ANNUAL REPORT OF THE DIRECTOR

FOR FISCAL YEAR 1982-1983

It is my privilege to present to you my tenth annual report, for the fiscal year 1982-1983. In my report I wish to address major areas of our activities. I would like to take your thoughts through ten years to help you visualize where we have been, where we are today, and where we may be heading in the future.

DATA PROCESSING

Ten years ago there was no such object as a personal computer, certainly not in the the AAVSO Headquarters. We were using computer cards to enter and verify our data on an IBM key punch machine and a verifier. We were making our data from the 1960's machine readable on computer cards with no back-up on magnetic tape. Observations coming in each month were plotted directly from the monthly reports onto the "running light curves" of each star.

We surveyed our data processing operation, our urgent needs, and our resources, and we decided to prioritize the computerization of the data coming in each month. This would allow us to disseminate our current data to the astronomical community more easily.

Once we were able to computerize and process the incoming monthly data, we went back to computerize the data from the 1960's so that our data from 1960 to the present would be in machine readable form. Along with this activity we developed computer programs to check, sort, merge, and plot data.

We then transferred all the observations on computer cards (some 1.5 million) onto magnetic tapes and made several copies of these tapes to be stored at various locations for safety.

Five years ago we converted all our computer programs and data files from Control Data to a Digital System when the computer facilities that we have been using at the Harvard-Smithsonian Center For Astrophysics upgraded their computers to Digital Vax computers. We developed more computer programs to increase the efficiency of our data processing.

We started to computerize and make machine readable our archival data published from 1911 to 1960. Our data cards began to occupy most of the office space, as well as presenting enormous difficulties in processing them via the very small card reader of the Vax computer. We purchased our own microcomputer system which used diskettes as the medium to enter data and which was compatible with the Vax Computer at the Center For Astrophysics.

We trained our staff in using our in-house computers, and developed still more computer programs to aid us in our operations. This is where we are now in terms of our data processing:

- 1. Processing Current Data: We are up to date in entering and processing the 15,000 to 20,000 observations received each month.
- 2. <u>Processing Archival Data Published from 1911 to 1960</u>: This project, which was temporarily halted, is now in progress again. The members of the Royal Astronomical Society of New Zealand, Variable Star Section, sent their archival data to be added to our files to make the data on each star more complete.

 Publication of Data: AAVSO Report 38, observations of long period variables from 1974 to 1977, was published most cost-effectively this year. This publication, which contains for the first time computer-plotted light curves of individual observations of 490 stars, has been received very favorably by our members, observers, and the astronomical community.

AAVSO Reports 39 and 41, observations of other types of variables, have been prepared. They need final checking and plotting. AAVSO Report 40, the continuation of Report 38, is in the same state.

Long term data on long period variables is extremely important in providing information about the behavior, pulsation modes, slow evolution, and changes in the interior structure of these stars. They also provide an important galactic data base for comparison with long period variables in other galaxies.

Maxima and Minima of Long Period Variables from 1950 to 1975: compilation of maxima and minima dates and magnitudes for 383 long period variables from 1950 to 1975 has been completed. This is the continuation of the Studies of Long Period Variables published in 1956. We have received a grant from the Small Research Program of the American Astronomical Society to print this work.

Maxima and Minima of Long Period Variables from 1975 to 1980: Compilation of these data has also been completed, thanks to the volunteer help of Mrs. Katherine Hazen. The information will be published after final checking.

SPECIAL REQUESTS

AAVSO was founded in 1911 for the purpose of making the observations of amateur astronomers available to professional astronomers. This has been our main goal. During the last decade, as astronomers have stretched their research to both shorter and longer wavelengths of the electromagnetic spectrum, AAVSO optical data have become increasingly important in understanding the behavior of variable stars. Each year we receive an increasing number of requests from astronomers. We have supplied AAVSO data for 822 requests in the past 10 years. 602 of these were in the past five years. Figure 1 is a graph of the number of special requests filled each year since 1974.

This year alone we have supplied data for a record high number of 151 requests received from astronomers and students throughout the United States as well as abroad. The list below and also Figure 2 show the types of variable stars for which data were requested.

- Cataclysmic variables dwarf novae (32%), novae and recurrent novae (9%)
- Long Period variables (18%)
- 3. Semiregular variables (11%)
 4. Symbiotic stars
- Symbiotic stars Z And type (8%)
- 5. R Coronae Borealis stars (3%)
- 6. RV Tauri stars (1%)
- 7. Eclipsing binaries (2%)
- 8. Cepheids, quasars, and BL Lacertae stars (3%)
- 9. The Sun (4%)
- 10. Nebular variables (1%)
- General requests on variables (8%)

A list of the names of individuals making requests, with their affiliation and location, is given at the end of my report.

I have categorized below and shown in Figure 3 the various areas in which AAVSO data and services have been used.

- 1. Data correlation (24%): AAVSO data have been used to correlate a) spectroscopic and photometric data obtained with special instruments on large telescopes; b) x-ray, ultraviolet, and infrared data obtained with instruments aboard spacecraft such as the European X-ray Observatory Satellite (EXOSAT), International Ultraviolet Explorer (IUE), and Infrared Astronomical Satellite (IRAS); and c) data in the radio wavelengths obtained with radio telescopes.
- 2. Simultaneous observing (15%): Participation of AAVSO observers in the simultaneous observation and notification of stellar activity during observing runs of astronomers in the optical, infrared, radio, x-ray, and ultraviolet wavelengths, with instruments both ground-based and aboard spacecraft.
- 3. Data analysis (13%): AAVSO data have been used in the analysis of long period, semiregular, symbiotic, dwarf novae, recurrent novae, and R Coronae Borealis stars.
- 4. Scheduling observing runs (13%): We have provided information, particularly on long period and semiregular variables and dwarf novae, to assist astronomers in scheduling ground-based and aboard-spacecraft observing runs.
- 5. Reference material (13%): We have provided information, light curves, and finding charts, to be used as reference materials for articles in astronomical magazines and books.
- 6. Science projects (11%): We have provided information, light curves, finding charts, and guidance to students involved in science projects on variable stars and the Sun for their science classes and science fairs. For his science project on variable stars, D. F. Figer of Wickliffe, Ohio, won first prize at the State Science Day of Ohio.
- 7. Setting up special observing programs (3%): We have provided information and guidance to set up observing programs on variable stars in high schools and universities in the United States, England, and Indonesia.

The 1901 nova, GK Persei, was observed at various wavelengths during its minor outburst, thanks to the immediate notification of its activity from our observers, especially John Bortle. For the first time, short period, 350-second oscillations were observed from an old nova in the x-ray with EXOSAT.

TY Piscium, a dwarf nova suspected to be of SU UMa type from its optical behavior, was observed during its superoutburst (which we predicted) with a high-speed photometer by Dr. Edward Kemper at Louisiana State University. The finding of superhumps, with a period of about 101 seconds, confirmed that TY Piscium is indeed an SU UMa type dwarf nova.

AAVSO provided the only optical data for SU UMa during the observing run in which three satellites - EXOSAT, IUE, and IRAS - observing simultaneously for the first time monitored this dwarf nova. All professional observatories scheduled to observe it photometrically were clouded out.

AAVSO contributions to research in variable stars continue to be acknowledged in professional articles either published or about to be published in the astronomical literature. A few of these articles are listed below:

Blair, W. et al. "Spectroscopic Observations of Symbiotic Stars and Related Objects." Preprint.

Bode, M. et al. "Infrared Photometry and Spectroscopy of Nova Aquilae 1982." Preprint.

Clark, F. et al. 1982, "Polarization Properties of the 86 GHZ SiO Maser Emission from R Cassiopeiae." Astrophysical Journal 260, 569; 1982.

AAVSO observations have been published covering 19 astronomical events in the <u>IAU Circulars</u> of the Central Bureau for Astronomical Telegrams.

Thus, AAVSO data - your observations - are crucial to variable star research and are being used extensively by the astronomical community worldwide.

SUMMARY OF OBSERVATIONS

This year weather conditions in the USA were again unfavorable for observing. Many longtime observers who have been observing and reporting observations every month could not maintain their records. Despite this, we received a record high number of observations for the year, thanks to the efforts of our observers abroad.

Figure 4 is a graph of the observations received at HQ each year since 1974. The contributions of the observers in the United States and abroad are indicated for each year. This year, for the first time, the number of observations from abroad is larger than that from the United States. Figure 5 is a graph of the number of observers and observations for each year.

During the fiscal year 1982-1983, we received 194,580 observations from 505 observers. These totals include 88,167 observations from 256 observers in 40 states of the United States, and 106,413 observations from 248 observers in 28 countries, including 24,561 observations from the French variable star observers of AFOEV, 11,742 observations from Canadian observers, and 10,771 observations from observers in South Africa. These totals also include the 83 adjusted observations of Orion variables, where ten observations are counted as one.

The grand total of observations recorded since the founding of AAVSO in 1911 is 4,983,981.

Table I lists the number of observers and the total observational contribution from each country for this year; Table II gives the same information for 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 or fainter).

25 observers reported between 1000 and 2000 observations, 13 between 2000 and 3000, 8 between 3000 and 4000, and 2 between 4000 and 5000 observations. Michel Verdenet sent in 6362 observations, Wayne Lowder 6602, and Danie Overbeek 8080.

Mark Heifner leads the inner sanctum observations with 1668 estimates, followed by Ernst Mayer with 1479, John Bortle with 1292, and Glenn Chaple with 1059 estimates.

Charles Bordner, Bob Donahue, Chris Heseltine, and Howard Landis sent in observations obtained with a photoelectric photometer. Drs. Martha Hazen-Liller and Richard Stanton provided photoelectric estimates for comparison stars in several variable star fields.

My sincere thanks to each of our untiring, enthusiastic, and devoted observers for their astronomical contributions. Each observer's observations, whether one or hundreds, are very much appreciated and valued. My special thanks to those observers who, additionally, have participated in simultaneous observing runs to aid astronomers requesting this assistance, and to those observers who alert me by phone and mail to the unusual behavior of stars before the regular monthly report forms are sent. These special services have helped astronomers immensely in obtaining valuable data on variable stars.

INTERNATIONAL COOPERATION

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

Members of the following variable star associations sent in observations to the AAVSO, either individually or as a group, for inclusion in our data files for processing and publication: Association Française des Observateurs d'Étoiles Variables (France); Astronomical Society of Southern Africa, Variable Star Section; Astronomischer Jugendclub (Austria); Berliner Arbeitsgemeinschaft für Veränderliche Sterne (West 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); Norsk Astronomisk Selskap, Variable Stjernegruppen (Norway); Planetario e Observatorio Astronomico do Colegio Estadual do Parana (Brazil); Pleione Valtozocsillag-eszlelo Halozat (Hungary); Royal Astronomical Society of Canada; Uniao Brasileira de Astronomia, Variable Star Commission (Brazil); Vereniging Voor Sterrenkunde, Werkgroep Veranderlijke Sterren (Belgium).

Dr. Frank Bateson, Director of the Variable Star Section of the Royal Astronomical Society of New Zealand, sends the observations of their members for preparation of the <u>AAVSO Bulletins</u>, which give the maxima and minima dates of long period variables. In turn, Dr. Bateson disseminates AAVSO predicted dates to his observers. Dr. Bateson has also been sending the archival data of the Variable Star Section of the Royal Astronomical Society of New Zealand to be included in our archival data files. Last year the British Astronomical Association and the Amateur Astronomical Society of Scandinavia also disseminated the data in the <u>AAVSO Bulletin</u> to their observers.

We continue to exchange literature with major universities, observatories, and astronomical groups around the world.

MEETINGS ATTENDED AND TALKS GIVEN ON THE AAVSO

I attended the 161st Meeting of the American Astronomical Society held in Boston last January, and presented a poster paper on the supermaxima of SU Ursae Majoris stars. Following this meeting, the 7th Annual North American Workshop on Cataclysmic Variables was held at the Harvard-Smithsonian Center for Astrophysics, Cambridge, MA. We assisted in the organizing and hosting of this Workshop and had a three-day open house at Headquarters. Many astronomers took advantage of this opportunity to become familiar with our operation and our data base.

I gave talks on the AAVSO and variable stars to the following groups this past year: the Science Fiction Convention, Boston; Burlington High School 7th, 8th, 9th grade science classes; Philips Academy Astronomy Club, Andover, MA; and the Astronomy Class at Massachusetts Institute of Technology.

REQUESTS FOR INFORMATION ON THE AAVSO AND MEMBERSHIP

We have received 400 requests this year for information on the AAVSO from individuals, astronomy clubs, schools, magazines, and book publishers. One of our members who attended the Riverside Convention in California distributed information on the AAVSO, and we have several new members from that meeting.

126 new members were elected this year. Of these, 124 joined as annual members and 2 as sustaining. In addition, 18 members changed membership from annual to sustaining and one person was reinstated as an AAVSO member.

COMMUNICATIONS

We receive a very large number of letters that usually request specific information. This past year we have answered 750 individual letters, not including short notes, form letters, and general letters to members. We are working very hard at handling correspondence and one method has been to prioritize it. The addition of an administrative assistant, Janet MacLennan, to our staff has made a big difference in managing the correspondence.

A recent letter we received from one of our new members has given us hope. The letter reads:

"I have enjoyed being a member of the AAVSO for nearly a year now and I just wanted to take a moment out to thank you and your staff for the excellent aids and ears you provide to amateur astronomers like myself in our variable star observations. I have especially appreciated the prompt replies given to my questions this past year about specific stars. With this in mind and in the spirit of good humor I thought I'd send along a couple of dubious astronomical limericks I'd been working on of late. As you process the mass of figures in the September reports I hope these will give you a little chuckle. Thanks again.

For whom a telescope is carriable We commend a program of variables Flashing on and off nightly They take our time rightly That some even thinketh them marriageable.

There was an astronomer named Bauer Who smelled as sweet as a flower 'Every morning,' he'd admit, 'I'd stay up until six and bathe in a meteor shower.'"

In order to aid communications, we have purchased a telephone answering machine for Headquarters. Members can now call in observations or leave messages after Headquarters office hours and on weekends. There is no limit on the message length (up to one-half hour) and I can call in from my home and listen to messages left on the machine. Several of our members who have been using the answering machine have been pleased with how reasonable and convenient it is. We urge more members to make use of this service.

PUBLICATIONS

The following have been published by the AAVSO this year:

The Journal of the AAVSO, Volume 11, Nos. 1 and 2; Volume 12, No.

1, edited by Charles A. Whitney, with assistance from Elizabeth O. Waagen and Janet C. MacLennan.

AAVSO Bulletin 46: Predicted Maxima and Minima Dates of Long Period Variables for 1983, prepared by Janet Akyüz Mattei.

AAVSO Bulletin 46 Supplement: Schematic representation of the data in AAVSO Bulletin 46, compiled by Peter O. Taylor and Josefa M. Manella.

AAVSO Circular, Numbers 144 to 155, edited by John E. Bortle and Charles E. Scovil.

AAVSO Alert Notices, Numbers 49 to 58, prepared by Janet Akyüz Mattei.

AAVSO Solar Bulletin, Volume 38, Numbers 8 to 12, edited by Robert B. Ammons, with assistance from Stephanie Ammons and Peter O. Taylor.

Ephemerides of Eclipsing Binary and RR Lyrae Stars for 1983, prepared by Peter O. Taylor and Josefa M. Manella, with Marvin E. Baldwin.

AAVSO Photoelectric Photometry Newsletter, Volume 3, Numbers 3 and 4, edited by Russell M. Genet; Volume 4, Number 1, edited by John R. Percy.

Predicted maxima dates of long period variables for 1984 and an ephemeris of a few easy-to-observe Cepheids, RR Lyrae Stars, and Eclipsing Binaries, as well as a set of information on the AAVSO Photoelectric Photometry Program, prepared by Janet Akyüz Mattei, were all published in the Observer's Handbook 1984 of the Royal Astronomical Society of Canada.

Predicted maxima dates of bright long period variables, prepared by Janet Akyüz Mattei, were published monthly in <u>Sky & Telescope</u>.

The contribution of the following members' time and abilities toward AAVSO publications is gratefully acknowledged:

Robert B. Ammons, Stephanie Ammons, Marvin E. Baldwin, John E. Bortle, Russell M. Genet, Janet C. MacLennan, Josefa M. Manella, John R. Percy, Charles E. Scovil, Peter O. Taylor, Elizabeth O. Waagen, Charles A. Whitney, and the Editorial Board of the <u>JAAVSO</u>.

EDUCATIONAL PROGRAMS

The Venture Program, in which several universities participate, offers opportunities to students taking one to two semesters off from college. This Program has provided us with a student from Northwestern University, Eric Schwartz, a mathematics major with computer programming experience. He will be spending six months at AAVSO Headquarters to customize and revise some of our computer programs.

Margarita Tapia has been working as a Margaret W. Mayall Assistant. Her major work is to plot the observational data, and she also assists in other office activities.

We helped several high school students with their science fair projects on variable stars and the Sun. One student from Leesburg, Florida, wrote:

"The information you sent was most helpful as well as interesting. I thought you might be interested to know that I have not only won

first place in the high school science fair but that I have won first place in the county-wide fair in earth and space science."

Another student from Wickliffe, Ohio, wrote:

"I would like to thank the organization for supplying the information for my variable star project. The project was presented at District Science Day and State Science Day of Ohio." In both of these events this student won first prize.

We helped set up a complete observing program on variable stars and the Sun for the IAU-sponsored "School for Young Astronomers" project in Java, Indonesia.

PERSONNEL AT HEADQUARTERS

Our recent accomplishments are due to the very hard working, conscientious, and capable Headquarters staff. We work as a team and our goal is to accomplish the business of the association in the most efficient way possible. My sincere and special thanks to my technical assistant Elizabeth O. Waagen, our administrative assistant and correspondence secretary Janet C. MacLennan, our special research assistant Shelly K. Pope (now a graduate student at the University of Arizona), our secretary Dorothy Haviland, our data entry operators Barbara Silva and Bethune Kelly, our general assistant Margarita Tapia, our Venture Program student Eric Schwartz, and our volunteer assistant Katherine Hazen.

ACKNOWLEDGEMENTS

Our special thanks go to the Harvard-Smithsonian Center for Astrophysics (CFA) for their financial support in the form of a computer grant. We use the CFA's computer to process our large volume of data, and to prepare these data for publication. We thank Prof. Owen Gingerich for making this grant possible. Special thanks to Barbara Welther for her suggestions and help with data processing and computer funding at the CFA and for her assistance with our Annual meeting in Nantucket. We also extend thanks to the new Director of the CFA, Dr. Irwin Shapiro, for his support of AAVSO's use of the CFA's computer, and to Dr. James Conklin, Director of the CFA Computation Facility, for his assistance with our computer needs.

We most gratefully acknowledge the continuing financial support of Dr. Clinton B. Ford in computerizing the archival data and in the printing of AAVSO Report 38.

We thank the Central Florida Astronomical Society for their contribution through the Fernald Memorial Fund to the printing of \underline{AAVSO} Report 38.

We acknowledge with thanks the grant from the National Aeronautics and Space Administration (NASA) to disseminate and to publish our data on some cataclysmic variables.

We very much appreciate the grant from the National Science Foundation (NSF) to process and to make machine-readable all our data from 1966 to 1979, and to prepare more recent data for publication.

We thank the National Oceanic and Atmospheric Administration (NOAA) for the financial support of the activities of our Solar Division.

We are grateful for the grant from the Small Research Program of

the American Astronomical Society to publish the data on maxima and minima of long period variables from 1950 to 1975.

We remember our members Cy and Emily Fernald with fond memories and acknowledge their continued support of the association through the trust fund bequeathed to the AAVSO.

We thank the Stamford Museum and Nature Center for making available to Charles Scovil the facilities of Stamford Observatory for the preparation of new charts and the <u>AAVSO Circular</u>, and the 22-inch telescope for the observations of variable stars and special observing programs.

Our special thanks to Mrs. Katherine Hazen for volunteering her time to help with our data analysis and Headquarters operations.

Our thanks to our member Keith Danskin for his help at Headquarters.

Our special thanks to members who have taken Sustaining Membership, thus increasing their financial support of the association, and to members who have made financial contributions to the General Fund, the Margaret W. Mayall Assistantship Fund, and/or the Endowment Fund.

I personally thank my husband for his support and encouragement.

My special thanks to our Committee Chairmen, Officers, and Council Members for their contributions of wisdom and time to the efficient operation of the association.

In closing, I would like to thank each of you for your support and for your valuable contributions throughout my ten years of directorship. I hope I have gained your confidence and trust. I would like to believe that I have represented the AAVSO well to the astronomical community. I have attempted to make the astronomical community more aware of the "treasures" of the AAVSO - the data you provide. This has been and will continue to be my main goal.

Respectfully submitted,

Janet Akyüz Mattei Director

TABLE I
Observer Totals by Country

Country	No.of Obs.	Total Obs.	Country	No.of Obs.	Total Obs.
Argentina Australia Austria Belgium Brazil Canada Chile Czechoslovakia Denmark England Fed.Rep.German France German Dem. Re Greece	8 9 y 10 31	3423 1995 119 4414 70 11742 91 274 1403 5237 5697 24561 1437 1688	Hungary Italy Japan Netherlands Norway Poland Romania South Africa Spain Sweden Switzerland U. S. A. Venezuela Yugoslavia Zimbabwe	66 18 5 14 6 2 1 10 1 1 260 1 7	10612 4630 2152 8622 3787 668 691 10771 15 7 118 88167 119 427 1643
			TOTAL	505	194580

TABLE II
U. S. A. Observer Totals by State

<u>State</u>		No.of Obs.	Total Obs.	<u>State</u>	1	No.of Obs.	Total Obs.
Alabama	(AL)	3	817	Nebraska	(NE)	2	197
Arizona	(AZ)	6	1437	New Hampshire	(NH)	3	117
California	(CA)	28	3605	New Jersey	(NJ)	3	1010
Colorado	(CO)	7	9640	New Mexico	(NM)	1	37
Connecticut	(CT)	7	2437	New York	(NY)	26	17271
Florida	(FL)	10	4171	North Carolina	(NC)	4	574
Georgia	(GA)	4	55	North Dakota	(ND)	2	91
Hawaii	(HI)	2	95	Ohio	(OH)	18	5279
Illinois	(IL)	16	5103	Oklahoma	(OK)	2	17
Indiana	(IN)	7	1706	Oregon	(OR)	2	4
Iowa	(IA)	3	24	Pennsylvania	(PA)	15	3123
Kansas	(KS)	2	2352	Rhode Island	(RI)	1	22
Louisiana	(LA)	5	3350	South Carolina	(SC)	3	1283
Maine	(ME)	4	258	Tennessee	(TN)	2	55
Maryland	(MD)	1	377	Texas	(TX)	18	4089
Massachusetts	(AM)	12	6047	Vermont	(VT)	1	78
Michigan	(MI)	6	1443	Virginia	(VA)	5	3412
Minnesota	(MN)	4	268	Washington	(WA)	2	632
Mississippi	(MS)	3	253	West Virginia	(WV)	1	1002
Missouri	(MO)	6	1600	Wisconsin	(WI)	13	_4836
				TOTAL		260	88167

TABLE III

	D Abbatt Court	410	_	D0 0		40
	P. Abbott, Canada	413			A. Bucaro, IL	42
	M. Adams, MA				T. Bueno, CA	623
	Albrecht, HI	89-	T		Bulzacchelli, NY	15
	Allmand, Wales	227			Bunge, NY	226
	J. R. Amorim, Brazil				P. Burbank, MN	4
	Andersen, Norway	8			C. Buss, CA	180
	Andrews, AZ	7	00		A. Buss, ND	37
	B. Ariail, SC	610-	00		Butler, MO	228- 42
	Arnold, France	654			Camponovo, Argentina	
	L. Arthur, OH Atkin, TX	12 198			A.S. Campos, S.Africa	900
	Atwood, CT	17			Candela, France Caruso, OH	1
	Aubaud, France	271			Cavagna, Italy	230- 5
	E. Aucoin, Jr., ME	39			Cerar, Yugoslavia	55
	R. Baker, WI	5-	7		F. Chaple, Jr., MA	4186-1059
	E. Baldwin, IN	287	_		Christian, Italy	125
	Balogh, Hungary	6			Clark, MO	235- 3
	Barbin, PA	42-	3		Clarke, PA	105
	S. Barksdale, FL	712	•		W. Clement, FL	4
	Baroni, Italy	275-	1		Cole, FL	6
	A. Barros, Argentina		_		Colin, France	16
	Bartos, Hungary	339			J. Collins, England	
	Bartus, Hungary	39			L. Collins, CA	38
	S. Bates, MA	215			Comello, Netherlands	
	Bauer, W. Germany	45			M. Cook, CA	100
BAE A.	Beaman, IL	10-	2	CCL C.	Cooper, LA	6
BBA B.	B. Beaman, IL	252-	39	COE E.	Costa Linsdas, Braz	il 8
	J. Beaman, IL	2		CLX L.	B. Cox, Canada	11
BKY K.	E. Beaman, IL	13-	3	CR T.	A. Cragg, Australia	1953- 493
BKK K.	Beckmann, ME	132			E. Crumrine, NY	38
BTY T.	Benner, PA	788-	200	DAN~J.	Danko, Hungary	21
BBE~B.	Berente, Hungary	17			H. Danskin, NH	63- 16
BEG*M.	Berger, France	25		DSL L.	A. DaSilva L., Braz	il 56
BSG G.	Berns, CA	1		DBF F.	Deboosere, Belgium	212
	R. Biesiada, Poland	32			Deceuninck, Belgium	
	A. Bilodeau, CA	70-	39		S. Demchyshyn, Cana	
	Birioukoff, France	8			A. DeYoung, VA	4
	Birkner, IL	36			D. Dietz, CO	27- 8
	Biro, Hungary	3			G. Dillon, TX	147
	Blagg, TX	186			Dixon, NY	260- 2
	L. Blane, S. Africa	22			Docci, Italy	74
	Bohme, E. Germany	1286			Dolzan, Yugoslavia	143
	Boinck, Netherlands	6	_		L. Dombrowski, CT	108- 2
	Bordner, CO	110-	2		Domeny, Hungary	427
	W. Borgman, PA	225			Dredge, S. Africa	92
	hn E. Bortle, NY		1292		Dumont, France	151
BJT JO	seph E. Bortle, NY	43			P. Dyck, MA	4- 2
	J. Bouma, Netherlands				R. Echeverria, Franc	
	J. Bourgeois, TX	11	ΕO		H. Eckendorf, AZ	240- 36
	A. Bradley, LA	171-	50		Eckert, W. Germany	174
	Branchott FI	3 1773			E. Ellerbe, Spain	15 12- 1
	Branchett, FL	51-	10		A. Falvo, NY B. Farrar Jr., NM	12- 1 37- 3
	C. Bretl, KS R. Brewster, TX	27	12		A. Fausel, MI	143
	Bril, Netherlands	284			Feijth, Netherlands	
	F. Broussard, TX	3			F. Figer, OH	186
	M. Brown, NY	166			Fike, IL	7
	Bruno, France	200			W. Fleet, Zimbabwe	300- 11
	Bryden, Canada		231		M. Flynn, MO	74- 1
				-		

	Fodor, Hungary B. Ford, CT	23 208- 96		Horvath, Hungary Horvath, Hungary	10 59	
	Formo, WI	7		Hoste, Belgium	587-	2
FTO T.	Fors, Denmark	20		S. Houston, CT	1	
	Fortier, Canada			Hubbard, MA	4	
	K. Frank, OK	6		Hudgens, MS	3	
	A. Freeman, CO	84		A. Hudson, CA	213	
	Frosina, Italy	6		J. Hullett, TX	93	
	C. Fugman, WI	62		J. Hurless, OH	703-	78
	C. Gale, IA	3		M. Hurst, England	539-	18
	L. Garrison, PA	6	IPO J.	Ipolyi, Hungary	3	
	P. Garsztka, France Gaskill, TX	250 71		Ipolyi, Hungary	3 154	
		62		Jacobs, WI	2	
	Geenan, Netherlands Gerber, W. Germany	301		Jahn, W. Germany A. James, WI	716	
	Giuliani, Italy	27		T. Jeffrey, CA	245-	54
	R. Glenn, NY	263		K. Jensen, Denmark	4	34
	H. Glenn, NY	264		Jergler, Hungary	4	
	F. Goff, CA			E. Johnson, MD	377-	9
	Gombos, Hungary	62		Kaiba, Yugoslavia	16	_
	N. Goodwin, LA			A. Kalata, IL	9	
	A. Graham, IL	170		Karaszi, Hungary	23	
	H. Granslo, Norway	3280- 34		Karli, Yugoslavia	21	
GJH J.	H. Grant, SC	58		W. Kelley, Jr., VA	223-	92
	Gregory, France	12		Kesztheli, Hungary	75	
	W. Griese, III, CT		KRB R.	P. King, MN	174-	37
GFK F.	Grove, MI	178	KBS B.	Klaas, W. Germany	48	
GML M.	Grunanger, Austria	80		Klinting, Denmark	188-	1
	Grunnet, Denmark	380		W. Kneipp, LA	225-	16
GRZ H.	Grzelczyk, W. Germany				35	
	Gualdoni, Italy			W. Knight, ME	3	
	Gugumus, France	305		P. Knight, ME	84	
	Gunther, France	2923		H. Knowles, MA	33	
GYA L.	Gyarmati, Hungary	2923 4 21		Kocsis, Hungary	172	
HDH S.	Hadhazi, Hungary			F. Koehler, AZ	820	
	A. Halbach, CO	3633- 114 1526- 5			20 118	
	Ham, CO	86		Kohl, Switzerland	68	
	Hanon, France T. Hansen, CA	2		Kole, Netherlands	69	
	Harles, ND	5 4		J. Koller, Canada S. Kolman, IL	1248-	233
	Harrington, NY	22		A. Komorous, Canada		233
	P. Harvan, MO	84		Kosa-Kiss, Romania	691	
	Hasubick, W. Germany			Koshiro, Japan	376-	2
				Kovacs, Hungary	32	_
	S. Heasley, PA	14		Kovacs, Hungary	539	
HGT~T.	Hegedus, Hungary	91		Krisch, W. Germany	879	
	A. Heifner, CO			L. Krisciunas, HI	6	
HEN~C.	Henshaw, England	252	KRU J.	Kruta, Czechoslovakia	274	
HJN J.	Hers, S. Africa	1451- 547	KPG&G.	Kuipers, Netherlands	2028-	187
HES C.	Hesseltine, WI	26		Kuplinski, Jr., PA	37	
HEV~Z.	Hevesi, Hungary	67		F. Kurtz, Hungary	26	
	L. Hiett, VA	2561		Kutnjak, Yugoslavia	159	
	T. Higgs, Zimbabwe			Lambert, TX	88	
	E. Hill, AZ			W. Langhans, CA	443-	104
	Hirasawa, Japan			LaPerna, Italy	83	
	G. Hodgson, IA	7		M. Laskowski, IN	53	
	Holl, Hungary	1		Latzel, NE	155	
	Honda, Japan	164		Lazuka, IL	173	
HDI D.	Horowitz, TX	36	ת מעה.	C. Leake, IL	160	

T ED +D	Tohout Duones	4.0		MDE D. R. Monger, FL 259
	Lebert, France	48		MDD Dt itt iiongo-/
	Leifsen, Norway	162		MII I. Homzooy
	Lengyel, Hungary	110		MOK K. D. Molibre, 111
	Letellier, France	119		110 11. 0. 1101104 94-7
	J. LeVeque, CA	31		MAO A.J. Morbidelli, Italy 1124
	N. Ley, Greece	163		non de ne norgan, n-
	Liller, Chile	91		1.00 0 1 21 1.02 jan.,
	Limburg, Netherlands			THER C. D. HOLLED, III.
	Lin, CA	11		MB A.G.F.Morrisby, Zimbabwe 467
	C. Lindbloom, PA	269		MOW W. C. Morrison, Canada 3854- 1
	Lingas, Norway	5		MFK F. K. Mulligan, CA 208
	F. Loblaw, Canada	27		MUN C. R. Munford, England 163
	W. Lohvinenko, Canada		4	MCZ C. Munoz, AL 23
LGV G.	V. Lopatynski, CA	28-	5	MLZ L. Munoz, AL 21
LOL*J.	Lorsignol, France	91		MIA~A. Murai, Hungary 74
LOS*S.	Lorsignol, France	53		MJC M. J. Murphy, NC 38
	J. Los, NH	36		MRZ R. P. Muzinich, CA 13
LX W.	M. Lowder, NY	6602		MYE K. J. Myers, IN 7
LTB T.	Lubbers, MN	22		NMA~A. M. Nagy, Hungary 52
LCG C.	Ludwig, Belgium	502		NZO~Z. Nagy, Hungary 5
	Lukas, W. Germany	40		NAM M. Naslund, Sweden 7
LJO&J.	O. Luurs, Netherland	ls 58		NRH R. H. Nelson, Canada 93- 1
	F. Lynch, RI	22		BAO~A.Nemeth-Buhin, Hungary 1786
	J. MacDonald, II, Canad	la 12		NRB R. Neubauer, Austria 28
	Makfuhas, NY	1		NM M. Newberry, CO 37
	Mandy, Zimbabwe	50		NPJ P. J. Newman, TX 6
	Marozsak, Hungary	4		NJA J. A. Nielsen, NY 50
	Marx, W. Germany	1830-	4	NVG V. G. Nielsen, Denmark 67
	Matsuyama, Japan	343		NTE E. Norton, MA 14
	Mattei, MA	3		NTS T. S. Norton, MA 206
	Matteo, Italy	590		NOG G. T. Nowak, VT 78
	H. Mayer, OH		479	OBG G. J. O'Brien, CT 101
	W. Mayer, Jr., OH	62-		OJO J. O. Olesen, Denmark 122
	McDonald, Canada	12		OV E. G. Oravec, NY 2739
	I. McGowan, NC	12		OB M.D. Overbeek, S.Africa 8080- 149
	McKenna, NJ	854-	31	PCP C. Pampaloni, Italy 48
	McMillan, NC	512	-	PAG~G. Papp, Hungary 13
	B. Medias, Norway	74		PPS~S. Papp, Hungary 306
	J. Medway, England	1400		PRN R. Patrick, PA 493- 91
	L. Megginson, MO	248		PAR R. H. Patterson, NY 33- 6
	T. Mendenhall, IN	2		PAT C. Patton, III, MI 147
	R. Meyer, IN	2		PLZ L. Pazzi, S. Africa 758- 57
	Meyers, S. Africa	44		PN A. E. Pearlmutter, MA 245
		166		PEI E. Pedersen, Denmark 28
	Mezosi, Hungary Midtskogen, Denmark	594		PEG*C. Peguet, France 262
	F. Miller, FL	10 8-	,	· · ·
	Millyard, Canada	15	_	
	E. Milton, CA			
	A. Mimna, OH	197		· · · · · · · · · · · · · · · · ·
	R. Miner, IN	125		
	Minois, France	1654		
_	Minter, WI	100		
	Mizser, Hungary	2001		PGZ G. Pierangelo, Italy 777
	Mocarski, IL	30		PIJ~J. Piriti, Hungary 192
	Mochizuki, Japan	12		PWR R. E. Powaski, OH 53
	Mohrbacher, OH	63		PFJ F. J. Price, NY 38
	Molnar, VA	618	~ ~	PRG G. Prosser, S. Africa 93
	Monella, Italy	111-	29	QTL T. Quesnell, WI 55- 1
MGF G.	Monferini, Italy	31		RMJ M. Raley, Jr., GA 5

	Dobe Hungary	100		CDC N C Common D3	
	Ratz, Hungary	180		SPG N. G. Spryn, PA 27	
	Ravet, France	30		STR R. H. Stanton, CA 313-	257
RRE R.	E. Reaves, CA	11		SKS T. K. Steckner, Canada 450-	21
	Rehner, OH	10		SGP P. Stegmann, NJ 107	
	Reichenbacher, E. Germa				
		_			
	Reinhard, Austria	11		SET C. Stephan, OH 380-	21
RNT C.	C. Reinhart, OH	15		STF G.Stephanopoulos, Greecel 437	
REN*J.	Renault, France	279		SWS R. S. Stewart, Canada 5	
	I. Riggs, NY	1119-	151	STQ N. Stoikidis, Greece 88	
	Ritterbush, NH	18			
				SNJ N. Stritof, Yugoslavia 22	
	Robek, Yugoslavia	11		SGM M. D. Sugarman, CA 40-	19
	Roberts, MS	115-	23	SGA~G. Sule, Hungary 4	
RAR R.	A. Robotham, Canada	604		SJN J. Sullivan, OK 11	
RKA~L.	Roka, Hungary	30		SRG R. Surgens, NY 1	
	W. Rosebrugh, FL	422		HUO D. J. Sventek, TX 42	
	- ·				
	M. Ross, MI	71	_	SVN P. L. Sventek, TX 2073-	18
RR R.	E. Royer, CA	17-	1	SZU"B. Szabo, Hungary 8	
RPH H.	Rumball-Petre, CA	24		SZQ~E. Szabo, Hungary 6	
RAN A.	Rutter, NY	6		SOZ~L. Szantho, Hungary 1622	
	J. Ryan, MS	135			
				SMZ~M. Szasz, Hungary 4	
	D. Sabia, PA	43		SAO~A. Szauer, Hungary 33	
SJC J.	C. Sadow, LA	123		SZG~B. Szegedi, Hungary 125	
SGT~T.	Sagodi, Hungary	432		SZK~G. Szitkay, Hungary 13	
	Sainsbury, CA	29		SKB"B. Szoke, Hungary 30	
					-
	Sala, Italy	44		TZR R. G. Tanzer, NJ 49-	1
	Samolyk, WI	2404		TU D. Taulman, TX 1	
SNL J.	G. Sandel, SC	615		TDR D. R. Taylor, CA 4	
SKA~M.	Sarkadi, Hungary	3		TPS~I. Tepliczky, Hungary 42	
	Sarkadi, Hungary	3		TAS A. Thomas, NC 12	
	C. Saville, England				
		150		TM H. D. Thomas, WA 266	
	M. Schimpf, CA	18		THM J. V. Thomas, OR 2	
SMF F.	Schmidt, NY	102		TMR R. P. Thomas, CA 175	
SRD R.	H. Schmidt, MN	68		THR R. R. Thompson, Canada 151	
	Schroyens, Belgium	75		THU*B. Thouet, France 505	
		4			
	Schroyens, Belgium			TAN~A. Tolgyesi, Hungary 60	
	Schweitzer, France	3791		TML~L. Tomasewszky, Hungary 110	
SCE C.	E. Scovil, CT	1510-	675	TOO~J. Toone, England 2393	
SEE E.	H. Seifert, NE	42		TOT~T. Torma, Hungary 1	
SNP P.	A. Sernas, IL	4		TCE*E. C. Torres, France 495	
	B. Sharpe, Canada	2729-	32	TGW&G.W.Tremonti, Netherlands232	
			32		11
	Shaver, OR	2		•	11
	Shervais, Jr., VA	. 6		TJC J. C. Truax, MI 7	
SRC R.	C.Shinkfield, Austral	ia 42		TUB~V. Tuboly, Hungary 40	
SJA A.	J. Shorten, England	89		TUC C. Turk, S. Africa 69	
	J. Shotter, PA	304-	4	TDK D. K. Turner, NY 2	
	Sicoli, Italy	67	•	TYS R. L. Tyson, NY 182	
	Simmons, FL	21		UJV~A. Ujvarosy, Hungary 23	_
SNE N.	A. Simmons, WI	299-	119	UND G. E. Underhay, CA 128-	1
SKW W.	Simmons, FL	21		VAD~S. Vadasz, Hungary 8	
	Singer-Brewster, CA			VAI*J. P. Vaidis, France 783	
	M. Slauson, IA	14			53
	•			VCP P. Van Cauteren, Belgium 366-	33
	Slotegraaf, S. Afri			VDJ&J.F.Van Dijk, Netherlands 41	_
SOD J.	Soder, OH	22		VPR P. Vanier, Canada 40-	8
SOK~M.	Somodi, Hungary	17		VNL F. R. Van Loo, Belgium 365-	32
	G. Southwick, WA	366		VSK K. Van Sickle, NY 2	
		636		VWS J.Van Wassenhove, Belgium 25	
	Speil, Poland				
	F. Spieth, Jr., CA	36		VAR~G. Varga, Hungary 15	
	Spongsveen, Norway	258		VZO~Z. Varga, Hungary 9	
sc c.	E. Spratt, Canada	1592-	203	VED*P. Vedrenne, France 3432	

AAVSO OBSERVERS 1982 - 1983

VIA*J. Vialle, France	6362 560		WI D. WDJ D.	Whitten, TX B. Williams, IN J. Williams, TN	15 1230- 11 52
VIN J. V. Vincent, Zimbabwe		T		E. Williams, OH	73
WEO E. O. Waagen, MA	2		WLP P.	Wils, Belgium	1238- 113
WGJ G. J. Waffen, OH	4		WJA J.	A. Wilson, MO	731- 1
WMJ&J.Warmerdam, Netherlands	335		WSN T.	W. Wilson, WV	1002- 303
WWA W. A. Washburn, GA	36		WWM W.	M. Wilson, TN	3
WBB W. V. Webb, OH	239		WTO T.	Wojtecki, OH	3
WER R. J. Weber, KS	2301-	934	WCL C.	L. Womack, TX	761
WCB C. B. Webster, PA	212-	1	YON R.	R. Young, PA	70
WEI D. D. Weier, WI	988-	234	ZAF J.	Zaffi, Venezuela	119
WC R. Wend, IL	170-	2		Zajacz, Hungary	571
WEF F. R. West, AL	773			Zalezsak, Hungary	447
WTJ J. E. West, TX	296		ZJJ J.	J. Zamichiei,Argenti	ina 11
WYT T. Weyenberg, WI	13		ZAM M.	Zanotta, Italy	336
			ZAL~L.	Zavodi, Hungary	7

- also member of Association Française des Observateurs d'Étoiles Variable (AFOEV).
- also member of Pleione Valtozocsillag-eszlelo Halozat (Hungary). also member of Nederlandse Vereniging Voor Weeren Sterrenkunde, Werkgroep Veranderlijke Sterren (NVVWS, WVS).

Table IV

List of Individuals Requesting AAVSO Data During Fiscal Year 1982-1983*

Adams, S. Augason, G. C. Beek, S. Berger, C. Bernhard, W. E. Birney, D. S. Blair, W. P.	Illinois NASA Ames Research Center, CA Cornell University, NY Florida Canada Wellesley College, MA Harvard-Smithsonian Center for
Biail, W. F.	Astrophysics, MA
Bridge, R.	Los Alamos National Laboratory, NM University of Toledo, OH England
	Malta Astronomy magazine
	California Alabama
Chen, P. C. Clark, F. Clarke, J. T. Cohen, J.	University of Texas University of Kentucky University of California, Berkeley University of California, Berkeley University of California, Berkeley University of California, Berkeley California Institute of Technology

Cordova, F.	Mullard Taboratory England
	Mullard Laboratory, England
Cuypers, J.	Katholieke Univ. Leuven, Belgium
Dahari, O.	Lick Observatory, CA
Dalmeri, I.	Italy
Dionne, M.	•
Dunch! W T	Canada
Duschl, W. J.	Max-Planck Institut, West Germany
Eicher, D.	<u>Deep Sky</u> magazine
Eicher, D.	Deep Sky magazine
Eicher, D.	
Bicher, D.	<u>Deep Sky</u> magazine
Eicher, D.	<u>Deep Sky</u> magazine
Espey, B.	Trinity College, Ireland
Figer, D. F.	Ohio
Figer, D. F.	
riger, D. r.	Ohio
Folloni, J. E.	Rhode Island
Freeman, M.	California
Friedjung, M.	Institut d'Astrophysique, France
Garcia, M.	
Galcia, M.	Harvard-Smithsonian Center for
	Astrophysics, MA
Gehrz, R. D.	University of Wyoming
Gierhart, C.	Virginia
Goodwin, J., Jr.	Massachusetts
Gravina, R.	Observatoire de Lyon, France
Hadley, D.	University of Texas
Hauke, J.	New York
Heck, A.	Observatoire de Strasbourg, France
Henson, G.	University of Oregon
Hessman, G. V.	University of Texas
Hidayat, B.	Indonesia
Hineline, M.	Maine
Hoeppe, G. R.	West Germany
Holm, A.	NASA Goddard Space Flight Center, MD
Holm, A.	NASA Goddard Space Flight Center, MD
Howell, S.	Michigan
Iyengar, K. V. K.	Tata Institute of Fundamental Research,
If chigary K. V. K.	
- 1	India
Johnson, H. M.	Lockheed Missiles & Space Co., Inc., CA
Johnson, T.	Massachusetts Institute of Technology
Kafatos, M.	George Mason University, VA
Karle, J. H.	Lewis and Clark College, OR
Kemper, E.	Johns Hopkins University, MD
Kent, H. P.	AVCO Everett Research Laboratory, MA
Kent, H. P.	AVCO Everett Research Laboratory, MA
	University of Illinois
Kenyon, S.	
Kilkenny, D.	South African Astronomical Observatory
King, A. R.	University of Leicester, England
King, A. R.	University of Leicester, England
Kiplinger, A. L.	NASA Goddard Space Flight Center, MD
Kitamura, M.	Tokyo Astronomical Observatory, Japan
Kleinman, S.	Lincoln Laboratories, M.I.T., MA
Kosth, R.	Jet Propulsion Laboratories, CA
Krautter, J.	Max-Planck Institut, West Germany
Krautter, J.	
	Max-Planck Institut, West Germany
Krautter, J.	Max-Planck Institut, West Germany
la Dous, C.	Universität München, West Germany
la Dous, C.	Universität München, West Germany
Langmesser, U.	Weizmann Institute of Science, Israel
Locatelli, C.	France
Lopez Arroyo, M.	Observatorio Astronomico de Madrid,
_	Spain
MacRobert, A.	
"" OTODOTO V	Sky & Telescope magazine
MagDobox+ 3	Sky & Telescope magazine
MacRobert, A.	<u>Sky & Telescope</u> magazine
MacRobert, A.	Sky & Telescope magazine Sky & Telescope magazine
	<u>Sky & Telescope</u> magazine

	THE ALL TOURS
MacRobert, A.	Sky & Telescope magazine
Magalhaes, A. M.	Vatican Observatory Research Group
Mateo, M.	University of Washington
Mayer, B.	California
Mazeh, T.	Tel Aviv University, Israel
Mazeh, T.	Tel Aviv University, Israel
Mazeh, T.	Tel Aviv University, Israel
Michalitsianos, R.	NASA Goddard Space Flight Center, MD
Naiden, J.	Washington
Noronha, P.	Association of Friends of Astronomy,
	Goa, India
Orlati, T.	Case Western Reserve University, OH
Pasachoff, J. M.	Williams College, MA
Pasachoff, J. M.	Williams College, MA
Pasachoff, J. M.	Williams College, MA
Patterson, J.	Harvard-Smithsonian Center for
	Astrophysics, MA
Patterson, J.	Harvard-Smithsonian Center for
	Astrophysics, MA
Dorgy T D	
Percy, J. R.	University of Toronto, Canada
Persinger, T.	East Tennessee State University
Polidan, R.	University of Southern California
Sabella, C. A.	Pennsylvania
Schwartz, C.	Massachusetts
Sherrington, M.	University of Leicester, England
Silk, A.	Massachusetts
Sion, E.	Arizona State University
Snijders, T.	Royal Greenwich Observatory, England
Stencel, R.	NASA, Washington, DC
Stover, R.	University of California, Santa Cruz
Szkody, P.	University of Washington
Szkody, P.	University of Washington
Szkody, P.	University of Washington
Tapia, S.	University of Arizona
	Osservatorio Astronomico Capodimonte,
Terranegra, L.	
	Italy
Tomaino, T.	Massachusetts Institute of Technology
Turner, K. C.	Arecibo Observatory, Puerto Rico
Turner, K. C.	Arecibo Observatory, Puerto Rico
Turner, K. C.	Arecibo Observatory, Puerto Rico
Underhill, A. B.	NASA Goddard Space Flight Center, MD
Viotti, R.	CNR Astrofisica, Italy
Vojkhanskaya, N. F.	Special Astrophysical Observatory, USSR
Wade, R. A.	University of Cambridge, England
Wallerstein, G.	University of Washington
Wallerstein, G.	University of Washington
Wallerstein, G.	University of Washington
	University of Washington
Wallerstein, G.	
Wannier, P. D.	Calfornia Institute of Technology
Wargau, W.	Universität Erlangen-Nurnberg, West
	Germany
Wargau, W.	Universität Erlangen-Nurnberg, West
5 ·	Germany
Waugh, R.	Worcester Science Center, MA
Webbink, R. F.	University of Illinois
White, N.	European Space Observatory, England
White, N.	European Space Observatory, England
White, N.	European Space Observatory, England

Whitney, T. Wild, A.	Massachusetts The Science Teacher magazine
Williams, R. E.	University of Arizona
Willson, L. A.	Iowa State University
Willson, L. A.	Iowa State University
Willson, L. A.	Iowa State University

^{*} Name repeated for each request.

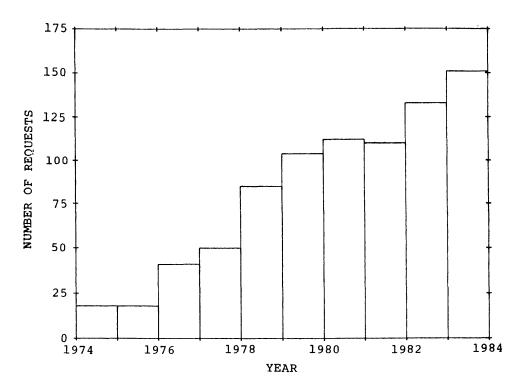


Figure 1. Graphic representation of the number of special requests for AAVSO data filled each year since 1974.

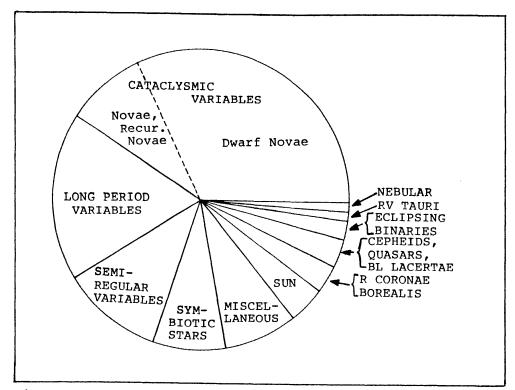


Figure 2. Types of variable stars for which data were requested during the fiscal year 1982-83.

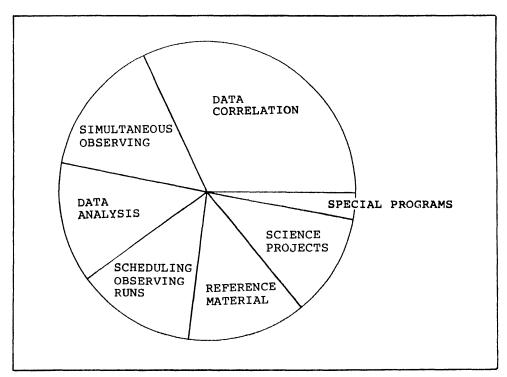


Figure 3. Areas in which AAVSO data and services were used during the fiscal year 1982-83.

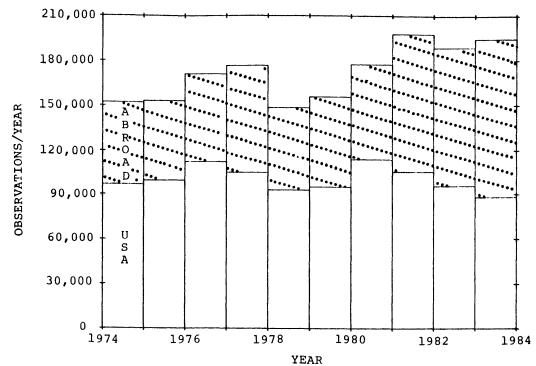


Figure 4. Graphic representation of the number of observations received at Headquarters each year since 1974.

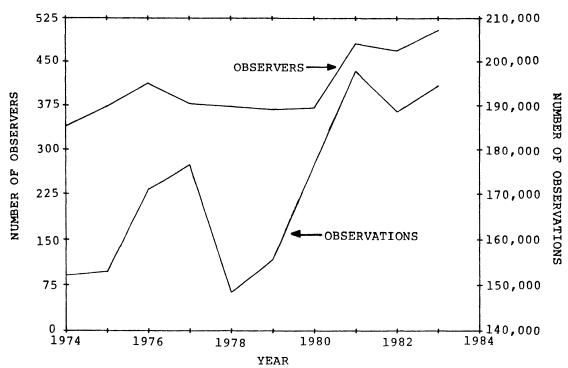


Figure 5. Graphic representation of the number of observers and observations for each year since 1974.