

SECOND ANNUAL CONGRESS

THE SECOND ANNUAL CONGRESS OF THE SOCIETY WAS HELD JUNE 3-5, 1968, AT THE UNIVERSITY OF CALGARY. AGAIN THIS YEAR, THE MEETINGS WERE HELD IN CONJUNCTION WITH THE CONFERENCE OF LEARNED SOCIETIES.

THE CAMPUS OF THE UNIVERSITY OF CALGARY IS QUITE IMPRESSIVE. THE BUILDINGS ARE NEW AND MODERN, AND ARE WELL SEPARATED, PRESUMABLY FOR FUTURE EXPANSION. REGISTRATION AND MEAL SERVICE WAS AT THE STUDENT UNION BUILDING, MCEWAN HALL. THE SCIENTIFIC SESSIONS AND THE ANNUAL GENERAL MEETING WERE HELD IN THE ENGINEERING BUILDING. FURTHER MEAL SERVICE WAS AVAILABLE AT THE DINING CENTRE THAT SERVED THE TWO RESIDENCES. AS A GENERAL RULE, COUPLES WERE BILLETED IN THE WOMEN'S RESIDENCE AND "STAGS" IN THE MEN'S. THE OVERFLOW FROM THE RESIDENCES WAS ACCOMMODATED AT MOTEL VILLAGE (14 MOTELS JUST ONE-HALF MILE FROM THE CAMPUS), AND AT THE DOWNTOWN HOTELS.

FIELD TRIPS

THERE WERE TWO FIELD TRIPS OFFERED TO PARTICIPANTS. ON TUESDAY AFTERNOON, TWO CHARTERED BUSES AND SEVERAL PRIVATE CARS TOOK VISITORS TO THE MARMOT CREEK WATERSHED PROJECT, A CO-OPERATIVE VENTURE INVOLVING HYDROLOGY, AGRICULTURE, METEOROLOGY AND SEVERAL OTHER SCIENTIFIC DISCIPLINES. THE VISITORS WERE CONDUCTED THROUGH AREAS WHERE GROUND WATER, STREAMFLOW, EVAPORATION, SOIL MOISTURE, AND VARIOUS METEOROLOGICAL PARAMETERS WERE BEING MEASURED. A SUMMARY OF A PAPER (DESCRIBING THE PROJECT), GIVEN BY MR. DON STORR AT THE CONGRESS, WILL BE PUBLISHED IN A FORTHCOMING ISSUE OF ATMOSPHERE.

FROM MARMOT CREEK, ALL ROADS LED TO THE ⁶ RANCH (RAFTER 6 FOR YOU DUDES) FOR THE ANNUAL BANQUET. BARBECUED STEAKS, A HEATED SWIMMING POOL (BUT OH - THAT WET-BULB COOLING), HORSEBACK RIDES AND A SING-SONG, ALL CONTRIBUTED TO A FINE TIME FOR ALL. THE VISITING TROUBADOUR COMPOSED THE FOLLOWING POEM^{*} IN HONOUR OF THE OCCASION. IT IS BASED ON THE TRIBULATIONS OF METEOROLOGISTS ESPECIALLY DON STORR, AS RELATED BY PROF. CHAMBERS AND MISS BRINKMAN, TWO OF THE LOCAL ARRANGEMENTS COMMITTEE. IT IS SUNG TO THE TUNE OF "LILLI MARLENE", AND SOUNDS MUCH BETTER SUNG THAN READ.

ANOTHER FIELD TRIP TOOK PLACE ON THURSDAY WHEN THE ALBERTA HAIL STUDIES PROJECT AT PENHOLD WAS VISITED. TRANSPORTATION WAS AGAIN BY CHARTERED BUS. THE STAFF AT THE PROJECT HAD ORGANIZED SEVERAL DISPLAYS OF EQUIPMENT, AND EVEN ARRANGED THE FIRST HAILSTORM OF THE SEASON. IT WAS ACCOMPANIED BY WHAT APPEARED TO BE A FUNNEL CLOUD, MUCH TO THE DELIGHT OF THE VISITORS WHO SAW IT. HOWEVER, WHEN REQUESTED FOR AN ENCORE, THEY COULD NOT EVEN COME UP WITH A SMALL VOLCANIC ERUPTION. IN ANY EVENT, THE HOSPITALITY OF THE PROJECT STAFF AND THE CANADIAN FORCES OFFICERS' MESS WAS MUCH APPRECIATED.

* SEE PAGE 22

SCIENTIFIC SESSIONS

THE SCIENTIFIC PROGRAM OCCUPIED FIVE HALF DAYS, AS OUTLINED IN THE PROGRAM AND ABSTRACTS BOOKLET THAT WAS MAILED OUT TO ALL MEMBERS BEFORE THE MEETINGS.

ON MONDAY MORNING, PROF. A.W. BREWER, PRESIDENT OF THE SOCIETY, DECLARED THE SECOND ANNUAL CONGRESS OPEN. A WELCOME TO THE CAMPUS BY PROF. I.Y. ASHWELL OF THE DEPARTMENT OF GEOGRAPHY WAS FOLLOWED BY ANNOUNCEMENTS BY THE CHAIRMAN OF THE LOCAL ARRANGEMENTS COMMITTEE, PROF. CHAMBERS. THE LOCAL COMMITTEE UNDER MRS. CHAMBERS HAD DONE A TERRIFIC JOB FOR THE OFFICIAL HOSTS, THE ALBERTA CENTRE OF THE C.M.S.

THE SYMPOSIUM ON THE UPPER ATMOSPHERE WAS CHAIRED BY PROF. JOHN GREGORY, UNIVERSITY OF SASKATCHEWAN. THE KEYNOTE PAPER BY PROF. COLIN HINES (UNIVERSITY OF TORONTO), DISCUSSED THE ADVANCES IN THE DYNAMICS OF THE UPPER ATMOSPHERE THAT HAD BEEN MADE SINCE HE SPOKE ON THE SUBJECT TO THE CANADIAN BRANCH OF THE R.M.S. SIX YEARS AGO.

IN THE INTERVAL BETWEEN THESE TWO PAPERS, MANY MORE OBSERVATIONS OF THE CIRCULATION IN THE MAGNETOSPHERE (THE REGION FROM 150 KM OUT TO THE BOUNDARY OF THE GEOMAGNETIC DOMAIN - 10 EARTH RADII ON THE SUN SIDE AND SOME INDEFINITE DISTANCE ON THE OTHER SIDE), HAVE BEEN MADE. THESE OBSERVATIONS CONFIRM THE ESSENTIALS OF THE HINES-AXFORD MODEL OF MAGNETOSPHERIC CIRCULATIONS, WHILE CHANGING ONLY THE DETAILS. IN PARTICULAR, DENSITY CHANGES BY A FACTOR OF 100 OVER A FEW KILOMETERS, RESULTING FROM CIRCULATIONS, HAVE BEEN OBSERVED. PROF. HINES POINTED OUT THAT THE STRONG WEST WINDS THAT ARE OBSERVED IN THE IONOSPHERE AT 200 TO 300 KM ARE GENERATED METEOROLOGICALLY, BUT THERE ARE STRONG INFLUENCES OF ION DRAG (ESPECIALLY ON TIME SCALES OF LESS THAN ONE HOUR), EVEN THOUGH THE DENSITY OF IONS IS STILL SMALL RELATIVE TO THE DENSITY OF THE NEUTRAL GAS. HE STATED FURTHER THAT ON THE DIURNAL SCALE, NON-LINEAR COUPLING BETWEEN CHANGES IN ION CONCENTRATION AND CHANGES IN PRESSURE (OR DENSITY) MUST MAKE A SIGNIFICANT CONTRIBUTION TO THE WEST WINDS OBSERVED.

DURING THE REMAINDER OF HIS PAPER, PROF. HINES TOUCHED ON SEVERAL SUBJECTS CLOSER TO THE SURFACE. FOR EXAMPLE, HE DISCUSSED TIDAL EFFECTS IN THE REGION OF 100 KM AS OBSERVED BY SODIUM VAPOUR AND TMA TRAILS FROM ROCKETS, AND COMMENTED ON THE DETAIL IN THE WINDS SHOWN BY THE NEW FRENCH METEOR TRAIL RADAR. HE SHOWED THE POSSIBLE CONNECTION BETWEEN UPSTREAM TROPOSPHERIC JET STREAMS AND NOCTILUCENT CLOUDS, AND COMMENTED THAT WORK ON STRATOSPHERIC-IONOSPHERIC COUPLING WAS INCREASING IN TEMPO, LEADING TO MORE KNOWLEDGE ON THE EFFECTS IN THE HIGH ATMOSPHERE OF EVENTS LOWER DOWN.

THERE FOLLOWED TWO PAPERS ON OPTICAL TECHNIQUES FOR DETERMINING UPPER ATMOSPHERE COMPOSITION (LLEWELLYN AND JONES, AND RUNDLE AND GAULT), AND THREE ON RADIO TECHNIQUES (REES, GREGORY, AND MANSON). THESE FIVE PAPERS WERE ALL CONTRIBUTIONS FROM THE INSTITUTE OF SPACE AND ATMOSPHERIC STUDIES, UNIVERSITY OF SASKATCHEWAN. A.D. CHRISTIE FOLLOWED WITH A DISCUSSION OF NOCTILUCENT

CLOUDS, AND THE SYMPOSIUM WAS COMPLETED WITH TWO PAPERS ON ROCKET RANGE OPERATIONS IN CANADA (WETTER AND HOOPES FROM CHURCHILL, AND FRYERS FROM COLD LAKE).

MONDAY AFTERNOON WAS DEVOTED TO A TWO SESSION SYMPOSIUM ON THE TROPO-SPHERE, CHAIRED BY PROF. I. Y. ASHWELL. M. DANARD (WHO WILL SOON BE JOINING THE GROUP AT UNIVERSITY OF WATERLOO UNDER PROF. CSANADY), LED OFF THE TROPOSPHERIC CIRCULATION SESSION WITH A DISCUSSION OF A MODIFICATION TO HIS NWP MODEL (DEVELOPED TO INCLUDE THE EFFECT OF THE RELEASE OF LATENT HEAT IN RAIN AREAS) THAT INCLUDED THE EFFECT OF LONG-WAVE RADIATION. HE SHOWED THAT THIS EFFECT COULD BE UP TO TWENTY PER CENT OF THE LATENT HEAT EFFECT IN AREAS OF HEAVY RAIN. H. WILSON FOLLOWED WITH A DISCUSSION OF THE STRUCTURE OF JET-STREAMS, AND E. R. REINELT MADE A PLEA FOR NEW ANALYSIS TECHNIQUES IN WESTERN CANADA (ILLUSTRATED BY EXAMPLES OF THE EFFECT OF TERRAIN ON THE TEMPERATURE AND MOISTURE FIELDS).

THE KEYNOTE PAPER FOR SESSION II - 'ARCTIC METEOROLOGY', WAS PRESENTED BY PROF. LONGLEY OF THE UNIVERSITY OF ALBERTA. HE POINTED OUT THAT TWENTY-FIVE YEARS AGO, THE GENERAL CIRCULATION IN THE ARCTIC WAS BASED ON A SIMPLE HADLEY MODEL. HOWEVER, HIS ILLUSTRATIONS OF CYCLONE AND ANTICYCLONE TRACKS IN THE REGION SHOWED THAT THE SIMPLE MODEL IS INADEQUATE. THE ARCTIC CIRCULATION INCLUDES MOVING HIGHS AND LOWS, BUT THE MOVEMENTS ARE NOT THE SAME AS IN THE REGION OF THE WESTERLIES. FOR EXAMPLE, HIGHS AND LOWS MOVE INTO THE AREA, STAGNATE, AND THEN SUDDENLY COLLAPSE. THE SLOW MEANDERINGS ARE THE CAUSE OF SERIOUS FORECAST PROBLEMS BECAUSE ONLY SLIGHT MOVEMENT CAN CAUSE MAJOR CHANGES IN CIRCULATION AND THUS IN WEATHER.

SUMMARIZING, PROF. LONGLEY STATED THAT RADIATION BALANCE IS IMPORTANT, AND SATELLITES WILL PROVIDE MORE INFORMATION FOR RADIATION STUDIES. OTHER AREAS THAT NEED ATTENTION ARE A NEW MODEL FOR THE GENERAL CIRCULATION OF THE ARCTIC TO REPLACE THE OLD HADLEY MODEL, AND TROPOSPHERIC-STRATOSPHERIC INTERACTIONS (NOW THAT THE ARCTIC STRATOSPHERE IS KNOWN TO BE SO INTERESTING).

THIS THEME PAPER WAS FOLLOWED BY PROF. ORVIG SPEAKING ABOUT THE COMPUTATIONS THAT HE AND PROF. VOWINCKEL HAD MADE ON THE ENERGY BUDGET OF THE ARCTIC, AND INCLUDED A DEFENCE OF SOME EARLIER WORK AGAINST A CRITICISM LEVELLED BY PROF. LONGLEY IN HIS PAPER. H. WAHL THEN SPOKE ABOUT THE CLIMATOLOGICAL NETWORK (OR RATHER ITS LACK) IN THE YUKON, AND ILLUSTRATED THE NEED FOR MORE STATIONS WITH SOME COLOURED SLIDES OF THE TERRITORY. D. B. FRASER CONCLUDED THE SESSION WITH A DESCRIPTION OF A SEVERE DRAINAGE WIND UNDER AN ARCTIC INVERSION THAT OCCURS COMMONLY ON THE SHORES OF AMUNSEN GULF, AND WAS MENTIONED IN THE WRITINGS OF STEPHANSON.

TUESDAY MORNING, SESSION III OF THE SYMPOSIUM ON THE TROPOSPHERE, DEALT MAINLY WITH MATTERS RELEVANT TO ALBERTA HAIL STUDIES. PROF. W. HITSCHFELD OF MCGILL UNIVERSITY WAS THE CHAIRMAN. M. J. CURRY REPORTED ON A SENSITIVE MICRO-BAROGRAPH DEVELOPED (BY R. C. MURTY AND OTHERS) AT THE UNIVERSITY OF WESTERN ONTARIO. THE DETAIL ON PRESSURE CHANGES THAT WERE RECORDED BY THIS INSTRUMENT

WAS IMPRESSIVE. R.H. DOUGLAS THEN OUTLINED THE HISTORY OF THE MCGILL PROGRAM ON HAIL STUDIES, AND P.W. SUMMERS FOLLOWED WITH A REVIEW OF THE HISTORY OF THE ALBERTA HAIL STUDIES PROJECT. J.H. RENICK DESCRIBED A SYSTEM FOR TAKING AND ANALYZING STEREO CLOUD PHOTOGRAPHS USED BY HIM AND M. BALSHAW ON ALBERTA HAIL STUDIES. C. WARNER SHOWED TIME-LAPSE MOVIES OF A PARTICULAR STORM AND SUPPORTING RADAR PHOTOGRAPHS USED IN A SPECIAL STUDY BY HIM AND A.J. CHISHOLM. THE SAME STORM WAS MODELLED BY MRS. M. ENGLISH, WHO SHOWED HOW PREDICTIONS OF THE MODEL WERE SUPPORTED BY OBSERVATION.

THE NEXT TWO PAPERS TREATED SPECIAL OBSERVATION TECHNIQUES TO STUDY STORM CIRCULATION AND STRUCTURE. N. THYER DISCUSSED THE ANALYSIS OF SPECIAL PIBAL OBSERVATIONS AROUND SOME STORMS AND I. ZAWADZKI DESCRIBED HARPI, A NEW ELECTRONIC SYNTHESIS OF RADAR SCANS DEVELOPED AT MCGILL WITH E. BALLANTYNE (TO SUPPLEMENT CAPP). HEIGHT-AZIMUTH-RANGE POSITION INDICATOR DISPLAYS REFLECTIVITY OF THE STORM IN A GREY-SCALE IN VERTICAL SLICES AS FUNCTIONS OF HEIGHT AND DISTANCE.

THE LAST TWO PAPERS IN THE 'STORM' SECTION OF THE SESSION DEALT WITH CHEMISTRY. G. VALLI STATED THAT NATURE PROVIDES MORE FREEZING NUCLEI THAN MAN CAN WITH SILVER IODIDE GENERATORS, AND THAT THE MOST EFFECTIVE NUCLEI IDENTIFIED IN RAINFALL SAMPLES WERE LESS THAN .01 MICRON IN DIAMETER. P. SUMMERS, SPEAKING FOR HIMSELF AND B. HITCHON, NOTED THE INTERESTING RESULT THAT THERE HAS BEEN A SUBSTANTIAL REDUCTION IN HAIL REPORTS ABOUT FORTY MILES DOWNWIND FROM MAJOR SULPHUR-PRODUCING AREAS IN THE PROVINCE. THIS HAS BEEN ACCOMPANIED BY AN INCREASE IN THE PERCENTAGE OF LESS-DAMAGING SOFT HAIL, AND A DECREASE (OVER THE LAST TWENTY YEARS) IN THE SULPHUR DEFICIENCY OF THE SOILS IN SOME AREAS. THE CONCLUSION THAT INDUSTRIAL POLLUTION IS MODIFYING THE WEATHER WAS DRAWN.

THE FINAL PAPER OF THE SESSION WAS A DESCRIPTION OF THE MARMOT CREEK PROJECT BY D. STORR. IT SERVED AS AN INTRODUCTION FOR THE FIELD TRIP TO THE SITE DURING THE AFTERNOON. AS MENTIONED IN THE FOREGOING, MR. STORR HAS PROMISED TO SUBMIT A STREAMLINED VERSION OF THE PAPER TO ATMOSPHERE.

NEXT MORNING, DR. W.L. GODSON CHAIRED THE SYMPOSIUM ON PHYSICAL METEOROLOGY. THREE PAPERS DEALT WITH CLOUD PHYSICS, TWO WITH ATMOSPHERIC ELECTRICITY, AND THREE WITH RADIATION. PROF. LIST TREATED THE SUBJECT OF TURBULENCE IN THE WAKE OF FALLING PRECIPITATION PARTICLES AND CONCLUDED THAT, WHILE IT EXISTED, IT WAS NOT SIGNIFICANT IN THE PHYSICS OF CLOUDS AND THE PARTICLES THAT CONSTITUTE THEM. G. ISAAC, SPEAKING FOR HIMSELF AND D. BISHOP, BOTH OF MCGILL, COMPARED DATA ON ICE NUCLEI IN SURFACE AIR AND IN PRECIPITATION. ICE NUCLEI WERE ALSO THE SUBJECT OF A PAPER BY R.S. SHEMENAUER AND J. MAYBANK OF THE METEOROLOGICAL BRANCH AND SASKATCHEWAN RESEARCH COUNCIL RESPECTIVELY. THEY NOTED THAT THE MAIN SOURCE OF SUCH NUCLEI AT SASKATOON WAS RURAL, AND THAT ORGANIC SOILS WERE THE MOST EFFICIENT.

BECAUSE THEIR STUDIES HAD SHOWN THAT THE PROCESSES WERE MORE COMPLEX THAN AT FIRST THOUGHT, J.E. PAKIAM AND J. MAYBANK OF THE SASKATCHEWAN RESEARCH COUNCIL DISCUSSED SOME ELECTRIC FIELD AND CONDUCTIVITY MEASUREMENTS THAT THEY

HAD MADE, INSTEAD OF THE MATTERS COVERED IN THE ABSTRACT THAT APPEARED IN THE PROGRAM. THIS WAS FOLLOWED BY THE PRESENTATION OF SOME SPECTRA AND CROSS SPECTRA OF ELECTRIC FIELD AND OTHER METEOROLOGICAL ELEMENTS BY BHARTENDU OF THE METEOROLOGICAL BRANCH.

THE FINAL THREE PAPERS DEALT WITH SOLAR RADIATION EACH IN A NOVEL WAY. FR. EAST, COLLEGE JEAN DE BREBEUF, COMPARED INSOLATION IN URBAN MONTREAL AND IN A NEARBY RURAL AREA, AND ILLUSTRATED THAT THE POLLUTED URBAN AIR DID DECREASE THE AMOUNT OF SOLAR RADIATION REACHING THE GROUND. H. FERGUSON OF THE METEOROLOGICAL BRANCH, AND A NUMBER OF COLLEAGUES, USED A PLYWOOD AND PLASTER MODEL TO ASSIST IN THE COMPUTATION OF DAILY CLEAR-SKY VALUES OF INSOLATION AT MARMOT CREEK. THE SLIDES SHOWED GRAPHICALLY THE SHADOW EFFECTS AT VARIOUS SOLAR AZIMUTHS AND ELEVATIONS. B.J. GARNIER AND A. OHMURA OF MCGILL DESCRIBED THE DEVELOPMENT OF A COMPUTER PROGRAM TO CALCULATE THE TOPOGRAPHIC VARIATIONS OF THE DIRECT SOLAR BEAM FROM OBSERVATIONS TAKEN AT ONE SITE IN AN AREA.

THE FINAL SESSION OF THE CONGRESS WAS A SYMPOSIUM ON THE ATMOSPHERIC BOUNDARY LAYER WITH PROF. CSANADY OF WATERLOO IN THE CHAIR. THE KEYNOTE SPEAKER, PROF. K. HAGE, UNIVERSITY OF ALBERTA AND AN ASSOCIATE EDITOR OF ATMOSPHERE, NOTED THAT THE PAST TWENTY YEARS HAD BROUGHT MARKED ADVANCES IN GENERAL CIRCULATION MODELS AND NUMERICAL WEATHER PREDICTION, AND HAD SEEN THE START OF A UNIFIED THEORY OF THE SURFACE BOUNDARY LAYER. FURTHER PROGRESS IN THE MODELS WOULD REQUIRE THAT THE LARGE SCALE PROCESSES BE ALLOWED TO INFLUENCE THE SMALL SCALE ONES, WHICH, IN TURN, WOULD FEED HEAT AND ENERGY BACK UP INTO THE FORMER. TWO OF THE MAJOR PROBLEMS IN BOUNDARY LAYER THESE DAYS ARE THE GAP IN UNDERSTANDING OF ENERGY EXCHANGES BETWEEN SCALES, AND THE EVALUATION OF THE MESO AND MICRO-SCALES AS SOURCES AND SINKS OF ENERGY. IN ORDER TO GET CLOSE TO THESE PROBLEMS, THERE ARE SEVERAL QUESTIONS THAT MUST BE CONSIDERED: WHAT ARE THE TIME SCALES OF THE IMPORTANT PROCESSES, AND WHAT ARE THEIR GEOGRAPHICAL AND SEASONAL TRENDS? WHAT PROCESSES CAN BE PARAMETERIZED, WHAT ARE THE KEY PARAMETERS, AND HOW ACCURATELY MUST THEY BE MEASURED? WHAT IS THE TIME RATE OF DECAY OF EACH PROCESS - THIS DETERMINES THE PREDICTABILITY OF THE PROCESS.

AT THE PRESENT TIME, ONE MUST MAKE ASSUMPTIONS. FOR THE FUTURE, HOWEVER, GARP (THE GLOBAL ATMOSPHERIC RESEARCH PROJECT) WILL SEEK THE ANSWERS TO MANY OF THESE QUESTIONS.

PROF. HAGE WENT ON TO DISCUSS SOME OF THE IMPORTANT PROCESSES WITHIN THIS CONTENT. HE ESPECIALLY NOTED THE GREAT NEED OF EXPANDED OBSERVATIONAL PROGRAMS IN ORDER TO MEET THE OBJECTIVES OF GARP. IN THIS RESPECT, HE MENTIONED SEVERAL RESEARCH PROJECTS OR PROGRAMS THAT ARE IN PROGRESS OR ADVANCED PLANNING.

FOLLOWING PROF. HAGE, P.A. TAYLOR OF THE UNIVERSITY OF TORONTO DISCUSSED HIS MATHEMATICAL MODEL OF THE EFFECTS ON FLOW OF AN ABRUPT CHANGE IN ROUGHNESS OF THE UNDERLYING SURFACE. R.M. HOLMES OF DEMR THEN SHOWED THE RESULTS OF MEASURING THE COOLING EFFECT ALOFT OF A SMALL LAKE, USING A SPECIALLY

EQUIPPED LIGHT PLANE. THE EFFECT (OR LACK THEREOF) OR MINOR TERRAIN FEATURES ON PRECIPITATION DISTRIBUTION WAS THE SUBJECT OF THE PAPER BY R.B.B. DICKISON OF THE METEOROLOGICAL BRANCH. IN THE DISCUSSION OF ICE ACCRETION ON WIRES AND TOWERS BY G.A. MC KAY AND H.A. THOMPSON OF THE METEOROLOGICAL BRANCH, THE LATTER SHOWED A SLIDE WITH "ICYPLETHS" OF FREQUENCY OF OCCURRENCE OF FREEZING PRECIPITATION. J.A. MC CALLUM OF METEOROLOGICAL BRANCH PRESENTED BOTH HIS PAPER AND THAT OF JOHNSON AND LARSEN WHICH PRECEDED IT ON THE PROGRAMS. BOTH PAPERS DEALT WITH THE SUFFIELD EXPERIMENTS ON DIFFUSION IN THE BOUNDARY LAYER USING VERY SMALL GLASS SPHERES. THE CHAIRMAN, G.T. CSANADY, COMPLETED THE SESSION WITH HIS PAPER ON THE DIFFUSION OF A LARGE CLOUD IN THE BOUNDARY LAYER.

FORTY-NINE PAPERS HAD BEEN ACCEPTED FOR THE SCIENTIFIC SESSIONS. OF THESE, SIX WERE PRESENTED BY TITLE ONLY, FORTY-TWO WERE PRESENTED BY ONE OF THE AUTHORS, AND ONE BY A STAND-IN. IN FIVE HALF DAYS, MUCH WAS ACCOMPLISHED.

ANNUAL BUSINESS MEETING

ON MONDAY EVENING, JUNE 3, MEMBERS RETURNED TO THE ENGINEERING BUILDING FOR THE ANNUAL BUSINESS MEETING. IT WAS CALLED TO ORDER AT 1930 BY THE PRESIDENT, PROF. A.W. BREWER. THE FIRST ORDER OF BUSINESS WAS THE PRESENTATION OF THE 1967 PATTERSON MEDAL TO PROF. BALFOUR CURRIE OF THE UNIVERSITY OF SASKATCHEWAN AT SASKATOON. STANDING IN FOR J.R.H. NOBLE, DIRECTOR OF THE METEOROLOGICAL BRANCH, WHO WAS IN GENEVA, WAS D. SMITH, REGIONAL METEOROLOGIST AT EDMONTON.

FOLLOWING PROF. CURRIE'S REMARKS, THE MINUTES OF THE FIRST ANNUAL BUSINESS MEETING, THE REPORTS OF COUNCIL, THE TREASURER, THE AUDITOR, THE NOMINATING COMMITTEE AND THE PRIZE COMMITTEE WERE ACCEPTED AS PRINTED WITH LITTLE COMMENT. THE CHAIRMAN CONGRATULATED THE VARIOUS PRIZE WINNERS, AND ANNOUNCED THE ESTABLISHMENT OF THE ANDREW THOMSON AWARD FOR UNDERGRADUATE STUDENTS. REPRESENTATIVES OF THE LOCAL CENTRES PRESENTED REPORTS.

THE REPORT OF THE EDITOR AND THE PROPOSED PUBLICATION POLICY FOR ATMOSPHERE GENERATED CONSIDERABLE DISCUSSION. THERE WERE MANY COMPLAINTS ABOUT THE DELAYS IN PRINTING AND DISTRIBUTION, AND NON-RECEIPT OF ISSUES BY SOME MEMBERS. THE PROPOSAL WAS ACCEPTED AS PRINTED EXCEPT FOR A MOTION THAT THE TRANSACTIONS AND BUSINESS OF THE SOCIETY BE REPORTED IN AN OFFICIAL PUBLICATION OF THE SOCIETY; OF COURSE, AT THE PRESENT, ATMOSPHERE IS THE ONLY SUCH PUBLICATION.

THERE WAS ALSO DISCUSSION ABOUT THE BUDGET PROPOSAL, AND THE MOTION REGARDING AN INCREASE IN FEES FOR 1969 THAT CAME FROM COUNCIL. A MOTION FROM THE FLOOR INCREASED THE FEES TO \$7.50 FOR MEMBERS, LEAVING THE ANNUAL MEMBERSHIP FEE FOR STUDENTS AT \$1.00.

SEVERAL ANNOUNCEMENTS OF INTEREST WERE MADE. THE ONE ABOUT THE FORMATION OF LOCAL CENTRES AT SASKATOON AND QUEBEC CITY WAS MET WITH ENTHUSIASM BY THOSE PRESENT. AN INVITATION TO JOIN THE ROYAL AND THE AMERICAN METEOROLOGICAL

SOCIETIES AS A CO-SPONSOR OF A MEETING IN LONDON IN 1970 DEALING WITH GARP WAS PRESENTED, AND IT WAS LEFT TO COUNCIL TO CONSIDER THE QUESTION.

FOLLOWING ADJOURNMENT AT 2140, A RECEPTION WAS HELD IN THE ENGINEERS' LOUNGE.

G A R P W O R K S H O P

ON FRIDAY, JUNE 7, THE SOCIETY WAS CO-SPONSOR WITH THE METEOROLOGICAL BRANCH AND THE SUB-COMMITTEE ON METEOROLOGY AND ATMOSPHERIC SCIENCES (OF THE N.R.C. ASSOCIATE COMMITTEE ON GEOPHYSICS) OF THIS WORKSHOP. ITS PURPOSE WAS TO BRING TOGETHER SOME OF THE CANADIAN SCIENTISTS WHO WOULD BE PARTICIPATING IN GARP IN ORDER TO GIVE PRELIMINARY CONSIDERATION INTO WHAT CANADA'S ROLE SHOULD BE.

AN HISTORICAL INTRODUCTION TO GARP WAS GIVEN BY PROF. R.W. STEWART (INSTITUTE OF OCEANOGRAPHY, UNIVERSITY OF BRITISH COLUMBIA) WHO IS VICE-CHAIRMAN OF THE JOINT ORGANIZING COMMITTEE FORMED BY WMO AND IUGG. DR. W.L. GODSON FOLLOWED WITH A DISCUSSION OF THE STATUS OF SOME OF THE TOOLS - INSTRUMENTS AND FACILITIES THAT WOULD BE REQUIRED IN THE PROGRAM. BRIEF BACKGROUND PAPERS ON VARIOUS RELEVANT SUBJECTS WERE PRESENTED BY SEVERAL OF THE PARTICIPANTS.

IN THE NEXT STAGE, THE PARTICIPANTS DIVIDED THEMSELVES INTO PANELS - BOUNDARY LAYER (UNDER R.W. STEWART) AND FREE ATMOSPHERE (UNDER W.L. GODSON) - FOR FURTHER DISCUSSION. THEN THE TWO PANELS REJOINED TO SHARE RESULTS.

THESE DISCUSSIONS SHOULD PROVIDE A GOOD POINT OF DEPARTURE FOR DETAILED PLANNING OF CANADA'S ROLE IN GARP.

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