

REPORT ABSTRACT: NOISE PROPAGATION NEAR VANCOUVER INTERNATIONAL AIRPORT

Piercy J.E., and Embleton, T.F.W., Effect of Weather and Topography on the Propagation of Noise - Vancouver Airport, Report APS 526, Acoustics Section, Physics Division, National Research Council of Canada, Ottawa, Ontario K1A 0S1, June 1974

The effects of weather and topography particularly, as well as one or two other factors, most notably the directionality of the jet, are examined with particular reference to current problems at Vancouver International Airport (YVR). The presentation is designed to be accessible to non-specialist and specialist alike. It features a detailed analysis of the factors influencing noise levels from operations on the ground (aircraft accelerating down the runway for takeoff, decelerating after landing by reverse thrust, and stationary engine testing) and in the air (angle of aircraft above horizon at listener greater than about 5°). The former are found to be strongly dependent on both weather and topography (shallow hillside or flat land around YVR) and the latter to be essentially independent. The effect of hillside and inversions in reducing the ground shielding is calculated by a new method using measurements of the ground impedance. The directionality of the jet engine as a noise source is found to introduce substantial errors into the accepted method of calculating NEF contours for distances greater than about 2,000 feet, particularly in the side-line areas. The noise levels to be expected in specific areas surrounding YVR are discussed in the light of this general analysis.

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SEMINAR ON NOISE IN INDUSTRY

A three day seminar on noise problems encountered in industry will be held on October 7,8 and 9 at the Edmonton Inn, Edmonton, Alberta. The seminar which is sponsored by the University of Alberta Extension Department will feature knowledgeable lecturers from government, industry and universities.

The material in the seminar will include introductory acoustics, subjective acoustics, noise control for mechanical equipment indoors and outside, personnel protection, examples of specific problems and solutions.

This seminar will be of interest to those concerned with the control of noise in their work who wish to become acquainted with some of the techniques available to accomplish this end.

The fee for this seminar is \$150. For further information please contact:

Susan Pierce
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University of Alberta
Edmonton, Alberta
Telephone: (403) 432-5038

1974 MEETING OF THE CANADIAN ACOUSTICAL ASSOCIATION

The Canadian Acoustical Association (formerly the Canadian Committee on Acoustics) will hold its 1974 Annual Meeting at the University of Alberta, Edmonton, Alberta, on October 10 and 11. This meeting will follow a three day seminar on Noise in Industry which is being given under the auspices of the University of Alberta Department of Extension.

Members planning to attend the meeting may obtain information on hotel and motel accommodation as well as campus maps from:

Dr. G. Faulkner,
Associate Professor,
Mechanical Engineering,
University of Alberta,
Edmonton 7, Alberta.

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EMPLOYMENT

Physicist: Ph. D. October 1974 (expected). Thesis in ultrasonic studies of material properties using modulus and attenuation measurement in polycrystalline metals. Two years research experience in industry. Seeking R&D or teaching position. Will relocate. James Nan-Chu Chen, 35 Glenmont Road, Brighton, Massachusetts 02135.

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DONATION

We wish to thank General Radio for their kind donation of \$50 to our Association.