

power Doppler radar, it measures ground speed and the true motion of aircraft over the earth's surface. In employing the Doppler principle, DAGMAR utilizes the frequency changes in radio signals transmitted from a moving source.

Led by Dr. Geoffrey Hattersley-Smith, a glaciologist with the Board's Geophysics Section, a group of scientists began a series of geophysical, geological and climatological studies of the Lake Hazen area in North Ellesmere Island early in May. The DRB-sponsored expedition was established to provide Canada with geophysical information about her far northern territories and to support the IGY programme.

While obtaining glacial ice cores near the base of Henrietta Nasmith Glacier at the northwest end of Hazen Lake, Dr. Hattersley-Smith discovered in a stone cairn documents left by United States explorer Lieutenant A.W. Greely in 1882. During previous expeditions to the northern part of Ellesmere Island, Dr. Hattersley-Smith found similar documents and other historical relics deposited at widely separated sites by members of early exploration parties.

"Arctic Canada from the Air", a 540-page book which examines Canada's arctic in detail and promises to become a "bible" for individuals operating above the treeline, was

published late in August. Written by Miss Moira Dunbar, of the Geophysics Section, and Wing Commander Keith R. Greenaway, one of the western world's foremost polar navigators, the project was undertaken at the request of the RCAF. W/C Greenaway was seconded to the Board for about three years and spent much of that period gathering data for the text.

DRB engineers recently began a programme aimed at evaluating vehicle performance by means of working scale models. The Board financed the production of a model of a Canadian Army tracked vehicle designed for over-snow and tundra operations.

The studies are being directed towards the evaluation of this technique as a pre-design tool for new types of vehicles. The engineers expect that trials with small working scale models will result in significant cost reductions when operational prototypes are produced.

During the firing of a series of United States research rockets at Fort Churchill in support of the IGY, Defence Research Northern Laboratory (DRNL) staff members assisted in carrying out electronic measurements, telemetering and in contributing to other associated activities. DRB scientists integrated into the launching team gained practical and useful experience in large, research rocket firing techniques. DRNL facilities were made available as a headquarters for the project.

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UNEF AIR TRANSPORT

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in the Gaza area, and improvements in the shipping and commercial airline transportation between these points. In addition, four-engine North Star aircraft from No. 426 Transport Squadron at Dorval, which have been making weekly flights to Capodichino will not terminate there but will carry on to Beirut, Lebanon.

No. 115 Communication Flight based at El Arish in the Gaza area, which has a strength of about 70 officers and airmen and has depended upon RCAF facilities at Capodichino for carrying out engine overhauls, will be redesignated as an Air Transport Unit and strength-

ened by approximately 30 personnel and one Dakota aircraft.

In November 1956, Canada committed a squadron of twelve C-119 Flying Boxcars from the transport squadrons based at Namao and Downsview to UNEF. The personnel and aircraft of No. 435 Transport Squadron, augmented by aircraft from No. 436 Squadron, moved to Capodichino. A large scale airlift of urgently required troops and materiel from Capodichino to Abu Sweir, Egypt was completed in January 1957, after which eight of the aircraft returned to Canada and No. 435 Squadron returned to Namao, Alta. To replace the squadron, two communications flights, Nos. 114, equipped with Flying Boxcars, and No. 115 equipped with Dakota and Otter medium transport aircraft were set up at Capodichino and El Arish.

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