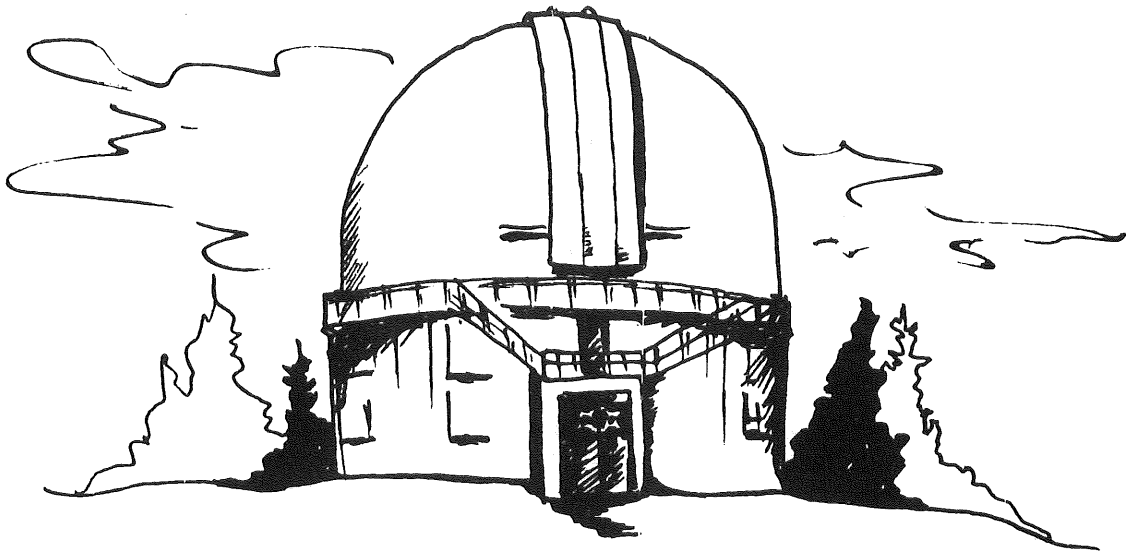

DAVID DUNLAP DOINGS

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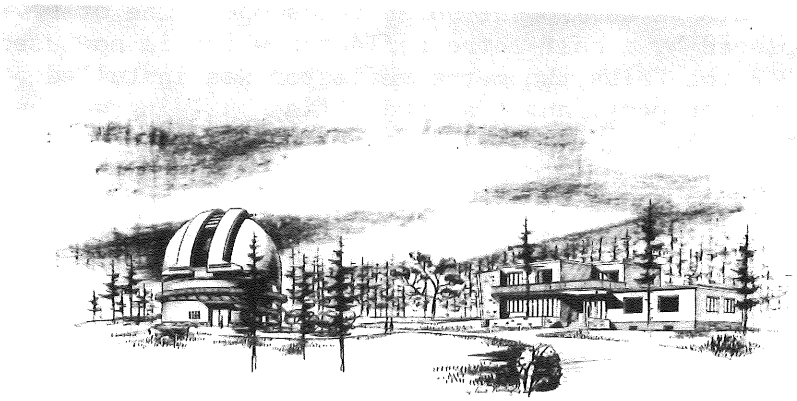

Ondřejov Observatory

See page 2

EDITORIAL

A Private Observatory that Went Public

A month ago I visited for a few days at Ondrejov Observatory which is operated by the Astronomical Institute of the Czechoslovak Academy of Science. It takes its name from the village of Ondrejov which straggles along the paved road about a kilometre down-hill from the Observatory buildings via Dr. Fric Street.

It was this Dr. Josef Jan Fric who founded the Observatory. He, Josef, and his brother, Jan, sons of a rich industrial family of Prague, had become fascinated by astronomy as boys. Jan died in 1899 while still a young man, and the grief-striken Josef added Jan to his own name and determined to build an observatory to be named for them both. He acquired about a square kilometre of land in the hilly country near Prague and in 1909 completed a fine house and two elegant red brick domes separated by formal gardens and a pond. Dr. Fric operated his observatory privately until 1928 when he donated it to the state.

The present administration building near the original domes was built in 1953 and incorporates a horizontal solar telescope. One of Dr. Fric's telescopes was replaced by a half-metre reflector which is now used for photometry. In 1968 the Zeiss two-metre reflector was installed on a knoll at the far end of the property and a second office building was built nearby. Other installations include a small radio dish and facilities for meteoritic research.

It was the two-metre telescope which interested me most. (I had seen it in the Zeiss Works in Jena in 1963 in the early stages of its construction.) It is an elegant instrument with a modified German mounting resembling the D.A.O. 48-inch. It has prime, Cassegrain and coudé foci, but it is the coudé spectrograph which is now mostly used. The coudé chamber is horizontal and the spectrograph has dispersions of 17, 8.5 and 4.3 A/mm. Three young staff members, Petr Harmanec, Pavel Koubsky and Jiri Krpata have chosen binary shell stars as their specialty and are working diligently and effectively in this field. Roel Hurkens and I are collaborating with them on 4 Her and we are hopeful that, with some borrowed DAO observations of 1919-20 and 1953-1962, DDO observations of 1936-40 and recent DDO and Ondrejov observations, we can make some sense out of apparent period changes.

There are interesting contrasts between the operation of their observatory and ours. In keeping with the communist policy of zero-unemployment, many of the local residents are employed on small jobs at the Observatory, so that the

total staff is a staggering 150. Many of these have lunch at the Observatory cafeteria (a very hearty lunch for 50¢) and, in fact, so also do some of the children who attend the nearby school and who live too far away to go home for lunch. Similarly the bathtub of the comfortable little visitors' suite where we were lodged (free for me, 50¢ per night for my wife) seems to be in frequent use by villagers who lack running water in their homes. This sort of community use of available state facilities is one feature of communism which partly offsets features which we consider to be unduly oppressive.

J.F.H.

OBSERVING

New Outburst of Cyg X-3

Phil Gregory of U.B.C. and Ernie Seaquist have discovered intense linear polarization in another major radio outburst from the cosmic X-ray source Cygnus X-3. In a collaborative program with U.S. astronomers they have observed at 2695 MHz and 8085 MHz a burst from May 14 to May 31, 1974, measuring flux density, linear and circular polarization, position, and angular size. The instrument used was the interferometer of the N.R.A.O. at GreenBank, West Virginia.

They find that the degree of linear polarization reached 14% at 8085 MHz, and represents the first positive detection of polarization in this object. The observations are most readily interpreted in terms of a highly ordered and stable magnetic field configuration associated with the outburst region, which is emitting synchrotron radiation. The polarization at 2695 MHz was lower, and the analysis of the measurements at two frequencies permits the conclusion that ionized gas and magnetic-fields associated with the source depolarize the radiation at the lower frequency. Furthermore, the amount of depolarization decreases with time, suggesting a dilution of the depolarizing medium possibly caused by an overall expansion of the source.

They find an upper limit of 0".05 for the angular diameter throughout the observing period and they have derived a new position accurate to 0".05, the most accurate yet achieved.

This outburst is one of the largest observed from Cygnus X-3, (> 11 f.u. at 2695 MHz) and the signal strength provides a high signal to noise ratio which

accounts for the high quality of the data. It is expected that these measurements will be a significant milestone in providing an understanding of the overall nature of this peculiar source.

E.R.S.

COMINGS & GOINGS

During the period May 20 - 31 Sidney van den Bergh gave the following lectures at the NATO Erice Summer School: 1) Stellar Populations in the Galaxy, 2) Stellar Populations in the Magellanic Clouds, 3) Globular Clusters and Dwarf Spheroidal Galaxies, 4) M31 and its Companions, 5) The Missing Mass in the Universe, 6) The Evolution of Galaxies. He returned on June 1 to attend a session of the Council of the R.S.P. at Bishop, Calif. and for the June Institute and will again attend the Erice Summer School June 23-July 9.

Serge Pineault and Kayll Lake also attended the Erice Summer School on General Relativity May 8-22.

Robert Roeder was in Ottawa on May 30, speaking on "Are Angular Diameters a Cosmological Test?" Between June 22 and July 3 he is attending GR7, the relativity meeting in Tel Aviv and will give another version of the same talk.

Tom Bolton and Jack Heard attended the Spring Symposium of the Hamilton Centre of the R.A.S.C. on June 8, speaking respectively on "Black Holes" and "J. Miller Barr".

Ernie Seaquist has left, with his family, for Australia for his sabbatical year, expecting to work with Jasper Wall at Parkes on radio stars and with Bruce Slee at Clugoora on observations of spiral galaxies at 160 MHz.

Don MacRae, Rene Racine and Sidney van den Bergh attended the ESO/SRC Conference on Large Telescopes at Geneva May 27 - June 1. On the same trip Don had earlier attended a meeting of Directors of the CFHT interim Board.

The following attended the CAP/CAS meeting in St. John's Nfdld on June 9-13: Tom Bolton, Tom Clarke, Maurice Clement, Bob Garrison, Don MacRae, René Racine, Gretchen Hagen and Bill Harris. A number of papers were presented, including an invited review paper on "The Observational Evidence for Black Holes" by Tom Bolton.

Rene Racine is observing at Las Campanas June 14-30.

SEMINARS

JUNE	As announced in DDD 7/5, plus a "Town Meeting" on 'Revision of the Astronomy Curriculum' on June 4, and the sessions of the June Institute, June 18-21.
JULY	None planned as yet.

PAPERS SUBMITTED IN JUNE

S. van den Bergh	"Dark Nebulae in the Magellanic Clouds", "Future Research of Nearby Galaxies", "The Determination of the Hubble Parameter: An Interim Report".
J.D. Fernie	"On the Use of a Single Photo-multiplier for UBVRI Photometry"
P.G. Martin & J.R.P. Angel	"The Diffuse Interstellar Features Studied in HD 21389 By Polarimetry and Spectrophotometry
C.T. Bolton	"High Dispersion Spectroscopy of the Sigma Orionis System"
W.E. Harris	"The Unusual Horizontal Branch of NGC 2808"
R. Racine	"The Apparent Distribution of Globular Clusters"

P O T P O U R R I

Born

To Doyne and Frank Ahern at York Central Hospital on June 14 a daughter, Erin Elizabeth.

Librarians Meet

The Special Libraries Association held its annual conference in Toronto this year at the Four Seasons Sheraton Hotel with over 2,300 members in attendance. Astronomy librarians comprise a very small percentage of this group but they are becoming increasingly active. Plans were made at this meeting to continue work on a computerized list of serial holdings, to update the directory of astronomy libraries and to compile a listing of rare astronomy books available in American and Canadian Observatories. The dominant theme was communication and we all hope that through improved communication between Observatory libraries we will be able to strengthen our collections and the services available to our patrons.

The Conference, however, wasn't all business meetings and on Tuesday June 11th the Physics-Astronomy-Mathematics Division attended the show at the McLaughlin Planetarium followed by a talk by Dr. J.D. Fernie on the Transit of Venus which was very well received.

On Thursday librarians from Yerkes, Dudley, Dearborn and several other Observatories visited D.D.O. They were naturally very interested in our library but also enjoyed seeing the 74" telescope ably demonstrated and explained by Bob Chambers. The tour concluded in the library where our guests had an opportunity of meeting with members of the staff for coffee and discussion. Thanks to Bob for acting as our guide and to Joan Topley and Gerry Longworth for helping with transportation to and from the Observatory.

C.M.

R.S.C.

At the meetings of the Royal Society of Canada held on Campus June 2-5 Helen Hogg was elected Chairman of the Editorial Committee of the Academy of Sciences and Jack Heard was re-elected Convener of the Interdisciplinary Subject Division.

J.D.F. in S.A.

Don Fernie made an unexpected trip to South Africa May 24-June 7 because of a sudden serious illness of his mother in Pretoria. She is now out of danger and convalescing in hospital.

Promotion

René Racine has been promoted to Associate Professor with tenure as of July 1.

Pier Demolished

Gerry Longworth and his helpers spent the greater part of a week tearing down, breaking up and hauling out the pier of the old microphotometer in the clock-room. Gerry recalled an equally rough day some thirty-five years ago when he and Dr. Young, assisted by Tom McKenzie and his two gardeners, mixed the ton-and-a-half of concrete on a sweat-board outside the carpenter shop window, chuted it down into a wheelbarrow and shoveled it into the form in the clock-room. Gerry is thankful that the new microdensitometer has its own table. It is expected about July 2, and Tom Bolton thinks it will take two to three weeks to erect and test it.

Co-author, anyone?

Don MacRae calls attention to an ad in Physics Today for May for co-author to collaborate in writing a book proving the special theory of relativity to be in error. "You provide the writing ability; I provide the mathematical proof".

Can't expect all skills in one person.

Navigation is for the Birds

Dave Ellis writes that he is now in the Zoology Department of U. of Alta. and asks if anyone knows which migratory birds navigate by starlight. He thinks European Whitethroats may and "hopes" that arctic terns may. Can anyone help?

Dave. - There was an article in Sci. Amer. or Sky + Tel., maybe as long as ten years ago, about some experiments performed on birds in a planetarium. What a mess it must have made!

Ed.

Letters from Alumni

Emmanuel Davoust writes that, having done his military service, he is now employed as research assistant at Besancon Observatory. Jacques Vallée recently visited and gave a seminar, and Emmanuel would like to hear from any others who may be visiting France. His address: Université de Besançon, Observatoire, 41 Bis. ave de l'Observatoire, 2500 Besançon, France.

John Roger writes from Nigeria to thank DAMcR for the Observer's Handbook and JDF and JFH for DDD and to tell bits of information about his teaching job in Etinan. He is now head of Maths and Physics at the school. His address: Q/I/M/S/S/, Etinan, S/E/S/, Nigeria.

P.D.F.'s

Barry Madore has a Post-doc. Fellowship for next year at Cambridge and Jack Winzer has one at U. of Alta.

Our Pisco Project Threatened?

The Department of Revenue, enquiring of Gerry Longworth as to in what room the recently acquired still was to be located, were disconcerted to be told that it had been shipped to Chile.

FINAL ITEM

The Duelling Director

Alongside the rather inconspicuous little spit of land that is the actual Cape of Good Hope there is another equally inconspicuous spit known as Cape Maclear. It is named after one of the most interesting directors of the Royal Cape Observatory.

Thomas Maclear was born in Ireland in 1794 and raised to be a doctor by two uncles who were themselves medical men. While a house surgeon at an infirmary in Bedford he met that strange family of Smyths (one of whom, Piazzi, eventually became Astronomer Royal for Scotland before he went completely dotty over pyramidology), as a consequence of which he soon became an ardent amateur astronomer.

In 1833 Thomas Henderson (of stellar parallax fame) resigned the directorship of the Cape Observatory in a huff with the British Admiralty over the architecture of the Observatory's sanitary arrangements. Maclear's astronomical abilities were by now sufficiently well-known for him to be considered as a successor to Henderson, and in due course he accepted the directorship. It seems strange that a medical doctor should so readily be appointed to that post, but I suspect the Admiralty's main problem was finding someone willing to accept it, rather than choosing the best man for the job. In any case, Maclear was to prove himself more than able. Besides, he couldn't say he wasn't warned.

Henderson wrote to say what life would be like: "I will tell you about my residence in Dismal Swamp among slaves and savages - plenty of insidious venomous snakes. What would you think, if on putting out your candle to step into bed you were to find one lurking beside the bed?" Etc., etc.

The medical uncles were irate and wrote to say in effect that while astronomy might be a suitable hobby for the mildly eccentric, it was hardly a fit profession for a gentleman. They signed off with a curt refusal to contribute even a farthing towards Maclear's travelling expenses.

Maclear had hoped to travel out on a private ship with John Herschel, who was to become a close and lifelong friend, but the fares were such that he was obliged to take a government vessel instead. Admiral Beaufort urged him to be on hand well before the sailing date so as to "order your pigs and chickens and potted meats" for the voyage, as well as to lay in a good store of dried potatoes and apples as antiscorbutics. The Maclear family took the precaution of having the ship's captain observed while he drank in a tavern, but despite passing this test he announced to Maclear in mid-voyage that the trip would cost Maclear very nearly as much as the fare for the classier private vessel after all. The entire family was hideously seasick, and one of the children died, an event that later brought a lugubrious letter from one of the Smyth sisters saying she had never thought the child strong anyway.

No doubt it was with no little relief that on the sunny summer morning of 5 January 1834 the Maclears found themselves on deck with Cape Town and Table Mountain before them. On shore to meet them was Maclear's assistant, a Lieutenant Meadows, who greeted his new chief with one of the most remarkable of salutations: "So, Sir, you have determined to accept this wretched appointment."

It soon became clear that Meadows was not only a pretty sour individual, but was also maintaining a ménage à trois, and before long he and the Observatory parted company. He was an astute judge of the propitious moment, however, and

enraged Maclear by resigning on the grounds of ill-health just as Maclear had made up his mind to fire him.

Assistants were not easy to find in the African wilds, and after Meadows' departure Maclear decided to appoint his own manservant to the now vacant post of 'Labourer', a post which seems to have covered everything from gardening to shopping to reducing observations and being a night-assistant. The new 'Labourer' was one Thomas Bowler, a wonderfully eccentric individual, and a historical character in his own right. Africa seems to have stimulated his eccentricities, and eventually, after he had insulted Mrs. Maclear, Maclear regretfully dismissed him. Bowler went off to Cape Town, where, inbetween grumbling about the cost of living ("butcher's meat is twopence a pound"), he set up a school for teaching young ladies to sketch and -- that polite accomplishment -- "the use of the globes". It turns out that Bowler had considerable talent as an artist, and his sketches of mid-nineteenth century Cape Town are a valuable record of the times. Today a Bowler sketch fetches a considerable price, and almost anyone in South African art circles knows the name; few have heard of Maclear.

Sometime I shall have to return to the many and varied adventures of Herschel and Maclear, as well as the latter's long (he resigned in 1870) and remarkable career, but for now let me conclude with the episode of the duel.

On the morning of February 23, 1835, Maclear, after a night of observing, was awakened by a servant who reported that there were several French naval officers downstairs to pay a courtesy call. Maclear asked the servant to show them into the library while he dressed, adding that they were not to go into the observing room with its delicate instruments next to the library. When Maclear came downstairs he found his visitors not only wandering around the observing room, but fiddling with the transit instruments. Not for nothing was Maclear known behind his back as 'The Emperor', and the peppery little man apparently bristled fiercely at this intrusion. In short order the volatile Frenchmen stormed out, and in a few hours two gentlemen arrived with the letter reproduced below.

"23d Feb 1835

"Sir!

"As I have been at the
"C. Royal Observatory during a Course of the
"Science & being insulted by your appearance
"If it is your intention by so doing an

" As you are Officer of the navy and
" Commander of the French man of war
" the Madagascar at present in Table Bay
" I wish to have satisfaction for your
" improper Conduct, & request for an answer
" I am
" Bosse
" Commander of the French Ship Madagascar

This "bombastic note", Maclear noted, "was written on a slip of dirty paper" and conveyed by two 'gentlemen' who not only could not produce visiting cards, but whom he recognized as a local baker and innkeeper respectively. The Emperor promptly sat down and penned a stiff, dignified, but nevertheless somewhat conciliatory reply, in which "I have the honour to inform you that I am extremely surprised at the nature and tone of a note received from you.... I disclaim having employed improper language on the occasion or anything insulting."

The Observatory being a British naval establishment, Maclear sent a copy of his letter to the senior naval officer at the nearby British base in Simon's Town, asking in a covering letter - his temper again rising - "[Do you] consider my honour in any way involved? If so I will go out with this Bosse, provided he is a commissioned officer and his friend neither a baker nor a common lodging house keeper, but my family and insurance are barriers to fighting unless my honour is concerned; in that case nothing shall prevent me."

Happily the French captain seems to have accepted Maclear's letter as closing the matter, but the British navy came down heavily on poor Maclear. The senior naval officer "called upon me and told me that my conduct was highly improper, that the note was more the production of a prize fighter than a gentleman and that I ought to have sent it to the French Minister of Marine and have not replied to him."

It is fitting that Maclear should be remembered by that rocky Cape jutting into the ocean; in his way he withstood the tides of his times as well as does the rock that remains.

J.D.F.