

ANNUAL REPORT OF THE DIRECTOR  
FOR FISCAL YEAR 1980 - 1981

It is my privilege to present to you my eighth annual report, for the fiscal year 1980-1981.

DATA PROCESSING

1. Current Data: Observations received at Headquarters each month are processed - keypunched and verified on IBM cards (thanks to a grant from Clinton B. Ford), copied onto magnetic tape, and checked, sorted, and listed using the Digital VAX computer at Harvard-Smithsonian Center For Astrophysics - within the month they are received. This prompt processing is both very important and necessary to disseminate current data to the astronomical community.

2. Old Data: Since we are up-to-date with our current data processing, we have undertaken another important task this year, that of processing our data from 1911 to 1960. This project is a long one, as we have about 2.5 million observations to process. Monthly reports are filed alphabetically by observer. Presently we are keypunching data from observers whose last name begins with C. The completion of this project will provide machine-readable data extending over 70 years on hundreds of variable stars.

FUNDING FOR A MICRO-COMPUTER AT HQ

For the past several years it has been very apparent that we needed a micro-computer at HQ, in order to enter our data onto a medium like floppy disks, rather than IBM cards, as the limited space at HQ has been completely taken over by cards. Also, an in-house computer is essential in order to publish our data faster, and to analyze them. I have spent a significant amount of time searching the micro-computer market for the right system, and have had discussions with several members who are experts in the field. I am happy to report to you that our proposal for a micro-computer has been funded by Research Corporation. This funding will make our dream a reality now. The system to be installed is an Ithaca Intersystems multi-user computer, with graphics terminal, plotter, and printers.

The data entry will be from key to floppy disk. The system is compatible with the Digital VAX computer, which we will continue to use for our big jobs.

We are grateful to Research Corporation for their grant. The micro-computer will help to increase the efficiency of our operation immensely.

SPECIAL REQUESTS

Each year we receive an increasing number of requests from astronomers for our data. This year we fulfilled 110 requests.

These requests were on the following types of variable stars, in order of the number of requests received:

1. Dwarf novae - U Gem and Z Cam type stars
2. Long Period variables
3. Semiregular variables
4. Symbiotic stars - Z And type stars
5. Novae, nova-like stars, and recurrent novae
6. Nebular variables - mostly T Tauri stars
7. Eclipsing binaries
8. R Coronae Borealis stars
9. RV Tauri stars
10. Cepheids

Requests came from universities, schools, newspapers, and individuals throughout the United States and abroad. A list of special requests and a brief description of the content of each is given at the end of my report.

Here I wish to share some highlights from these special requests with you.

The AAVSO's optical data are crucial in correlating and interpreting observations in the wavelengths shorter (x-ray, ultraviolet) and longer (infrared, radio) than in the visual region of the electromagnetic spectrum. Astronomers such as F. Cordova, K. Mason, P. Szkody, and C. Wu used our data extensively to correlate with ultraviolet and x-ray observations of cataclysmic variables obtained with IUE and HEAO-2 satellites, respectively.

Astronomers such as F. Clark, M. Feast, and L. A. Willson, who specialize in long period variables, used our data to determine phases of observations in radio wavelengths, to correlate with infrared observations, and to help to find answers to theoretical studies on pulsations of these stars, respectively.

In recent years, one of the crucial contributions of our observers to variable star research has been through simultaneous monitoring of cataclysmic variables during observing runs with several spacecraft and/or with large telescopes at major observatories. This year AAVSO assisted 12 such programs scheduled with HEAO-2 or IUE, and at observatories at Kitt Peak, Mt. Lemmon, Mt. Wilson, and Baja, Mexico. Our immediate alerts to the outbursts and behavior of these stars have been important in guiding the astronomers as to what objects to observe, and in helping them make the most efficient use of ground-based and spacecraft telescope time.

Our data have been used and our contributions acknowledged in several recent publications. A few of these are listed below:

Chlebowski, T. et al. 1981, "Discovery of a New X-ray Emitting Dwarf Nova IE 0643.0-1648," Astrophys. Journ. Letters 247, L35.

Hildebrand, R. et al. 1981, "Observations of Fast Oscillations in SS Cygni," Astrophys. Journ. 243, 223.

Middleditch, J. and Cordova, F. 1981, "The Colors of the Pulsations and Flickering of SY Cnc During Outburst," submitted to Astrophys. Journ.

Krautter, J., et al. 1981, "TT Ari - A New Dwarf Nova," submitted to Astron. and Astrophys.

Hinkle, K. 1981, "Time Series Spectra of Chi Cygni," submitted to Astrophys. Journ.

Wade, R. 1981, "Spectroscopy and Spectrophotometry of Cataclysmic Variable Stars," Ph. D. Thesis.

Several astronomers acknowledged our observers' contributions with personal letters. Below are a few excerpts from such letters:

Dr. R. Stiening wrote, "We are very grateful for the assistance of your observers. Our program would not be successful if we had to spend our large-aperture telescope time looking for active objects."

On another occasion he wrote, "Once again I would like to thank you for the help that you and the AAVSO observers gave us during our recent work at Mt. Lemmon. We simply could not carry out a successful program without your help." (Drs. Stiening and Hildebrand found fast oscillations - on the order of seconds - only during the peak of

outbursts in several dwarf novae. As the star fades, the oscillations become non-periodic. The cause is still not known.)

K. Horne wrote, "Because of the participation of many AAVSO observers and generally good weather at Palomar, outbursts of 14 dwarf novae were observed during 13 nights. Observations made with the spectrograph of the Palomar 60" telescope cover a spectral range from 3200 - 7000Å. The data should provide a good basis for a study of the physical changes that occur in these systems during the course of an outburst. I am indeed grateful for the invaluable efforts of all the AAVSO observers who participated in the alert."

During the Sixth U.S. Workshop on Cataclysmic Variables in Santa Cruz, California, the contributions of AAVSO were acknowledged in about 20 papers. In several cases, the research reported was carried out because we alerted the astronomer to the outburst or to unusual behavior of a dwarf nova. Dr. J. Pringle, a leading theorist, started his review paper on the outbursts of cataclysmic variables by showing an AAVSO light curve of SS Cygni.

#### SUMMARY OF OBSERVATIONS

Despite the unfavorable weather conditions, we had a very active observing year. We received 197,832 observations from 481 observers worldwide. These totals include 105,637 observations from observers in 44 states in the USA, and 92,195 observations from observers in 25 foreign countries, including 26,592 observations from the French Variable Star Observers (AFOEV) made over the past three years and sent by their director, E. Schweitzer, and 3317 observations from observers in the Netherlands (NVVWS,VWS).

Both the French and Dutch observers wish to have their observations included in the AAVSO data base and published by the AAVSO.

The totals also include the 1500 adjusted observations of Orion variables, in which ten observations are counted as one, as detailed in my February, 1981, letter to observers.

The grand total of observations is 4,600,722. The 4.5 millionth observation was made by Dietmar Böhme of East Germany, observing alpha Herculis at magnitude 3.0 on JD 2444708.8.

Table I lists the number of observers from each country and the total of their astronomical contributions, Table II from each state in the USA. Table III is an alphabetical list of observers, giving each person's observing initials, name, location, annual total of observations, and total of inner sanctum observations (magnitude 13.8 or fainter, and/or "fainter than" 14.0 and fainter).

Thirty observers sent in between 1000 and 2000 observations; twelve between 2000 and 3000; six between 3000 and 4000; and M. Heifner, E. H. Mayer, D. Overbeek, G. Samolyk, E. Schweitzer, and R. Weber between 4000 and 5000.

Chris Spratt sent in 5657, Paul Vedrenne, 5876 (3 years' total), and Wayne Lowder 6613 observations.

Ernst H. Mayer leads the inner sanctum observations with 1967, followed by Chris Spratt with 881, and Richard Weber with 856.

The number of our photoelectric observers has been increasing as photometers become more and more accessible. John Carrington, Russ Genet, Jeffrey Hopkins, Kevin Krisciunas, Martha Liller, Richard

Lines, Thomas McFaul, James Scholl, and David Skillman contributed valuable photoelectric photometry. Their data on non-program stars have not been included in the annual counts.

Walter Feibelman sent observations obtained with IUE, thus extending our data file to cover not only ground-based optical observations, but also optical observations from outer space.

I thank each observer who patiently makes, records, and sends observations to HQ.

I especially thank those observers who call or send notes on the unusual behavior of stars before the regular report forms are sent in, those who try extra hard to contribute to special observing programs when our assistance is requested by astronomers. These observers are:

Ernst H. Mayer, Jim E. Morgan, Charles Scovil, John Bortle, Carolyn Hurlless, Glenn Chaple, Ernie Mayer, Jr., Paul Goodwin, Clint Ford, Philip Bradley, Kenneth Medway, George Kelley, Danie Overbeek, Ken Beckmann, Tom Fetterman, Peter Collins, Bob Ariail, Mark Heifner, Chris Spratt, Lancaster Hiatt, Gus Johnson, Steve Sharpe, Chris Stephan, Richard Hill, Ben Mayer, Keith Danskin, Jim Eckendorf, Pat Madden, Chuck Fausel, Tom Bretl, Clay Sherrod, Michael Smith, and Georg Comello.

#### INTERNATIONAL COOPERATION AND COLLABORATION

Our cooperation with major groups of variable star observers around the world continues.

Members of the following Variable Star Associations sent their observations to the AAVSO either individually or as a group, for inclusion in our data files, and for publication.

Association Française des Observateurs d'Etoiles Variables (France); Astronomical Society of Southern Africa, Variable Star Section; Astronomischer Jugendclub (Austria); Berliner Arbeitsgemeinschaft für Veränderliche Sterne (W. Germany); British Astronomical Association, Variable Star Section (England); British Astronomical Association of New South Wales (Australia); Japan Astronomical Study Association; Nederlandse Vereniging voor Weeren Sterrenkunde, Werkgroep Veranderlijke Sterren (Netherlands); Planetario e Observatorio Astronomico do Colegio Estadual do Parana (Brazil); Pleione Valtozoeszlelo Halozat (Hungary); Uniao Brasileira de Astronomia, Variable Star Commission (Brazil); Vereniging voor Sterrenkunde, Werkgroep Veranderlijke Sterren (Belgium).

The observations of southern variables made by members of the Variable Star Section of the Royal Astronomical Society of New Zealand are compiled by their conscientious member, Gordon Smith, and kindly sent to us by their director, Dr. Frank Bateson, to be used in refining the predictions of maxima and minima dates of these stars in our annual Bulletin. During the Workshop on Cataclysmic Variables in Santa Cruz, Frank and I had many opportunities to discuss further cooperation between our two organizations.

We continue to exchange literature with universities, observatories, and groups of variable star observers worldwide.

#### REQUESTS FOR INFORMATION ON AAVSO AND COMMUNICATION

We fulfilled 452 requests for information on the AAVSO this year. Requests came mostly from individuals, with some from astronomy clubs, colleges, and high schools.

In the area of communication, because of the very large volume of correspondence that needs my attention and the limited time I have because of my other responsibilities, we have not yet solved our problem of delays. Thanks to a grant for communication from Clinton Ford, we have a part-time correspondence secretary to help me, and we are trying hard to overcome the problem.

I answered 626 personal letters, not including short notes, and we sent out over 5200 pieces of mail from HQ this year, excluding bulk mailing of publications.

#### NEW MEMBERSHIP

This year we elected 179 new members - the largest number ever. Of these 173 were annual, 4 were sustaining, and 2 were sponsored from Hungary. 17 members changed their membership from annual to sustaining, thus supporting the operation of the association even more.

Our sponsorship program of active observers in "Iron Curtain" countries is still continuing. There are several observers in Hungary and Poland who wish to be members of AAVSO and receive our publications. They are unable to join because of the restrictions of their governments in regard to sending money abroad. Only through your sponsorship do they have the opportunity to benefit from our publications. I encourage more of you to participate in this program.

We greatly appreciate the efforts of our members who give talks about the AAVSO, and who bring new members to the association.

#### PUBLICATIONS

The following have been published by the AAVSO this year:

The Journal of the AAVSO, Volume 9, Numbers 1 and 2, and Volume 10, Number 1, edited by Charles Whitney.

AAVSO Bulletin #44: Predicted Maxima and Minima Dates of Long Period Variables for 1981, prepared by Janet A. Mattei.

AAVSO Bulletin #44 Supplement: Schematic representation of Bulletin #44, compiled by Peter Taylor and Josefa Manella.

AAVSO Circular: Numbers 121 to 132, edited by John Bortle and Charles Scovil.

AAVSO Solar Bulletin: Volume 39, Number 11, to Volume 40, Number 10, edited by Robert Ammons.

Ephemeris of Eclipsing Binary and RR Lyrae Stars: Prepared by Peter Taylor and Josefa Manella, with Marvin Baldwin.

Predicted Maxima of Bright Stars, in Observers Handbook of the Royal Astronomical Society of Canada, and monthly in Sky & Telescope, prepared by Janet A. Mattei.

An article by Charles Scovil about the new AAVSO Variable Star Atlas was published in the Journal of the Royal Astronomical Society of Canada.

Papers titled "Light Variation of CI Cygni" and "AAVSO Visual Light Curves of Z And, R Aqr, BF Cyg, CI Cyg, AG Peg, and AX Per," by Janet A. Mattei, were published in the Proceedings of the North American Workshop on Symbiotic Stars.

Sincere thanks and appreciation are due to Charles Whitney for his editorship of the Journal; the Editorial Board of the Journal,

particularly Douglas Hall and Dorrit Hoffleit for their refereeing of articles; Elizabeth Waagen and Mary Collins for their editorial assistance in preparing the Journal; Peter Taylor and Josefa Manella for their compilation of data for Bulletin #44 Supplement and for preparing the Ephemeris of Eclipsing Binary and RR Lyrae Stars with Marv Baldwin; John Bortle and Charles Scovill for preparing and publishing the Circular; Bob Ammons for preparing the Solar Bulletin; Peter Taylor for his calculation of sunspot numbers; Stephanie Ammons for her calculation of solar radio flares; and Carolyn Hurless for her help in the mailing of the Solar Bulletin.

#### ALERT NOTICES

The Alert Notice is an informal publication which allows me to reach interested observers and members when there is a need for special observations. Those interested receive these Notices free of charge if they mail twelve self-addressed stamped envelopes to Headquarters. This year we issued six Alert Notices, two of which were Special Notices. The Alert Notices were on the discovery of Nova Sgr 1980, Nova CrA 1981, the Supernova in NGC 6946, the simultaneous monitoring of cataclysmic variables and symbiotic stars during IUE observing runs, the mini-outburst of GK Per, and information on some of the outbursts of cataclysmic variables. The Special Notices were on the simultaneous monitoring of a large number of cataclysmic variables during observing runs in Baja, California, and Mt. Lemmon, Arizona.

#### EDUCATION AND TRAINING PROGRAMS

This summer, thanks to the contributions of our members, the Perkin Fund, and the Kenilworth Foundation to the Margaret W. Mayall Assistantship Fund, we were able to hire Michael Davis, from Villanova University, under this program. Michael revised the periods of two long period variables, R Aql and R Hya, converted a photoelectric photometry reduction program to the VAX computer, and compiled some finding charts for stars recommended to AAVSO PEP observers.

We also had a Clinton B. Ford summer research assistant, James Klavetter, from Massachusetts Institute of Technology, who worked on the relationship between decline rates from outbursts of dwarf novae and their orbital periods. We are grateful to Clint for the funding of this project.

#### PERSONNEL

An executive is only as good as her staff. My special thanks go to the very capable, conscientious, hardworking Headquarters staff, namely my assistant, Elizabeth O. Waagen, our secretary, Dorothy Haviland, our data entry operators Bethune Kelly and Barbara Silva, our two new assistants, Shelly Pope and Karen Meech, who are helping us prepare data for publication, our part-time correspondence secretary, Mary F. Collins, and our volunteer helpers, Margaret W. Mayall, Katherine Hazen, and Margarita Tapia. We each recognize the significance of the others' responsibilities and we work as a team with only one goal in mind - the success of our association.

#### ACKNOWLEDGEMENTS

We express our deep appreciation and thanks to Research Corporation for their generous grant for a micro-computer system for our HQ, which will help us to serve our members and astronomy more efficiently.

We are grateful to Harvard-Smithsonian Center For Astrophysics

for allowing us to use the computer facilities, and for the grant in computing time which allows us to process our data. We thank Prof. Owen Gingerich for making this grant possible, and Barbara Welther for her valuable help and suggestions in data processing and computer funding.

We greatly appreciate the help and support given to the AAVSO by the personnel of the Computer Facility of the Center For Astrophysics.

We gratefully acknowledge the Clinton B. Ford Grants for data processing, correspondence, and the special summer research assistantship.

We acknowledge with thanks the contributions of the Perkin Fund and the Kenilworth Foundation to the Margaret Mayall Assistantship Fund, thus making it possible to hire students and/or undertake special projects under this program.

We are very thankful to the National Science Foundation for the grant made to process our "gap" data and to publish the recent data, and for the travel grant to allow me to attend astronomical meetings.

The National Oceanic and Atmospheric Administration has supported our Solar Division for over two decades. We appreciate the trust they have bestowed on the AAVSO solar observers, and thank them for their continued financial support.

We remember our devoted members, the late Cy and Emily Fernald, who generously supported the association during their lifetimes. They continue to support the association with the trust fund they have bequeathed to the AAVSO.

Our special thanks to the "anonymous" friend of the association for her contributions to print out the processed data of the "gap".

We thank Stamford Observatory for making available to Charles Scovill facilities for the preparation of AAVSO new charts, the Atlas, and the Circular, and for allowing the 21-inch telescope to be used for special observing programs of the AAVSO.

We thank Dr. Martha Liller, the curator, and Jackie Kloss, the acting curator, of Harvard Plate Stacks for allowing us to use the Harvard Photographic Plates for variable star research and chart work.

Our special thanks to Margaret W. Mayall for giving her time and wisdom to work with the important archival materials of the association.

Our sincere thanks to Mrs. Katherine Hazen (Dr. Martha Liller's mother) for volunteering her time to help with our data and operation.

We thank Margarita Tapia for her careful work in plotting our data, and the Cambridge CETA for selecting our HQ as her training site.

Our sincere thanks to Keith Danskin for his preparation of the albums with our historical photos, and thanks to both Adrian Levesque and Keith for their preparation of our historical slides. We all enjoyed the photographs and the slides during our 70th Anniversary meeting.

I extend our appreciation and thanks to members who have taken sustaining membership, who have sponsored members from "Iron Curtain" countries, and who have given above their dues to the General Fund,

Margaret Mayall Assistantship Fund, and/or Endowment Fund.

I personally thank my husband for his support, understanding, and encouragement.

My special thanks to the Committee Chairmen, Robert Ammons, Marvin Baldwin, Carmine Borzelli, Thomas Cragg, Clinton Ford, Howard Landis, and Charles Scovil, for their valuable contributions, and to our officers, Carl Anderson, Clinton Ford, Ernst H. Mayer, Arthur Stokes, and Theodore Wales, for their help in the efficient operation of our association.

Respectfully submitted,

Janet Akyüz Mattei  
Director

TABLE I

<u>Country</u>	<u>No. of Obs.</u>	<u>Total Obs.</u>	<u>Country</u>	<u>No. of Obs.</u>	<u>Total Obs.</u>
Argentina	2	14	Japan	6	4214
Australia	5	2245	Netherlands	8	3317
Austria	5	838	Norway	2	461
Belgium	9	5528	Poland	1	249
Brazil	3	60	Rep. of China	1	28
Canada	23	15266	Romania	1	1900
Czechoslovakia	1	465	South Africa	10	5188
England	7	2597	Spain	1	2268
Fed. Rep. Germany	9	7287	Switzerland	2	82
France	33	26592	U. S. A.	295	105637
German Dem. Rep.	1	1132	Venezuela	1	143
Greece	2	2216	West Indies	1	31
Hungary	40	8067	Zimbabwe	3	818
Italy	9	1189			
			<b>TOTAL</b>	<b>481</b>	<b>197832</b>

TABLE II

<u>State</u>	<u>No. of Obs.</u>	<u>Total Obs.</u>	<u>State</u>	<u>No. of Obs.</u>	<u>Total Obs.</u>
Alabama (AL)	3	746	Missouri (MO)	7	2951
Arizona (AZ)	8	3039	Montana (MT)	1	12
Arkansas (AR)	2	87	Nevada (NV)	2	2020
California (CA)	29	4515	New Hampshire (NH)	4	224
Colorado (CO)	12	7797	New Jersey (NJ)	10	4429
Connecticut (CT)	12	2149	New Mexico (NM)	4	2109
Delaware (DE)	1	2	New York (NY)	21	15002
Florida (FL)	11	3123	North Carolina (NC)	2	375
Georgia (GA)	4	153	North Dakota (ND)	2	276
Hawaii (HI)	1	845	Ohio (OH)	21	10083
Illinois (IL)	18	4294	Oklahoma (OK)	1	11
Indiana (IN)	6	1769	Oregon (OR)	4	60
Iowa (IA)	3	391	Pennsylvania (PA)	17	3186
Kansas (KS)	3	4854	Puerto Rico (PR)	1	3
Kentucky (KY)	2	65	Rhode Island (RI)	3	83
Louisiana (LA)	3	5147	South Carolina (SC)	8	1178
Maine (ME)	1	14	Tennessee (TN)	3	181
Maryland (MD)	3	530	Texas (TX)	10	546
Massachusetts (MA)	15	4394	Virginia (VA)	6	5243
Michigan (MI)	6	1569	Washington (WA)	4	556
Minnesota (MN)	4	570	West Virigina (WV)	1	2110
Mississippi (MS)	1	83	Wisconsin (WI)	15	8863
			<b>TOTAL</b>	<b>295</b>	<b>105637</b>



LIST OF SPECIAL REQUESTS  
DURING FISCAL YEAR 1980-1981

- Altschiller, D., Boston Magazine. Information on the AAVSO.
- Barwig, H., Der Universität München, West Germany. Light curve and listing of individual observations of SU UMA for April 1980, to correlate with high speed photometric data.
- Becker, R.H., Columbia University. Light curves and listings of individual observations of the cataclysmic variables WW Cet, RX And, CN Ori, Z Cha, Z Cam, EX Hya, MV Lyr, EM Cyg, and WZ Sge, for correlation with x-ray data from HEAO-2.
- Belcher, R., Wayne, NJ. Information on Polaris, to be used in stellar-corrected guidance equipment.
- Berriman, G., California Institute of Technology. Light curves of KT Per, RX And, TT Ari, TZ Per, SS Aur, YZ Cnc, Z Cam, SY Cnc, EX Hya, AH Her, V603 Aql, EM Cyg, AE Aqr, and SS Cyg, for correlation with infrared data.
- Bianchini, A., Università Di Padova, Italy. Light curves of GK Per, to correlate with spectroscopic observations in order to re-determine its orbital period.
- Bidelman, W., Warner and Swasey Observatory. Chart on AI Sgr, for identification purposes.
- Bille, A., Lincoln Lab. Information on solar flares and AAVSO Solar Bulletin.
- Boyer, M., Philadelphia, PA. Information on Beta Per and Beta Lyr for an astronomy project.
- Brewczak, B., Mt. Clemens, MI. Information on Delta Cep and Beta Lyr for an astronomy project.
- Cassatella, A. ESA, Satellite Tracking Station, Spain. Light curves of CI Cyg, V1016 Cyg, T CrB, SU UMA, U Gem, RU Peg, AB Dra, Z Cam, RX And, V Sge, Omicron Cet, RY Sgr, and MV Sgr, to correlate with UV observations from IUE; information on AAVSO publications.
- Chlebowski, T., Center For Astrophysics. Listing of individual observations (of J. Morgan's) of the new x-ray emitting dwarf nova near Sirius, to correlate with x-ray data from HEAO-2.
- Clark, F., National Bureau of Standards. Light curves of Omicron Cet, R Leo, W Hya, VX Sgr, Chi Cyg, and R Cas, to correlate with observations in radio wavelengths; Bulletin 44, to aid in scheduling of future observations.
- Cohen, M., NASA Ames Research Center. Light curve of V410 Tau, to correlate with data in radio wavelengths.
- Cordova, F., Los Alamos Scientific Lab. Simultaneous optical coverage and immediate notification of outbursts of Z Cam, TT Ari, GK Per, KT Per, HT Cas, and X Leo during IUE observing run in January, 1981.
- Listing of individual observations on TT Ari.
- Information on the long-term behavior of SS Cyg, to assist scheduling of observing run with HEAO-2.
- Simultaneous optical coverage and immediate notification of outbursts of HT Cas, KT Cas, CN Ori, Z Cam, SY Cnc, RX And, and TW Vir during observing run at Mt. Lemmon in February, 1981.
- Optical data and comments on all cataclysmic variables observed with HEAO-2, for a paper on an x-ray survey of these stars.
- Simultaneous monitoring and immediate notification of outbursts of RU Peg, SS Cyg, EM Cyg, and AH Her during observing run at Kitt Peak in June, 1981.
- Cunningham, E., Hatfield Polytechnic (Observatory), England. Light curves of RV Tauri variables TW Cam, RV Tau, SS Gem, U Mon, AC Her, R Sct, R Sge, and V Vul.
- Dickinson, D., California Institute of Technology. Information on MY Cep.

- Dunham, D. IOTA. Visual brightness of U Ori, for occultation observations.
- Eason, E., Aerospace Corporation. Light curve of U Gem, to correlate with photometric data of its eclipses.
- Edwards, S., Smith College. Information on and a list of T Tauri stars and other nebular variables in the AAVSO observing program.
- Long-term light curves of S CrA, T CrA, R CrA, DI Cep, BP Tau, RY Tau, T Tau, RW Aur, GW Ori, V380 Ori, and RU Lup.
- Engels, D., Der Universitat Bonn, West Germany. Light curves of U Ori, RS Vir, Y Lup, R Aql, and VX Sgr.
- Evans, A., Univeristy of Keele, England. Light curves of SU UMA.
- Fabbiano, G., Center For Astrophysics. Simultaneous monitoring of SS Cyg during rocket-flight observations in the far ultraviolet.
- Feast, M., South African Astronomical Observatory, South Africa. Light curves of R Aqr, to correlate with infrared observations.
- Historical light curve of and a reprint of a paper on R Aqr.
- Feibelman, W. A., NASA Goddard Space Flight Center. Light curve of CH Cyg, to correlate with ultraviolet observations made with IUE.
- Chart on KR Aur, to be used during IUE observations.
- Harvey, P., University of Texas. Light curve of V1057 Cyg.
- Hayes, D., Columbia University. Light curve of Omicron Cet, to correlate with linear polarization data near its light maximum.
- Long-term light curve from 1975 to 1981 of Omicron Cet.
- Light curve of Mu Cep, to correlate with polarization data.
- Hildebrand, R., University of Chicago. See Stiening and Hildebrand.
- Hinkle, K. H., Kitt Peak National Observatory. Light curves of Omicron Cet and R Cas, to correlate with infrared observations.
- Light curves of T Cas, R And, R Leo, X Oph, R Aql, Chi Cyg, and T Cep, to be used in determining radial velocities from infrared spectra.
- Hollander, R., Town & Country Magazine. Information on AAVSO and AAVSO observing program.
- Holm, A., NASA Goddard Space Flight Center. Light curve of RY Sgr, to correlate with ultraviolet observations from IUE.
- Horne, K., California Institute of Technology. Light curves of 21 dwarf novae, to correlate with spectroscopic observations made at Mt. Palomar.
- See Szkody and Horne.
- Hudgens, B., Clinton, MS. Some sample light curves and information on AAVSO, to be used in a talk on AAVSO.
- Iijima, T., Osservatorio Astrofisico, Italy. Light curve of V1329 Cyg, to correlate with spectroscopic observations.
- Jensen, K., Los Alamos Scientific Laboratory. Information on the optical behavior of U Eri and U For.
- Light curve of CH Cyg, to correlate with photometric observations.
- Historical light curve of Z And and updated light curve of CH Cyg, to correlate with photometric data.
- Jewell, P., University of Illinois. AAVSO Bulletin 44 and its Supplement, to be used to schedule observations.
- Information on the maxima dates of W Hya and predictions of the forthcoming maxima dates.
- Light curve of W Hya.
- Light curves of Omicron Cet, IK Tau, U Ori, R Leo, W

- Hya, S CrB, WX Ser, U Her, RR Aql, T Cep, and R Cas.
- Johnson, H., Lockheed Missiles & Space Corporation. Light curve of R Aqr, to correlate with ultraviolet observations made with IUE; AAVSO Bulletin 44 and its Supplement, to be used in scheduling future observations.
- Kafatos, M., George Mason University. Long-term light curves of the symbiotic stars AX Per, AG Peg, AG Dra, CH Cyg, RW Hya, BF Cyg, Z And, V1016 Cyg, and V1329 Cyg, to correlate with ultraviolet observations made with IUE.
- Kenyon, S., University of Illinois. Historical light curves of 22 symbiotic stars, to correlate with spectroscopic observations.
- \_\_\_\_\_ Light curve of the symbiotic star YY Her, to be used in his Ph. D. thesis.
- Kiplinger, A., NASA Goddard Space Flight Center. Information on dwarf novae in the AAVSO observing program and commitment of AAVSO to simultaneous monitoring, to aid him in obtaining observing time with IUE.
- \_\_\_\_\_ Further communication on dwarf novae for his forthcoming IUE observing run.
- Krautter, J., European Southern Observatory, West Germany. Simultaneous monitoring and immediate notification of outbursts of dwarf novae during observing run with IUE.
- \_\_\_\_\_ Light curve of WW Cet, to correlate with ultraviolet observations made with IUE.
- \_\_\_\_\_ Information on T Tauri stars in the AAVSO observing program, for his forthcoming IUE observing run.
- Lane, A., University of Massachusetts. Light curves of Omicron Cet, U Ori, R Leo, IK Tau, W Hya, VX Sgr, R Aqr, U Her, X Cyg, R Cas, TX Cam, and VY Cma, to correlate with observations obtained in radio wavelengths.
- Leake, D., University of Illinois Astronomy Club. Information on the optical behavior and light curve of T UMa.
- Liebert, J., University of Arizona. Notification of the fading of AM Her.
- Mantegazza, L., Osservatorio Astronomico, Italy. Light curves of AC Her, U Mon, RV Tau, and R Sct, to correlate with spectroscopic observations.
- Mason, K., University of California. General information on the optical behavior of and detailed information on the October, 1980, outburst of U Gem, to predict its next outburst.
- \_\_\_\_\_ Light curve of U Gem, to correlate with x-ray observations made with HEAO-2.
- Mathieu, R., University of California. Information on T Tauri stars in the AAVSO observing program; long-term light curve of T Tau, to correlate with photographic and photoelectric observations.
- Mazeh, T., Telaviv University, Israel. Light curve of T CrB.
- Merrill, M., Kitt Peak National Observatory. Light curve and listing of individual observations and AAVSO finder chart of supernova in M100.
- Michaels, T., Norwich Bulletin, CT. Information on AAVSO and AAVSO observing program, to be used in an article by W. S. Houston.
- Mozurkewicz, D., University of Wyoming. Light curves of the RV Tauri stars RV Tau, SU Gem, U Mon, and V Vul.
- Mundt, R., University of Arizona. Information on V1057 Cyg; historical light curve of T Tau, to correlate with spectroscopic observations obtained with the Multi-Mirror Telescope.
- Oliveren, N., University of Wisconsin. Light curves of AX Per, CI Cyg, BF Cyg, and V1016 Cyg, to correlate with spectroscopic observations.
- Perminas, N., Marlboro College. Information on, identification chart for, and ephemeris of the minima of Beta Per for 1981.

- Pollock, A., University of Birmingham, England. Light curves of V818 Sco (Sco X-1), to correlate with soft x-ray observations.
- Pringle, J., University of Cambridge, England. Simultaneous monitoring of dwarf novae and immediate notification of outburst activity during IUE observing run.
- Rao, N. K., Indian Institute of Astrophysics, India. Information on the optical behavior of SU Tau, SS Cam, and R CrB during an observing run with IUE.
- Schuster, W., University of Mexico. Investigation of a bright object observed in Ophiuchus, which was Neptune.
- Sharp, S., University of Kansas. Long-term light curves of 22 long period and semiregular variables, to correlate with polarimetric data.
- Shylaja, B., Indian Institute of Astrophysics, India. List of individual observations on N CrA 1981, to correlate with spectroscopic observations.
- Sinnott, R., Sky Publishing Corporation. Predicted optical brightness of S Sct for June 5, 1981, for occultation observations.
- Slovak, M., University of Texas. Historical light curve of Z And, to be used in his Ph. D. thesis.
- Spencer, J., Naval Research Laboratory. AAVSO Bulletin 44, for scheduling observations with radio telescopes.
- Starrfield, S., Arizona State University. Light curve of U Sco; information on AAVSO and its publications.
- Stencel, R., University of Colorado. Identification charts on RX Pup, SY Mus, RW Hya, T CrB, Y CrA, AR Pav, BF Cyg, and RR Tel, to be used during IUE observing runs.
- Stiening, R., Stanford University. Long-term light curves of RX And, TY Psc, EM Cyg, and U Gem, to correlate with high speed photometric data obtained at Mt. Lemmon.
- Identification charts on 15 cataclysmic variables, to be used during an observing run at Mt. Lemmon.
- Further light curves and listings of individual observations of EM Cyg, to correlate with high speed photometric observations.
- Stiening, R. & Hildebrand, R., Stanford University and University of Chicago. Simultaneous monitoring and immediate notification of outbursts of dwarf novae during an observing run at Mt. Lemmon to detect short-term oscillations during outburst.
- Stover, R., University of Texas. Information on the optical behavior of U Gem during its outburst in October, 1978.
- Information on the optical behavior of EM Cyg, and predictions of its next outburst, to be used during an observing run at McDonald Observatory.
- Light curves of RU Peg.
- Strother, E., Florida Institute of Technology. 1981 Ephemeris for Eclipsing Binaries; AAVSO charts of flare stars.
- Swasenberg, Mr., Astronomy Magazine. Predicted maxima dates of R Hya and R Crv.
- AAVSO Bulletin 44, to be used in articles in Astronomy Magazine.
- Szkody, P., University of Washington. Simultaneous monitoring and immediate notification of outbursts of dwarf novae during an observing run with IUE.
- Identification charts for CY Lyr, CM Del, and V503 Cyg, for observing run at Mt. Lemmon.
- Simultaneous monitoring and immediate notification of outbursts of cataclysmic variables during an observing run at Kitt Peak.
- Szkody, P. & Horne, K., University of Washington and California Institute of Technology. Simultaneous monitoring and notification of the behavior of dwarf novae during an

- observing run at Mt. Wilson to observe photometrically the decline of these stars.
- Taylor, G., University of Washington. Light curves of S UMa and V Cnc.
- Travirs, J., NH. Information on the position of the sun on January 2, 1981, to settle a claim in an auto accident.
- Turnshek, D., University of Arizona. Long-term light curves of 18 long period and semiregular variables, to determine phases during special observing program.
- Ukita, N., Institut De Radio Astronomie Millimetrique, France. Light curves of R Cas, R Leo, Omicron Cet, and W Hya, to correlate with observations in radio wavelengths.
- Vogt, N., European Southern Observatory, Chile. Light curves of 36 cataclysmic variables, to correlate with spectroscopic observations.
- Walk, J., U. S. Naval Observatory. Information on the period and optical brightness of Omicron Cet, VY CMa, R LMi, R Leo, W Hya, VX Sgr, and R Cas during their observing runs.
- Wanner, W., Mainz, West Germany. Light curve of UU Aur, for a project in a scientific competition for young people.
- Whelan, J., University of Cambridge, England. Optical behavior of UZ Ser in August, 1980, and information on the magnitude sequence used in the UZ Ser identification charts.
- Willner, S., Center For Astrophysics. AAVSO Bulletin 44, to schedule observations with the Multi-Mirror Telescope.
- Willson, L. A., Iowa State University. Information on optical brightness and phase of Omicron Ceti, R Leo, U Ori, S Vir, and Chi Cyg during specific observing runs.
- Wu, C., Computer Sciences Corporation. Light curves of U Gem, SU UMa, SS Cyg, VW Hyi, and SS Aur, to correlate with ultraviolet observations made with Dutch ANS satellite.
- \_\_\_\_\_ Immediate notification on the outburst of GK Per, to schedule IUE observations.

TABLE III AAVSO OBSERVERS 1980-1981

AD R. M. Adams, MA	1253-	232	BPE P. E. Burke, Australia	10
ADG G. Adornato, NY	17		BUS R. Buss, ND	111
AB W. Albrecht, HI	845-	2	BUL T. Butler, MO	331
ALG G. S. Aldering, MA	8-	4	CTT T. Campbell, GA	6
ALS S. Allmand, England	41		CWA W. Campney, Canada	82
ALL L. Allred, MN	200		CJA J.S. Campos, S. Africa	174
AJR J. R. Address, OH	32		CEA*M. Candela, France	274
AWR R. Andrews, OH	105		CAH H. J. Carney, FL	397-
ANN R. J. Annal, CA	1074-	348	CRJ J. Carrington, AR	41-
ARI R. B. Ariail, SC	842-	208	CRJ J. R. Caruso, NY	64
AKT T. Atkin, West Indies	31		CIT M. Cavagna, Italy	447
ATW P. Atwood, CT	128		CYM M. Caylor, CA	12
AUB*M. Aubaud, France	41		CPL*M. Chapellier, France	6
ADE D. E. Aucoin, Jr., ME	14		CGF G. Chaple, Jr., MA	1171
BBU*M. Babeau, France	38		CRU*M. Charriard, France	27
BTR T. R. Baker, WI	362-	77	CRK R. K. Childress, TN	2
BM M. Baldwin, IN	1559		CST G. J. Christensen, OR	10
BRM R. M. Bales, OR	5		CLK W. Clark, MO	178-
BCI C. Barani, Italy	14		CEW E. W. Clement, FL	101
BBN W. Barbin, PA	31-	6	CRH R. H. Clouser, PA	10
BDJ*J. C. Bardin, France	43		CLB R. Clyde, OH	64
BWK W. S. Barksdale, FL	1584		CLO A. Cole, FL	6
BSF S. F. Barnhart, OH	175-	13	COL P. L. Collins, MA	102
BSR S. Baroni, Italy	437		CMG&G. Comello, Netherlands	1819-126
BSP*P. Bartos, Hungary	829		CWL W. J. Connor, RI	5
BNE N. Bates, IL	3		COO L. M. Cook, CA	388
BB R. S. Bates, MA	184		CPB B. Cooper, MN	4
BAU J. Bauer, W. Germany	340		CSD D. Costanzo, VA	84-
BAE A. Beaman, IL	17	1	CR T. Cragg, Australia	1995-
BBA B. B. Beaman, IL	580-	51	CRR R. E. Crumrine, NY	475
BCJ C. J. Beaman, IL	20-	1	CUN D. Cunningham, Canada	303
BKY K. E. Beaman, IL	66-	9	DSL L. A. DaSilva, Brazil	7
BEJ J. Beaver, OH	166-	1	DAE*E. Dalos, Hungary	134
BKK K. Beckmann, MO	1847		DLT J. Dalton, CT	33-
BCB B. Benedict, IL	1		DAN*J. Danko, Hungary	20
BTY T. Benner, PA	369-	14	DAK K. Dankin, NH	97-
BRX R. Beria, Italy	17		DV G. Davidson, KS	8
BIL G. A. Bilodeau, CA	73-	39	DAJ J. Davis, MD	22
BIK*G. Birioukoff, France	73		DMS M. S. Davis, CT	16
BKN A. Birkner, IL	144		DBF F. Deboosere, Belgium	7
BGB B. Blagg, TX	14		DGR R. C. DeGraeve, MI	1038
BLD D. Blane, S. Africa	140		DCS*L. Deicsics, Hungary	6
BNI N. I. Blessinger, GA	24		DEA R. DeMartino, CT	24
BOJ J. Bodenstein, S. Africa	31		DML M. L. Dennis, KY	29
BOH D. Böhme, Germany	1132		DMZ*M. Dezso, Hungary	13
BNC C. Bordner, CO	146-	23	DMN D. Dierick, Belgium	34
BRJ J. E. Bortle, NY	2109-	685	DRG R. Diethelm, Switzerland	1000- 168
BMU&R. Bouma, Netherlands	310		DRD R. D. Dietz, CO	46- 28
BRG B. J. Bourgeois, TX	3		DIL W. G. Dillon, TX	20- 2
BAP P. A. Bradley, LA	223-	41	DCH C. Doerr, OH	94
BRE E. M. Bram, CA	38		DAG A. Dredge, S. Africa	31
BTB T. C. Bretl, KS	153-	29	DUS*R. Dubois, France	8
BTF T. F. Brien, NV	22		DGH H. Dugan, WA	24
BLP*P. Brlas, Hungary	52		DUR*M. V. Duruy, France	1
BBM B. M. Brown, NY	50		DKS S. Dvorak, IA	2602
BTG T. G. Browning, OR	4		DGP G. Dyck, MA	75
BOA*A. Bruno, France	85		ECJ J. H. Eckendorf, AZ	5
BJM J. Bryton, PA	6		ECK C. Eckert, W. Germany	267-
BYD R. Bryden, Canada	150-	11	EHR E. Ehrhart, CA	37
BS S. A. Bucaro, IL	146		EM G. Emerson, CO	268
BDH&H. Bulder, Netherlands	13		FRW W. B. Farrar, Jr., NM	33
				3-
				2
				7

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FCA C. A. Fausel, MI	287		HY A. S. Heasley, PA	56	
FWA W. Feibelman, MD	9	IUE	HGT T. Hegedus, Hungary	79	
FJH&H. Feijth, Netherlands	875-	20	HEF M. A. Heifner, CO	4508-	559
FEP P. Fenei, Hungary	11		HRL R. L. Hensley, KY	52	
FEN A. Penyvesi, Hungary	77		HJN J. Hers, S. Africa	340-	38
FET T. I. Fetterman, NJ	1053-	473	HZW W. Herzner, Austria	3	
FLT R. W. Fleet, Zimbabwe	611-	42	HES C. Hesselstine, WI	44	
FLG G. Fleischer, Austria	22		HEV Z. Hevesi, Hungary	42	
FEM E. M. Flynn, IL	438-	10	HE L. Hiett, VA	3393	
FDA A. Fodor, Hungary	16		HSN N. T. Higgs, Zimbabwe	37	
FD C. B. Ford, CT	767-	242	HRI R. E. Hill, AZ	318-	23
FOJ J. Formo, WI	2		HSE E. A. Hils, Canada	62	
FT G. Fortier, Canada	404-	10	HDI D. E. Hinsman, CA	7	
FOU A. Fournial, France	12		HIR Y. Hirasawa, Japan	935-	6
FPK P. K. Frank, OK	11		HIK K. Hiroswawa, Japan	138	
FAA A. Frosina, Italy	7		HOH H. Honda, Japan	1865	
FMG G. C. Fugman, WI	74		HON F. Honnart, France	22	
FLZ L. Fuha'sz, Hungary	19		HOV G. Horvath, Hungary	537	
GDB D. Gabor, Hungary	443		HOI I. Horvath, Hungary	562	
GJW J. W. Garasich, PA	252		HOU D. Hough, NJ	19	
GDR R. J. Gardner, CA	21-	1	HU W. S. Houston, CT	10	
GAZ J. P. Garsztko, France	89		HOY S. J. Hoyle, France	20	
GEJ J. Geenen, Netherlands	10		HDB B. Hudgens, MS	83	
GJA A. J. George, Jr., OR	41		H59 J. A. Hudson, CA	143	
GMG G. Giampaolo, Italy	32		HR C. J. Hurless, OH	2225-	354
GGI G. Giannotta, Italy	68		HUR G. M. Hurst, England	340-	15
GCH R. S. Gilchrist, CT	34		IDG D. G. Iadevaia, RI	18	
GVT V. Giuliani, Italy	11		ITO M. Ito, Japan	321	
GLF F. Glenn, NY	565		JCK A. Jackson, OH	2	
GLW W. Glenn, NY	565		JAG G. Jaeger, WI	177	
GFB W. Goff, CA	264-	99	JM R. A. James, WI	608	
GDA A. C. Gondola, NM	15		JJT J. T. Jeffrey, CA	146-	3
GOP P. N. Goodwin, LA	3878-	619	JOG G. E. Johnson, MD	505-	23
GLM L. M. Gorski, IL	43		JRV R. V. Jones, NC	311	
GFG F. G. Graham, PA	6-	1	JYJ J. Joyce, SC	2	
GKA K. A. Graham, IL	273		KAI I. Karaszi, Hungary	48	
GRL B. H. Granslo, Norway	84		KLY G. W. Kelley, Jr., VA	596-	257
GJH J. H. Grant, SC	50		KZS S. Keszthely, Hungary	8	
GEY E. Greaney, NJ	29-	1	KIR P. E. Kirby, OH	211	
GRW D. Green, MA	16		KAE A. E. Klein, Argentina	9	
GRI J. W. Griese, CT	3		KS J. H. Knowles, NY	55	
GA A. S. Grossman, CA	998		KOC A. Kocsis, Hungary	357	
GML M. Grunanger, Austria	140		KKF K. F. Koehler, AZ	585	
GRZ H. Grzelczyk, W. Germany	130-	14	KLK G. Kohl, AZ	70	
GNN M. Guinnebert, France	6		KHL M. Kohl, Switzerland	36	
GUN J. Gunther, France	2328		KHJ H. J. Koller, Canada	157	
GTH T. H. Guo, China	28		KRS R. S. Kolman, IL	83	
GUA A. Gutai, Hungary	4		KMA M. A. Komoros, Canada	86	
HK E. A. Halbach, CO	1184-	20	KOS A. Kosa-Kiss, Romania	1900	
HMK M. A. Hall, OH	40		KOA M. Koshiro, Japan	931-	4
HMR R. Ham, CO	1521-	5	KVI I. Kovacs, Hungary	62	
HNN C. Hanon, France	3		KIS G. Krisch, W. Germany	730	
HTA T. Hansen, CA	1		KRK K. L. Krisciunas, CA	58	PEP
HSG G. Hanson, WI	3121-	20	KRU J. Kruta, Czechoslovakia	465	
HLP P. Harles, ND	165-	1	KPG G. Kuipers, Netherlands	237-	18
HRR P. Harrington, NY	18		KUR R. Kuplinski, Jr., PA	8	
HAV R. P. Harvan, PA	86		KWD C. Kwadrat, PA	5	
HSB W. Hasubick, W. Germany	3175		LFE E. LaFortune, NY	28	
HWL W. Hawley, NH	18-	1	LAM D. Lam, Canada	13	
HSM M. Hays, Jr., FL	4		LAR R. Lambert, TX	84	
HZL L. Hazel, NY	1114-	306	LTW T. W. Langhans, CA	245-	12

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LTM T. M. Laskowski, IN	46	MCZ C. Munoz, AL	38
LDR D. Laurent, Belgium	64	MLZ L. Munoz, AL	32
LKD D. C. Leake, IL	39	MJC M. J. Murphy, NC	81
LEB*M. Lebert, France	19	MRZ R. P. Muzinich, CA	26
LFM F. Lee, CA	19	MYE K. J. Myers, IN	42
LET*M. Leraut, France	18	MYP P. A. Myles, MO	1
LEV A. J. LeVeque, CA	33	NMA*A. M. Nagy, Hungary	15
LAJ A. Levesque, Jr., NH	72-	1 NRH R. H. Nelson, Canada	123-
LVY D. H. Levy, AZ	678-	2 NM M. Newberry, CO	58
LMH M. Liller, MA	3-PEP3	NWE W. E. Newsome, MT	12
LNB G. C. Lindbloom, PA	546	NBY J. Nordby, MN	358-
LJR R. Lines, AZ	61 PEP	NTE E. Norton, MA	495
LWT T. Lohvinenko, Canada	132	NTS T. S. Norton, MA	287
LOS*S. Lorsignol, France	106	OBG G. J. O'Brien, CT	115
LEJ E. J. Los, NH	37	OCN S. D. O'Connor, Canada	67
LOF F. G. Loso, NJ	14	OV E. G. Oravec, NY	2633
LX W. M. Lowder, NY	6613	OJR*J. R. Osorio, Spain	2268
LJM J. M. Luffman, AR	10	OB M. Overbeek, S. Africa	4325-
LKS R. Lukas, W. Germany	98-	3 PAR R. H. Patterson, VT	3
LUM M. Lunn, England	20	PLZ L. Pazzi, S. Africa	11
LYR R. F. Lynch, RI	60-	2 PN A. E. Pearlmutter, MA	715
MDD P. Madden, LA	1046-	690 PEG*C. Peguet, France	258
MEA J. Martin, WI	6	PNM M. Penn, CT	64
MRX H. Marx, W. Germany	1950	PSH S. H. Peters, MI	2
MSK K. Mascola, Canada	108	PNB*B. Petrohan, Hungary	47
MTO M. Mateo, TX	57	PED D. B. Pettengill, FL	427
MTZ O. Matzek, Austria	48	PFA J. A. Pfannerstill, WI	8
MYR E. H. Mayer, OH	4162-1967	PEE*E. Peli, Hungary	33
MYW E. W. Mayer, Jr., OH	1632-	756 PFF G. Pfeiffer, W. Germany	594
MBE B. E. McCandless, DE	2	PHL*A. Philippe, France	20
MYS S. McCarthy, MA	7	PSJ J. Phillips, SC	4
MDP P. McDonald, Canada	4	PIJ*J. Piriti, Hungary	81
MKJ J. McKenna, NJ	233-	1 PLR R. M. Poole, PA	456
MKK K. M. McKeown, CO	90	PTM*M. Porta, France	15
MSD D. L. Means, IA	294	PWR R. E. Powaski, OH	6
MED K. Medway, England	1797	PFJ F. J. Price, NY	15
MDG D. L. Megginson, MO	139	PRI L. H. Price, SC	59
MLP P. Mendell, CO	92-	4 PRG G. Prosser, S. Africa	37
MFT F. Mendenhall, Jr., IN	15	QD P. H. Quadt, CO	3-
MEZ*C. Mezosi, Hungary	516-	2 QFF P. F. Quinn, WI	40
MHL E. Michaels, Sr., TX	4	RRE R. E. Reaves, GA	107
MMA R. A. Mimna, OH	241	REC C. Reese, MO	11
MJI J. R. Miner, IN	95	REH D. Rehner, OH	10
MIS*J. Minois, France	3336	RNT C. C. Reinhart, OH	10
MZS*A. Mizser, Hungary	581	REN*J. Renault, France	495
MKZ*Z. Mnyatyinszki, Hungary	3	RIR R. Rieth, W. Germany	2
MCE E. Mochizuki, Japan	24	RJI J. I. Riggs, NY	462-
MOD D. Mohrbacher, OH	69	RTK T. Riopka, Canada	26
MJS*I. Mojdisz, Hungary	27	RIP M. Rippel, NM	3
MOC*C. Molnar, Hungary	47	RWD D. W. Roberts, GA	16
MOL J. Molnar, VA	987	RAR R. Robotham, Canada	1114
MAR R. Monella, Italy	156-	9 ROR D. A. Rodger, Canada	97
MOR R. L. Monske, PA	1036-	22 RMA M. Rodrigues, Australia	35
MJ A. C. Montague, MI	1143-	2 RPD P. G. Roduta, MA	47
MSO S. Montenegro, Brazil	39	RB D. W. Rosebrugh, FL	469
MAJ A. J. Morehouse, MI	25 PTG	RR R. E. Royer, CA	5
MJA J. A. Morgan, WI	123	RJF J. F. Ruhl, AZ	214
MOJ J. E. Morgan, AZ	846-	278 RPH H. Rumball-Petre, CA	32
MRR C. S. Morris, MA	100-	7 REW E. W. Russell, WA	2
MOW W. Morrison, Canada	3362	SGT*T. Sagodi, Hungary	16
MUN C. Munford, England	190-	1 SJB J. Sainsbury, WA	13



TABLE III - AAVSO OBSERVERS 1980-81

SAH G. Samolyk, WI	4112	THU*M. Thouet, France	732
SNL J. G. Sandel, SC	137	TAN*A. Tolgyesi, Hungary	1298
STC G. E. Santacana, PR	3	TST S. Toothman, IL	9
SRN T. M. Sarna, IL	94-	5 TCE*C. Torres, France	700
SGR*J. Saugere, France	113	TFN F. Traynor, Australia	38
SSC S. M. Schimpf, CA	42	TDM D. M. Troiani, IL	1777- 15
SRD R. H. Schmidt, MN	8	TUB*V. Tuboly, Hungary	243
SMJ J. F. Scholl, NV	2134	PEP,PTG TUC C. Turk, S. Africa	27
SDH D. Schroyens, Belgium	31	TDK D. K. Turner, NY	13
SCZ*E. Schweitzer, France	4946	TYS R. L. Tyson, NY	225
SCE C. E. Scovil, CT	951-	424 UND E. Underhay, CA	157
SHS S. B. Sharpe, Canada	2175-	10 VCP P. VanCauteren, Belgium	233- 38
SSV S. Shervais, Jr., VA	168	VED*P. Vedrenne, France	5876
SJC R. Shinkfield, Australia	160	VWD&W. Velde, Netherlands	3
SRA A. Shorten, England	102	VET*M. Verdenet, France	2395- 369
SLH L. J. Shotter, PA	172	VWY W. Verhaegen, Belgium	67
SKL K. Simmons, FL	18	VCS C. Vervliet, Belgium	18
SKW W. Simmons, FL	18	VIA*J. Vialle, France	1304
SWZ W. S. Sizensky, CT	8	VIN J. Vincent, Zimbabwe	170- 2
SKN C. R. Skinner, NJ	8	VJC J. C. Vlasic, CA	333- 52
SDN D. M. Slauson, IA	22	VLJ J. Volhard, WI	131- 1
SGV G. V. Smith, MI	106	VOK K. Volkmer, CA	31- 1
SHA H. A. Smith, CA	31	VOL W. Vollman, Austria	625- 1
SJ J. R. Smith, TX	30-	5 VYP P. Vuylsteke, Belgium	88
STL M. B. Smith, NM	1983	WEO E. O. Waagen, MA	1
SOD J. Soder, OH	5	WGJ G. J. Waffens, OH	3
SOK*M. Somodi, Hungary	188	WGM M. S. Wagner, IL	16- 1
SJZ J. Speil, Poland	249	WRN R. Warden, PA	24- 3
SPC C. S. Spell, SC	22	WMJ&J. Warmerdam, Netherlands	50
SLF L. F. Spieth, Jr., CA	33	WAB B. D. Warner, CO	166- 10
SPO J. Spongsveen, Norway	377	WNF N. F. Wasson, CA	35
SC C. E. Spratt, Canada	5657-	881 WBB W. V. Webb, OH	502
SPG N. G. Spryn, PA	12	WER R. J. Weber, KS	4679- 856
STR R. H. Stanton, CA	221-	183 WED G. Wedemayer, WI	41
SKS T. Steckner, Canada	1064-	1 WEM M. Wesolowski, Canada	199- 2
SGP P. Stegmann, NJ	154	WEP F. West, AL	676
SET C. Stephan, OH	392-	19 WTJ J. West, TX	190
STF G. Stephanopoulos, Greece	2137	WES R. F. West, IN	12
SWT R. J. Stewart, NJ	3	WYT T. Weyenberg, WI	14
STQ N. Stoikididis, Greece	79	WTE E. S. Whitt, SC	62
SRU R. K. Summers, VA	15	WI D. B. Williams, IL	545
HUO D. J. Sventek, TX	40-	1 WDJ D. J. Williams, TN	132
SVN P. Sventek, TX	30	WLP P. Wils, Belgium	2989- 386
SOZ*L. Szantho, Hungary	308	WJA J. A. Wilson, MO	444
SAO*A. Szauer, Hungary	5	WSN T. W. Wilson, WV	2110- 400
SZG*B. Szegedi, Hungary	43	WWM W. M. Wilson, TN	47
SKB*B. Szoke, Hungary	870	WNB B. Wingate, NJ	2883
TZR R. Tanzer, NJ	33	WWR W. R. Winkler, CO	6
TJR J. R. Tavares, Brazil	14	WBT B. Wolpert, NY	10
TYR M. J. Taylor, FL	77	YON R. R. Young, PA	111
TLA M. D. Taylor, England	39	ZAF J. Zaffi, Venezuela	143
TPS*I. Tepliczky, Hungary	317	ZAD D. Zak, NY	4
TM H. D. Thomas, WA	540	ZLT*T. Zalelezsak, Hungary	52
TJB J. B. Thompson, FL	22	ZJJ J. Zamichiel, Argentina	5
THR R. Thompson, Canada	171	ZAE*R. Zanni, France	53
TRJ R. Thomson, S. Africa	95	ZLG*G. Zenkl, Hungary	19

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