

rec'd \$15.75 expense check 1-19-48

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TRIP TO ITHACA, NEW YORK

December 18, 1947

The day of the 17th of December 1947, was spent at the Electrical Engineering School of Cornell University, Ithaca, New York. During the morning an informal conference was held in the office of C.R. Burrows who is director of the electrical division. Present were Burrows, Seeger, Hamlin and Miss ?, of Cornell, Williamson, of Toronto and Reber, of the Bureau. *Martina Stahr*

Seeger and Hamlin work full time on the radio astronomy project. Miss ? Stahr is head of astronomy department and Williamson is an astrophysicist from Toronto Observatory who is acting as a per diem consultant for Cornell. The work is being done in school shops. During the afternoon a trip was made to local airport (15 miles away) where the equipment is being installed.

A concrete pier about 4 feet high and 12 feet in diameter will support a circular track about 10 feet in diameter. On the track will be a triangular carriage with a one wheel truck at each corner. This carriage will carry a mounting which has two more axis, namely, polar and declination. A mirror 17 feet in diameter with a focal ratio of 0.35 will mount on the declination frame. The axis of mirror will be perpendicular to declination axis and the mirror may be turned upon its axis for study of polarization effects. Thus four axis are available to give the mirror a variety of motions. The mirror has rather open spacing and was loaned by the Navy from an SK radar. It comes in two sections and cost \$247. to move it from freight station to air port (15 miles) The whole machine is about half finished and will cost in excess of \$15,000. by the time it is completed. At the present rate of progress some results should be being secured in March or April 1948.

The first frequency of operation will be 205 megacycles because a receiver from an SCR 268 is available for use. Measurements of Cosmic Static, Solar Noise and radiation from the moon thruout its phases will be made. About a year hence it is expected that equipment for use at 10 cm will be available and more data will be secured at this frequency. Particular attention will be paid to measurement of antenna patterns.

Other equipment available are quite a number of parts (but not complete) from an SK, a 268 and a 545. A quonset hut about 60 ft. long and 20 ft. wide is used for housing the equipment and as a small shop at the airport. The program is substantially and nearly exclusively backed by the Navy.