

UBC REPORTS

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UBC REPORTS CAMPUS EDITION

UNION DISPUTE DENIED

Mr. John F. McLean, UBC's Director of Personnel, Labor Relations and Ancillary Services, has denied that any attempt to stifle union organizational activity has been made by the University administration.

Statements to this effect were published in the Thursday, Oct. 14, edition of the student newspaper, *The Ubysey*.

"UBC has always welcomed union organization when a majority of persons concerned have shown their wish to belong to a union," Mr. McLean said. "At no time have we attempted to discourage anyone from joining a union if they so wish."

The Ubysey statements apparently stemmed, in part, from an incident in which a non-certified union was first given and then denied permission to hold an organizational meeting on campus.

The meeting was called to discuss organization of a UBC unit of the Office and Technical Employees' Union, an affiliate of a U.S.-based international union.

Organizers of the meeting were mistakenly given permission to hold the meeting in a University building. This was an inadvertent violation of a long-standing policy that University facilities are not available to non-certified unions for organizational purposes, but are available to unions for normal union activities after they have been certified as bargaining units for UBC employees and have contracts with the University.

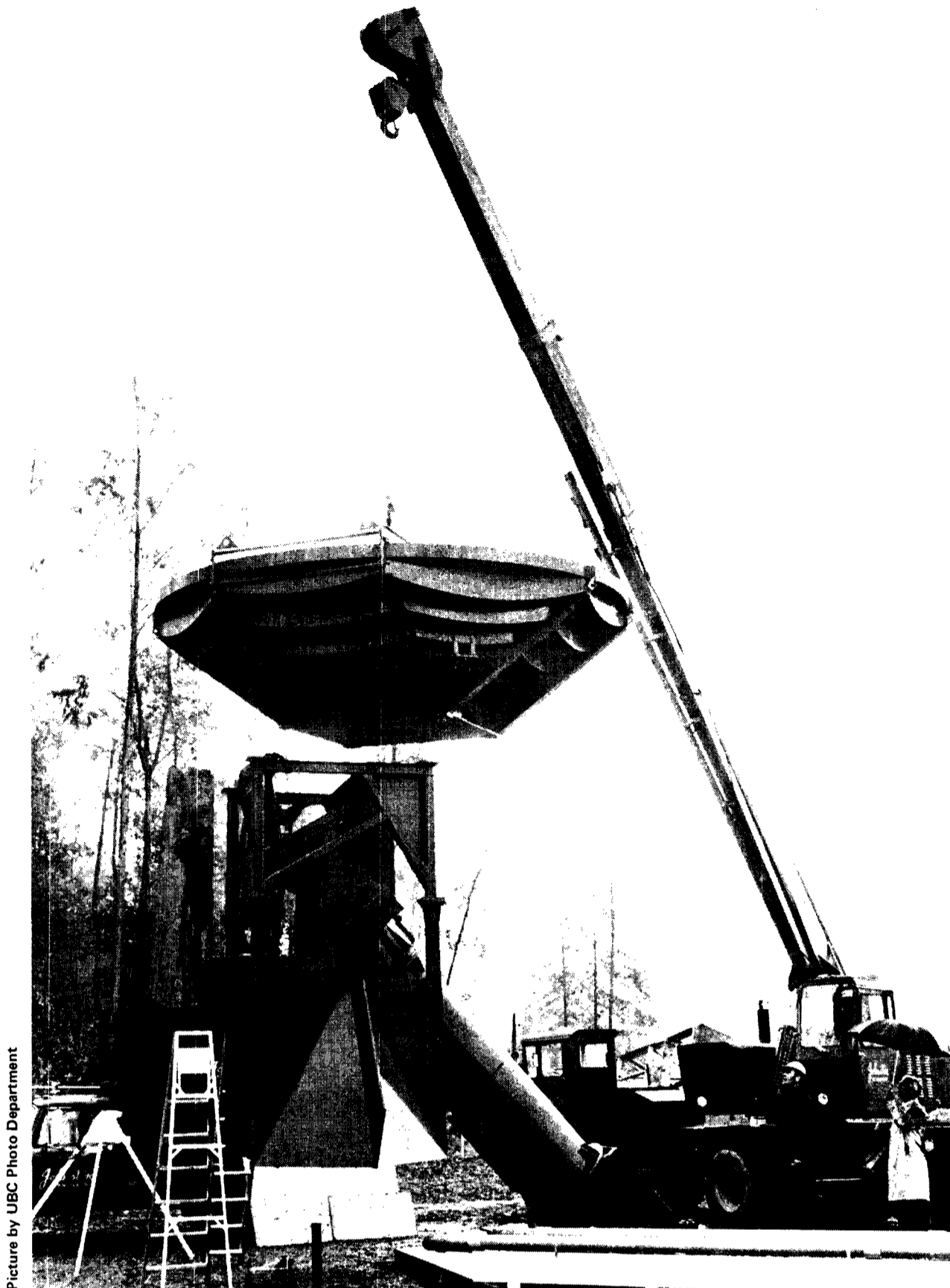
Mr. McLean said it would have been unfair to the four unions certified on the campus, which were denied University facilities in their organizational stages, to make such facilities available to an outside union.

The Canadian Union of Public Employees, Local 116, UBC's largest union local, has been certified on campus since 1942, Mr. McLean said.

A news story in *The Ubysey* referred to a "dispute between the union (OETU) and UBC administration. Mr. McLean said no such dispute exists. "The OETU has never approached us in regard to anything," he said. "We've had no discussion with them and we know very little about them."

Mr. McLean also denied a charge made, according to *The Ubysey*, by OTEU spokesman Bill Lowe that Mrs. Jeanne Paul was asked for her resignation as administrative assistant in the Faculty of Science because of union activities.

"As far as we know this statement is completely incorrect," Mr. McLean said. "At no time were union activities mentioned or considered."



Picture by UBC Photo Department

New radio telescope on UBC's South Campus will probe deep space. Details on Page Four.

Research Probe at UBC

A national Commission to Study the Rationalization of Research at Canadian Universities will hold a one-day hearing on the UBC campus next Tuesday (Oct. 26).

The commission, established earlier this year by the Association of Universities and Colleges of Canada, will meet in the Board and Senate room of the Main Mall North Administration Building.

The hearing will be open to all members of the University community, the general public and the news media.

The commissioners who will hear briefs are Dr. J.A. Corry, former principal of Queen's University in Kingston, Ont., and Mr. Louis-Philippe Bonneau, vice-rector of Laval University in Quebec City.

The commission's terms of reference are to study, report and make recommendations on the mechanisms, structures and processes required to ensure the research undertakings in the universities of Canada can be planned to serve, without undue duplication, both the advancement of knowledge and provincial, regional and national development.

(For further details on the commission and research at UBC see the interview on Page Two with UBC's deputy president, Prof. William Armstrong. A summary of UBC's research allocations for the last two fiscal years appears on Page Three).

Prof. Armstrong told *UBC Reports* that the University would not be presenting a brief to the

commission. He said some material had been sent to the commission to illustrate the degree of research co-operation which exists among Western Canadian universities.

As examples of co-operation he cited the Tri-University Meson Facility (TRIUMF), a new cyclotron currently under construction in UBC's South Campus research area; the Western Canadian Universities Marine Biological Society (WCUMBS), which is developing a marine biology research facility on Vancouver Island, and Western Telescopes for Astronomical Research (WESTAR), which is attempting to raise funds to complete the Queen Elizabeth II telescope on Mount Kobau in the southern Okanagan.

At least three UBC groups are known to be preparing briefs for presentation to the commission.

Dr. Philip White, head of the Faculty of Commerce and Business Administration, will present a brief on behalf of the recently-formed Council of Deans of Faculties of Management and Business Administration. Dean White is the current chairman of the Council.

Dr. Pierre Maranda, associate professor in UBC's Department of Anthropology and Sociology, will present a brief on behalf of the department.

UBC's librarian, Mr. Basil Stuart-Stubbs, and the librarians at Simon Fraser University and the University of Victoria also plan to make a statement to the commission.

UBC's deputy president, Prof. William Armstrong, right, former dean of the Faculty of Applied Science, describes how western Canadian universities are co-operating to avoid duplication of research effort. He also discusses the concern expressed in recent years about secret or classified research being carried out in a university setting.



SECRET RESEARCH BARRED AT UBC

UBC REPORTS: The University will be visited next Tuesday (Oct. 26) by a commission of the Association of the Universities and Colleges of Canada which is studying the rationalization of university research. The term "rationalization" of university research might lead someone to believe that there is something irrational about university research. What is meant by the term in this context?

DEPUTY PRESIDENT WILLIAM ARMSTRONG: The Commission is studying the mechanism of research granting and research support in Canada to see if they can be used to avoid duplication of research in Canadian universities. It means rationalization in that sense.

UBCR: Is there a good deal of research duplication going on in Canadian universities at present?

DEPUTY PRESIDENT ARMSTRONG: I think inevitably there is a fair amount of duplication, but when I say that I don't mean two people are doing exactly the same work. They are working in the same fields and in most cases they are aware of what the other group is doing. In general, the work is complementary but there is always the feeling that if you had a centre of excellence at one university, where all these people were concentrated and interacting together, that more would be achieved.

Certainly, I think there is no doubt that you must have what we usually call a group of viable size before you start getting interactions between the people. And in these larger groups you do seem to create more exciting, innovative research.

In Western Canada we have already progressed a long way toward rationalization in many fields and I have already sent some of this information to the commission so that they will be aware of it when they come here.

UBCR: Can you outline what you have presented to the commission?

DEPUTY PRESIDENT ARMSTRONG: Perhaps the best known of these developments is the Tri-University Meson Facility (TRIUMF), which is under construction now on the UBC campus. UBC, the Universities of Victoria and Alberta and Simon Fraser University are all contributing funds for the project, but the lion's share of the construction costs is being provided by the federal government. The TRIUMF cyclotron will produce beams of basic particles for study by physicists and it will also have some application in medical research.

There are other projects which should be mentioned; the Western Canadian Universities Marine Biological Society (WCUMBS), for instance, which has just received a half million dollar grant from the federal government to develop a marine biology station at Bamfield on the west coast of Vancouver Island. There are five western universities involved in this project.

WESTAR (Western Telescopes for Astronomical Research) is another co-operative project which is attempting to raise funds to complete the Queen

Elizabeth II telescope on Mount Kobau near Osoyoos in the southern Okanagan. There are eight Canadian universities, including UBC, involved in this effort.

In addition, UBC has done a good deal to foster interdisciplinary work in such fields as water resources, which is spread across five or six departments and involves faculty members and graduate students from each. This tends to do away with duplication of research which might otherwise occur in those departments. Another example of this is the Institute of Animal Resource Ecology. It draws heavily on the services of faculty members in several departments.

UBCR: Are there other areas that can be developed in the future?

DEPUTY PRESIDENT ARMSTRONG: Yes. Biomedical engineering, as it is often called, is an interface area between various applied science fields, including electrical, mechanical and metallurgical engineering, and the life and health sciences. Engineers and technologists provide the necessary instrumentation skills which the medical doctor needs in the delivery of modern health care.

UBCR: Do you see one or two universities in Canada concentrating on studies in this area?

DEPUTY PRESIDENT ARMSTRONG: I think so. There is one unit at McGill at the present time. There is a fair chance that we will establish one here.

UBCR: Is the University going to present a brief to the commission?

DEPUTY PRESIDENT ARMSTRONG: No. The University as a whole won't present a brief, but several groups of the faculty will. The University librarians, for instance, are interested in rationalization of their book collections, especially some of the more expensive ones which are used rather infrequently by people in research fields.

UBCR: Is it the aim of the AUCC commission to lay down some guidelines which will save money?

DEPUTY PRESIDENT ARMSTRONG: Yes, the hope is that research money will be used more efficiently. I hope the commission realizes that you can only achieve rationalization of research on a national scale and that any degree of rationalization is dependent upon the continued direct support of research by the federal government. If you start feeding research funds through the provincial governments, as has been suggested, any significant degree of rationalization is virtually impossible. The only way of establishing an overall granting policy is to organize it on a national scale through the federal government.

UBCR: Since we are dealing with the question of research, what is the situation this year at UBC? In the last fiscal year UBC had a very minimal increase over the previous year in research funds, largely because of reduced spending by the federal government. How do we stand this year?

DEPUTY PRESIDENT ARMSTRONG: The increase this year has been fairly small because the

number of requests has increased and the available funds have to be spread more thinly. In many cases the dollars per grantee has actually decreased this year. And the purchasing power of those dollars has also decreased so this, in effect, means less research support this year than last year.

UBCR: Is this seriously hampering the University in its research effort?

DEPUTY PRESIDENT ARMSTRONG: I think it will restrict the growth of graduate schools in many areas. This will be the main effect because graduate students rely on these grants for support. So from that point of view it will restrict research.

UBCR: In recent years concern has been expressed about universities doing secret or classified research for governments or private industry. Can you tell us what the position is here at UBC with regard to this? Do we allow secret or classified research to go on?

DEPUTY PRESIDENT ARMSTRONG: No. Our policy is quite clear. We do not permit any classified research and we insist that the results of all research should be publishable by the people doing the research. In some cases we find that our industrial contracts may lead to results that the company or the University wishes to patent. In such cases we have to hold back on publication for a period of six months or so while patents are applied for. There is a degree of restriction there but it is usually in the University's interest if there are patent applications involved. But we don't accept defence research unless we're completely free as far as publication is concerned.

UBCR: What mechanisms does the University have for acceptance of research grants?

DEPUTY PRESIDENT ARMSTRONG: Our Office of Research Administration examines every grant application before it is sent to the granting agency. In the Office of Research Administration under Dr. Frank Forward, applications are examined for restrictions on publication and to determine whether or not the project uses human subjects or animals in the experimental work, because we have policies with respect to both of these types of research. So we have carefully built-in controls for dealing with restrictions, but also the type of research being done, the kinds of subject material that is actually being studied, particularly in the case of human research.

UBCR: Are there occasions when the University turns back a research fund application?

DEPUTY PRESIDENT ARMSTRONG: I just turned one back the other day, as a matter of fact.

UBCR: What did it involve?

DEPUTY PRESIDENT ARMSTRONG: The grantee wanted all the results of the research restricted and refused to allow publication. I refused to accept this contract. The faculty member who applied for the grant will have to confer with the granting agency. We will insist on free publication and in this case, since graduate students are involved, we will insist that the results be available as the basis for theses.

\$15.5 MILLION SPENT ON RESEARCH

University of B.C. faculty members spent \$15,588,863 on research in the 1970-71 fiscal year which ended on March 31, an increase of \$1,052,671 or 7.24 per cent over the previous fiscal year.

The 1970-71 increase is in sharp contrast to the increase in research funds over the 1969-70 fiscal year. Reduced federal government spending meant an increase of only \$227,733 in 1969-70 over the previous year.

Figures on research fund allocations at UBC are compiled by Prof. Frank Forward, consultant on research administration.

Reproduced below are tables which show how much each Faculty spent on research, the source of funds as well as source distribution and percentage for the last two fiscal years.

The Faculty totals include funds which were awarded to students in the form of fellowships and scholarships. These funds totalled \$2,514,976 in 1969-70 and \$2,799,951 in 1970-71.

The federal government continues to be the largest single contributor to research at UBC. In 1970-71 federal funds made up more than 73 per cent of the total received by UBC. (See

Source Percentage table below).

The Faculties of Science and Medicine again spent the most on research in 1970-71. The Faculty of Graduate Studies received the largest increase in research funds, \$619,578 over the previous fiscal year.

Only the Faculty of Dentistry showed a noticeable decline in research funds. The 1969-70 total of \$197,030 included funds for the purchase of several pieces of major equipment, including an electron microscope, Dean S. Wah Leung, the head of the Faculty, told *UBC Reports*. The reduced 1970-71 total of \$95,865 represents operational research funds.

SUMMARY OF UBC RESEARCH FUND ALLOCATIONS

1969-70 AND 1970-71

SOURCE OF FUNDS

	1969-70	1970-71
Atomic Energy Control Board	\$ 294,900	\$ 291,600
Canada Council - Operating	308,954	403,376
Canada Council - Travel	16,850	21,860
Canada Department of Agriculture	81,000	82,935
Central Mortgage and Housing Corp.	19,500	19,350
Department of Labor	-	4,000
Department of Transport	81,000	121,922
Defence Research Board - Operating	240,500	251,716
Department of Veterans Administration	11,729	8,061
Energy, Mines and Resources - Earth Physics	-	1,800
Energy, Mines and Resources - Geography	3,250	3,500
Energy, Mines and Resources - Geological	24,625	30,395
Energy, Mines and Resources - Mines	9,000	6,000
Energy, Mines and Resources - Observatories	7,000	-
Energy, Mines and Resources - Policy and Planning	-	20,740
Energy, Mines and Resources - Water Resources	49,100	147,650
Federal Welfare Grants	66,895	85,146
Forestry and Fisheries	50,000	80,000
Fisheries Research Board - Operating	90,361	75,015
Fisheries Research Board - Equipment	-	10,000
Indian Affairs and Northern Development	36,736	82,867
Institute of Industrial Relations	-	19,415
Medical Research Council - Equipment	194,560	133,376
Medical Research Council - Operating	1,727,373	1,749,531
Medical Research Council - Personnel Award	200,101	62,660
National Harbours Board	1,500	-
National Fitness and Amateur Sport	22,500	19,400
National Health Grant	698,782	643,810
National Research Council - Equipment	344,418	465,500
National Research Council - ERE Committee	187,370	254,469
National Research Council - Negotiated Development	75,000	-
National Research Council - Operating	3,950,379	4,461,978
National Research Council - Travel	28,849	-
Penitentiary	11,000	21,000
Province of British Columbia	168,795	159,129
Private, Industrial and Foreign	2,504,623	2,433,105
Scholarships and Fellowships	2,514,976	2,799,951
Science Council of Canada	18,150	28,871
Solicitor-General	-	3,000
UBC Budget	10,530	3,000
UBC Special Fund	366	-
UBC Research Committee	485,520	582,735
	<u>\$14,536,192</u>	<u>\$15,588,863</u>

FACULTY

	1969-70*	1970-71†
Agricultural Sciences	\$ 658,666	\$ 771,822
Applied Science	1,733,655	1,684,740
Arts	1,596,435	1,875,870
Center for Continuing Education -	-	49,280
Commerce	187,349	264,607
Computer Centre	415,000	317,610
Dentistry	197,030	95,865
Education	148,331	183,207
Forestry	307,516	337,757
Graduate Studies	761,761	1,381,339
Law	4,900	40,468
Library Building	70,000	23,500
Medicine	3,915,046	3,959,905
Pharmaceutical Sciences	126,712	104,674
Science	4,413,791	4,498,219
	<u>\$14,536,192</u>	<u>\$15,588,863</u>

* Includes awards and fellowships totalling \$2,514,976

† Includes awards and fellowships totalling \$2,799,951

SOURCE DISTRIBUTION

B.C. Government	\$ 173,545	\$ 159,129
Federal Government	10,627,216	11,483,050
Private, Industrial and Foreign	2,714,975	2,885,208
University Funds	1,020,456	1,061,476
	<u>\$14,536,192</u>	<u>\$15,588,863</u>

SOURCE PERCENTAGE

B.C. Government	1.2%	1.0%
Federal Government	73.1%	73.7%
Private, Industrial and Foreign	18.7%	18.5%
UBC Funds	7.0%	6.8%
	<u>100.0%</u>	<u>100.0%</u>



PROF. HUGH R. WYNNE-EDWARDS



DR. DONALD O. ANDERSON

Top Canadian Geologist Joins UBC Faculty

A distinguished Canadian geologist from Queen's University has been named to head UBC's Department of Geology.

Prof. Hugh Robert Wynne-Edwards, 37, who is currently head of the Department of Geological Sciences at Queen's, has been appointed by the UBC Board of Governors to succeed Prof. William Mathews, who resigned as head of the UBC department June 30. Acting head until Prof. Wynne-Edwards can take up his post July 1, 1972, will continue to be Dr. James W. Murray.

The appointment continues a long and close relationship between the geology departments of the two universities. Prof. Wynne-Edwards is the third geologist from Queen's at Kingston, Ont., to hold a senior position at UBC.

The geology department at Queen's is second only to UBC's in size in North America.

Born in Montreal, Prof. Wynne-Edwards took a B.Sc. degree with first-class honors from the

Freese Program

Freese, a program sponsored by the Dean of Women's Office, will consist this year of a presentation entitled *An Overview of Modern China* and the British Broadcasting Corporation's film series *Civilization*.

The program will begin tomorrow (Thursday, Oct. 21) in the Student Union Building auditorium with a film-slide presentation by Mr. Ken Woodsworth of UBC's Center for Continuing Education and leader of the Center's summer tour of the People's Republic of China.

The *Civilization* series, narrated by Sir Kenneth Clark, will begin Oct. 25. The second film in the series will be shown Nov. 3 and the series will then continue on a weekly basis until Dec. 1. The series will resume in the second term on Feb. 9 and continue weekly until March 22.

Freese events are open to everyone and there is no admission charge. The program is financed by a grant from the Leon and Thea Koerner Foundation.

**UBC
REPORTS**

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University of Aberdeen in 1955. He took an M.A. degree and Ph.D. degree from Queen's in 1957 and 1959 respectively.

He joined the staff of Queen's geological sciences department the year he took his doctorate and became head in 1968.

He was visiting professor to the University of Aberdeen from 1965 to 1966; advisor to the State Directorate of Mining and Geology at Uttar Pradesh, India, in 1964; has spent ten summer sessions with the Geological Survey of Canada; and has been advisor to the "Grenville Project" of the Quebec Department of Natural Resources since 1968.

He has published more than 40 scientific articles, many of them on the Grenville geological province of the Canadian Shield — an area about 250 miles wide north of the St. Lawrence River in the Province of Quebec.

He has designed a system for collecting geological information in the field in a form that can be fed directly into a computer, specializes in the study of metamorphic rocks as well as "regional tectonics" — the relationship to each other of large-scale structures in the earth's crust.

Prof. Mathews, a UBC graduate who became head of the department in 1964, resigned as head June 30 this year. He is continuing as full professor in the department and is taking a year's leave-of-absence to do an air photo study of two major ice sheets in northeastern B.C. and the Northwest Territories.

The two other Queen's geologists who became leading figures at UBC are Dr. M.Y. Williams, professor emeritus of geology and head of the department for 14 years, and the late Dean Reginald W. Brock, UBC's first dean of Applied Science.

The Board has also appointed Prof. Donald Anderson, of the Department of Health Care and Epidemiology, to the post of director of the Division of Research and Development in Health Services.

Prof. Anderson will be attached to the office of the Co-ordinator of the Health Sciences, where he will stimulate work being done in a number of areas dealing with the delivery of health care using different mixes of professionals.

His research will attempt to find more effective and less costly methods of providing health care. Much of the work connected with testing various methods of health care delivery will be done in UBC's developing Health Sciences Centre and in existing health care programs.

UBC recently received a National Health Grant of \$27,000 to support the work of the division.

The Board has also accepted the resignation of Mr. James Turner as director of UBC's Department of Physical Plant as of Nov. 1. Mr. Turner has resigned to accept a similar position at the University of Toronto.

Telescope Will Probe Deep Space

Canada has entered one of the most fascinating realms of astronomy with the arrival of a 15-foot, millimeter-wave radio telescope at the University of B.C.'s south campus.

The \$65,000 telescope will be used to study atoms and molecules in the space between the stars in our galaxy. Astronomers have made startling discoveries in interstellar space recently.

In the past three years alone huge concentrations of about 20 different types of molecules have been found to exist in this part of the universe.

Many of the molecules are complex and contain many of the types of atoms that make up amino acids, the basic building blocks of life. So far little work has been done in Canada on interstellar molecules.

The aluminum telescope, manufactured by Andrew Antenna Co. of Whitby, Ont., will measure electromagnetic radiation.

All matter in the universe emits electromagnetic radiation. Our information about the universe is through scientific interpretation of this radiation.

The radiation varies in wavelength according to source. From the shortest to the longest wavelengths, the electromagnetic spectrum runs from gamma rays, x-rays, ultraviolet rays, light rays — the only range of the spectrum our eyes are sensitive to — infra-red radiation, which we feel as heat, microwaves and radio waves.

The UBC telescope will "hear" radio emission of about three millimeters or 1/8-inch wavelength from interstellar space.

Total cost of the project will be \$270,000 including \$55,000 for a computer-operated pedestal for the telescope, \$100,000 for receiving and control equipment, \$30,000 for site preparation, and \$20,000 for salaries of staff associated with the project.

The project is under the direction of Dr. W.H. Shuter, associate professor in UBC's Department of Physics, and is being financed through a \$538,600 National Research Council negotiated development grant.

The grant, to be spent over three years, was awarded last year for three separate research projects in astronomy and astrophysics at UBC, including Dr. Shuter's.

This kind of NRC grant is to stimulate rapid development of research in subject areas where the University already has competence, especially if the subject area doesn't fall within the domain of one department but is shared by a number of disciplines.

UBC has a nucleus of scientific talent working in the inter-departmental Institute of Astronomy and Space Science.

History Workshop Program Set

Prof. Lynn White, Jr., one of the world's leading authorities on the history of science and technology, will take part in a three-day workshop Oct. 22-24 sponsored by the Department of History at the University of B.C.

Prof. White, who is director of the Centre for Medieval and Renaissance Studies and professor of history at the University of California at Los Angeles, will give a public lecture to open the workshop at 12:30 p.m. on Friday, Oct. 22, in Room 106 of UBC's Buchanan Building. His topic will be India and Medieval Europe.

The balance of the workshop will take place in the UBC Faculty Club and the P.A. Woodward Biomedical Library in the UBC Health Sciences Centre.

Details of the workshop are available from Dr. R.W. Unger, UBC history department, 228-5162.

Prof. White is noted for a number of ground-breaking books and studies in the field of medieval science and technology. He is currently engaged in research on India and medieval Europe and the problem of psychological aggression in the Middle Ages and the Renaissance.