



CHRISTMAS GREETINGS

From the Students

During the Christmas season it is traditional to reflect upon the past year and to anticipate the events of the New Year. As we graduate students consider the past year, we remember our friends and fellow students who have left the D.D.O. for other places, and we wish them the best of fortunes in the New Year. We recall all our interactions with the faculty, from "weak interactions" at countdowns to "strong interactions" at Staff-Student Committee meetings, but always profitable interactions, for we have learned by them. We look forward to the continuation of this process in the New Year. We recall as well our contacts with the administrative and technical staffs as they attempt to keep the department and the observatory functioning - sometimes in spite of us and always to our benefit. We hope that we and they may work together even more successfully in the New Year. And to all our friends, be they former students, faculty, secretaries, or technicians, we wish you a Merry Christmas and a Very Happy New Year.

T.B. for GASA

From the Staff

The season's best to all our readers! In Richmond Hill it's Christmas all right, no doubt about it, with snow already on the ground, near zero temperatures in the dome, and even three clear nights in a row last week!

Short days and long nights seem to make us more aware of ourselves, our heritage and our tradition. That's when we specially remember our former DDO colleagues, now so widely scattered. To each one individually go heartiest greetings from those they left behind, and our very best wishes for 1969.

MR

From DDD

The editorial and press-room staff of DDD wish everyone a Very Merry Christmas and a Happy New Year.

J.T. and J.F.H.

## OBSERVING

### BaII Program

Dr. Bakos, staff member, and Dr. Bajcar, post-doctorate fellow, of the University of Waterloo have designed an observing program of bright stars for the G12 spectrograph. Dr. Bajcar will be observing these stars on Wednesday nights, and other observers are invited to help when circumstances permit.

The observing program is designed primarily towards the investigation of BaII. Dr. Bakos writes:

"Dr. Bajcar and myself have recently discovered the presence of the BaII line at  $\lambda 4554\text{\AA}$  in a great number of late type stars of my old visual binary program. Since this apparently contradicts a statement by Keenan according to which the BaII line is a prominent feature of S-stars only and that the presence of strong BaII in stars is rather peculiar, we felt that an investigation of the BaII stars is needed. The purpose of our project is twofold:

1. We would like to obtain high dispersion spectrograms of about 20 stars of spectral type K and luminosity classes I to V in order to determine the equivalent width of the BaII line, and its change as a function of the luminosity of the stars.

2. By placing a few typical BaII stars and S-stars on the program we hope to refine the spectral criteria for both groups of stars.

In addition we would like to investigate the abundances of Ba and other heavy elements in this group of stars. "

### MHa 328-116

Dr. FitzGerald, also of Waterloo, has been observing this peculiar 11th magnitude star both with the G40 and G12 for some time. He now writes:

"This is possibly a planetary nebula in the formation process. The star was discovered by McCuskey (IAU Circ. No. 1916) and identified as a symbiotic variable by McCuskey, FitzGerald and Houk (Ap.J. 144, 113s, 1966). However, it has little or no blue continuum, or red, and has changed little since its rise from 14m (Me\*) to 11m (Emission line star).

Plates are being taken to monitor it and also to determine its expansion velocity ( $\sim 40 \text{ km/sec.}$ ), electron pressure and temperature.

It may be taken at any dispersion of up to  $12\text{\AA/mm}$  since the lines are only just resolved at  $33 \text{ \AA/mm}$ .

Dr. Fernie is being kind enough to obtain UBV measures about once a month."

### Papers Submitted during December

Hiltner, W.A., Garrison, R.F.  
and Schild, R.E.

"MK Spectral Types for Bright  
Southern OB Stars".

Also worthy of note here is the issuance of Dr. van den Bergh's two recent RASC Journal articles on "The Galaxies of the Local Group" as DDO Communication No. 195. In its glossy cover with an illustration of M33, it is a very attractive booklet and a most valuable reference. Copies are available for sale at \$2.40 each.

Congratulations to Miss Northcott, Editor of the RASC Journal, for the large December number containing articles relative to the 50th Anniversary of the DAO celebrated at the time of the recent AAS Victoria meeting. Congratulations also to our DAO colleagues for their excellent articles and on the anniversary of this fine observatory which has made, and continues to make, such great contributions to astronomy.

### December Seminars

December Seminars were given as announced last month except that, in addition, Dr. J.F.R. Gower of U.B.C. gave a seminar on campus, Dec. 12, on "Radio Astronomy at the D.R.A.O.".

### January Seminars

Jan. 8	Dr. Roberts.	"Methods of Measuring Field Strengths in Radio Sources".
Countdown		

Other probable speakers are:

Jan. 15	Dr. Schmitt
Jan. 22	Chalmers Hardenbergh and Hugh Ross

### Spring Seminars

Dr. Anand is trying to arrange visits from some or all of the following: Megger, Ostricker, Pesch, Marlborough, Galt, Gingerich and Deutsch. Details later.

### Course G2000 : Seminars in Astrophysics

Jan. 9	Bill Dodd,	"Diffuse Interstellar Lines".
16	Carl Bignell,	"Radio Recombination Lines".
23	Dave Goodenough,	"Image Tube Spectroscopy".
30	Mark Naylor,	"Flare Stars".

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COMINGS AND GOINGS

Dr. Schmitt attended the AAS meetings in Tucson, Dec. 10-13.

Dave Goodenough is still at Cerro Tololo observing. He has been assigned seven nights with the 16-inch and eight with the 36-inch. All his nights to Dec. 4 had been photometric.

Dr. MacRae has just returned from the founding meeting in Washington on Dec. 15 of the Universities Space Research Association represented by 46 Universities. The purpose of this meeting was to review plans for forming a consortium which will ultimately take responsibility for the Lunar Science Institute now being established by the National Academy of Sciences (Washington) near the Manned Spacecraft Center in Houston Texas.

Dr. Roeder left on Dec. 12 for Arizona to confer with Dr. Frank Low concerning infra-red research and to attend the "Texas" Symposium on "Relativistic Astrophysics" in Tucson on Dec. 16-20. Drs. Anand, Clement, Kronberg and Roberts and Greg Fahlman are also attending the Symposium.

LETTERS TO THE EDITOR

Sir,

I should like to point out that the early Canadian telescope referred to in No. 10 of these Doings was never the third largest instrument in North America. This honour belongs to the 36-inch Crossley reflector which was erected at the Lick Observatory in 1895 (Schaeberle, J.M. 1895 P.A.S.P., 7, 197, Keeler, J.E. 1900, Ap. J., 11, 325). The first observations obtained with this instrument were of Comet 1898I (Brooks) which are described by Keeler in Ap.J., 8, 287.

Yours truly,

Pasadena, Dec. 3, 1968

Sidney van den Bergh.

In conversation with the Editor last week Father Leclaire expressed distress that it could be inferred that he made the claim that the Gervais telescope was once the third largest on the continent. He did not; the erroneous claim was made by Scientific American.

Ed.

Sir;

After a thorough perusal of DAVID DUNLAP DOINGS, Vol. 1, No. 11, I wish to compliment you both on your excellent documentation and fluency of writing. There is, however, a point I wish to raise.

On page 2, "The New Gate". With respect to cars sliding into the ditch, I wish to enquire at what point the fair number is reached, after which it is unfair for a car to do this. (I would rather plan to skid



when it is fair.)

I am, Gentleman,

Yours faithfully,

Richmond Hill, Dec. 11, 1968

Helen Hogg

DDD acknowledges and regrets the misuse of the adjective.

Ed.

#### Appointment

Mrs. Alice Streit (pr. 'Straight') has been appointed as a third secretary in the Department. Mrs. Streit comes from Switzerland; her husband is Assistant Professor in the Department of Mathematics.

#### Reinhardt Awards

Awards have been made recently from the Reinhardt Fund to Dave Goodenough for his observing trip to Cerro Tololo and to Greg Fahlman to attend the Texas Symposium. The late Mr. Carl Reinhardt, B.Sc., was a geologist with an abiding interest in Astronomy who was a long-time member and supporter of the R.A.S.C. and who bequeathed certain earnings of his mining claims in Cobalt, Ont., to the University for bursaries to graduate students in astronomy.

#### R.A.S.C. Toronto Meetings

Dr. Fernie talked to the Centre Dec. 13 on "Cepheid Variables as Distance Indicators". Dr. Heard will talk Jan. 17 on "Navigation -Applied Astronomy and Hobby". Later speakers in the spring program will be Dr. Garrison and Dr. Roberts.

Staff and students are urged to continue their support of the R.A.S.C. Student fees are only \$3.00 annually, including Journal and Handbook. Toronto Centre meetings are held in the McLaughlin Planetarium.

#### Alumni

Dr. David Crampton of the Dominion Astrophysical Observatory spent Monday last at the Observatory. He and Heather and baby Lisa are spending three weeks in the Toronto area visiting their parents and other relatives.

We hear that one day recently there was a meeting of nine (including wives) DDO alumni. They were the Hubes, McClures, Demers, Racines and one other not identified to our source.

## HOLIDAY VERSE

### Ode to a Pulsar (The Star of 1968)

Hail to thee, O Little Pulsar,  
Spinning round and round and round!  
With our Big Ears we are listening  
For the pulsing of your sound.

When first you came into our ken  
It was hard to credit facts.  
Were these the signals from other beings  
Or a fluke in radio tracks?

Now we're sure you're really there,  
With density beyond compare,-  
A million million times the earth.  
Gracious! What gave this creature birth?

Dervishes whirling in a second,  
(And some are thirty times as fast)  
The swiftest in the famous Crab,-  
How many centuries can it last?

And from your surface come the watts,  
Millions of them for every inch.  
What is the source of all this power?  
Spin-down rotation, that's a cinch.

Is this your secret, Little Pulsar?  
And if it is, how can we know?  
That's my secret, Earthbound Man,  
And Tommy Gold has told you so.

Helen Hogg  
Christmastime, 1968

### The Ballad of Bakes and Bajcar and BaII

This is the story of scientists two,  
Bakes and Bajcar of Waterloo who  
Sought the abundance of Barium II.  
They listed some stars, observed them anew,  
Took some fresh spectrograms, got quite a few,  
Treasured them, measured them, curves of growth drew,  
Seeking abundance of Barium II,  
Seeking new knowledge for me and for you.

So pacans of triumph and rooty-toot too  
For Bakes and Bajcar, the scientists two,  
Bakes and Bajcar of Waterloo U,  
Bakes and Bajcar of DDO too,  
Bakes and Bajcar who knew what to do  
To get the abundance of Barium II.

J.F.H.