



DAVID DUNLAP DOINGS

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Monsieur le Président, Mes chers Collègues

Je voudrais déclarer de nouveau que le Conseil national de recherches du Canada vous invite cordialement à venir à notre pays à l'été de 1979. Cette invitation est appuyée par l'Université de Montréal, par la ville de Montréal, par la belle province de Québec, et par tous les astronomes du Canada. Nous espérons vous voir au Canada à l'occasion de la Dix-septième Assemblée Générale de l'Union Astronomique Internationale.

*French text of Don MacRae's invitation
to the IAU to meet in Canada in 1979.
For his English version see p. 2.*

Canada's Invitation to IAU for 1979

At the Grenoble General Assembly of the IAU Don MacRae, in his capacity as Chairman of the National Committee for Canada for the IAU, addressed the plenary session in these words followed by a shorter version in French which is printed on page 1.

Mr. President, Ladies & Gentlemen

As Chairman of the Canadian National Committee I extend a cordial invitation to the International Astronomical Union, to hold its seventeenth General Assembly in the city of Montreal, Canada. This invitation is issued by our adhering organization, the National Research Council of Canada, on behalf of Canadian astronomers. Canada will welcome all members of the Union and invited participants who come as individuals to attend the General Assembly.

Canada is a young country. Astronomy in recent years has blossomed in a vigorous proliferation of research centres across our land. Our astronomers have the enthusiasm and ambition of youth. They look forward eagerly to playing host at the first IAU General Assembly to be held in our country.

The city of Montreal is proud to have been chosen as the proposed site. It is one of our eastern cities and its latitude is almost identical with that of Grenoble. Montreal is easy to reach by air, by land or by water. It is our largest city. There are ample accommodations and adequate facilities for attending to IAU business, and also for diversions. The city authorities, the University of Montreal, and the Province of Quebec will do their utmost to welcome the IAU and make the seventeenth General Assembly a success.

Canada is a large country. We hope you will also plan visits to our astronomical observatories and research institutions. As many of you know, we have a number of optical, solar and radio observatories, astrophysical laboratories, and centres for theoretical studies. Several are within easy reach of Montreal. Others you can visit when you travel westward via the St. Lawrence River and Lake Ontario to Toronto, Niagara Falls and beyond. The Great Lakes are North America's fresh-water equivalent of the Mediterranean Sea. Several of our major research centres are to be found dotted across the Prairies, located among our Canadian Rocky Mountains, and perched on our Pacific Ocean coast.

OBSERVING

The DDO 24-inch Telescope

Our readers away from the Observatory, as well as Observatory people who do not observe with the 24-inch, may be interested to know of the equipment now available for this telescope.

The most recent instrument to go into use on the 24-inch is a twin-channel photoelectric polarimeter, largely controlled by the Nova mini-computer in the dome, which is now being debugged by Peter Martin and Sylvia Alers.

Another outgrowth of having a computer in the dome has been the reticon spectroscopic system developed by Bruce Campbell for his thesis, and it is pleasing to know that this instrument will continue in use by Barrow Baldwin and Ron Lyons after Bruce's departure.

A third application of the computer has been the automation by Bruce of Don Fernie's two-channel chopping photometer. The observer can now choose either manual operation or complete control of each cycle by the computer. In the latter instance the computer prints out preliminary reductions on the standard UBVR system immediately after each cycle.

John Sorvari's rapid-filter-change photometer is available, although not currently in use.

Finally, Bob Garrison's classification spectrographs, including an image-tube version, and older DC photometers continue in use.

J.D.F.

A Note on NGC 5102

In recent years a number of plausible mechanisms have been proposed to account for the presence of S0 galaxies in rich clusters. The existence of such galaxies in the general field has, however, remained a puzzle. Recent observations of NGC 5102 may provide the first clues to the solution of this

problem. It had been known for some years that this object had bluer integrated colours and earlier spectral type than do most lenticular galaxies. It had been suspected that these peculiar characteristics were due to a low metal abundance. Recent Tololo observations which show that NGC 5102 has a strong radial colour gradient now make this view untenable. The very blue colours of the nucleus of this galaxy can be accounted for by assuming that a violent burst of star formation took place in the nucleus of NGC 5102 about four hundred million years ago. Plates obtained with the CTIO 4-meter telescope show that this star-forming activity has not yet died down completely. These observations show a sprinkling of B stars and two faint HII regions embedded within the outer disc of NGC 5102. The observations of this galaxy suggest that lenticular galaxies in the field are produced when the hydrogen gas in spiral galaxies is driven out by violent nuclear explosions.

August 18, 1976

Sidney van den Bergh

COMINGS AND GOINGS

DDO Involvement at IAU

The following attended the Grenoble General Assembly: Tom Bolton, Christine and Maurice Clement, Bob Garrison, Don MacRae (who appeared on the platform to issue the invitation for 1979 and who was elected President of Commission 38 - Exchange of Astronomers), Peter Martin, Phil Kronberg, Robert Roeder, Ernie Seaquist and Sidney van den Bergh (who was invited to the platform as an in-coming vice-president). Tom Bolton was named to the organizing committee of a proposed working group on "Automatic Analysis of Photographic Data" and is serving as acting secretary.

Sidney van den Bergh was chairman of the organizing committee for IAU Colloquium no. 37 in Paris and on September 6 he spoke at this colloquium on "The Distance Scale within the Local Group". He also spoke to IAU Commission No. 33 on August 30 on "The Disks and Bulges of the Local Group", and talked to the Working Group on Galaxy Photometry on the subject of "The Hydra I Cluster".

Tom Bolton presented two papers on August 26 to Commission 30 (of which he is a newly elected member): one on "The measurement of Radial Velocities by a High-Speed Microdensitometer" and another (on behalf of Jack Heard) on "Further Radial Velocity Observations of the 1973 new IAU Standard Velocity Stars".

Phil Kronberg presented some new results to the Radio Astronomy Commission at Grenoble and by invitation gave a review and contribution at Symposium 74 in Cambridge on the subject of "Polarization as a Cosmological Test".

Other Summer Activities

Sidney van den Bergh spoke on "Problems of Southern Hemisphere Astronomy" at the Kitt Peak National Observatory on August 11 and on "Optical Observations of the Radio Galaxy Centaurus A" at NORDITA in Copenhagen on September 10.

John Percy attended the E.R.D.A. and A.A.S. conference on "Solar and Stellar Pulsation" at Los Alamos, New Mexico, August 3-5, 1976, and presented two papers - on observational and theoretical studies of delta Scuti stars.

Bob Deupree (Ph.D. 1974) played a major role in the conference presenting two papers and co-ordinating discussion of the "Goddard Standard Model" (of a 10-day Cepheid). Bob and Jan send their best wishes to everyone in the Department.

Bob Garrison spent a week (September 3-7) of his sabbatical leave at D.D.O. en route between Poland and Lick.

Phil Kronberg has returned to the University after an interesting and successful sabbatical leave as von Humboldt Fellow at the Max-Planck-Institut für Radioastronomie in Bonn. The family were all there, Robea enjoying the experience of keeping house in Germany and the boys enjoying school and kindergarten. Phil's recent publications and his contributions to the Grenoble meeting and IAU Symposium 74 are tabulated elsewhere.

SEMINARS

AUGUST

Tues. 17th
D.D.O.

Sidney van den Bergh, "The Distance Scale Within the Local Group".

SEPTEMBER

Tues. 21st
D.D.O. 4 p.m.

Ron Allen, University of California at Berkeley and Kapteyn Laboratory, "Radio Continuum Emission from the Disks of Normal Galaxies"

Tues. 28th
D.D.O. 4 p.m.

Ron Caterna, University of Washington, "Observations of Stars in Globular Clusters"

OCTOBER

Tues. 12th
D.D.O. 4 p.m.

Sidney van den Bergh, "New Optical Observations of Cygnus A, NGC 5102, M104 and the Hydra 1 Cluster"

PAPERS SUBMITTED

S. van den Bergh

The Distance Scale Within the Local Group.

De Lupus Supernova van het jaar 1006.

The Mass Spectrum of Star Formation in the Sombrero Galaxy.

The Peculiar SO Galaxy NGC 5102.

Photometric Observations of Galaxies in the Hydra I Cluster.

The Optical Structure of Cygnus A.

Observations of Two Obscured Galaxies in Cygnus.

David G. Turner

The Period of the Cepheid CV Monocerotis

HDE 255930 - A Newly-Discovered Variable in Orion

The Absolute Magnitude of the Cepheid CV Monocerotis

Cluster Membership of the Cepheid UY Persei

The Absolute Magnitude of the Cepheid VY Carinae

- S. Pineault and
R. Roeder *Applications of Geometrical Optics
to the Kerr Metric. II. Numerical
Results.*
- E. Seaquist &
C. Bignell *High Resolution Studies of Spiral and
Irregular Galaxies at 2.7 and 8.1 GHz III:
NGC 3310.*
- R.F. Garrison &
J. Kormendy *Some Characteristics of the Young Open
Cluster Trumpler 37.*
- P. Martin, J. Angel &
J. Maza *Night to Night Variations in the Optical
Polarization of the Nucleus of NGC 1275.*
- J. Percy *Education in Astronomy. A Review.*
- The Application of Maximum Entropy Spectral
Analysis to the Study of Short Period
Variable Stars.*
- Photometric Observations of LX Persei.*
- Observational Studies of Multiple
Periodicity in Pulsating Variable Stars,
Using Maximum Entropy Spectral Analysis*
- Linear Non-Adiabatic Pulsation Analysis of
Normal and Metallic Line A Stars.*
- R. Racine &
W. Herbst *R Associations V.*
- P.P. Kronberg *Rotation Measures and Cosmology.*
- D. Hanes, W. Harris &
B. Madore *UBV Sequences for Selected Virgo Galaxies.*
- S. Shore & S. Adelman *Magnetic Fields and Diffusion Processes
in Peculiar A Stars: II Precession and
the Oblique Rotator Model.*

P O T P O U R R I

Former DDO Staffer Dies

Carson Whelan, former secretary and observing assistant of the Observatory, died recently after suffering a heart attack at his home in York at the age of 59. He held the Observatory positions from January 1946 to April 1949, being the second secretary

replacing Miss Edna Fuller who had filled the secretarial position as a part-time employee since 1935. A few years after leaving the Observatory Carson formed the very successful company, Automatic Letter Typing Ltd., of which he was still president at the time of his death.

Resignations and Departures

This summer has seen an unusual number of personnel leaving the Department and the Observatory. The latest in the list: Esther Salve, Departmental Secretary, has accepted a secretarial appointment at the Royal Ontario Museum; her replacement is Martha Fraser. Ruta Caune, Observatory Librarian, has been selected from 300 applicants for an 18-month management training course at Ontario Hydro - her replacement is Mrs. Sheila Summerhays. Dave Turner, PDF, has been appointed for a two-year term as Assistant Professor at Laurentian University, replacing Serge Demers (Ph.D. 1966) who has accepted an appointment at the University of Montreal; directly affected by Dave's departure is his wife Pat who is leaving her part-time job as assistant in the Library. Bruce Campbell successfully defended his thesis on September 10 and in December he will take up a PDF at U.B.C.; meanwhile Bruce and Kaye are en route to Europe and Africa where they will tour for two months. Bill Herbst (Ph.D. 1971) who has been PDF at York for the past two years has accepted a Fellowship at the Carnegie Institution of Washington; this takes wife Betty from her job as research assistant to Sidney van den Bergh; her job is being assumed by Jim deRoux B.Sc. who worked at the Observatory in the summer of 1974. Roel Hurkens has gone to the University of Victoria to enrol in a doctoral program in astronomy.

Alumnus at Queen's

Jacques Vallée (Ph.D. 1973) has accepted a one-year appointment with the Astronomy Group, Department of Physics, Queen's University.

Recovered

Jack Heard has recovered well from a heart attack which saw him hospitalized in Orillia Soldiers' Memorial Hospital for two weeks in July.

FINAL ITEM

McCleane's Gift

Quite a while ago now, on a pleasant October morning in 1959, I was part of the audience gathered in the grounds of the Royal Cape Observatory to witness the unveiling of a cornerstone in the dome of the new 40-inch reflector. Since the Observatory was then a British naval institution there was a British admiral along to do the unveiling, a gentleman who happily admitted that he knew not a thing about astronomy, but who announced that he had been most heartened to hear that the useful lifetimes of telescopes were extremely long. This, he said, was in contrast to all other equipment of the Royal Navy, where the prevailing opinion was that if something worked it must be obsolete. I remember thinking at this point: "My God, they've been showing him the McCleane refractor!"

The McCleane refractor (more strictly three refractors, 24, 18, & 12 inches, on a single mounting) had been the pride and joy of Sir David Gill there before the turn of the century. (Frank McCleane had been the businessman benefactor who had fallen prey to Sir David's consummate skill in extracting money.) It was really an astrometric telescope, but by mid-century was also being used for photoelectric photometry, and for much of 1955 it was my inestimable joy to be assigned time on it for purposes of my master's thesis.

Like many big refractors, this one was a great clanking monster that somehow gave one the willies just stepping into the dome. In part this may have been due to its location in the grounds. From the main administration building (itself 130 years old) one stepped off into the dusk past the grave of the Rev. Fearon Fallows, first director, on past the graves of Sir Thomas Maclear and his wife, and then through a dense, dank grove of something like cypress trees. A willies mood was easy to acquire.

Operating the beast could be nervewracking. Not only was there much clanking and clunking, but the thing worked on a gravity drive running only a sector of a gear, so every few hours a piercingly shrill bell announced it was time to de-clutch and wind up the weights again (inevitably just as the observer had located some difficult object in the finder). It was here that I learnt the first rule of the observer: lock the outside door behind you when you enter the dome. There I was after several hours of silence, my nerves waiting for the bell to scream out, when suddenly a disembodied voice in the dark behind me asked what was going on. Extracting the point of the pencil with which I had been writing from the palm of my hand, I found the voice to be that of some casual visitor who had wandered in out of curiosity, and in that, Mr. Driver later assured me, I had been relatively lucky.

Mr. Driver was one of the old hands of the Observatory under whose tutelage I was sometimes placed. His experience of night visitors was coloured by the sober fact that the Observatory was located next to what in the crude ways of the times we called a lunatic asylum. (There were endless jokes about which was which.) Mr. Driver's visitor had been in deep conversation with him for several minutes on the subject of astronomy, when he casually identified himself as Napoleon, gloomily noting that he had been having some trouble with the troops lately. This gave Mr. Driver rather more pause for contemplation than one might even have expected, because only a few weeks before he had had an unpleasant run-in with one of these chappies from next door. Mr. Driver cycled to work in the mornings, and was in the habit of taking a short-cut through the grounds of the neighbouring establishment. Here the milder patients would be out gardening, and Mr. Driver in due course found himself always exchanging elaborate greetings with one of these guys who watered the flower beds. Came the morning when a preoccupied Mr. Driver failed to say hello, and was awakened from his reverie by a thorough soaking from the hosepipe and a torrent of abuse following him as he pedalled furiously on down the driveway. Anyway, as I recall, Mr. Driver simply shepherded Napoleon out of the dome, possibly announcing himself as Wellington when they reached the door.

Then again, the construction of this dome did allow the observer a sporting chance under such circumstances. It was equipped with a rising floor, and at the point of the inner entrance door there was a small neon indicator light attached to the floor. A staff member, on opening the door in the dark and seeing the light above his head, would then know that the floor was likewise up there and proceed no further. An unauthorized visitor, however, wouldn't know this, and might happily step off into the black abyss below, where was housed the hydraulic machinery for the floor. Mr. Driver solemnly assured me it had happened.

The rising floor allowed other sporting chances. I recall a night when I had brought the floor up, rotated the dome, made an observation, and was again lowering the floor when I saw out of the corner of my eye that the looped rope for the shutters had caught on the edge of a table containing heaps of expensive electronics for high-speed lunar occultation photometry. Another three inches and my astronomical career would have been over. John Irwin, a fellow-observer there that year, had a similar experience. His student assistant once momentarily forgot how to stop the floor as it was shooting up towards the photometer on the telescope. The fellow froze in panic at the controls, and Big John had to seize him in a bear hug and tear him bodily away before Anglo-American relations hit a new low.

Attached to the dome was a fairly large laboratory, again once Sir David Gill's pride and joy. Indeed, I suspect that could he have come back then he would have found little changed since his departure in 1906. There was, for instance, the original spectrograph for the 24-inch refractor, which contained God knows how many prisms and was fully capable of reaching third magnitude in an easy four hours.

We didn't use it much. Mind you, Mr. Driver once told me that in the beginning the spectrograph had been ready before the telescope, and some enthusiast had set it up in the laboratory and spent months making a spectrographic analysis of the lead in Admiralty pencils.

But my fondest memories of the McClean Telescope concern the shutters of its dome. Somewhere in the middle of the night once, the wind suddenly veered northwest, and that meant rain for sure. And then, as I started to close up, the shutters jammed wide open. Panic-stricken, I rushed off down the grove and grave route towards the house of the Chief Assistant, David Evans, who, in my innocence I felt sure, would gladly come to my rescue. A prolonged leaning on the doorbell produced a sleepy and dishevelled pyjama-clad David, clearly uncharmed by this turn of events, who listened in stony silence to my story, and then, carefully closing the door in my face, disappeared. Nonplussed, I waited long enough to have him reappear in slacks and sweater, and the two of us, still wordless, started off on another lap past the graves, etc. Suddenly he broke the silence. "Tell me, Fernie," he said in a kindly conversational tone, "do you know the story about the English music-hall comedian working in Germany?" Relieved that it was to be jokes rather than a tirade, I allowed as how I did not. "Well," said David, "since I feel just like that comedian right now, I'll tell you. There he was doing this show in Germany, and finding that he was getting absolutely nowhere. Clearly the language barrier was too much; he couldn't get even a smile out of the audience. In utter frustration he finally turned on them and demanded 'Is there anyone here who speaks English?' A little old lady in the front row held up her hand, 'Well,' yelled the comedian, - and here a note of hysteria crept into David's voice - damn you for a start!!" Only David used a much, much more colourful verb than 'damn'.

David had no better luck at the shutters than had I. We had to get the Chief Mechanic out of bed to deal with them, and my typewriter can't produce the words he used to comment on the situation.

Very soon after that I left the Cape to continue my career in the States.

J.D.F.

