Stanton, CA	15- 13		ZAL	L. Zavodi, Hungary	16	
STI	P. C. Steffey, CA	1385- 47		ZT	R. Zit, WI	53-	5
SHY	H. M. Steinbach,W.Ger	162		ZW	W. Zukauskas, Canada	17	