

27TH ANNUAL REPORT OF THE DIRECTOR OF THE AAVSO  
FOR THE YEAR ENDING SEPTEMBER 30, 1958

I take great pleasure as the Director of the AAVSO in presenting herewith this 27th Annual Report of the work of the Association for the fiscal year 1957-1958. Again this year as in the past few years, much of the time at Headquarters was spent on work of preparing observations for publication.

The last half of the year was beset with financial worries. Our last contract with the Office of Naval Research has been given with the understanding that we would not ask for another renewal this year. The work contracted for under it was completed the last of March 1958. We were very happy to have enough money from the Bache Fund of the National Academy of Sciences to pay for printing the results of observations made through April 1955.

Our grant from the National Science Foundation expired in May. We applied for a renewal, but have not as yet had an answer from the Foundation. The Advisory Board of the National Science Foundation hesitates to set a precedent of continued or long term support of any organization. We find that this feeling is strong, and of course understandable, in all sources of financial aid. We try to convince the board that our great desire is to build our own Endowment Fund so it is large enough to make us self sufficient in the future.

In our attempts to get financial help from other sources, we have set up a few definite projects as an indication of some of our needs. I will list several of them here, in hopes that some of our members and friends may be inspired.

1. Printing costs on Quarterly Reports . . . . .	\$ 500
2. Preparation of 1 year's observations for publication. . . (50,000 to 60,000 individual estimates)	3,000
3. Part time typist and assistant for 6 months . . . . .	1,000
4. Part time typist and assistant for 1 year . . . . .	2,000
5. Full time assistant for 1 year . . . . .	3,200
6. Linedex supplies for 1 year . . . . .	150
7. Transfer of present system of preparation of observations to an IBM system. . . . .	5,000
8. Educational service in answering about 700 requests for information per year . . . . .	\$ 200

Help on any of these projects would be very greatly appreciated.

The National Bureau of Standards renewed their contract for another year with the AAVSO for the preparation of American Sunspot Numbers. This helps with the expenses incurred by the Solar Division in the work of collecting and reducing solar observations.

Endowment Fund. The Treasurer's Report shows our continued progress with the Fund. Our investments have proved to be very wise ones, and show good capital gains in

addition to a reasonable income. Numerous gifts from members and friends have been added to the Fund. Proceeds from the sale of the Campbell volume "Studies of Long Period Variables," and the "Manual for Observing Variable Stars," have also been added. Lewis Boss has continued to pay printing costs on the Photoelectric Photometry Handbook, and donates all proceeds from the sale of it to the Fund. Robert Dunn did the same thing with the sale of prints of the AAVSO group photograph he took at the Amherst meeting.

Requests for Information. The present Space Age has increased interest in astronomy, and during the year we answered more than 650 requests for information about work on variable stars. Increase in costs of paper, printing and postage make this a sizeable part of our budget, but we feel that we are performing an important service to do what we can to encourage this great interest.

Membership. Our membership list is now about 600. In October 1957 we had 2 annual members change to sustaining, and elected 23 new annual members. At the June 1958 meeting we elected 31 new annual members. We regret that we had to drop a few names from our list because of non-payment of dues.

I am very sorry to have to report the death during the year of the following members: Walter P. Reeves, of Portland, Maine, our 2nd Vice President and member of our Finance Committee; M. K. Bappu of India, who was a fine observer for many years; Mrs. Winifred Kearons, a Patron member from West Bridgewater, Mass.; Knut Lundmark, a life member, Lund, Sweden; Albert G. Ingalls, formerly of Scientific American; and a good friend and observer, Kevin Burns of the Allegheny Observatory.

Subscription to Publications. We now have 26 observatories and libraries who subscribe to our publications. This includes one observatory which subscribes to our Special Services.

Special Contributions from Members. Mrs. Phoebe Haas continues her work on the 10-day means of the observations from the Variable Star Section of the Royal New Zealand Astronomical Society. Mr. Frank Bateson, Director of the Variable Star Section, kindly sends us the observations as soon as they are available.

We continue to depend on Newton Mayall for many office supplies, blueprints, glossy prints for reproduction, long distance telephone tolls, and other such items. He also took pity on the growing congestion of floor space in our office and rented a room in a nearby storage warehouse to take care of our boxes of supplies.

Library. The Charles Y. McAtear Library received 14 books, 126 publications, and 306 pamphlets, circulars and reprints during the year.

Work on the lantern slide collection is progressing slowly, but even though we have no printed catalogue, the slides are now much easier to find with the new system of classification.

Publications. Two Quarterly Reports, Numbers 20 and 21, were distributed in the summer of 1958. Number 20 contains the results of about 55,000 observations of 668 variable stars, made by 133 observers, during the 400-day interval from Jan. 22, 1953 to Feb. 25, 1954; and Number 21, about 61,500 observations of 734 variables made by 149 observers during the period from Feb. 26, 1954 to April 1, 1955. As in the previous Reports, weighted 10-day means were given for the slowly varying stars, and individual estimates for rapidly varying ones. Microfilm copies of all the

Individual observations are available at cost. The copy for Quarterly Report 22 has been typed and is ready for proofreading and printing, as soon as we get the money to pay for the printing. It contains about 58,000 observations of 805 variables, plus over 31 hours of constant observation of some of the flare stars, made during the interval from April 2, 1955 to May 6, 1956. Work is progressing on the preparation of Quarterly Report 23, which will bring the publication of observations up to June 1957. Bulletins Nos. 16, the 1958 Annual Predictions of Maxima and Minima of Long Period Variables; and 17, BiMonthly Predictions of Variable Stars for the AAVSO, by Walter Scott Houston, were distributed during the year.

Two issues of AAVSO Abstracts, edited by Newton Mayall, were printed for the meetings of October 1957 and June 1958. Variable Star Notes, written by the Director, were published in each issue of the bimonthly Journal of the Royal Astronomical Society of Canada.

A much needed revision of the Manual for Observing Variable Stars was ready for distribution in the fall of 1957. Printing of the Manual was made possible through the generous gift of Clinton B. Ford. Some money was also given from the Chart Committee Fund to enable us to give copies of the Manual to serious prospective observers, instead of the practice charts given in the past. Copies have also been sold at \$1 each through reviews in Sky and Telescope and other magazines.

Annual Summary of Observations. Indication of the increased interest in astronomical observations is the fact that this year we had an increase of observers over the last few years, and 40 of them sent in reports of observations for the first time. We received a total of 51,317 observations from 143 observers in 729 reports, an average of 61 reports per month. In addition to the regular observations, Gunnar Darsenius spent 1<sup>h</sup> 23<sup>m</sup> watching two flare stars, DO Cephei and EV Lacertae; Ray Berg watched AE Aquarii for 1<sup>h</sup> 32<sup>m</sup>, Joe Miller 1<sup>h</sup>, and Michiel Overbeek had 3 1/2 hours, of constant watch on UV Ceti.

Thirty-five observers from 15 countries outside the USA contributed 38% of the total number of observations. This total includes some very useful observations made since 1956 by observers at the Wilhelm Foerster Institute in Berlin. The other 62% of the observations came from 108 observers in 27 states.

Table I lists the countries in alphabetical order, with the number of observers and totals of observations.

TABLE I - COUNTRIES

Country	No. Observers	Total Obs.	Country	No. Observers	Total Obs.
Argentina	1	605	Mexico	1	1551
Australia	1	9	Peru	1	9
Canada	7	1834	South Africa	4	7033
Chile	8	1103	So. Rhodesia	1	441
Germany	5	5025	Sweden	1	314
Greece	1	267	Taiwan	1	493
Iran	1	29	U.S.A.	108	31571
Italy	1	929			
Jamaica	1	44			
			16 TOTALS	143	51317

Table II lists the states in the same way. Once again, New York tops the list of states. Nearly 6,600 of the 9,370 observations were made by members of the Observing Group of the Amateur Astronomers Association.

TABLE II - UNITED STATES

Arizona	1	71	Maryland	1	1	Oklahoma	1	7
California	16	3330	Minnesota	1	2660	Oregon	1	4
Connecticut	4	2887	Missouri	1	1856	Pennsylvania	10	407
Florida	2	249	Montana	1	224	South Carolina	1	31
Georgia	1	645	New Hampshire	1	92	Texas	3	250
Illinois	6	778	New Jersey	5	223	Virginia	2	106
Indiana	3	104	New Mexico	2	70	Washington	2	462
Kansas	2	42	New York	23	*9370	Wisconsin	8	514
Kentucky	1	26	*6587 from O.G., AAA					
Maine	1	4374	Ohio	8	2738			
						27 TOTALS	108	31571

Regular monthly reports were received from the following 15 observers: Robert Adams, Missouri; Curtis Anderson, Minnesota; Thomas Cragg, California; Cyrus Fernald, Maine; Clinton Ford, Connecticut; Ferdinand Hartmann, New York; Reginald de Kock, South Africa; Allen Montague, Illinois; Edward Oravec, New York; Patrick Parker, Georgia; Robert Percy, Indiana; Leslie Peltier, Ohio; Patrick Rizzo, New York; Leif Robinson, California; and David Rosebrugh, Connecticut.

Eight observers missed only one month each: Gunnar Darsenius, Sweden; George Diedrich, Ohio; O.M. Erpenstein, California; J.G. Goodsell, California; G. B. Lacchini, Italy; Francis Morgan, Canada; Francis Price, New York; and Leonard Solomon, New York.

In all, 34 observers sent in their reports 10 times or more during the year. This regular receipt of observations helps us to keep our plots of light curves up-to-date.

Among our new observers, 8 sent in more than 100 observations during the year, and one, Robert Allin of Canada, sent 1,100 since he started observing in January 1958. He has also just joined the select ranks of the "Inner Sanctum" observers.

Table III lists the observers in order of the number of observations received from each. The "Observer of the Year" is again Reginald P. de Kock of South Africa, with 5,983 observations. In second place is Edward G. Oravec with 4,686; then in third place is Cyrus Fernald with 4,374; in 4th place Reinhard Rudolph of Germany with 3,542; 5th is Curtis Anderson with 2,660; and 6th is Thomas Cragg with 2,244. DeKock, Fernald, Rudolph and Cragg are also "Sanctum" members.

Fourteen observers in all sent more than 1,000 observations each, and 21 more than 500 during the year. The 14 observers had a total of 33,133 observations, or 64% of the total. While we are always proud and happy over the fine record of those who send more than 1,000 observations, we are also delighted to have so many more observers getting into the 500 or more class.

Twenty-six of our members made "Inner Sanctum" membership by observing variables 13.8 and fainter; 4 of these observers were among our new contributors.

With few exceptions, observing conditions were very bad most of the year, and most monthly totals were lower than usual. Exceptions were undoubtedly in Maine in August 1958, when Cyrus Fernald made 756 observations; and in Minnesota in July when Curtis Anderson made 725. Reginald de Kock made about 650 observations in September 1957 and July 1958.

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TABLE III - AAVSO OBSERVERS

1	Reginald de Kock, South Africa	5983	S	45	Edward Anderson, Philadelphia, Pa.	163	
2	Edward Oravec, Tuckahoe, N.Y.	4686		46	Donald Engelkemeir, Hinsdale, Ill.	160	
3	Cyrus F. Fernald, Wilton, Maine	4374	S	47	Peter Smits, Cape Town, So. Africa	158	
4	Reinhard Rudolph, Berlin, Germany	3542	S	48	Dan Taulman, Fort Worth, Texas	154	
5	Curtis Anderson, Minneapolis, Minn	2660		49	George Diedrich, Elyria, Ohio	143	
6	Thomas Cragg, Inglewood, Calif.	2244	S	50	Richard Wend, Milwaukee, Wisconsin	140	S
7	Robert Adams, Neosho, Missouri	1856	S	51	Frank Kelly, Johnson City, N.Y.	137	
8	Clinton Ford, Suffield, Conn.	1788	S	52	Robert W. Miller, Miami, Florida	133	S
9	Ferdinand Hartmann, St. Albans, N.Y.	1740		53	David Halvorson, Philadelphia, Pa.	118	
10	Domingo Taboada, Puebla, Mexico	1551		54	Albert Sharpless, So. Miami, Florida	116	
11	C. J. Renner, Castalia, Ohio	1337	S	55	Harry von Rosenvinge, Franconia, N.H.	92	
12	Robert Allin, Alberta, Canada	1101	S	56	Philip Seldon, Brooklyn, New York	90	
13	David Rosebrugh, Meriden, Conn.	1087		57	Herbert Beidler, Chicago, Illinois	89	
14	Leslie Peltier, Delphos, Ohio	1040		58	Jerome Wyckoff, Ridgewood, N.J.	89	
15	G. B. Lacchini, Faenza, Italy	929	S	59	Paul Skaritka, Bronx, New York	87	
16	Werner Braune, Berlin, Germany	822	S	60	Edward Halbach, Milwaukee, Wisc.	81	S
17	Patrick Parker, Griffin, Georgia	645		61	Norman B. Godfrey, Austin, Texas	80	
18	Carlos Segers, Buenos Aires, Arg.	605		62	Robert Magruder, Chester, Virginia	78	
19	Miguel Valdez, Santiago, Chile	542		63	Jeremy Knowles, Hollis, New York	77	
20	*Michiel Overbeek, Germiston, So. Af.	530	S	64	*Joe Miller, Beverly Hills, Calif.	74	S
	*plus 3 1/2h UV Cet				* plus 1h UV Cet		
21	Gabriel Garland, Santiago, Chile	523		65	Ralph Buckstaff, Oshkosh, Wisconsin	71	
22	Chang-Hsien Tsai, Taipei, Taiwan	493		66	Kenneth Fuller, Mesa, Arizona	71	
23	Allen Montague, Oak Park, Ill.	488		67	Philip Peters, Long Beach, Calif.	70	
24	Francis Price, Queens Vill., NY	483		68	James Robinson, St. Vrain, New Mex.	67	
25	Wayne Lowder, Pelham, New York	460	S	69	Stephen Bieda, San Jose, Calif.	66	
26	Richard Gemberling, Spokane, Wash	453	S	70	William Miller, Glen Rock, New Jer.	66	
27	R. H. Dicknell, Shamva, So. Rhodesia	441		71	Claude Carpenter, Romoland, Calif.	64	S
28	Leif Robinson, Sylmar, Calif.	439	S	72	Norman Hutchings, Victoria BC, Can.	62	
29	Arthur Pearlmutter, Kew Gardens, NY	418		73	D. M. Fletcher, Philadelphia, Penna	56	
30	Jurgen Muller, Berlin, Germany	417		74	William Glenn, New York, N.Y.	54	
31	S. C. Venter, Pretoria, So. Africa	362		75	Robert Percy, Indianapolis, Ind.	50	
32	Craycroft Wilson, E. Meadow, N.Y.	335	S	76	*Ray Berg, Dyer, Indiana	49	
33	Christine Rosenfield, Alberta, Can	322			* plus 1h 32m AE Aqr		
34	Francis Morgan, Verdun, Que., Can.	318		77	George Hein, Bronx, New York	49	
35	*Gunnar Darsenius, Gotenburg, Swed.	314		78	Tom Osypowski, Milwaukee, Wisconsin	48	
	*plus 20m DO Cep; 55m EV Lac			79	William Mebius, Verona, New Jersey	47	
36	Wolfgang Quester, Berlin, Germany	268		80	E. C. Melville, Jamaica, B.W.I.	44	S
37	Constantin Chassapis, Pentel, Greece	267		81	Ronald Royer, Pico Rivera, Calif.	41	
38	Leonard Solomon, Brooklyn, N.Y.	250	S	82	Stephen Maran, Brooklyn 38, N.Y.	40	
39	Charles McPherson, Edgar, Montana	224		83	DeLorne Diedrich, Elyria, Ohio	39	
40	James Breckinridge, Cleveland, O.	219	S	84	Donald Charles, Pleasant Hill, Cal.	37	
41	Patrick Rizzo, Brooklyn, N.Y.	213		85	J. G. Goodsell, So. Pasadena, Cal.	36	
42	O. M. Erpenstein, Millbrae, Calif.	176	S	86	Vincent Thurn, Wiesbaden, Germany	36	
43	Phillip Goldenblatt, Bronx, N.Y.	171		87	George Wallerstein, Pasadena, Cal.	34	S
44	A. R. Ball, Milwaukee, Wisconsin	166	S	88	Donald Koons, Waverly, New York	33	

continued....

89	James Carlisle, Spartanburg, S.C.	31	117	Wallace Byrd, Coalgate, Okla.	7
90	Morgan Thomas, Armish-Maag, Iran	29	118	Martin Sloan, Escondido, Calif.	7
91	Lancaster Hiatt, Arlington, Va.	28	119	J.H. Conklin, Philadelphia, Pa.	6
92	Jack Kubanoff, Philadelphia, Pa.	28	120	Elvira Matte de Lira, Santiago, Chile	5
93	William Silveira, San Bruno, Cal.	27	121	Florence Rosenblatt, Brooklyn, N.Y.	5
94	Dale Panke, Louisville, Kentucky	26	122	William Weaverling, Dyer, Indiana	5
95	Walter Houston, Manhattan, Kansas	21	123	G. Whidden, Elyria, Ohio	5
96	Frederick Pilcher, Topeka, Kansas	21	124	Ronald Dales, Salem, Oregon	4
97	Maxwell Kimball, Glen Ridge, N.J.	20	125	Robert Cunningham, San Jose, Calif.	4
98	Robert McGovern, State College, N.M.	18	126	Ramon Gomila, Santiago, Chile	4
99	Kenneth Weitzenhoffer, Brooklyn, N.Y.	18	127	Carole Usakowski, Brooklyn, N.Y.	4
100	M.H. Major, Corpus Christi, Texas	16	128	J. Wilson, Elyria, Ohio	4
101	Russell Kofoed, Lincolnwood, Ill.	15	129	Richard Hamilton, Darien, Conn.	3
102	Maria Schrader, Santiago, Chile	15	130	Abelardo Ibanez, Santiago, Chile	3
103	Frank Walker, Chicago, Illinois	14	131	Dan Judd, Albuquerque, New Mexico	3
104	M. Lattey, Vernon, B.C., Canada	13	132	Orin Kindt, Kenosha, Wisconsin	3
105	James Wolfe, Pittsburgh, Penna.	13	133	G. Poynor, Philadelphia, Penna.	3
106	Gerald Schultz, Lincolnwood, Ill.	12	134	Donald Ramthun, Cudahy, Wisconsin	3
107	Donald Rosenfield, Edmonton, Alta. Can.	11	135	Gordon Hall, Milwaukee, Wisconsin	2
108	Elizabeth Socha, Brooklyn, N.Y.	11	136	Juan Nestler, Santiago, Chile	2
109	Allan Sandage, Pasadena, Calif.	10	137	D. Del Grande, San Jose, Calif.	1
110	I. P. Debono, Sydney, NSW, Australia	9	138	Frederick Fallon, Silver Spring, Md.	1
111	James English, New Haven, Conn.	9	139	J. Nemiroff, Philadelphia, Penna.	1
112	Victor Estremadoyro, Chorrillos, Peru	9	140	S. Primavera, Philadelphia, Penna.	1
113	Hernan Salce, Santiago, Chile	9	141	Francis Reynolds, Potsdam, New York	1
114	Howard Thomas, Coulee Dam, Wash.	9	142	Tom Roderick, Cuyahoga Falls, Ohio	1
115	Herbert Luft, Oakland Gardens, N.Y.	8	143	Willard Shea, Mullica Hill, N.J.	1
116	Bruce Bohannon, Edmonton, Alta, Can.	7			

The discovery of the third explosion of Nova RS Ophiuchi gave a great impetus to the observers. Many who had not done any observing for a number of years answered our appeal for observations. We hope they are back in the swing again, and will continue to observe. We were delighted to receive photoelectric photometer observations of RS Ophiuchi from two of our new contributors: Allan Sandage of Mount Wilson Observatory, and Donald Engelkemeir of Hinsdale, Illinois. Several observations were made near the same time with the Mount Wilson 100-inch reflector and Engelkemeir's 8-inch reflector, and they agreed within a few hundredths of a magnitude!

We can now say that we receive observations made with instruments ranging in size from binoculars to a 100-inch reflector. Perhaps we need not say that the observations made with the 100-inch were of a 6th magnitude star.

Other Activities. All divisions of the AAVSO report a very active and successful year. The report of Harry L. Bondy, Chairman of the Solar Division, will be published in the Solar Bulletin. A very high maximum of sunspot numbers was observed during the year. For many days  $R_A$  (Daily American Relative Sunspot Number) was over 200. The Solar Division is also collecting some very interesting results on Sudden Enhancements of Atmospherics (SEA's) with Warsaw receivers.

Lewis J. Boss, Chairman of the Photoelectric Photometry Committee, reports a tremendous increase of interest in PEP observations. To date, about 55 copies of the Handbook have been sold, and Mr. Boss has given all the proceeds to the AAVSO Endowment

Fund. The Handbook seems to be the only easily available source of practical information about photometers.

At last we have had another naked eye nova, and it was found by AAVSO members Cyrus Fernald and David Rosebrugh. You have all heard the story of the third reappearance of Nova RS Ophiuchi. The members of the Nova Search Division, under the chairmanship of George Diedrich, should feel encouraged to continue their fine work and watch for the next bright nova.

Roy A. Seely, the new Chairman of the Occultation Division, is printing a new set of instructions for observers, and it is hoped that many more observers will try their hand at this fascinating and valuable work.

You have all heard the reports of John Welch, Chairman of the Telescope Committee, and that of our good President, Richard Hamilton, who is also Chairman of the Chart Committee. All the committees and their chairmen are to be congratulated on their successful work during the year.

Personnel. Once again, I would like to express our appreciation for the fine work of our AAVSO assistant, Helen Stephansky. She very capably carried on the work at Headquarters during my absence this summer to attend the Tenth General Assembly of the International Astronomical Union in Moscow.

We are also fortunate in being able to continue to have the part-time services of Mrs. Florence Campbell Bibber, who has been responsible for much of the work of collating the observations and typing the final copy for the Quarterly Reports.

I would also like to give my personal thanks to all the officers, members, and friends of the AAVSO, who have given me so much help during the year.

Respectfully submitted,

MARGARET W. MAYALL  
Director, AAVSO