

25TH ANNUAL REPORT OF THE RECORDER
FOR THE YEAR ENDING SEPTEMBER 30, 1956

It gives me great pleasure to present herewith the 25th Annual Report of the Recorder of the AAVSO for the year 1955-56. Every year brings its different problems and solutions. This year our financial worries were temporarily relieved by a two-year grant from the National Science Foundation, a one-year contract with the Office of Naval Research, and a contract with the National Bureau of Standards.

The first two of these financial aids are to help with the work on variable stars. The National Science Foundation grant was given for the "Analysis, Correlation and Publication of Visual Observations of Variable Stars," for current years, and the ONR contract was made to prepare observations of 1952 and 1953 for publication. The contract with the National Bureau of Standards is to gather observations of sunspot counts, and to prepare the American Relative Sunspot Numbers.

As our Treasurer's report shows, our Endowment Fund is growing, and we are building up a very fine investment portfolio. Members should bear in mind that it can be very advantageous taxwise to the donor to give stocks to the Association. All contributions, both large and small, are needed and welcome. Our friends are ingenious in their ways of helping. Some observers make a practice of slipping a bill in with their observations. Robert Dunn is unofficially our "official photographer." He took a very fine group photograph at our 1956 spring meeting at Cornell, made 8x10" prints of it, and turned over all proceeds of the sale to the AAVSO Endowment Fund. Mrs. Phoebe Haas always sends a gift with her New Year's greeting. Mrs. Louise Sutherland sent a check along with her regrets that she could not attend our annual meeting. Our South African observer, Reginald de Kock, pays dues even though he is an Honorary member. Our thanks go to all of our kind friends.

Many observatories in the country have expressed their willingness to help pay for the AAVSO publications, but they cannot include contributions in their budgets. We decided to set up a subscription rate of \$15 a year for the AAVSO technical publications, and \$35 a year for publications plus additional special services. A circular letter was mailed out during the summer, and by the last of September we had ten \$15 subscriptions for the fiscal year 1955-56, and thirteen for the year 1956-57, plus a subscription for special services from the Mount Wilson and Palomar Observatories.

Merit Award. The 14th Merit Award was presented at the 1956 Spring Meeting at Cornell University to "Margaret Walton Mayall and R. Newton Mayall for their unflinching devotion to the ideals and interests of the Association during its recent years of great trial, and for their combined efforts in completing for publication the Leon Campbell Memorial Volume 'Studies of Long Period Variables.'" The award is an exceptionally beautiful scroll designed and illuminated by our member, Edgar Paulton. The first 13 awards were the handiwork of our late Patron member, Fred E. Jones. At the last meeting he attended before his death in 1955, Mr. Jones talked with Edgar Paulton and asked him if he would carry on the work of the illuminated awards. Our very best thanks go to Mr. Paulton for carrying out his agreement so beautifully.

Requests for Information. We have continued to receive some very good publicity, and have had many requests for information about the work of the AAVSO. During the year material has been sent out in answer to 460 requests, varying from pencilled notes from grade-schoolers to letters from people with fine equipment, who are anxious to start observing programs. If the material we send the "budding scientists" helps to keep up their enthusiasm, the AAVSO is doing a good deed.

Membership. Our membership list continues to grow, due to our publicity and the good work of our members. At our 1955 annual meeting we elected 22 annual, 2 sustaining, and 1 life member. At the 1956 Spring meeting, we elected 30 annual and 2 sustaining members. I am sorry to have to report the death of two of our members: George C. Waldo of Fairfield, Conn., a patron of the Association and one of the "Old Guard;" and Edwin W. Hering of Paramus, New Jersey. We were all very much saddened to hear of the death of Fredrica Campbell, the widow of Leon Campbell, who was so closely associated with the AAVSO from its very beginning.

Special Contributions from Members. In addition to the financial support from our members mentioned above, we have received a great deal of help in other ways. Special mention should be made of the many hours of work John Gaustad gave us during the year. In spite of his busy life as a Freshman at Harvard, he came to the office regularly one afternoon each week, and helped us with many jobs. I want to mention especially his work on lantern slides and in collecting and filing material in our Variable Star files.

Mrs. Phoebe Haas has continued her work on the 10-day mean values of variable star observations. The United Scientific Company again printed the AAVSO Julian Day Calendar. It was widely distributed among their clients and to AAVSO members. In the spring Mr. H.D. Isenberg of Chicago duplicated 25 copies of the "Instruction Booklet for Observers," for us to distribute as needed until the revised copy has been completed and printed. The revision is still on the agenda, so Mr. Isenberg has again come to our rescue with 50 more duplicated copies of the old version.

Library. The Charles Y. McAteer Library has received 100 publications, 238 pamphlets, reprints and circulars, and 22 books. Among the gifts were some new astronomy books given by Helen Stephansky, which help bring our library up to date, some from Newton and Margaret Mayall, and three early-American items given by Anton Kovar of Arlington, Mass., who has in the past presented many astronomical Americana to the library.

Publications. The Leon Campbell Memorial volume "Studies of Long Period Variables" has received high praise from reviewers and users of it. During the year 195 copies were sold, and orders continue to come in. Our regular BiMonthly Predictions of the approximate brightness of the variables has been discontinued, and it was suggested that observers might find it very interesting to make their own predictions with the use of the ANNUAL PREDICTIONS OF MAXIMA AND MINIMA OF LONG PERIOD VARIABLES, and the mean light curves in the Campbell Volume. Many observers are now doing this, and take great delight in noting deviations from the mean curves.

Three AAVSO Bulletins were published during the year: No.11, 1956 ANNUAL PREDICTIONS OF MAXIMA AND MINIMA OF LONG PERIOD VARIABLES, containing predicted dates of 518 max and 523 minima for 395 long period variables; No.12, PREDICTIONS OF MAGNITUDE RANGES FOR EVERY OTHER MONTH DURING THE YEAR, computed by Walter Houston from the AAVSO BULLETIN NO.11 and the mean light curves in the Campbell STUDIES OF LONG PERIOD VARIABLES. It was printed as "Insert Feature No.2" of the GREAT PLAINS OBSERVER, with enough additional copies for AAVSO observers. BULLETIN NO.13 was issued as an ADDENDA TO NO.12, and contained predictions for variables for which we have no mean light curves.

QUARTERLY REPORT NO.18 was distributed in the spring of 1956. A new form was used for this number, and 10-day mean values were printed instead of individual observations. By doing this we were able to print the results of more than 50,000 observations of about 600 variables made by AAVSO members during the 400 day interval from

Nov. 14, 1950 through Dec. 18, 1951, in one 67-page Report. Individual observations have been preserved on microfilm.

QUARTERLY REPORT NO. 19 is in preparation and 10-day means have been determined for the first hundred variables. It will contain results of the observations during the 400-day period from Dec. 19, 1951 to Jan. 21, 1953. In addition to the number of observations used in each 10-day mean value, QUARTERLY REPORT NO. 19 will have an additional column for a weight, an arbitrary number assigned by the Recorder on a scale of 5, to indicate the reliability of the mean value.

Two numbers of the AAVSO ABSTRACTS were distributed. They contained abstracts of papers presented at the Fall and Spring Meetings, edited by R. Newton Mayall.

VARIABLE STAR NOTES appeared in 5 issues of the Journal of the Royal Astronomical Society of Canada. Copy for the 6th issue (March-April 1956) was held up in customs for some unexplainable reason, until it was too late for the printer.

ANNUAL SUMMARY OF OBSERVATIONS. During the fiscal year 1955-56, 688 reports of variable star observations were received, an average of 57 reports per month. These reports contained 49,579 observations made by 131 observers. In addition to the regular estimates of brightness, three observers spent a total of 33 hours and 43 minutes in constant watch of 'flare stars.' Twenty-seven observers from 18 countries outside the continental United States contributed 28% of the observations received. 104 observers from 25 states contributed the other 72%. Table I lists the countries in alphabetical order, with the number of observers and total observations from each.

TABLE I - COUNTRIES

Alaska	1	10	Greece	1	312	South Africa	4	6934
Argentina	1	371	Hawaii	1	7	So. Rhodesia	1	327
Australia	3	171	Italy	2	886	Sweden	1	1027
Canada	3	329	Jamaica	1	121	Taiwan	1	31
Denmark	1	20	Japan	1	267	United States	104	35865
France	1	57	Mexico	1	1867			
Germany	2	967	Peru	1	10			
						19 countries	131	49579

Table II lists the states with their observers and numbers of observations. The greatest number of observations again comes from New York State with more than 13,000 observations, or over 27% of the total received, due to the combined efforts of the Observing Group of the Amateur Astronomers Association, and the Junior Astronomy Club.

TABLE II - UNITED STATES

California	11	3297	Massachusetts	1	151	Ohio	8	2641
Connecticut	2	2391	Michigan	2	232	Oklahoma	1	40
Florida	2	139	Minnesota	3	2061	Pennsylvania	1	52
Georgia	2	382	Missouri	2	1852	So. Carolina	1	49
Illinois	8	1003	Montana	1	163	Texas	2	49
Indiana	5	670	New Jersey	9	675	Virginia	1	56
Kansas	2	368	New York	21	*15466	Washington	2	78
Maine	1	3397			*13,581 from AAA and JAC	Wisconsin	12	592
Maryland	1	44	No. Carolina	3	17	25 states	104	35865

It is always gratifying to receive regular monthly reports from the observers. This year 12 monthly reports were received from each of the following 21 observers:

Robert Adams, Curtis Anderson, Ray Berg, James Breckinridge, James Carlisle, Thomas Cragg, Gunnar Darsenius, George Diedrich, Cyrus Fernald, Clinton Ford, Philip Goldenblatt, Ferdinand Hartmann, George Hein, Reginald de Kock, Allan Montague, Francis Morgan, Edward Oravec, Leslie Peltier, Patrick Rizzo, David Rosebrugh, and Leonard Solomon. Four observers, O.M. Erpenstein, Frank Kelly, Robert Percy, and Paul Skaritka, each missed just one month; seven observers sent 10 reports each; nine sent 9 reports; two sent 8; two sent 7; six sent 6; and eighty sent in 5 reports or less.

The 'Inner Sanctum' has been defined as open to observers who observe stars at 13.8 magnitude or fainter. Twenty-three observers are eligible for membership this year: Adams, Aronowitz, Ball, Carpenter, Cragg, Elias, Erpenstein, Ford, Goldenblatt, Halbach, Johnsson (one observation of one star, 14.1 magnitude!), de Kock, Lacchini, Maran, Melville, Neff, Peltier, Rudolph, Renner, Royer, Taboada, Venter, and Watson. Through the combined efforts of these observers, the minimum phases of many of the variables are being much better observed than ever before. It is hoped that other observers who have suitable equipment will make a still greater effort to concentrate on the faint variables. Of course we must not neglect the brighter stars, but we have many observers with small instruments who can observe only the brighter variables. It is a sad waste of a 6-inch reflector to observe naked-eye or binocular variables.

We have had 32 new observers send in their first reports this year. Nineteen of them sent in two or more reports; eight of the others sent their first reports in the last few months, and most of them will probably continue to observe.

Work on the 'flare' stars has proven to be of especial interest to several of our observers. Gunnar Darsenius has 23^h 53^m of observations for this year, and he writes that he has a total of about 40 hours of continuous observation all together. This year he has watched the following flare stars: YZ CMi, DO Cep, UV Cet, EV Lac, AD Leo, V371 Ori, and SZ UMa, and the suspected flare star, BD+55° 1823. He also observed a maximum of AE Aqr in August. S.C. Venter watched UV Cet and AE Aqr for a total of 6h 20^m, and Michiel Overbeek kept a constant watch of UV Cet for a total of 3^h 20^m.

Table III contains the list of observers arranged in order of number of observations submitted during the year. The 'top' observer for 1955-56 is again Reginald de Kock of South Africa, with a total of 5,699 observations. In second place we again find Edward Oravec of New York with 5,019, and in third place is Cyrus Fernald of Maine with 3,397. In fourth place is Paul Skaritka of New York with 2,971; fifth is Thomas Cragg of California with 2,459; sixth Curtis Anderson, Minnesota, with 2,041.

TABLE III - AAVSO OBSERVERS

1	R.P. de Kock, South Africa	5699 S	14	S.C. Venter, Pretoria, So. Africa	1071 S
2	Edward Oravec, Tuckahoe, N.Y.	5019		(plus 6h 20m flare stars)	
3	Cyrus Fernald, Wilton, Maine	3397	15	C.J. Renner, Castalia, Ohio	1053 S
4	Paul Skaritka, Bronx, N.Y.	2971	16	Gunnar Darsenius, Gotenburg, Swed.	1027
5	Thomas Cragg, Inglewood, Cal.	2459 S		(plus 23 ^h 53 ^m flare stars)	
6	Curtis Anderson, Minneapolis	2041	17	David Rosebrugh, Meriden, Conn.	981
7	Domingo Taboada, Puebla, Mexico	1867 S	18	Reinhard Rudolph, Berlin, Germany	961 S
8	Robert Adams, Neosho, Missouri	1828 S	19	Leonard Solomon, Brooklyn, N.Y.	932
9	Ferdinand Hartmann, St. Albans NY	1756	20	G.B. Lacchini, Faenza, Italy	823 S
10	Clinton Ford, Suffield, Conn.	1410 S	21	Stephen Maran, Brooklyn, N.Y.	721 S
11	Philip Goldenblatt, Bronx, N.Y.	1194 S	22	George Hein, Bronx, N.Y.	695
12	Leslie Peltier, Delphos, Ohio	1147 S	23	Ray Berg, Dyer, Indiana	584
13	Charles Aronowitz, Brooklyn, NY	1084 S	24	Allen Montague, Oak Park, Illinois	396

25	P.O. Parker, Griffin, Georgia	380	78	C.H. Tsai, Taipei, Taiwan	31
26	Carlos Segers, Buenos Aires, Arg.	371	79	Tom Waskiewicz, Inkster, Michigan	31
27	Frederick Pilcher, Topeka, Kans.	367	80	William Weaverling, Dyer, Indiana	28
28	Patrick Rizzo, Brooklyn, N.Y.	344	81	Albert Sharpless, SoMiami, Florida	25
29	R.H. Bicknell, Bindura, So. Rhod.	327	82	Kenneth Weitzenhoffer, New York NY	25
30	Francis Morgan, Verdun, Quebec	317	83	Stephen Bieda, San Jose, Calif.	24
31	Demetrius Elias, Athens, Greece	312 S	84	George Lovi, Lakewood, New Jersey	24
32	William Glenn, New York, N.Y.	281	85	John Neff, Wauwatosa, Wisconsin	24 S
33	Tatsuo Yamada, Aichi, Japan	267	86	Donald Zahner, Clayton, Missouri	24
34	James Breckinridge, Cleveland, O.	263	87	Nelson Cleary, Skokie, Illinois	23
35	Maxwell Kimball, Glen Ridge, NJ	261	88	J.G. Goodsell, So. Pasadena, Calif	23
36	O.M. Erpenstein, Millbrae, Calif	228 S	89	Morgan Thomas, Winslow, Washington	22
37	Arthur Pearlmutter, Kew Gardens NY	227	90	P.B. Darnell, Copenhagen, Denmark	20
38	Jerome Wyckoff, Ridgewood, N.J.	221	91	DeLorne Diedrich, Elyria, Ohio	17
39	Herbert Beidler, Chicago, Ill.	206	92	Norman Haslop, Elyria, Ohio	12
40	Ronald Royer, Pac. Palisades, Cal	205 S	93	M.V. Barnhill, Wilmington, N.C.	11
41	Christine Culp, Grand Ledge, Mich	201	94	Philip Seldon, Dayton, Ohio	11
42	Edward Halbach, Milwaukee, Wisc	179 S	95	Kenneth Walko, Elyria, Ohio	11
43	Charles McPherson, Edgar, Mont	163	96	Victor Estremadoyro, Lima, Peru	10
44	Ralph Buckstaff, Oshkosh, Wisc	158	97	John Gaustad, Minneapolis, Minn.	10
45	Gerald Schultz, Lincolnwood, Ill	158	98	Robert Pivonka, Anchorage, Alaska	10
46	Jeremy Knowles, Hollis, N. Y.	151	99	Stephen Robb, Minneapolis, Minn.	10
47	A.R. Ball, Milwaukee, Wisconsin	137 S	100	Robert Cunningham, San Jose, Cal.	9
48	George Diedrich, Elyria, Ohio	137	101	William Gleason, Oakland, Calif.	9
49	Frank Kelly, Binghamton, N.Y.	129	102	Curtis Richards, Milwaukee, Wisc.	9
50	E.C. Melville, Jamaica, B.W.I.	121 S	103	Richard Wend, Milwaukee, Wisconsin	9
51	Carl Cleary, Skokie, Illinois	117	104	James Berg, Dyer, Indiana	8
52	Robert W. Miller, Miami, Florida	114	105	Franklin Loehde, Edmonton, Canada	8
53	Robert Deemer, Pasadena, Calif.	110	106	Floyd Houston, New Suffolk, N.Y.	7
54	Donald Charles, Pleasant Hill, Cal	108	107	Tony Bonilla, Honolulu, Hawaii	7
55	Mark Howarth, Newcastle NSW, Aust	101	108	Jane Shelby, Teaneck, New Jersey	7
56	Russell Kofoed, Lincolnwood, Ill	98	109	Vincent Thurn, Lorsbach, Germany	6
57	Claude Carpenter, Romoland, Cal	86 S	110	Ronald Vitalis, Milwaukee, Wisc.	6
58	Michiel Overbeek, Germiston, SoAf	85	111	Burnell Brown, Dallas, Texas	5
	(plus 3 ^h 20 ^m flare stars)		112	Julia Perley, Fort Bragg, No. Car.	5
59	Simon Archer, Pretoria, So. Africa	79	113	Arthur Dalton, Beverly, Alb, Canada	4
60	William Mebius, Verona, N.J.	67	114	Mike Gear, Skokie, Illinois	4
61	Mario Ancarani, Faenza, Italy	63	115	Edward Lawrence, Waterford, Wisc.	4
62	Frank Price, Queens Village, NY	62	116	Allen Solomon, Brooklyn, New York	4
63	Robert James, Milwaukee, Wisc.	61	117	William Albrecht, Wauwatosa, Wisc.	3
64	Rene Ficonetti, Ollioules, France	57	118	Robert Greenley, Caldwell, N.J.	3
65	Richard Gemberling, Spokane, Wash	56	119	Rene Wurgel, Union City, New Jersey	3
66	Lancaster Hiatt, Arlington, Va.	56	120	Walter Barber, Atlanta, Georgia	2
67	James Wolfe, Pittsburgh, Penna.	52	121	Marvin Bostic, Durham, No. Carolina	1
68	William Miller, Glen Rock, N.J.	52	122	Jane Burden, Long Island City, N.Y.	1
69	James Carlisle, Spartanburg, S.C	49	123	Linda Crouse, New York, New York	1
70	Robert Percy, Indianapolis, Ind	49	124	Richard Fink, Milwaukee, Wisconsin	1
71	James Arnold, Daingerfield, Texas	44	125	Walter Houston, Manhattan, Kansas	1
72	Paul Watson, Pasadena, Maryland	44 S	126	Robert Johnsson, Chicago, Illinois	1 S
73	Wallace Byrd, Coalgate, Oklahoma	40	127	James Lund, Milwaukee, Wisconsin	1
74	Rosina Dafter, Brisbane, Australia	38	128	James Peters, New Albany, Indiana	1
75	David Halvorson, Woodbury, N.J.	37	129	Mrs. Kenneth Walko, Elyria, Ohio	1
76	Hugh Boutell, Santa Barbara, Cal.	36	130	Farrell Walsh, Brooklyn, N.Y.	1
77	Kevin Moloney, Brisbane, Australia	32	131	Joseph Zelvin, Brooklyn, N.Y.	1

This year three observers made more than 3000 observations each; three between 2000 and 3000; and ten between 1000 and 2000. These 16 observers contributed 35,000 observations, or about 70% of the total.

Other Activities. The chairmen of the various other divisions of the AAVSO report a very active year. The Solar Division under the enthusiastic chairmanship of Harry Bondy, continued to expand its activities. They are making great plans for special observations during the International Geophysical Year. We all owe David Rosebrugh and William Reid a special vote of appreciation for carrying on the computation of the American Sunspot Numbers and the preparation of the lists of sunspot observations for publication ever since Neal Heines retired. This work has now been handed over to Dr. Sarah Hill of Wellesley College. Mr. Bondy's report will be printed in the Solar Division Bulletin.

George Diedrich, Nova Search Chairman, is still hoping for a nice bright nova to repay his observers for the many hours they spend checking their regions of the sky.

Mrs. Margaret Beardsley has retired as Chairman of the Occultation Division, in order to devote more time to her observing. Under her capable management she has had fine reports to send to Mrs. Sadler at the Occultation headquarters in the British Nautical Almanac Office. Her successor, Dr. Sarah Hill, is learning what a fascination there is in observing occultations.

The Chairman of the Telescope Committee, John Welch, has spent much time working with the incomplete records of telescopes owned by the AAVSO, and in making repairs on the ones in his hands. He now has several instruments available for loan to members in good standing who have proved their ability and willingness to observe.

The Chart Committee, under the chairmanship of Richard Hamilton, is one of the busiest committees in the Association. Between sending out first sets of charts to new observers, adding to the lists of older observers, and getting charts drawn and printed of additional variables for the AAVSO program, there are always large sets of charts to be checked from former observers who wish to get back into the work again.

The Photoelectric Photometer division prepared a fine brochure for building and using the instruments. Chairman Lewis Boss had the brochures printed and turns over all the proceeds of the sales (\$2.00 each) to the AAVSO.

The chairman of the Satellite Tracking Committee, R. Newton Mayall, is preparing for a busy year when the satellites are launched. It is hoped that many of our observers will take an active part.

Personnel. Miss Helen Stephansky continues her work as AAVSO Assistant. It would be very difficult for the Recorder to carry on without her capable and enthusiastic help.

Thanks to the financial help from the National Science Foundation and the Office of Naval Research, we have again been able to make use of the expert typing ability of Florence Campbell Bibber, acquired through years of experience working with her father.

Work in the AAVSO Headquarters continues to be a great pleasure due to the loyal and enthusiastic support of the officers, members, and friends of the AAVSO.

Respectfully submitted,

MARGARET W. MAYALL, Recorder

October 20, 1956